The catalog of the University comprises four issues: General Information, the Undergraduate Catalog, the Graduate Catalog, and the Law School Catalog. Each issue is published by the Office of the Registrar.

The Undergraduate Catalog is published in August of even-numbered years; the Graduate Catalog is published in August of odd-numbered years; the Law School Catalog is published in January of even-numbered years. These issues contain regulations and degree requirements that apply to undergraduates, graduate students, and students in the School of Law. Regulations are valid only for the period given on the title page; for an explanation of the period for which degree requirements are valid, see “Graduation under a Particular Catalog” in each issue. The list of courses to be offered in the following sessions is preliminary and is superseded by the Course Schedule, published each semester and summer session.

General Information, published every August, contains current and historical information about the University and regulations that apply to all students during the academic year given on the title page. General Information is meant to be used along with each of the other issues; each student must be familiar with the regulations given there and with those given in the issue that covers his or her degree program.

The catalog of the University is the document of authority for all students. Any academic unit may issue additional or more specific information that is consistent with approved policy. The information in the catalog supersedes that issued by any other unit if there is a conflict between the two. The University reserves the right to change the requirements given in the catalog at any time.

Catalogs are published online at http://registrar.utexas.edu/catalogs/. A limited number of printed catalogs are distributed to libraries and academic units. The information in the online catalog may reflect changes to policy approved after the printed catalog is published, and supersedes the information in the printed catalog if there is a conflict between the two.

Assistance in obtaining information about the University, including costs, refund policies, withdrawal, academic programs, the faculty, accreditation, and facilities and services for disabled persons, is available from V. Shelby Stanfield, Registrar, at (512) 475-7510 and at The University of Texas at Austin, Office of the Registrar, P O Box 7216, Austin TX 78713-7216.

Cover: Architectural detail of Sutton Hall (1915–1918). Named for William Seneca Sutton, the first dean of the University’s School of Education, the building was designed in the Spanish Renaissance style by noted American architect Cass Gilbert. Mr. Gilbert served as the campus architect for the University from 1912 to 1922. Sutton Hall is today one of four adjacent buildings that house the University’s School of Architecture.
The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston

Cultivated mind is the guardian genius of Democracy, and while guided and controlled by virtue, the noblest attribute of man. It is the only dictator that freemen acknowledge, and the only security which freemen desire.

Mirabeau B. Lamar

Where liberty has arisen, learning must be cherished—or liberty itself becomes a fragile thing.

Lyndon B. Johnson
The mission of the University is to achieve excellence in the interrelated areas of undergraduate education, graduate education, research, and public service. The University provides superior and comprehensive educational opportunities at the baccalaureate through doctoral and special professional educational levels. The University contributes to the advancement of society through research, creative activity, scholarly inquiry, and the development of new knowledge. The University preserves and promotes the arts, benefits the state’s economy, serves the citizens through public programs, and provides other public service.

The Graduate School at the University of Texas at Austin is an active community of diverse scholars in over one hundred academic programs dedicated to excellence in original research, teaching, creative expression, and intellectual leadership. Using our extensive resources and talents, we cultivate individuals who work together to bring knowledge, innovation, and best practices to meet the great and small challenges of our time.
Officers of Administration

THE UNIVERSITY OF TEXAS AT AUSTIN

EXECUTIVE OFFICERS

William Powers Jr., JD, President
Steven W. Leslie, PhD, Executive Vice President and Provost
Gregory J. Vincent, JD, EdD, Vice President for Diversity and Community Engagement
Kevin P. Hegarty, MPA, CPA, Vice President and Chief Financial Officer
Patricia C. Ohlendorf, JD, Vice President for Legal Affairs
Donald A. Hale, BS, Vice President for Public Affairs
Juan M. Sanchez, PhD, Vice President for Research
Patricia L. Clubb, PhD, Vice President for University Operations
Juan C. Gonzalez, PhD, Vice President for Student Affairs
James L. Hill, PhD, Senior Vice President
DeLoss Dodds, BS, Athletic Director
Christine A. Plonsky, BS, Athletic Director
Nancy A. Brazzil, BS, Deputy to the President
Charles A. Roeckle, PhD, Deputy to the President
David S. Onion, BSRTF, Senior Associate Vice President for Development
Gwen W. Grigsby, MPA, Associate Vice President for Governmental Relations
Carlos E. Martinez, JD, Associate Vice President for Governmental Relations

ADMINISTRATIVE OFFICERS OF THE COLLEGES AND SCHOOLS

Victoria E. Rodriguez, PhD, Vice Provost and Dean of Graduate Studies
Frederick R. Steiner, PhD, Dean, School of Architecture
Thomas W. Gilligan, PhD, Dean, Red McCombs School of Business
Roderick P. Hart, PhD, Dean, College of Communication
Judy C. Ashcroft, EdD, Dean, Division of Continuing and Innovative Education
Manuel J. Justiz, PhD, Dean, College of Education
Gregory L. Fenves, PhD, Dean, Cockrell School of Engineering
Douglas Dempster, PhD, Dean, College of Fine Arts
Sharon Mosher, PhD, Dean, John A. and Katherine G. Jackson School of Geosciences
Andrew P. Dillon, PhD, Dean, School of Information
Lawrence C. Sager, LLB, Dean, School of Law
Randy L. Diehl, PhD, Dean, College of Liberal Arts
David A. Laude, PhD, Interim Dean, College of Natural Sciences
Alexa A. Stuifbergen, PhD, RN, FAAN, Dean, School of Nursing
Miles L. Crismom, PharmD, Dean, College of Pharmacy
Robert L. Hutchings, PhD, Dean, Lyndon B. Johnson School of Public Affairs
Barbara W. White, PhD, Dean, School of Social Work
Paul B. Woodruff, PhD, Dean, School of Undergraduate Studies
THE UNIVERSITY OF TEXAS SYSTEM

EXECUTIVE OFFICERS

Francisco G. Cigarroa, MD, Chancellor
David B. Prior, PhD, Executive Vice Chancellor for Academic Affairs
Scott C. Kelley, PhD, Executive Vice Chancellor for Business Affairs
Kenneth I. Shine, MD, Executive Vice Chancellor for Health Affairs
Barry D. Burgdorf, JD, Vice Chancellor and General Counsel
Barry McBee, JD, Vice Chancellor and Chief Governmental Relations Officer
Randa S. Safady, PhD, Vice Chancellor for External Relations
Amy Shaw Thomas, JD, Vice Chancellor and Counsel for Health Affairs
William H. Shute, JD, Vice Chancellor for Federal Relations
Sandra K. Woodley, DBA, Vice Chancellor for Strategic Initiatives
Terry A. Hull, Associate Vice Chancellor for Finance, Ad Interim
Board of Regents

OFFICERS

Wm. Eugene Powell, Chairman
Paul L. Foster, Vice Chairman
R. Steven Hicks, Vice Chairman
James D. Dannenbaum, Vice Chairman
Francie A. Frederick, General Counsel to the Board of Regents

MEMBERS

TERMS SCHEDULED TO EXPIRE FEBRUARY 1, 2013

James D. Dannenbaum, Houston
Paul L. Foster, El Paso
Printice L. Gary, Dallas

TERMS SCHEDULED TO EXPIRE FEBRUARY 1, 2015

R. Steven Hicks, Austin
Wm. Eugene Powell, San Antonio
Robert L. Stillwell, Houston

TERMS SCHEDULED TO EXPIRE FEBRUARY 1, 2017

Alex M. Cranberg, Austin
Wallace L. Hall Jr., Dallas
Brenda Pejovich, Dallas

STUDENT REGENT WITH TERM TO EXPIRE MAY 31, 2012

John Davis Rutkauskas, UT Southwestern Medical School at Dallas

Each regent’s term expires when a successor has been appointed and qualified and has taken the oath of office. The student regent serves a one-year term.
### Directory of Offices

The following list includes some University offices of general interest. A complete directory of offices on campus is published at http://www.utexas.edu/directory/offices/.

#### Academic Calendar
The academic calendar is published in General Information, in the Course Schedule, and at http://registrar.utexas.edu/calendars/.

**The University of Texas at Austin**  
Office of the Registrar  
P O Box 7216  
Austin TX 78713-7216

#### Admission
Graduate and International Admissions Center, Walter Webb Hall 102 (405 West 25th Street), (512) 475-7391, fax (512) 475-7395  
http://www.utexas.edu/ogs/admissions/

**The University of Texas at Austin**  
Graduate and International Admissions Center  
P O Box 7608  
Austin TX 78705-7608

### Catalogs and Course Schedules
Catalogs and Course Schedules are published at the registrar’s Web site, http://registrar.utexas.edu/.

**The University of Texas at Austin**  
Office of the Registrar / Publications Distribution  
P O Box 7216  
Austin TX 78713-7216

### Fellowships, Teaching Assistantships, and Research Assistantships
Information and application forms for University fellowships, teaching assistantships, and research assistantships are available from the graduate adviser in each graduate program. General information on University fellowships, and additional information on fellowships funded by sources external to the University, is available from the fellowship director in the Office of Graduate Studies, Main Building 101, (512) 232-3603.

**The University of Texas at Austin**  
Office of Graduate Studies  
1 University Station G0400  
Austin TX 78712

The mailing address for each graduate program is given in the program’s section of chapter 4.

### Financial Assistance
Office of Student Financial Services, Student Services Building 3.214, (512) 475-6282  
http://finaid.utexas.edu/

**The University of Texas at Austin**  
Office of Student Financial Services  
PO Box 7758  
Austin TX 78713-7758

### Housing
Information and application forms for University housing units are available at http://www.utexas.edu/student/housing/. A partial list of privately owned housing is also available through this site. Information is also available from the division at 200 West Dean Keeton Street (Kinsolving Dormitory), (512) 471-3136, fax (512) 475-6532.

**The University of Texas at Austin**  
Division of Housing and Food Service  
P O Box 7666  
Austin TX 78713-7666

### International Students
International Office, 2222 Rio Grande Street, (512) 471-1211, fax (512) 232-4363  
http://www.utexas.edu/international/

**The University of Texas at Austin**  
International Office  
P O Box A  
Austin TX 78713-8901  
USA
### MEDICAL SERVICES
University Health Services, Student Services Building 2.212, (512) 471-4955
http://healthyhorns.utexas.edu/

The University of Texas at Austin
University Health Services
P.O. Box 7339
Austin TX 78713-7339

### REGISTRATION INFORMATION
Registration, Main Building 1, (512) 475-7656, fax (512) 475-7515
http://registrar.utexas.edu/students/registration/

The University of Texas at Austin
Office of the Registrar / Registration
P.O. Box 7216
Austin TX 78713-7216

### SERVICES FOR STUDENTS WITH DISABILITIES
Division of Diversity and Community Engagement, Student Services Building 4.104, (512) 471-6259, video phone (866) 329-3986, fax (512) 475-7730
http://www.utexas.edu/diversity/ddce/ssb/

The University of Texas at Austin
Services for Students with Disabilities
Division of Diversity and Community Engagement
1 University Station A4100
Austin TX 78712

### TRANSCRIPTS
Office of the Registrar, Main Building 1, (512) 475-7689, fax (512) 475-7515
http://registrar.utexas.edu/students/records/transcripts/

The University of Texas at Austin
Office of the Registrar / Transcripts
P.O. Box 7216
Austin TX 78713-7216

### ADDING AND DROPPING COURSES, QUESTIONS ABOUT DEGREE PROGRAMS, INFORMATION, AND FORMS
Office of Graduate Studies, Main Building 101, (512) 471-4511
http://www.utexas.edu/ogs/

The University of Texas at Austin
Office of Graduate Studies
1 University Station G0400
Austin TX 78712
1. Graduate Study

Statement on Equal Educational Opportunity • 1
Title IX/ADA/504 Coordinators • 1
Disability (Section 504/ADA) • 1
Gender (Title IX) • 1
Accreditation • 2
The Nature and Purpose of Graduate Work • 2
Graduate Degrees • 2
Fields of Study • 3
Ad Hoc Interdisciplinary Doctoral Program • 4
Dual Degree Programs • 4
Combined JD/PhD Programs • 5
Graduate Portfolio Programs • 6
Libraries and Other Academic Resources • 6
The University Libraries • 6
Other Libraries in Austin • 7
Research Facilities • 7
Information Technology Services • 8
Cooperative Consortium Program • 8
Cooperative Degree Programs • 8
Financial Aid • 8
Fellowships • 8
Assistantships • 8
Additional Financial Aid and Deadlines for Financial Aid • 9
Student Services • 9
Graduate Student Assembly • 9
Student Responsibility • 9

2. Admission and Registration

Admission • 11
Admission Requirements • 11
Admission Tests • 12
Graduate School Select Admission Program • 12
Admission with Conditions • 12
Admission as a Nondegree Student • 12
Applying for Admission • 13

3. Degree Requirements

Limitation for Faculty • 18
Grade Point Average • 18
Graduate Credit • 18
Courses Taken in Residence • 18
Transfer of Credit • 18
Extension Credit • 19
Correspondence Credit • 19
Credit by Examination • 19
Enrollment of Undergraduates in Graduate Courses • 19
Use of the Course 398T on the Program of Work • 20
Courses Counted toward Another Degree • 20
Continuous Registration • 20
Leave of Absence • 21
Application to Another Graduate Major (Change of Major) • 21
Warning Status, Academic Dismissal, and Termination • 21
Time Limits • 21
The Master’s Degree • 22
Prerequisites • 22
Supervising Committee • 22
Options • 22
The Doctor of Philosophy • 23
Course Requirements • 23
Foreign Language Requirement • 24
Graduate Studies Committee Requirements • 24
Admission to Candidacy • 24
International Students • 13
Enrollment Deposit • 14
Readmission • 14
Exchange Students • 14
Registration • 14
Registration for New Graduate Students • 14
Late Registration • 14
Registration for Continuing Graduate Students • 15
Registration Following Graduation • 15
Course Load • 15
In Absentia Registration • 16
Adding and Dropping Courses • 16
Evaluation • 17
Withdrawal from the University • 17
The Dissertation Committee • 24
The Dissertation • 24
Review of Progress • 25
Final Oral Examination (Defense of Dissertation) • 25
Submission and Publication of the Dissertation • 25
Approval of the Degree • 25
The Doctor of Education • 26
Admission • 26
Admission to Candidacy • 26
The Doctor of Audiology • 26
The Doctor of Musical Arts • 26
Graduation • 27
Graduation under a Particular Catalog • 27
Procedures of Graduation • 27
Other Components of the University of Texas System • 28

4. Fields of Study

School of Architecture • 29
Architecture • 29
Community and Regional Planning • 36
Interior Design • 40
Landscape Architecture • 43

Red McCombs School of Business • 48
Business Administration • 48
Accounting • 54
Business, Government, and Society • 59
Finance • 61
Information, Risk, and Operations Management • 64
Legal Environment of Business • 70
Management • 72
Marketing • 74
Technology Commercialization • 78

College of Communication • 80
Communication • 80
Advertising • 82
Communication Sciences and Disorders • 84
Communication Studies • 89
Journalism • 94
Public Relations • 97
Radio-Television-Film • 98

College of Education • 103
Education • 103
Curriculum and Instruction • 104
Educational Administration • 112
Educational Psychology • 119
Foreign Language Education • 127
Kinesiology and Health Education • 129
Science Education / Mathematics Education • 136
Special Education • 139

Cockrell School of Engineering • 148
Engineering • 148
Aerospace Engineering • 149
Architectural Engineering • 154
Biomedical Engineering • 157
Chemical Engineering • 165
Civil Engineering • 169
Electrical and Computer Engineering • 186
Engineering Management • 198
Engineering Mechanics • 200
Materials Science and Engineering • 204
Mechanical Engineering • 211
Operations Research and Industrial Engineering • 224
Petroleum Engineering • 229

College of Fine Arts • 233
Fine Arts • 233
Art Education • 235
Art History • 237
Design • 240
Music • 242
Studio Art • 248
Theatre and Dance • 250

John A. and Katherine G. Jackson School of Geosciences • 256
Energy and Earth Resources • 256
Geological Sciences • 258

School of Information • 268
Information Studies • 268

College of Liberal Arts • 279
African and African Diaspora Studies • 279
American Studies • 281
Anthropology • 284
Asian Studies • 288
Classics • 296
Cognitive Science • 299
Comparative Literature • 300
Economics • 303
English • 307
European Studies • 310
French and Italian • 311
Geography • 315
Germanic Studies • 321
Government • 324
History • 328
Latin American Studies • 332
Linguistics • 336
Medieval Studies • 340
Mexican American Studies • 340
Middle Eastern Studies • 342
Philosophy • 352
Psychology • 354
Religious Studies • 360
Russian, East European, and Eurasian Studies • 363
Science, Technology, and Society • 365
Slavic Languages and Literatures • 365
Sociology • 368
Spanish and Portuguese • 377
Women’s and Gender Studies • 381

**College of Natural Sciences** 385
Astronomy • 385
Biochemistry • 389
Biological Sciences • 391
Ecology, Evolution, and Behavior • 392
Microbiology • 393
Plant Biology • 394
Cell and Molecular Biology • 402
Chemistry • 406
Computer Science • 410
Human Development and Family Sciences • 416
Human Ecology • 419
Marine Science • 419
Mathematics • 423

Neuroscience • 428
Nutritional Sciences • 432
Physics • 435
Statistics • 440
Textile and Apparel Technology • 445
UTEACH—Natural Sciences • 447

**School of Nursing** 448

**College of Pharmacy** 465
Pharmacy • 465
Translational Science • 474

**Lyndon B. Johnson School of Public Affairs** 477

**School of Social Work** 483

**Intercollegial Programs** 489
Computational Science, Engineering, and Mathematics • 489
Graduate Studies • 494
Writing • 495

**English as a Second Language** 497

5. **Members of Graduate Studies Committees** 498

**Appendix: Course Abbreviations** 556
1. Graduate Study

The University of Texas at Austin, established in 1883, is a major research institution. It is the largest member of The University of Texas System. The University has grown from one building, two departments, eight faculty members, and 221 students on a forty-acre tract to a campus of more than 350 acres, with more than 110 buildings. The enrollment is about fifty thousand.

The faculty includes Pulitzer Prize and Nobel Prize winners and members of the National Academy of Sciences, the National Academy of Engineering, and the American Academy of Arts and Sciences. The University awards one of the largest number of doctoral degrees in the United States and is one of three southwestern members of the Association of American Universities.

The Graduate School was established in 1910 as the Graduate Department, but the first master’s degree was awarded in 1886. The first doctoral degree was awarded in 1915. More than eleven thousand graduate students are now enrolled, and more than eight hundred doctoral degrees and twenty-eight hundred master’s degrees are awarded each year.

The administration of the Graduate School (which does not include the School of Law) is the responsibility of the vice provost and dean of graduate studies. Graduate degrees are available in about a hundred fields. Each academic area that offers a graduate degree has a Graduate Studies Committee, a group consisting of all the assistant, associate, and full professors who are active in that graduate degree program. The Graduate Studies Committee recommends students for admission to the program, sets program-specific requirements for the graduate degrees in that area, and recommends students for admission to candidacy for degrees. Graduate education is the responsibility of the members of Graduate Studies Committees. One member serves as the graduate adviser to register and advise all graduate students, to maintain records, and to represent the Graduate School in matters pertaining to graduate work in that area.

STATEMENT ON EQUAL EDUCATIONAL OPPORTUNITY

The University of Texas at Austin is committed to an educational and working environment that provides equal opportunity to all members of the University community. In accordance with federal and state law, the University prohibits unlawful discrimination on the basis of race, color, religion, national origin, gender, age, disability, citizenship, and veteran status. Discrimination on the basis of sexual orientation is also prohibited pursuant to University policy.

TITLE IX/ADA/504 COORDINATORS

Federal law prohibits discrimination on the basis of gender (Title IX of the Education Amendments of 1972) and disability (Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990). The University has designated the following persons as Coordinators to monitor compliance with these statutes and to resolve complaints of discrimination based on gender or disability.

DISABILITY (SECTION 504/ADA)

For students and employees: Linda Millstone, Deputy to the Vice President for Diversity and Community Engagement and Director of Equal Opportunity Services, NOA 4.302 (101 East 27th Street), (512) 471-1849

GENDER (TITLE IX)

For students: Soncia Reagins-Lilly, Senior Associate Vice President for Student Affairs and Dean of Students, SSB 4.104 (100-B West Dean Keeton Street), (512) 471-1201

For employees: Linda Millstone, Deputy to the Vice President for Diversity and Community Engagement and Director of Equal Opportunity Services, NOA 4.302 (101 East 27th Street), (512) 471-1849

STUDENT UNION EXEMPTED
ACCREDITATION

The University of Texas at Austin is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelor’s, master’s, first-professional, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, GA 30033-4033 or call (404) 679-4500 for questions about the accreditation of the University of Texas at Austin.

THE NATURE AND PURPOSE OF GRADUATE WORK

Graduate work at the University is divided into disciplines. These are normally associated with departments; they may, however, be broader in scope, involving courses and research in several departments. The candidate for an advanced degree presents work done in a chosen major area, but usually he or she is also expected to have done supporting work on an advanced level (upper-division or graduate) in one or more relevant areas. There are three components of graduate study: coursework, independent study, and independent scholarly research leading to a report, thesis, recital, dissertation, or treatise. In some areas, internships, field studies, and other professional experiences may also be an integral part of the program. The proportion of each type of study varies according to the previous training of the student and the nature of the major area.

The objective of graduate study is to develop the intellectual breadth and to provide the specialized training necessary to a career in teaching, research, the arts, or the professions. Emphasis is placed on the knowledge, methods, and skills needed for scholarly teaching, original research and problem solving, intellectual leadership, creative expression, and other modes of achievement in the student’s discipline.

GRADUATE DEGREES

The Graduate School offers the following degrees.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Arts</td>
<td>MA</td>
</tr>
<tr>
<td>Master of Architecture</td>
<td>MArch</td>
</tr>
<tr>
<td>Master of Business Administration</td>
<td>MBA</td>
</tr>
<tr>
<td>Master of Education</td>
<td>MEd</td>
</tr>
<tr>
<td>Master of Fine Arts</td>
<td>MFA</td>
</tr>
<tr>
<td>Master of Global Policy Studies</td>
<td>MGlobalPolStds</td>
</tr>
<tr>
<td>Master of Interior Design</td>
<td>MId</td>
</tr>
<tr>
<td>Master of Landscape Architecture</td>
<td>MLA</td>
</tr>
<tr>
<td>Master of Music</td>
<td>MMusic</td>
</tr>
<tr>
<td>Master in Professional Accounting</td>
<td>MPA</td>
</tr>
<tr>
<td>Master of Public Affairs</td>
<td>MPAff</td>
</tr>
<tr>
<td>Master of Science in Accounting</td>
<td>MSAcc</td>
</tr>
<tr>
<td>Master of Science in Applied Physics</td>
<td>MSApplPhy</td>
</tr>
<tr>
<td>Master of Science in Architectural Studies</td>
<td>MSArchSt</td>
</tr>
<tr>
<td>Master of Science in Community and Regional Planning</td>
<td>MSCRIP</td>
</tr>
<tr>
<td>Master of Science in Computational Science, Engineering, and Mathematics</td>
<td>MSCSEM</td>
</tr>
<tr>
<td>Master of Science in Computer Science</td>
<td>MSCompSci</td>
</tr>
<tr>
<td>Master of Science in Economics</td>
<td>MS Econ</td>
</tr>
<tr>
<td>Master of Science in Engineering</td>
<td>MSE</td>
</tr>
<tr>
<td>Master of Science in Finance</td>
<td>MSFin</td>
</tr>
<tr>
<td>Master of Science in Geological Sciences</td>
<td>MSGeoSci</td>
</tr>
<tr>
<td>Master of Science in Health Education</td>
<td>MSHealthEd</td>
</tr>
<tr>
<td>Master of Science in Historic Preservation</td>
<td>MSHP</td>
</tr>
<tr>
<td>Master of Science in Information, Risk, and Operations Management</td>
<td>MSIOROM</td>
</tr>
<tr>
<td>Master of Science in Information Studies</td>
<td>MSInfoStds</td>
</tr>
<tr>
<td>Master of Science in Kinesiology</td>
<td>MSkin</td>
</tr>
<tr>
<td>Master of Science in Management</td>
<td>MSMan</td>
</tr>
<tr>
<td>Master of Science in Marine Science</td>
<td>MSMarineSci</td>
</tr>
<tr>
<td>Master of Science in Marketing</td>
<td>MS Mkt</td>
</tr>
<tr>
<td>Master of Science in Neurosciences</td>
<td>MS Neurosci</td>
</tr>
<tr>
<td>Master of Science in Nursing</td>
<td>MSN</td>
</tr>
<tr>
<td>Master of Science in Pharmacy</td>
<td>MSPPhr</td>
</tr>
<tr>
<td>Master of Science in Social Work</td>
<td>MS SocialWk</td>
</tr>
<tr>
<td>Master of Science in Statistics</td>
<td>MSStat</td>
</tr>
<tr>
<td>Master of Science in Sustainable Design</td>
<td>MSSD</td>
</tr>
<tr>
<td>Master of Science in Technology Commercialization</td>
<td>MSTC</td>
</tr>
<tr>
<td>Master of Science in Textile and Apparel Technology</td>
<td>MSTAT</td>
</tr>
<tr>
<td>Master of Science in Urban Design</td>
<td>MSUD</td>
</tr>
<tr>
<td>Doctor of Audiology</td>
<td>AuD</td>
</tr>
</tbody>
</table>
Doctor of Education EdD  
Doctor of Musical Arts DMA  
Doctor of Philosophy PhD

FIELDS OF STUDY

Graduate degrees are offered in the following fields. A complete list of fields in which graduate courses are taught is given in the appendix.

SCHOOL OF ARCHITECTURE

Architecture MArch, PhD  
Architectural history MA  
Architectural studies MSArchSt  
Community and regional planning MSCR, PhD  
Historic preservation MSHP  
Interior design MID  
Landscape architecture MLA  
Sustainable design MSSD  
Urban design MSUD

RED McCOMBS SCHOOL OF BUSINESS

Business administration MBA  
Accounting MPA, MSAcc, PhD  
Finance MSFin, PhD  
Information, risk, and operations management MSIROM, PhD  
Management MSMAn, PhD  
Marketing MSMkt, PhD  
Technology commercialization MSTC

COLLEGE OF COMMUNICATION

Advertising MA, PhD  
Communication sciences and disorders MA, AuD, PhD  
Communication studies MA, PhD  
Journalism MA, PhD  
Radio-television-film MA, MFA, PhD

COLLEGE OF EDUCATION

Curriculum and instruction MA, MEd, EdD, PhD  
Educational administration MEd, EdD, PhD  
Educational psychology MA, MEd, PhD  
Foreign language education MA, PhD  
Health education MEd, MSHealthEd, EdD, PhD  
Kinesiology MEd, MSKIn, EdD, PhD  
Mathematics education MA, MEd, PhD  
Science education MA, MEd, PhD  
Special education MA, MEd, EdD, PhD

COCKRELL SCHOOL OF ENGINEERING

Aerospace engineering MSE, PhD  
Architectural engineering MSE  
Biomedical engineering MSE, PhD  
Chemical engineering MSE, PhD  
Civil engineering MSE, PhD  
Electrical and computer engineering MSE, PhD  
Engineering management MSE  
Engineering mechanics MSE, PhD  
Environmental and water resources engineering MSE  
Materials science and engineering MSE, PhD  
Mechanical engineering MSE, PhD  
Operations research and industrial engineering MSE, PhD  
Petroleum engineering MSE, PhD

COLLEGE OF FINE ARTS

Art education MA  
Art history MA, PhD  
Dance MFA  
Design MFA  
Music MMusic, DMA, PhD  
Studio art MFA  
Theatre MA, MFA, PhD

JOHN A. AND KATHERINE G. JACKSON SCHOOL OF GEOSCIENCES

Energy and earth resources MA  
Geological sciences MA, MSGeoSci, PhD

SCHOOL OF INFORMATION

Information studies MSIInfoStds, PhD

COLLEGE OF LIBERAL ARTS

African and African Diaspora studies MA, PhD  
American studies MA, PhD  
Anthropology MA, PhD  
Asian cultures and languages MA, PhD  
Asian studies MA  
Classics MA, PhD  
Comparative literature MA, PhD  
Creative writing MFA  
Economics MA, MSEcon, PhD  
English MA, PhD  
French MA, PhD  
Geography MA, PhD  
Germanic studies MA, PhD  
Government MA, PhD  
History MA, PhD  
Italian studies MA, PhD

1. Pending final approval.
Students admitted to established academic programs may propose to construct an ad hoc interdisciplinary doctoral program that draws on the intellectual resources of several graduate programs and involves faculty members from more than one college or school. This procedure allows students who have been admitted to a graduate program to design a course of study that does not fit into an existing degree plan. Each program must be approved by the graduate dean.

Students interested in the ad hoc interdisciplinary doctoral program should consult the graduate adviser of the program to which they are admitted or to which they plan to apply. Additional information is available from the Office of Graduate Studies and at http://www.utexas.edu/ogs/admissions/adhoc/guidelines.html.

**DUAL DEGREE PROGRAMS**

Dual degree programs are structured so that a student can pursue graduate work at the University in two fields and fulfill the requirements of two degrees; in programs leading to two master’s degrees, the degrees are awarded simultaneously. To enter a dual program, the student must be accepted by both of the individual programs. Students who wish to enter a dual program that involves the JD degree should contact the Admissions Office in the School of Law first. Dual programs are offered in the following fields.

<table>
<thead>
<tr>
<th>Field 1</th>
<th>Field 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising/Business administration</td>
<td>MA/MBA</td>
</tr>
<tr>
<td>Advertising/Public affairs</td>
<td>MA/MPAff</td>
</tr>
<tr>
<td>Asian studies/Business administration</td>
<td>MA/MBA</td>
</tr>
<tr>
<td>Asian studies/Public affairs</td>
<td>MA/MPAff</td>
</tr>
<tr>
<td>Business administration/</td>
<td></td>
</tr>
<tr>
<td>Energy and Earth resources</td>
<td>MBA/MA</td>
</tr>
<tr>
<td>Communication studies/</td>
<td></td>
</tr>
<tr>
<td>Business administration</td>
<td></td>
</tr>
<tr>
<td>Communication studies/</td>
<td></td>
</tr>
<tr>
<td>Latin American studies</td>
<td>MA/MA</td>
</tr>
<tr>
<td>Communication studies/Public affairs</td>
<td>MA/MA</td>
</tr>
</tbody>
</table>

1. Pending final approval.
Community and regional planning/Geography MScRP/PhD
Community and regional planning/Sustainable design MScRP/MSSD
Community and regional planning/Urban design MScRP/MSUD
Global policy studies/Asian studies MGlobalPolStds/MA
Global policy studies/Business administration MGlobalPolStds/MBA
Global policy studies/Energy and earth resources MGlobalPolStds/MA
Global policy studies/Journalism MGlobalPolStds/MA
Global policy studies/Latin American studies MGlobalPolStds/MA
Global policy studies/Middle Eastern studies MGlobalPolStds/MA
Global policy studies/Russian, East European, and Eurasian studies MGlobalPolStds/MA
Information studies/Latin American studies MSinfoStds/MA
Journalism/Business administration MA/MBA
Journalism/Latin American studies MA/MA
Journalism/Middle Eastern studies MA/MA
Journalism/Public affairs MA/MPAff
Latin American studies/Business administration MA/MBA
Latin American studies/Community and regional planning MA/MScRP
Latin American studies/Law MA/JD
Latin American studies/Public affairs MA/MPAff
Law/Business administration JD/MBA
Law/Community and regional planning JD/MScRP
Law/Global policy studies JD/MGlobalPolStds
Law/Information studies JD/MSinfoStds
Law/Middle Eastern studies JD/MA
Law/Public affairs JD/MPAff
Law/Russian, East European, and Eurasian studies JD/MA
Law/Social work JD/MSSW
Mechanical engineering/Business administration MSE/MA
Middle Eastern studies/Business administration MA/MA
Middle Eastern studies/Information studies MA/MSinfoStds
Middle Eastern studies/Public affairs MA/MPAff
Nursing/Business administration MSN/MBA
Public affairs/Business administration MPAff/MBA
Public affairs/Civil Engineering MPAff/MSE

Public affairs/Community and regional planning MPAff/MScRP
Public affairs/Energy and earth resources MPAff/MA
Public affairs/Social work MPAff/MSSW
Radio-television-film/Business administration MA/MBA
Radio-television-film/Latin American studies MA/MA
Radio-television-film/Middle Eastern studies MA/MA
Radio-television-film/Public affairs MA/MPAff
Radio-television-film/Russian, East European, and Eurasian studies MA/MA
Russian, East European, and Eurasian studies/Business administration MA/MA
Russian, East European, and Eurasian studies/Public affairs MA/MPAff
Women’s and gender studies/Information studies MA/MSinfoStds
Women’s and gender studies/Public affairs MA/MPAff

**Dual degree programs with other institutions.** The dual degree programs listed above lead to two University degrees; in other programs, students pursue degrees from the University and from another school at the same time. Dual degree programs in biomedical engineering, chemistry, biochemistry, cell and molecular biology, and neuroscience allow students to pursue both a Doctor of Philosophy degree from the University and a Doctor of Medicine degree from the University of Texas Medical Branch at Galveston. A dual degree program in business administration allows students to pursue a Master of Business Administration degree from the University and the degree of Master of Administration from Tecnológico de Monterrey-Campus Sante Fe. A dual degree program between the University’s School of Social Work and the Austin Presbyterian Theological Seminary allows students to earn the Master of Science in Social Work from the University and the Master of Divinity from the seminary simultaneously. The University’s School of Social Work also offers a dual degree program with the University of Texas Health Science Center at Houston School of Public Health leading to the Master of Science in Social Work from the University and the Master of Public Health from the center.

**COMBINED JD/PHD PROGRAMS**

The School of Law and the Graduate School offer programs leading to the Doctor of Jurisprudence and the Doctor of Philosophy with a major in government or philosophy. These programs are designed to prepare
students for academic careers in law or the cognate discipline or both. By counting law courses toward the PhD and courses in the cognate discipline toward the JD, students can save up to a year of coursework. The law school provides financial aid to students at the dissertation stage of the program. More information on the JD/PhD in government is available at (512) 471-5121, and on the JD/PhD in philosophy at http://www.utexas.edu/law/academics/curriculum/philosophy/.

GRADUATE PORTFOLIO PROGRAMS

The goal of graduate portfolio programs is to recognize and encourage cross-disciplinary research and scholarly activity. A portfolio program usually consists of four thematically related graduate courses and a research paper, presentation, or practical experience. The portfolio must include courses offered by at least two graduate programs other than the student’s major program. Portfolio programs are approved by the Graduate School. Although the certification requirements of each program are independent of the requirements for graduate degrees, courses included in the Program of Work may, with appropriate approval, be counted toward certification. Upon completion of both degree and portfolio program requirements, the student’s University transcript reflects portfolio certification.

Graduate portfolio programs are available in the following areas:
- African and African American studies
- Applied statistical modeling
- Arts and cultural management and entrepreneurship
- Cellular and molecular imaging for diagnostics and therapeutics
- Communication, information, and cultural policy
- Cultural studies
- Disability studies
- Dispute resolution
- Gerontology
- Imaging science
- Integrated watershed science
- Interdisciplinary European studies
- Mexican American studies
- Molecular biophysics
- Museum studies
- Nanoscience and nanotechnology
- Native American and indigenous studies
- Nonprofit studies
- Religious studies
- Romance linguistics
- Scientific computation
- Societal impacts of science and technology
- Sustainability
- Women’s and gender studies

Information about portfolio programs is available from the Office of Graduate Studies and at http://www.utexas.edu/ogs/docport/.

LIBRARIES AND OTHER ACADEMIC RESOURCES

THE UNIVERSITY LIBRARIES

The libraries of the University are a resource center for Texas and the Southwest, as well as a national resource center for library materials on Latin America, Texas, the history of the American South and West, and nineteenth- and twentieth-century British, French, and American literature. Libraries include the University of Texas Libraries, the Dolph Briscoe Center for American History, the Harry Ransom Humanities Research Center, and the Joseph D. Jamail Center for Legal Research: Tarlton Law Library. The University of Texas Libraries are the Perry-Castañeda Library, the Nettie Lee Benson Latin American Collection, the Audio Visual Library, six science and technology libraries, and several other branch and special collections.

The University Libraries Web site, http://www.lib.utexas.edu/, serves as the gateway to an array of online information resources. These include the online library catalog, http://catalog.lib.utexas.edu/, which provides information on most items located in the collections of the University of Texas Libraries, the Dolph Briscoe Center for American History, and the Humanities Research Center, and a partial listing for items in the Law Library. The University Libraries Web site also offers access to millions of pages of specially licensed scholarly information, including the full text of articles and illustrations from thousands of journals, the full text of about eighty thousand books in electronic format, several hundred indexes, and an extensive online map collection. A variety of library services are also available online.

Detailed information about the University Libraries is given in General Information.
PERRY-CASTAÑEDA LIBRARY

This six-level open stack library contains more than 2.5 million volumes and is the main library of the University. It serves most subject areas but emphasizes the humanities; the social sciences; business; education; nursing; social work; and European, East European, Asian, Middle Eastern, Hebraic, and Judaic studies. Special materials include United States and United Nations official documents, current journals, and newspapers. On-site reference service is offered, and graduate students may consult subject bibliographers to identify useful resources and gain access to them.

DOLPH BRISCOE CENTER FOR AMERICAN HISTORY

The Dolph Briscoe Center for American History is a special collections library, archive, and museum that facilitates research and sponsors programs on the historical development of the United States. The center supports research and education by acquiring and preserving research collections and making them accessible and by sponsoring exhibitions, conferences, fellowships, and grant-funded initiatives. Research collection strengths are the history of Texas, the South, the Southwest, and the Rocky Mountain West, congressional history, and other specific national topics. More information is given in General Information.

HARRY RANSOM CENTER

The Harry Ransom Center is one of the world’s foremost institutions for literary and cultural research. It offers resources in a number of disciplines and periods, but its principal strength is in its collections of twentieth-century British, American, and French literature. The center houses about a million books, thirty million manuscripts, five million photographs, and more than one hundred thousand works of art. Additional information is given in General Information and at http://www.hrc.utexas.edu/.

LAW LIBRARY

The Joseph D. Jamail Center for Legal Research: Tarlton Law Library is one of the largest academic law libraries in the country, with more than a million volumes of codes, statutes, court decisions, administrative regulations, periodicals, textbooks, and treatises on law and related fields. It offers a strong collection of foreign and international legal materials.

More information is given in General Information.

SPECIAL COLLECTIONS AND BRANCH LIBRARIES

The Nettie Lee Benson Latin American Collection, an internationally recognized resource for research in Latin American and United States Latino studies, contains more than a million volumes of books, pamphlets, and journals, in addition to extensive collections of manuscripts, maps, newspapers, photographs, recordings, and microfilm. It includes materials on any subject related to Latin America or written by a Latin American, regardless of language.

The branch libraries are the Architecture and Planning Library (including the Alexander Architectural Archive), the Mallet Chemistry Library, the Classics Library, the McKinney Engineering Library, the Fine Arts Library, the Walter Geology Library, the Life Science Library, the Physics Mathematics Astronomy Library, and the Marine Science Library in Port Aransas. Reference, circulation, and reserves services are available at all branch libraries.

OTHER LIBRARIES IN AUSTIN

The Lyndon Baines Johnson Library and Museum, located on campus, is operated by the National Archives and Records Administration. This library is a valuable resource for the study of the twentieth century. Faculty members and students also have access to other public and private libraries in the Austin area, including several special-interest libraries.

RESEARCH FACILITIES

The University offers some of the most extensive university research facilities in the United States. There are more than a hundred organized research units on campus and many other informally organized laboratories; they give graduate students the opportunity to conduct laboratory and field research in almost all fields of study. Internships are also offered in many fields. Facilities associated with specific degree programs are described in chapter 4.
INFORMATION TECHNOLOGY SERVICES

Information Technology Services (http://www.utexas.edu/its/) supports the University’s academic and research programs by providing an information-technology–based environment, technological capabilities, and a staff to assist students, faculty and staff members, academic departments, and research centers with their learning, teaching, research, and outreach activities. Information Technology Services (ITS) provides the University’s core computing, wired and wireless networking, videoconferencing, satellite conferencing, network directory, domain name, and information processing infrastructure, as well as a broad range of services and support programs.

The facilities and services provided by ITS are described in General Information. Many academic units support additional information technology resources; these are described in chapter 4 of this catalog.

COOPERATIVE CONSORTIUM PROGRAM

A cooperative arrangement between The University of Texas System and the Texas A&M University System allows a graduate student at one institution to use unique facilities or courses at the other institution with a minimum of paperwork. The graduate student registers and pays fees at the home institution and may retain any fellowship or financial assistance awarded by it. Space must be readily available, and the instructor or laboratory director of the proposed work must consent to the arrangement. Approval must be given by the graduate dean of each institution.

A similar arrangement among component institutions of The University of Texas System has been authorized by the chancellor and the Board of Regents. The University has active arrangements with the University of Texas Health Science Center at Houston, the University of Texas M.D. Anderson Science Park in Bastrop County, and the University of Texas Medical Branch at Galveston.

COOPERATIVE DEGREE PROGRAMS

With appropriate approval, the University of Texas at Austin and another component of The University of Texas System may enter into a cooperative agreement in which one component serves as the degree-granting institution while some or all of the courses in the degree program are taught at the other component. The component that grants the degree is the “sponsoring” institution. A student who enters such a cooperative program is admitted on the understanding that institutional sponsorship of the program may change during the student’s enrollment. The student’s continuation in the program will not be affected by such a transfer of sponsorship, but the student will become subject to the policies and procedures of the new sponsoring institution, which may differ from those of the original sponsor. The student will receive his or her degree from the component that sponsors the program at the time of the student’s graduation.

FINANCIAL AID

FELLOWSHIPS

University fellowships, which are administered through the Graduate School, are awarded to both new and continuing graduate students in most academic areas. Students must be nominated by their graduate advisers for any fellowship administered by the Graduate School. Additional information on University fellowships is published by the Office of Graduate Studies at http://www.utexas.edu/ogs/funding/fellowships/.

University recruiting fellowships for entering graduate students are awarded on the basis of scholastic excellence and adequate preparation for graduate study in the student’s chosen field, as shown by his or her academic record and letters of recommendation. University fellowships for continuing students are awarded on the basis of the student’s record since entering the Graduate School, including performance in relevant coursework and research or creative activity, letters of recommendation from University faculty members, and the endorsement of the graduate adviser; financial need is also considered. There are additional specific qualifications for many of the competitive fellowships awarded by the University and by graduate programs. Generally, fellowships require no service from the recipient. Major fellowships provide for payment of nearly all tuition in addition to the stipend.

ASSISTANTSHIPS

Various teaching, research, and academic assistantships are awarded by the departments. These appointments require specific service. Nonresidents and international students who hold assistantships of at
least twenty hours a week may pay resident tuition if the assistantship duties are related to the student’s degree program. An applicant may indicate on the admission application that he or she would like to be considered by the graduate program for a teaching assistantship or a research assistantship. Enrolled students should apply directly to the department in which they would serve.

**ADDITIONAL FINANCIAL AID AND DEADLINES FOR FINANCIAL AID**

The Office of Student Financial Services offers financial assistance in the form of gift aid, which includes grants and scholarships, and self-help aid, which includes student employment programs and long-term loans. To apply for these programs, all applicants are encouraged to complete the Free Application for Federal Student Aid (FAFSA). More information about these programs and deadlines for filing the FAFSA are published by Student Financial Services at http://finaid.utexas.edu/. Information is also available by mail from The University of Texas at Austin, Office of Student Financial Services, P O Box 7758, Austin TX 78713-7758.

Individual graduate programs may also offer financial assistance to their students. For more information about these programs and deadlines for applying to them, applicants should contact the graduate program of interest. Financial aid decisions are made soon after program application deadlines, and applicants whose materials have not been received may not be given full consideration.

**STUDENT SERVICES**

In addition to student services provided by the Office of Graduate Studies, support services for students are provided by several other offices, including the Division of Housing and Food Service; University Health Services; the Counseling and Mental Health Center; and Parking and Transportation Services. The functions of these and similar offices are described in General Information.

Graduate students are represented on campus and in the community by the Graduate Student Assembly, described below. In addition, there are social and professional groups for graduate students in most fields of study, and hundreds of registered student organizations that are open to undergraduates and graduate students.

**GRADUATE STUDENT ASSEMBLY**

The Graduate Student Assembly (GSA) has been the official representative body for graduate students since 1994. Other groups, including the Council of Graduate Students, represented graduate students between 1968 and 1994. GSA addresses issues that are important to its constituents, not only as students but also as teaching assistants, research assistants, and assistant instructors. GSA reports administratively to the vice provost and dean of graduate studies. Administrative expenses are funded through an allocation from students’ tuition.

The objectives of GSA are to represent the views of graduate students to the University community and the community at large; to facilitate graduate student communication and interaction; to gather and disseminate information pertinent to graduate students; to conduct activities that promote the general welfare of graduate students; and to provide a means of assisting in the selection of graduate student members of departmental, college, and University bodies.

More information about GSA, including contact information for officers, current representatives, meeting agendas and minutes, and current and past activities, is available at http://www.utgraduatestudentassembly.org/index.php.

**STUDENT RESPONSIBILITY**

While University faculty and staff members give students academic advice and assistance, each student is expected to take responsibility for his or her education and personal development. The student must know and abide by the academic and disciplinary policies given in this catalog and in General Information, including rules governing quantity of work, the standard of work required to continue in the University, warning status and scholastic dismissal, and enforced withdrawal. The student must also know and meet the requirements of his or her degree program; must enroll in courses appropriate to the program; must meet prerequisites and take courses in the proper sequence to ensure orderly and timely progress; and must seek advice about degree requirements and other University policies when necessary.

The student must give correct local and permanent postal addresses, telephone numbers, and e-mail address to the Office of the Registrar and must notify this office immediately of any changes. Official cor-
The student must register by the deadlines given in the Course Schedule and must verify his or her schedule of classes each semester, must see that necessary corrections are made, and must keep documentation of all schedule changes and other transactions.

Students should be familiar with the following sources of information:

**University catalogs.** General Information gives important information about academic policies and procedures that apply to all students. It includes the official academic calendar, admission procedures, residence requirements, information about tuition and fees, and policies on quantity of work, grades and the grade point average, adding and dropping courses, and withdrawal from the University. This catalog also gives historical and current information about the University’s organization and physical facilities. It describes the services of the Division of Student Affairs and the libraries and research facilities that support the University’s academic programs.

The graduate catalog gives information about degrees offered by the Graduate School. It describes academic policies and procedures that apply to graduate students and lists courses and members of Graduate Studies Committees. The undergraduate catalog and the law school catalog give similar information about undergraduate programs and the programs of the School of Law.

Catalogs are available at http://registrar.utexas.edu/catalogs/index.html.

**The Course Schedule.** The Course Schedule is published by the Office of the Registrar and is available before registration for each semester and summer session at http://registrar.utexas.edu/schedules/index.html. The Course Schedule includes information about registration procedures; times, locations, instructors, prerequisites, and special fees of classes offered; and advising locations.

**The University Directory.** The printed University directory is distributed by Texas Student Media each fall. It gives physical and e-mail addresses and telephone numbers of University offices and of students and faculty and staff members. Current directory information is available online at http://www.utexas.edu/directory/.

**World Wide Web.** The address for the University’s home page on the World Wide Web is http://www.utexas.edu/. In addition to the publications described above, the Web site includes sites maintained by departments, colleges, graduate programs, museums, libraries, research units, and student-service offices.

**The Office of Graduate Studies** is the central source of information for graduate students. Doctoral and master’s degree evaluators provide information about procedures for submission of reports, theses, dissertations, and treatises, and the student services section assists with registration and related matters. Information for both prospective and current students is available at http://www.utexas.edu/ogs/.

**Graduate advisers, assistant graduate advisers, and graduate coordinators.** The graduate adviser for each program is a faculty member designated to advise students and represent the Graduate School in matters pertaining to graduate study. He or she provides information about the program, including admission and degree requirements, and about fellowships, teaching assistantships, and research assistantships. The assistant graduate adviser, also a faculty member, serves in the absence of the graduate adviser. The graduate coordinator, a staff member who assists the graduate adviser and other faculty members in the administration of the program, also provides services to students.
2. Admission and Registration

All students seeking admission to the Graduate School should consult the Graduate School’s admissions Web site, http://www.utexas.edu/ogs/admissions/, for information and application forms. The student must submit an official transcript from each senior-level college he or she has attended and official scores on the Graduate Record Examinations General Test (GRE) or Graduate Management Admission Test (GMAT). The applicant should consult the graduate adviser for the program to which he or she is applying to learn which test to take and to learn about additional material required by the program.

A nonrefundable processing fee is charged each applicant to the Graduate School, the McCombs School of Business, or the School of Law. Current fee amounts are given in General Information. Under certain circumstances, applicants to the Graduate School may be eligible for a waiver of the application fee; additional information about the fee waiver is available at http://www.utexas.edu/ogs/admissions/fee_waiver.html. Applicants may apply simultaneously to more than one graduate program; a fee will be charged for each application.

ADMISSION

ADMISSION REQUIREMENTS

General requirements for admission to the Graduate School are
1. A bachelor’s degree from a regionally accredited institution in the United States or a comparable degree from a foreign academic institution. The Graduate and International Admissions Center (GIAC) will determine eligibility for admission in consultation with prospective graduate programs.
2. A grade point average of at least 3.00 in upper-division (junior- and senior-level) coursework and in any graduate work already completed.
3. An official score on the Graduate Record Examinations General Test (GRE), unless otherwise specified by the graduate program to which the student is applying. The McCombs School of Business requires master’s and doctoral degree applicants to submit a satisfactory score on either the GRE or the Graduate Management Admission Test (GMAT). Applicants to dual or combined degree programs with the School of Law must submit a satisfactory score on the Law School Admission Test (LSAT) as well as on the GRE or GMAT.
4. Adequate subject preparation for the proposed major. Evidence of adequate preparation varies by program, but examples include letters of reference, auditions, samples of work, and personal statements.
5. A recommendation for acceptance by the Graduate Studies Committee for the proposed major area.

International students whose native language is not English must also submit scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Applicants should consult the graduate adviser for the program of interest to learn which test the program requires.

Applicants may apply simultaneously to more than one graduate program, but they may enroll in only one program, with the exception of applicants admitted to dual degree programs. All complete applications are forwarded to the Graduate Studies Committee(s) to which they are directed. Admission decisions are based on a careful review of all aspects of the applicant’s file. Scores on standardized tests such as the GRE are not the sole criterion for making an admission decision or ending consideration of the application. Each applicant's test scores are compared with those of other applicants of similar socioeconomic status. Information about admission criteria for each graduate program is available from the graduate adviser.

When there are more qualified applicants than can adequately be instructed by the faculty or accommodated in the facilities, the Graduate Studies Committee (GSC) for the proposed area may deny admission to students who have met the prescribed requirements. GSC admissions recommendations

---

1. Graduates of foreign institutions may be required to have a minimum score on an English-language-proficiency test such as the TOEFL or the IELTS.
to the graduate dean are final; there is no appeal. All admissions must be approved by the graduate dean. Applicants who feel that their grade point averages or test scores are not valid indicators of ability should explain their concerns in a letter to the graduate adviser of the program to which they are applying.

ADMISSION TESTS

The Graduate Record Examinations General Test (GRE), the Graduate Management Admission Test (GMAT), and the Test of English as a Foreign Language (TOEFL) are offered at testing centers throughout North America and at selected international sites. Current information about GRE and TOEFL test dates, locations, and registration procedures is published by the Educational Testing Service at http://www.ets.org/. Similar information about the GMAT is published by the Graduate Management Admission Council at http://www.gmac.com/gmac/thegmat/.

The International English Language Testing System (IELTS) is administered in more than 120 countries and is available off-site in additional countries. Information about IELTS test dates, locations, and procedures is published at http://www.ielts.org/.

Applicants to dual or combined programs with the School of Law must also take the Law School Admission Test (LSAT), administered by the Law School Admission Council. Information about the LSAT is published by the council at http://lsac.org/.

GRADUATE SCHOOL SELECT ADMISSION PROGRAM

The Graduate School Select Admission Program allows graduate programs to recommend academically outstanding University undergraduates for admission to seek a graduate degree. Students are normally nominated in the junior year, and programs are encouraged to limit their nominations each year to one or two outstanding undergraduates.

Nominations are forwarded to the Graduate School by the program’s graduate adviser or graduate admissions office with the recommendation of the Graduate Studies Committee. Undergraduate candidates may be extended an offer of admission and financial aid as early as the junior year, conditional upon completion of the baccalaureate degree. Application and transcript fees are waived; some graduate programs may waive submission of GRE scores. Admitted students may enroll in graduate courses at undergraduate tuition rates during the senior year and reserve the courses for graduate credit.

Additional information is available in the Office of Graduate Studies, from the graduate adviser of the nominating graduate program, and at http://www.utexas.edu/ogs/admissions/select.html.

ADMISSION WITH CONDITIONS

Almost all of the students who are admitted to the Graduate School have qualifications equal to or better than the minimum standards outlined on page 11.

However, a Graduate Studies Committee may recommend, with the consent of the graduate dean, that a student be admitted to the Graduate School with conditions. The Graduate Studies Committee may require the student to maintain a certain grade point average or to take a certain number of semester hours of coursework. A conditionally admitted student may also be required to remedy deficiencies in undergraduate preparation by taking upper-division or graduate courses. The graduate adviser notifies the student of these conditions at the time of admission. The Graduate Studies Committee petitions the graduate dean for removal of conditions once the conditions have been met. A student who does not fulfill the conditions within the specified time may be barred from subsequent registration in the Graduate School. If the student changes his or her major before the conditions have been fulfilled, the conditions remain in effect unless the graduate adviser for the new program, on behalf of the Graduate Studies Committee, petitions the graduate dean and receives approval for them to be changed.

Students admitted with conditions are not eligible to be teaching assistants, assistant instructors, graduate research assistants, academic assistants, assistants (graduate), or tutors (graduate) except under rare and unusual circumstances and with the approval of the graduate dean.

ADMISSION AS A NONDEGREE STUDENT

A person who would like to take graduate coursework without becoming a candidate for an advanced degree may apply for admission to a graduate program as a nondegree student. The applicant must submit an application and transcripts of all college coursework to the Graduate School; Graduate Record Examinations scores are not required. Admission must be recommended by the Graduate Studies Committee for the program and
Admission and Registration

Admission

Admission and registration approved by the graduate dean. Admission as a nondegree student is not available in all graduate programs. Enrollment as a nondegree student is normally limited to one year. Nondegree students are not eligible to be teaching assistants, assistant instructors, graduate research assistants, academic assistants, assistants (graduate), or tutors (graduate).

A graduate nondegree student who wishes to seek a graduate degree must submit the material described in “Applying for Admission” below by the program’s deadline and must pay the usual application fee. A degree-seeking student may petition to have applied to the master’s degree up to six semester hours of graduate credit earned while he or she was a graduate nondegree student.

Undergraduate nondegree students. With the approval of the instructor and the graduate adviser, an undergraduate nondegree student may take any graduate course for which he or she has met the prerequisite. The student will not receive credit toward a graduate degree for courses he or she takes as an undergraduate nondegree student.

Exchange students. A graduate student who is admitted to the University through a reciprocal exchange program is classified as a nondegree student and is subject to all policies affecting nondegree students. Additional information about the exchange student status is given on page 14.

APPLYING FOR ADMISSION

Application for admission to the Graduate School consists of submitting to the Graduate and International Admissions Center the official online application form, transcripts, test scores, and processing fees. Instructions and forms are available at the Graduate School’s admissions Web site, http://www.utexas.edu/ogs/admissions/. Students may also indicate their interest in assistantships and fellowships on the application form.

Each graduate program may require the submission of additional materials. These materials vary by program, but examples include letters of reference, auditions, samples of the student’s work, and personal statements. Information about required materials is available from the graduate adviser of each program.

Because graduate programs set their own application deadlines, the applicant must be sure to inquire about the deadline for the program to which he or she is applying. Many programs have deadlines as early as December 1 for the following summer session or fall semester, but some programs set different dates. Few graduate programs admit new students for the spring semester; those that do have deadlines no later than October 1. It is the applicant’s responsibility to meet the deadline set by the graduate program. A list of program deadlines is given at the Graduate School’s admissions Web site, http://www.utexas.edu/ogs/admissions/programs.html.

Applicants should also note that some programs grant admission only for the fall semester.

Deadlines for those seeking financial aid. Information about financial aid and financial aid deadlines is given on pages 8–9.

INTERNATIONAL STUDENTS

In addition to meeting the general requirements for admission, applicants whose native language is not English must demonstrate sufficient competence in English to study effectively at the University. These applicants are required to submit scores on either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) to the Graduate School. Information about TOEFL is published at http://www.ets.org/toefl/. Information about IELTS is published at http://www.ielts.org/.

Because transcripts from foreign universities require special evaluation, prospective international students are advised to submit their application forms, test scores, and transcripts well in advance of deadlines. Early submission gives the University enough time to process the application and gives the applicant enough time to obtain visas and make travel arrangements if admission is granted. A nonrefundable processing fee is required with each application for admission to the Graduate School, the McCombs School of Business, or the School of Law. All payments must be in US dollars and drawn on US banks. Current fee amounts are given in General Information.

International students must maintain approved comprehensive health insurance or coverage. The student’s registration bill includes the premium for the University health insurance policy, unless approval to substitute alternate, comparable coverage has been given by the International Office.
ENROLLMENT DEPOSIT

Some graduate programs require students to pay a nonrefundable enrollment deposit upon admission to indicate that they accept the offer of admission. The current amounts of these deposits are given in General Information. For students applying to dual degree programs, one deposit serves to confirm the student’s intention of enrolling in both programs. When both programs require deposits, only the higher fee is required. The deposit is applied to the payment of fees when the student enrolls. Students who demonstrate financial need may qualify for assistance to cover the deposit.

READMISSION

All graduate students are expected to enroll and pay tuition by the twelfth class day of the fall semester and the spring semester of each academic year until they graduate. A student who does not do so must apply for readmission in order to return to the University. He or she must submit an Application for Readmission to the Graduate School by the deadline given in General Information and must pay the general application fee. The fee is waived if the student has received an official leave of absence as described on page 21. The student must also obtain the approval of the graduate adviser in the program in which he or she was last enrolled. Readmission to a graduate program is not guaranteed. A former graduate student who was in good standing when he or she left the University is not required to submit official transcripts unless they are requested by the student’s graduate program.

To change to a different major, the student must submit an Application for Admission to Another Graduate Major to the Graduate School; for additional information, see the section “Application to Another Graduate Major (Change of Major)” on page 21.

EXCHANGE STUDENTS

A graduate student who is admitted to the University through a reciprocal exchange program is classified as a nondegree student. An exchange student may not register for more than two long-session semesters and one summer session. The transferability of academic credit to the student’s home institution is determined by the home institution.

An exchange student who wishes to take a graduate course must obtain the approval of the instructor and of the graduate adviser for the program that offers the course, must meet all course prerequisites, and must meet any other requirements affecting nondegree students. The rules that apply to nondegree students are given in General Information.

An exchange student may later apply for admission to the University as a degree-seeking graduate student. To do so, he or she must submit the usual test scores, application fee, and other required material by the appropriate deadline, as described in “Applying for Admission” on page 13. If the applicant is admitted, the Graduate Studies Committee may seek the graduate dean’s approval to include on the Program of Work for the master’s degree up to six hours of graduate coursework that the student completed as a nondegree exchange student. All requirements related to courses that may be counted toward graduate degrees apply, including rules concerning courses counted toward another degree.

REGISTRATION

University students register online for each semester and summer session. Complete information about the registration process is given in the Course Schedule.

REGISTRATION FOR NEW GRADUATE STUDENTS

Applicants are notified by e-mail of their admission or denial. Admitted applicants should notify their graduate advisers as soon as possible whether they plan to accept admission. Either in an interview or by correspondence, the admitted applicant should then learn the specific requirements of his or her graduate program. Students should consult the Course Schedule to learn whether advising before registration is required in their major area.

LATE REGISTRATION

The period of late registration is given in the Course Schedule. During this period, a student may register with the consent of the graduate adviser; a late fee is imposed. After this period, registration is permitted only under exceptional circumstances, upon recommendation of the graduate adviser, and with consent of the graduate dean and the registrar.
REGISTRATION FOR CONTINUING GRADUATE STUDENTS

Continuing graduate students should consult the Course Schedule to learn whether advising before registration is required in their major area.

To continue in the Graduate School beyond the first semester or summer session, the student must make satisfactory progress in fulfilling any admission conditions that were imposed, meet any requirements made in writing by the Graduate Studies Committee, maintain a graduate grade point average of at least 3.00, and receive the approval of the Graduate Studies Committee. For further information about grade requirements, see the section “Graduate Credit” on pages 18–20.

REGISTRATION FOLLOWING GRADUATION

Students who wish to continue enrollment beyond the semester in which their degree is awarded must be admitted as nondegree students or as degree-seeking students in a new degree program. Students must request a change of major or degree-seeking status from the Graduate School.

COURSE LOAD

MAXIMUM COURSE LOAD

The maximum course load for a graduate student is fifteen semester hours in a long-session semester or twelve semester hours in a twelve-week summer session. A heavier course load must have the recommendation of the graduate adviser and the approval of the graduate dean. It is permitted only under exceptional circumstances.

FULL-TIME COURSE LOAD

There is no minimum course load for graduate students; however, the Graduate School recognizes nine semester hours during a long-session semester and three hours during a summer session as a minimum full-time course load. Individual graduate programs may require more.

Agencies that grant loans or provide for educational funding may establish different definitions of full-time status. The student should be familiar with the regulations of any agency to which he or she has an obligation.

Under various circumstances, graduate students must register for and must remain registered for a full-time load. The definition of a full-time load that is used in each case is given below.

Holders of Graduate School–administered fellowships and scholarships: Nine hours each semester and three hours in the summer session (in any combination of summer-session terms).

Graduate student academic employees: Nine hours each semester and three hours in the summer session (in any combination of summer-session terms). A “graduate student academic employee” is a graduate student who is also employed by the University under one of the following titles: teaching assistant, assistant instructor, graduate research assistant, academic assistant, assistant (graduate), and tutor (graduate).

Students receiving certain student loans: Nine hours each semester and three hours in the summer session (in any combination of summer-session terms).

Students living in University housing should consult the Division of Housing and Food Service for course-load regulations.

International students: Nine hours each semester. An international student must consult with International Student Scholar Services and must have the written permission of his or her dean to take fewer than nine hours. No minimum load is required in the summer. Some approved courses in English as a second language do not carry University credit, but each course is considered the equivalent of a three-hour course for purposes of the course load requirement. Students may enroll in these courses with the approval of their graduate adviser.

Affiliated studies: Students enroll in affiliated studies (A S) when they participate in a study abroad program offered by an institution with which the University has an affiliation agreement. Students enrolled in affiliated studies are considered full-time students. More information about affiliated programs is given in General Information.
Admission and Registration

**International study and research:** Students may enroll in international study and research (ISR) when they conduct research or study independently abroad. A student enrolled in international study and research is considered a full-time student. Doctoral candidates may not use registration in ISR to circumvent the continuous registration requirement described on page 20. When a doctoral candidate receives approval to enroll in ISR, however, that enrollment is an acceptable substitute for registration in dissertation hours, except in the final semester, when enrollment in the dissertation writing course (-99W) is required. More information about international study and research is available from the Study Abroad Office.

**In Absentia Registration**

Students must be registered for the semester in which they graduate and must apply for graduation by the deadline published in the academic calendar. There are no exceptions to this policy for fall semester and spring semester graduation; a student who fails to complete all degree requirements or misses the deadline for acceptance of the thesis, report, recital, dissertation, or treatise must register and pay tuition the following semester or summer session in order to receive the degree.

An exception is made for students who apply to graduate in the summer session but miss the deadline for acceptance of the thesis, report, recital, dissertation, or treatise. In this case, the student will be registered in absentia for the fall semester, only for the purpose of receiving the degree, by degree evaluators in the Office of Graduate Studies. The thesis, report, recital, dissertation, or treatise must be accepted by the deadline for in absentia registration, which falls before the beginning of the following fall semester. The fee for in absentia registration is $25. The student will be registered in absentia only once.

**Adding and Dropping Courses**

Before classes begin, a student who has registered may add or drop a course online as described in the Course Schedule. The student may also add or drop a course online during the first four class days of a long-session semester. From the fifth through the twelfth class day, he or she may add or drop a course with the approval of his or her graduate adviser and of the department in which the course is given. After the twelfth class day, the student may add a course only under rare and extenuating circumstances approved by the graduate dean.

In each summer-session term, the student may add or drop a course online during the first two class days. On the third and fourth class days, he or she may add or drop a course with the approval of his or her graduate adviser and of the department in which the course is given. After the fourth class day, the student may add a course only under rare and extenuating circumstances approved by the graduate dean.

A student may drop a course with the required approvals through the last class day of a semester or summer term. He or she receives a refund for courses dropped by the twelfth class day of a long-session semester or by the fourth class day of a summer term. From the thirteenth through the twentieth class day of a long-session semester, and from the fifth through the tenth class day of a summer term, the student may drop a course with no academic penalty; the symbol Q is recorded. If the student drops a course after that time, the instructor determines whether the symbol Q or a grade of F should be recorded.

If the student is in a warning status because of failure to maintain a grade point average of at least 3.00, he or she may not drop a course without the recommendation of the graduate adviser and the approval of the graduate dean.

The student should note that dropping a course may cause his or her course load to drop below that required for full-time status.

Specific deadlines for adding and dropping courses are given in the academic calendar; procedures are given in the Course Schedule.
EVALUATION

Letter grades and the symbols for credit and no credit, CR and NC, are most commonly used to record the instructor’s evaluation of students’ performance in a course. Under specific conditions, other symbols may be used to record students’ standing in a class. Grades and symbols and the policies governing them are described in General Information.

WITHDRAWAL FROM THE UNIVERSITY

Dropping an entire course load constitutes withdrawal from the University for that semester.

To withdraw from the Graduate School, the student must file with the graduate dean a withdrawal petition, a form that also explains refund policies. The student may withdraw through the last class day of the semester. If the student abandons his or her courses without withdrawing, the instructor in each class determines what grade should be recorded.

Students in a warning status because of failure to maintain a grade point average of at least 3.00 may not withdraw without a petition from the graduate adviser and the approval of the graduate dean.

A student may not be employed in an academic position beyond the last date of his or her enrollment. Students must end their academic appointments prior to withdrawing.
3. Degree Requirements

The general requirements for graduate degrees are given in this chapter. Specific requirements and course descriptions for each graduate program are given in chapter 4. Detailed information about each degree program is available from the graduate adviser and the graduate coordinator for that program.

LIMITATION FOR FACULTY

No tenured member of the faculty of the University of Texas at Austin may pursue an advanced degree at this institution.

GRADE POINT AVERAGE

The graduate grade point average is calculated by the registrar and appears on the student’s official record maintained by the registrar. To graduate, all graduate students must have a graduate grade point average of at least 3.00. Additionally, candidates for the master’s degree must also have a grade point average of at least 3.00 in courses included on the Program of Work. Individual Graduate Studies Committees may set grade point average requirements of 3.00 or higher for all or a portion of their students’ coursework.

Additional information about grades, symbols, and the graduate grade point average is given in General Information.

GRADUATE CREDIT

Only the courses that appear on the student’s Program of Work are counted toward the degree. The following policies govern the inclusion of courses on the Program of Work.

COURSES TAKEN IN Residence

Courses completed with a letter grade. Courses in which the student earned a grade of at least C while registered in the Graduate School may be included in the Program of Work. Limitations on the amount of undergraduate work that may be included are given in the section “Options” on page 22 and in chapter 4.

Courses completed on the credit/no credit basis. No more than 20 percent of the hours on the Program of Work for a master’s degree may have been taken on the credit/no credit basis, and no more than a comparable portion of the Program of Work for the doctoral degree. Thesis, master’s report, master’s recital, dissertation, and treatise courses, which are offered only on the credit/no credit basis, are not included in the 20 percent. More information about credit/no credit grading is given in General Information.

Courses with incomplete grades. Courses for which the symbol X (incomplete) or I (permanent incomplete) is recorded may not be included on the Program of Work. More information about incomplete grades is given in General Information.

TRANSFER OF CREDIT

Ordinarily, all work for the master’s degree must be done at the University of Texas at Austin. Under some circumstances, a maximum of six semester hours of graduate coursework in which the grade is A or B may be transferred to the Program of Work from another institution, but only on the basis of a petition by the Graduate Studies Committee and with the approval of the graduate dean. (In the School of Nursing, a higher number of hours may be transferred in some degree programs.) A student seeking a transfer of credit must provide the Graduate School with an official transcript and an official explanation of the course numbering and grading systems at the school at which the credit was earned. Only graduate courses may be transferred. Work counted toward a degree at another institution
cannot be transferred. Students are encouraged to seek approval before taking any coursework they plan to transfer. Students should not take courses at another institution during the semester they plan to graduate because the grades may not be received in time to certify the student’s Program of Work for graduation. Unless its inclusion has been approved by the graduate dean, no coursework listed on the Program of Work may be over six years old.

The doctoral Program of Work normally includes no more than six semester hours of courses transferred from another university. The Graduate School recognizes that the academic background of each doctoral student is different, and exceptions to the six-hour maximum may be granted with approval of the Graduate Studies Committee.

Transferred coursework as described in this section appears only on the student’s Program of Work. It does not appear on the official student record maintained by the registrar. Because it is not part of the official record, such coursework does not appear on the student’s transcript and is not included in either the graduate grade point average or the Program of Work grade point average.

EXTENSION CREDIT

Up to six semester hours of work done in extension classes through the University’s Division of Continuing Education may be listed on the Program of Work, with the approval of the Graduate Studies Committee and the graduate dean. The extension credit must be in graduate courses; the courses and instructors must be approved in advance by the Graduate School and by the program in which the student would otherwise take the work on campus; and the student must be admitted to the Graduate School before taking the extension courses. Because students must be registered at the University in the semester in which they graduate, they cannot be registered solely for extension courses in their final semester.

All grades in graduate courses taken through the Division of Continuing Education are included in the graduate grade point average.

CORRESPONDENCE CREDIT

Courses taken by correspondence may not be counted toward graduate degrees.

CREDIT BY EXAMINATION

Credit by examination may not be counted toward graduate degrees.

ENROLLMENT OF UNDERGRADUATES IN GRADUATE COURSES

GRADUATE WORK FOR UNDERGRADUATE CREDIT

An undergraduate may enroll in a graduate course under the following conditions:
1. He or she must be an upper-division student and must fulfill the prerequisite for the course (except graduate standing).
2. He or she must have a University grade point average of at least 3.00.
3. He or she must receive the consent of the instructor of the course and of the graduate adviser for the field in which the course is offered. Some colleges and schools may also require the approval of the dean’s office. Individual divisions may impose additional requirements or bar undergraduates from enrolling in graduate courses.
4. Students in most colleges must have their dean’s approval before they register for a graduate course.

Undergraduate students may not enroll in graduate courses that have fewer than five graduate students enrolled.

A graduate course taken by an undergraduate is counted toward the student’s bachelor’s degree in the same way that upper-division courses are counted, unless the course is reserved for graduate credit as described in the next section. Courses reserved for graduate credit may not also be used to fulfill the requirements of an undergraduate degree.

An undergraduate student enrolled in a graduate course is subject to all University regulations affecting undergraduates.

RESERVATION OF WORK FOR GRADUATE CREDIT

Under the following conditions, a degree-seeking undergraduate may enroll in a graduate course and reserve that course for credit toward a graduate degree:
1. The student must have a University grade point average of at least 3.00.
Degree Requirements

2. The student must have completed at least ninety semester hours of coursework toward an undergraduate degree.

3. The student may not register for more than fifteen semester hours in the semester or for more than twelve semester hours in the summer session in which the course is reserved.

4. No more than twelve semester hours may be reserved for graduate credit.

5. All courses reserved for graduate credit must be approved by the twelfth class day of the semester or the fourth class day of the summer session by the course instructor, the student’s undergraduate adviser, the graduate adviser in the student’s proposed graduate major area, the dean of the student’s undergraduate college, and the graduate dean. A form for this purpose is available on the Graduate School Web site.

An undergraduate student enrolled in a graduate course is subject to all University regulations affecting undergraduates.

A student who reserves courses for graduate credit must be admitted to a University graduate program through regular channels before the credit may be applied toward a graduate degree. By allowing a student to earn graduate credit while still an undergraduate, the University makes no guarantee of the student’s admissibility to any graduate program.

A course reserved for credit may be listed on the student’s Program of Work for the master’s or doctoral degree. Because it was taken before the student entered the Graduate School, it is not included in the graduate grade point average.

USE OF THE COURSE 398T ON THE PROGRAM OF WORK

With the consent of his or her Graduate Studies Committee, a student may include the college teaching methodology course, numbered 398T, on the Program of Work. Master’s degree students may include up to three semester hours. Doctoral degree students may include up to six semester hours, if they complete both introductory and advanced teaching methodology courses.

COURSES COUNTED TOWARD ANOTHER DEGREE

No course counted toward another degree may be counted toward a master’s degree, either directly or by substitution.

Work done for the master’s degree may be included in the work for the doctoral degree, provided it is acceptable to the Graduate Studies Committee, the supervising committee, and the graduate dean and provided it has not already been used toward another doctoral degree.

Students in a dual degree program must meet the course requirements for both degrees. Courses common to the two curricula in a dual degree program are included on the Program of Work for one of the degrees and are waived by the other degree program as specified in the dual degree program requirements. The Program of Work on which courses are waived must meet the Graduate School’s minimum-credit-hour requirements for the degree. A list of approved dual degree programs is given on pages 4–5.

CONTINUOUS REGISTRATION

All graduate students are expected to enroll and pay tuition by the twelfth class day of the fall semester and the spring semester of each academic year until graduation. If the student has been admitted to candidacy for the doctoral degree, registration in the dissertation course or the equivalent or in international study and research (ISR) is required. The only alternative to continuous registration is a leave of absence, discussed on page 21.

If a student who is not on approved leave fails to register by the twelfth class day, he or she may not return to the University without applying for readmission. The student must apply for readmission both to the University and to the graduate program and must pay the general application fee. The application is reviewed by the Graduate Studies Committee, which may choose to readmit the student or to deny readmission.

In order to fulfill the continuous registration requirement, doctoral candidates who are readmitted must retroactively register and pay tuition for all semesters that have elapsed since they were last enrolled.
LEAVE OF ABSENCE

Graduate students may apply for a leave of absence of no more than two semesters. Requests for a leave of absence must be approved in advance by the graduate adviser and the graduate dean. Applications from students who have been admitted to candidacy will be approved by the graduate dean only in rare and unusual circumstances.

A student on approved leave must apply for readmission in order to return to the University, but readmission during the approved period is automatic and the application fee is waived.

A student on leave may not use any University facilities; nor is he or she entitled to receive advice from any member of the faculty. A leave of absence does not alter the time limits for degrees or coursework.

APPLICATION TO ANOTHER GRADUATE MAJOR (CHANGE OF MAJOR)

To change his or her major, a student must submit the form Application for Admission to Another Graduate Major to the Graduate School. The application must be approved by the graduate adviser in the new program. Applications must be submitted by April 1 for the summer session, by July 1 for the fall semester, and by October 1 for the spring semester. Students should consult the graduate adviser for the proposed new major about priority deadlines and additional requirements, procedures, and materials.

If the student has been away from the University for a semester or longer, he or she must apply for readmission as described on page 14.

WARNING STATUS, ACADEMIC DISMISSAL, AND TERMINATION

To continue in the Graduate School beyond the first semester or summer session, the student must make satisfactory progress in fulfilling any admission conditions that were imposed, meet any requirements made in writing by the Graduate Studies Committee, maintain a graduate grade point average of at least 3.00, and receive the approval of the Graduate Studies Committee.

Graduate Studies Committees are responsible for evaluating the students in their programs to ensure that they are making satisfactory progress toward a degree. If the Graduate Studies Committee finds that a student is not making satisfactory progress, it may recommend to the graduate dean that the student’s program be terminated.

A graduate student whose cumulative graduate grade point average falls below 3.00 at the end of any semester or summer session will be warned by the Office of Graduate Studies that his or her continuance in the Graduate School is in jeopardy. The student must attain a cumulative graduate grade point average of at least 3.00 during the next semester or summer session he or she is enrolled or be subject to dismissal; during this period, the student may not drop a course or withdraw from the University without the approval of the graduate adviser and the graduate dean.

A graduate student who has been dismissed may be readmitted for further graduate study only by petition of the Graduate Studies Committee in the student’s major area or by the Graduate Studies Committee of another program that will accept the student. The petition must be approved by the graduate dean.

Warning status and academic dismissal are reflected on the student’s academic record.

Additional information about grades and the grade point average is given in General Information.

TIME LIMITS

Master's degree. All requirements for a master’s degree must be completed within one six-year period. Work over six years old may be reinstated only with the permission of the graduate dean, upon recommendation of the Graduate Studies Committee.

Doctoral degree. All completed work that is included in a doctoral student’s degree program at the time of admission to candidacy must have been taken within the previous six years (exclusive of a maximum of three years of United States military service). The Graduate Studies Committee will review the program of students who have not completed the degree at the end of three years from admission to candidacy; the committee will review the status of the student’s program yearly thereafter. At those times, the committee may recommend additional coursework, further examinations, or termination of candidacy. In addition, the program is subject to review by the graduate dean.
THE MASTER’S DEGREE

The University offers two types of master’s degree. The first, the Master of Arts, requires advanced study in the humanities, sciences, or education and the preparation of a thesis or report. This degree frequently serves as preparation for further study. The second type of master’s degree provides preparation in a professional field. These degrees are offered in such fields as architecture, business administration, education, engineering, fine arts, information studies, nursing, pharmacy, public affairs, and social work. A complete list appears on pages 2–3. Often, these degree programs require more coursework than the Master of Arts but do not include a thesis or report.

The following general requirements for the master’s degree set a minimum standard. With the approval of the graduate dean, specific programs may impose additional requirements.

PREREQUISITES

Every master’s degree program assumes that participants have a general college education through the baccalaureate level. Accordingly, to enter a master’s degree program a student must hold a baccalaureate degree from a regionally accredited United States institution or proof of equivalent training outside the United States. He or she must also have taken at least twelve semester hours of upper-division undergraduate coursework in the area of the proposed graduate major or must have the consent of the graduate dean. Some areas may require more undergraduate preparation. Students who lack adequate preparation may be admitted to a graduate program on the condition that they complete additional preparatory coursework designated by the graduate adviser. These courses are in addition to the thirty semester hours or more required for the master’s degree itself.

SUPERVISING COMMITTEE

Each master’s degree program is developed under the guidance of a supervising committee with two or more members, one of whom is designated as supervisor. The supervisor must be a member of the Graduate Studies Committee in the major area. In general, all committee members must be members of a Graduate Studies Committee. Occasionally, scholars who hold nonfaculty appointments at the University—research scientists, research engineers, or adjunct faculty members—or off-campus scholars are appointed because their expertise would be valuable to the student. The composition of the committee is subject to the approval of the graduate dean. The supervising committee is responsible for the quality, depth, and balance of the student’s educational experience.

OPTIONS

The Graduate School recognizes three options under which a student may pursue the master’s degree: with thesis, with report, and without thesis or report. All three options may not be available in any one field of study; information about the options that are possible is given in chapter 4 or is available from the student’s graduate adviser.

For each option, the Graduate School requires at least thirty semester hours of credit. Individual programs may have higher requirements, and many programs do require more hours in the report and no thesis/no report options than in the thesis option. No more than nine semester hours of upper-division coursework may be included on the Program of Work, and no more than six of these hours may be in the major area. In some degree programs and options, the number of upper-division hours allowed is lower.

At least eighteen semester hours must be in the major area; the thesis, report, or recital course, if part of the program, must be in the major. At least six hours must be in supporting work. Supporting work, often referred to as the minor, is an obligatory part of each degree program. It consists of coursework outside the major area, although the Graduate Studies Committee may permit some or all of it to be taken in other areas within the department.

The exact number of hours in the major area and in supporting work is determined in consultation with the graduate adviser. The Graduate Studies Committee must then review and approve the Program of Work, made up of the proposed courses in the major area and in supporting work. Courses listed on the Program of Work may not be more than six years old. The student may earn no more than 20 percent of the hours of credit listed on the Program of Work on the credit/no credit basis; thesis, report, and recital courses are not included in the 20 percent.

Master’s degree with thesis. Each student’s Program of Work must include at least twenty-one semester hours of graduate courses, including the thesis course. The thesis is prepared under the direction of a supervisor,
who is chair of the supervising committee. It is subject to the approval of the committee and ultimately of the graduate dean. Six semester hours of credit are granted for researching and writing the thesis. Course 698A (research project) must precede course 698B (writing period); 698A may not be repeated for credit. Both 698A and 698B must be taken on the credit/no credit basis. The student must register for 698B the semester he or she intends to graduate. The thesis cannot be accepted before the semester in which the student applies for graduation.

The thesis is normally written in English. Requests for permission to write in another language pertinent to the research will be granted when there are circumstances warranting an exception. An insufficient command of English is not justification for an exception. The petition from the graduate adviser should include assurance that faculty members competent both in the language and in the field are available and willing to serve on the thesis committee. The request must be approved by the graduate dean when the student is admitted to candidacy. The abstract and a substantial summary and conclusions section in English must be submitted with the thesis.

Some students seeking the Master of Music complete a recital rather than a thesis. All policies affecting the master’s degree with thesis apply to the master’s degree with recital, but the student completes the two-semester course Music 698R, *Master’s Recital*, rather than a thesis course. The recital is prepared under the direction of a supervisor, who is chair of the supervising committee, and graded by faculty members from the student’s performance area.

**Master’s degree with report.** Each student’s Program of Work must include at least twenty-four semester hours of graduate courses, including the report course. The report is prepared under the direction of a supervisor, who is chair of the supervising committee. Reports typically result from gathering special materials, from an internship or similar experience, or from seminars, conference courses, or supervised research. The report is subject to the approval of the committee and ultimately of the graduate dean. Three semester hours of credit are granted for preparing the report; the student must register for the master’s report course. The student must take this course on the credit/no credit basis and must register for it the semester that he or she files for graduation.

**Master’s degree without thesis or report.** Each student’s Program of Work must include at least twenty-four semester hours of graduate courses. Students must be registered for the master’s degree they apply to graduate.

**THE DOCTOR OF PHILOSOPHY**

The Doctor of Philosophy is a research degree designed to prepare students to discover, integrate, and apply knowledge as well as to communicate and disseminate it. The degree emphasizes development of the capacity to make significant original contributions to knowledge within the context of free inquiry and expression. The student pursuing this degree is expected to develop the ability to understand and to evaluate the literature of his or her field and to apply appropriate principles and procedures to the recognition, evaluation, interpretation, and understanding of issues at the frontiers of knowledge. In contrast to the PhD, other doctorates such as the Doctor of Education, the Doctor of Audiology, and the Doctor of Musical Arts are designed for professional training or focus on applied rather than basic research.

**COURSE REQUIREMENTS**

The Program of Work for the Doctor of Philosophy degree must have a minimum of thirty semester hours of advanced coursework, including dissertation hours. All the completed coursework that is included in a degree program at the time of admission to candidacy for a doctoral degree must have been taken within the preceding six years (exclusive of a maximum of three years of United States military service). All doctoral work is subject to review by the graduate dean.

In addition to courses and research in a field of specialization, additional work is taken to broaden or supplement the field. This supporting work may consist of coursework in one area or several; it may be in conference, laboratory, or problems courses; or it may be a supervised activity off campus relevant to the major interest. Normally, some or all of the supporting work is outside the major area, unless that area covers more than one department; at least three courses or the equivalent from outside the major area are generally proposed.
FOREIGN LANGUAGE REQUIREMENT

The Graduate School has no foreign language requirement. However, many graduate programs require the study of one or more languages. These requirements are given in chapter 4 or are available from the graduate adviser.

GRADUATE STUDIES COMMITTEE REQUIREMENTS

The Graduate Studies Committee specifies the coursework the student must complete, the qualifying examinations (written or oral or both) he or she must pass, the conditions under which he or she may retake all or part of an examination, and the procedures he or she must follow in developing a dissertation proposal.

In consultation with the graduate adviser, the student proposes a Dissertation Committee to advise or direct the student on the research and writing of the dissertation. The student selects the chair of the Dissertation Committee, with the consent of that person.

ADMISSION TO CANDIDACY

Each student seeking the PhD must be admitted to candidacy on the recommendation of the Graduate Studies Committee in the major area. Students may not register for the dissertation course until they are admitted to candidacy, and completion of coursework does not in itself constitute admission. Formal admission to doctoral candidacy consists of the submission and approval of the following:

1. Program of Work. The Program of Work comprises a list of courses taken and proposed, the prospective dissertation title, and similar information. The Graduate Studies Committee must approve the Program of Work. The Dissertation Committee may, in a review of the Program of Work, recommend additional course requirements to the Graduate Studies Committee.

2. Dissertation Committee. The membership of the Dissertation Committee, proposed by the student with the consultation and approval of the graduate adviser, is submitted to the Graduate School for approval by the graduate dean. The committee consists of at least five members. At least three of the committee members, including the chair, must be Graduate Studies Committee members in the student’s major program, and one committee member must be from outside the major program. The committee chair serves as the dissertation supervisor.


THE DISSERTATION COMMITTEE

The Dissertation Committee advises the student on the research and writing of the dissertation, conducts the final oral examination, and approves the dissertation. The chair of the Dissertation Committee ordinarily serves as the supervisor of research. Other members of the committee should be consulted as appropriate. Occasionally, a research scientist, research engineer, or faculty member who is not a member of the Graduate Studies Committee may be recommended by the Graduate Studies Committee to serve as the research supervisor for a specific dissertation. When the research supervisor is not a member of the Graduate Studies Committee, a member of the Graduate Studies Committee will be appointed as cochair of the Dissertation Committee.

THE DISSERTATION

The student must register for dissertation courses for a period of more than one semester or summer session. The dissertation research course (-99R) must precede the dissertation writing course (-99W) and may not be repeated. A dissertation is required of every candidate. It must be an original contribution to scholarship, the result of independent investigation in the major area, and must be approved by the Dissertation Committee.

The dissertation is normally written in English. Requests for permission to write in another language pertinent to the research are granted when there are circumstances warranting an exception. An insufficient command of English is not justification for an exception. The formal petition from the graduate adviser should include assurance that faculty members competent both in the language and in the field are available and willing to serve on the Dissertation Committee. The request must be approved by the graduate dean when the student is admitted to candidacy. The abstract and a substantial summary and conclusions section in English must be submitted with the dissertation.
REVIEW OF PROGRESS

The Graduate Studies Committee reviews the progress of students who have not completed the doctoral degree by the end of two years from admission to candidacy; the committee reviews each student’s progress annually thereafter. The committee may recommend that the student take additional courses or examinations or that the candidacy be terminated. Since annual reviews must be made after the first review, the committee will recommend extensions of only one or two semesters. Recommendations are forwarded to the graduate dean for approval.

FINAL ORAL EXAMINATION (DEFENSE OF DISSERTATION)

A satisfactory final oral examination is required for the approval of a dissertation. The exam is open to all members of the University community and the public, unless attendance is restricted by the Graduate Studies Committee. The Office of Graduate Studies publishes the time and place of this examination for students who have given consent.

Not less than four weeks before the date on which the student intends to defend the dissertation, a copy of the final draft of the dissertation, reviewed for technical and grammatical correctness by the supervisor, should be submitted to each member of the dissertation committee. Two weeks before the defense, a written request to hold the final oral examination must be submitted to the Graduate School. This request signifies the receipt of the doctoral dissertation for the purpose of giving the examination. The committee’s decision to examine a dissertation must be unanimous.

The examination covers the dissertation and the general field of the dissertation and such other parts of the student’s program as the committee determines. If the members of the committee are satisfied that the dissertation is an independent investigation in the major field and itself constitutes a contribution to knowledge and that the student has passed the final oral examination, they indicate approval on the Report of Dissertation Defense. The Report of Dissertation Defense and individual reports on the dissertation are filed within two weeks following the defense.

The decision of the committee must be unanimous. In the event that a committee cannot agree on a single decision, the matter is referred to the graduate dean for review. The dean’s recommendation concerning the dissertation must be approved by a majority of the dissertation committee. The results of the review are communicated to the student, the graduate adviser, the chair of the Graduate Studies Committee, the committee members, and the department chair, if applicable.

SUBMISSION AND PUBLICATION OF THE DISSERTATION

After defending the dissertation, the student must submit it in an approved electronic format to the Office of Graduate Studies. The dissertation is retained by the University Libraries. Information about format requirements is available at http://www.utexas.edu/ogs/etd/ and from the Office of Graduate Studies.

Dissertations must be made available to the public. A list of ways of doing this is available at http://www.utexas.edu/ogs/etd/ and from the Office of Graduate Studies. The student may request permission from the graduate dean to delay making the dissertation available to the public for up to one year in order to protect patent or other rights. This request must be supported by a written recommendation from the dissertation supervisor. The graduate dean makes the final decision regarding delayed publication.

The student may arrange for registration of copyright, at his or her own expense, by completing a form available in the Office of Graduate Studies or through an arrangement with a publisher of the student’s choice.

APPROVAL OF THE DEGREE

Upon approval by the Dissertation Committee of the dissertation and its defense, the Graduate Studies Committee certifies that the student has completed all degree requirements, has passed all required examinations, and is entitled to the award of the doctoral degree.
THE DOCTOR OF EDUCATION

The Doctor of Education (EdD) is a professional degree that emphasizes preparation for the highest levels of educational practice. It provides academic training and educational service experiences for individuals who will have leading roles in educational practice and who will help define the scope and functions of education in society. Programs are oriented toward the application of theory and research to issues of education and human development and to the development of skilled practitioners to fill a variety of roles in institutions that educate children, youth, and adults.

Students in educational administration complete a treatise; those pursuing the EdD in other fields complete a dissertation. Most policies affecting the EdD are similar to those described above for the PhD, such as the requirement for a minimum of thirty semester hours of advanced coursework, including dissertation or treatise hours. Additional policies on admission to the program and to candidacy are given below.

ADMISSION

In addition to the requirements for admission to the Graduate School, each department may require evidence of successful performance in an educational setting and evidence of interpersonal problem-solving skills and other skills useful for predicting success in professional educational roles. The applicant must hold a master’s degree from a regionally accredited United States institution or the equivalent.

ADMISSION TO CANDIDACY

In addition to the requirements listed for the PhD degree, the curriculum must have a clear and predominantly applied focus. The student’s program normally entails an internship in an operational setting that is distinct from previous or concurrent work experience.

In addition to the requirements listed for the PhD degree in regard to the Dissertation Committee, at least one member of the committee must be from outside the major program or from the field of practice represented by the dissertation.

THE DOCTOR OF AUDIOLOGY

The Doctor of Audiology provides academic and clinical training for those who plan to enter the profession of audiology. The degree program involves preparation for the diagnosis and nonmedical treatment of hearing and balance disorders; it is designed to prepare audiologists to meet the standards for Texas state licensure in audiology.

The program requires a minimum of eighty-two semester hours of coursework and is designed to be completed in four years. All preprofessional students in audiology complete the same set of core courses and basic clinical practicum. Students may choose from a set of electives based on their specific interests. Research experiences are part of the curriculum, but a dissertation is not required.

The Graduate Studies Committee in communication sciences and disorders oversees the AuD degree program. More information about the program is available from the graduate adviser in communication sciences and disorders.

THE DOCTOR OF MUSICAL ARTS

The Doctor of Musical Arts degree allows for three majors: performance (including conducting, opera, collaborative piano, and voice pedagogy emphases), composition, and music and human learning (including conducting and piano pedagogy emphases). Most policies affecting the DMA are similar to those described above for the PhD, such as the requirement for a minimum of thirty semester hours of advanced coursework, including treatise hours. Candidates for this degree must pass a comprehensive examination. They must demonstrate outstanding professional competence, artistic maturity, and exceptional knowledge of the historical and practical aspects of their major field. Each candidate must prepare a scholarly treatise in a field appropriate to the major or complete the alternative requirements of the nontreatise degree option. For composition majors, a musical work replaces the treatise. A jazz emphasis is available in each of the three majors.

Further information about requirements in various areas of concentration is available from the graduate adviser.
GRADUATION

The University holds commencement exercises at the end of the spring semester. Those who graduate in the preceding summer session or fall semester are eligible to attend along with those who graduate in the spring semester. In addition, the Graduate School holds a Convocation at the end of the spring semester at which master’s and doctoral degree candidates are individually recognized.

GRADUATION UNDER A PARTICULAR CATALOG

Degree requirements may be changed from one catalog to the next. The student is normally bound by the requirements of the catalog in force at the time of his or her first registration; the student may choose, however, to fulfill the requirements of a subsequent catalog. If the student does not fulfill the requirements within six years of his or her first enrollment in the Graduate School, he or she is then bound by the requirements of a subsequent catalog. The student may choose the catalog in effect in any year in which he or she is enrolled in the Graduate School, within the six-year limit.

PROCEDURES OF GRADUATION

Candidates for Master of Business Administration and Master in Professional Accounting degrees should consult advisers in their programs for graduation procedures. All other degree candidates must follow the procedures below. More detailed guidelines, deadlines, and forms are published by the Office of Graduate Studies at http://www.utexas.edu/ogs/pdn/.

MASTER’S DEGREE CANDIDATES

1. Be registered in the Graduate School in the semester or summer session in which they plan to graduate.
2. Submit the online Master’s Graduation Application and associated Program of Work via the Graduate School Web site.
3. Submit the thesis or report to the supervising committee by the deadline the committee establishes.
4. Submit the thesis or report to the Office of Graduate Studies for final approval by the graduate dean no later than the published deadline. The thesis or report must be submitted in an approved electronic format. The format must follow the guidelines published online.
5. Submit a signature page containing the original signatures of the thesis or report supervising committee and all required forms associated with degree certification to the Office of Graduate Studies no later than the published deadline. Candidates in these options must also submit a copy of the title page and an abstract.

DOCTORAL DEGREE CANDIDATES

1. Have completed the Intellectual Property (Copyright) Tutorial. If the candidate’s research involves human subjects, he or she must have provided evidence of ethical review by the departmental review committee and, if appropriate, by the University Institutional Review Board. The Institutional Review Board form should be attached to the Statement of Research with Human Participants form.
2. Be registered in the Graduate School in the semester or summer session in which they plan to graduate.
3. File the Doctoral Graduate Degree Candidate Form in the Office of Graduate Studies by the published deadline; if the student’s graduation is postponed, he or she must file a new form.
4. Provide each member of the Dissertation/Treatise Committee with a copy of the dissertation or treatise for evaluation.
5. Schedule the final oral examination with the Office of Graduate Studies.
7. Upload the final dissertation in electronic format to the submission site by the published deadline.
8. Submit the Committee Certification of Approved Version (signature page) and all required forms and fees associated with degree certification by the published deadline.
OTHER COMPONENTS OF THE UNIVERSITY OF TEXAS SYSTEM

For information about graduate programs and courses at the following components of The University of Texas System, consult their current catalogs.

The University of Texas at Arlington
The University of Texas at Brownsville
The University of Texas at Dallas
The University of Texas at El Paso
The University of Texas - Pan American
The University of Texas of the Permian Basin
The University of Texas at San Antonio
The University of Texas at Tyler
The University of Texas Southwestern Medical Center at Dallas
The University of Texas Medical Branch at Galveston
The University of Texas Health Science Center at Houston
The University of Texas Health Science Center at San Antonio
The University of Texas M.D. Anderson Cancer Center
The University of Texas Health Science Center at Tyler
4. Fields of Study
School of Architecture

ARCHITECTURE

Master of Architecture
Master of Arts
Master of Science in Architectural Studies
Master of Science in Historic Preservation
Master of Science in Sustainable Design
Master of Science in Urban Design
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The School of Architecture is housed in four adjacent buildings at the heart of the campus: Battle Hall (1911) and Sutton Hall (1918, renovated in 1982), designed by the noted American architect Cass Gilbert; Goldsmith Hall (1933, expanded and renovated in 1988), designed by the renowned French architect Paul Philippe Cret, one of the planners of the original forty-acre campus; and the West Mall Office Building (1961) by the Texas firm of Jessen, Jessen, Millhouse, and Greeven.

The Architecture and Planning Library, a branch of the University Libraries, collects materials on all aspects of architecture, landscape architecture, interior design, and community and regional planning, including design, history, criticism, theory, preservation, professional practice, case studies, and technology. The library houses over 84,000 volumes, including bound periodicals, professional reports, an extensive reference collection, a significant collection of about 15,000 rare books, and the Alexander Architectural Archive. The archive contains more than 287,000 architectural drawings, 1,800 linear feet of papers, photographic materials, models, and ephemera, representing thousands of projects in Texas, New York, Chicago, California, and Great Britain. Microform materials include many historic sources not available in book form. The University Libraries also provides access to a wide variety of electronic databases and a full range of reference and instructional services.

The resources of the Teresa Lozano Long Institute of Latin American Studies and the Benson Latin American Collection, and the proximity of Austin to Latin America, provide exceptional opportunities for the study of Latin American architecture.

The Center for American Architecture and Design provides support and resources for the study of American architecture. Through lectures, exhibitions, publications, seminars, and symposia, the center encourages a community of architecture scholarship.

The Center for Sustainable Development facilitates the study and practice of sustainable design, planning, and development in Texas, the nation, and the world through complementary programs of research, education, and community outreach.

The school also maintains a digitally equipped facility in Dallas, the Dallas Urban Laboratory, which houses a design studio, faculty offices, and space for review and research. The facility is available to a select group of students during the spring semester and summer session each year.

The school also offers several study abroad opportunities, as well as a design/build studio opportunity.

A variety of other facilities support students in their coursework and professional development. The school’s Career Services Center assists students with finding internships, identifying employment prospects, and preparing for interviews and negotiations with potential employers. The University Co-op Materials Resource Center contains a lighting lab, a conservation
lab, and a materials lab with more than 10,000 product and materials samples. The School of Architecture Visual Resources Collection (VRC) contains over 73,000 digital images, 240,000 slides, and related media, and circulates photography equipment as well as slide projectors. For a nominal fee, architecture students can join the Photo Union, a fully equipped black and white darkroom maintained by the VRC. Computer-aided design and research opportunities are provided by the school’s computer laboratory, which maintains microcomputer equipment interfaced with the extensive computing facilities of Information Technology Services. The Design Workshop supports model building, work in wood and metal, and CAD/CAM equipment.

AREAS OF STUDY

MASTER’S DEGREES

The School of Architecture offers master’s degree programs that lead to professional, postprofessional, and academic degrees.

Master of Architecture. There are two Master of Architecture (MArch) programs. The MArch (first professional) degree program fulfills the professional degree requirements for registration as an architect. The MArch (postprofessional) degree program offers students with professional degrees in architecture the opportunity for advanced study in an area of concentration: advanced architectural design and theory, historic preservation, sustainable design, or urban design.

Master of Arts. The Master of Arts (MA) is an academic degree with a concentration in architectural history. It is a prerequisite for doctoral work in architectural history.

Master of Science in Architectural Studies. The MSArchStds is an academic degree that offers a concentration in interdisciplinary studies, preparing students for careers in enhanced practice, research, or teaching.

Master of Science in Historic Preservation. The MSHP is an academic degree that prepares students for practice or doctoral study in historic preservation.

Master of Science in Sustainable Design. The MSSD is an academic degree that prepares students for doctoral study, practice-based research, work in public policy, or activism.

Master of Science in Urban Design. The MSUD is an academic degree focusing on urban design with associated coursework in the disciplines of architecture, landscape architecture, and community and regional planning. The program is designed to help students develop the professional skills needed to engage in improving the quality and structure of the built environment.

DOCTOR OF PHILOSOPHY

The Doctor of Philosophy is an academic degree with concentrations in the history of architecture and landscape architecture and in historic preservation. It provides students who have an appropriate master’s degree with a rigorous program of study intended to prepare them to conduct research and teach in these disciplines. The school’s faculty has particular expertise in early modern and modern architecture in Europe and the United States.

The concentration in the history of architecture and landscape architecture places special emphasis on understanding buildings or landscapes and their designers in context, and as complex and interconnected wholes that include aspects of aesthetics, tectonics, function, culture, and meaning. The student’s program of study may address the history of architectural theory; the history of design; the history of interior design; the history of urban design, settlement, or cities; the history of building technology; and the history of landscape design.

The concentration in historic preservation embraces multidisciplinary and culturally diverse approaches to the conservation of historic resources. The student’s program may address preservation planning and development; issues in the theory, history, and practice of the conservation of buildings, interiors, landscapes, and neighborhoods; historic site management; preservation and sustainable development; and innovative methodologies for preservation practice.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Dean J. Almy
Anthony Alofsin
Kevin S. Alter
Simon D. Atkinson
Michael L. Beaman
Michael L. Benedikt
Miroslava M. Benes
James S. Black
Danelle I. Briscoe
Richard L. Cleary
Ulrich C. Dangel
Elizabeth A. Danze
Larry A. Doll
Matthew L. Fajkus
Michael L. Garrison
Tamie Michele Glass
Francisco H. Gomes
Louise Harpman
David D. Heymann

Michael Holleran
Nancy P. Kwallek
Fernando Luiz Lara
Christopher A. Long
Carl Matthews
S Milovanovic-Bertram
Juan Miro
Steven A. Moore
Michael Oden
Allan W. Shearer
Igor P. Siddiqui
Vincent L. Snyder
Lawrence W. Speck
Frederick R. Steiner
Danilo F. Udovicki
Wilfried Wang
Lois Weinthal
Nichole Wiedemann

ADMISSION REQUIREMENTS

Master of Architecture (first professional). This degree program is open to qualified applicants who hold baccalaureate degrees in any discipline, including pre-architecture.

Master of Architecture (postprofessional). This degree program is open to qualified applicants who hold professional degrees in architecture.

Master of Arts. This degree program in architectural history is open to qualified applicants who hold baccalaureate degrees in any discipline. Prerequisites include twelve hours of architectural history, which may include courses in art history, history, or related subjects, and design experience. The design requirement may be satisfied by coursework or by evidence of previous fieldwork or professional architectural experience.

Master of Science in Architectural Studies. This degree program is open to qualified applicants who hold baccalaureate degrees in any discipline. Prerequisites for students without architecture degrees vary according to the student’s experience and intended area of inquiry.

Master of Science in Historic Preservation. This degree program is open to qualified applicants who hold baccalaureate degrees in any discipline. Prerequisites include at least one three-semester-hour course in architectural history as well as design experience. The design requirement may be satisfied by coursework or by evidence of previous fieldwork or professional architectural experience.

Master of Science in Sustainable Design. This degree program is open to qualified applicants who hold baccalaureate degrees in any discipline. Prerequisites include at least one three-semester-hour course in modern architectural history.

Master of Science in Urban Design. This degree program is open to qualified applicants who hold professional degrees in architecture or landscape architecture, or baccalaureate degrees in any discipline. Prerequisites for students without degrees in architecture or landscape architecture vary according to the student’s experience and intended concentration.

Doctor of Philosophy. Students who enter the doctoral degree program must hold a master’s degree or the equivalent in a discipline relevant to their area of concentration and must demonstrate the ability to excel in doctoral work. Admission decisions are made by the doctoral subcommittee of the Graduate Studies Committee.

DEGREE REQUIREMENTS

MASTER OF ARCHITECTURE

Professional degree program. For students entering with degrees other than professional degrees in architecture, the Master of Architecture is an accredited first professional degree, with graduate professional courses designed to prepare the student for advanced work in architecture; the coursework is prescribed on the basis of the student’s previous college work as shown in transcripts, portfolio, statement of intent, and references. The degree program requires at least sixty semester hours of coursework. Before progressing into advanced architectural design, first professional degree candidates must demonstrate proficiency in design and communication through a qualifying review conducted by the faculty. Students entering without a background in architecture normally complete the first professional degree program in approximately three and one-half years of study in residence; the academic records of students holding preprofessional degrees in architec-
tural studies are individually evaluated for course credit toward the first professional degree requirements.

Students may earn a Certificate of Specialization in Historic Preservation, Urban Design, or Sustainable Design by completing the relevant sequence of courses. Additional information is available from the graduate adviser.

Postprofessional degree programs. For students entering with a professional degree in architecture, the Master of Architecture is a postprofessional degree. It requires either thirty semester hours of graduate work, including the six-hour thesis; or thirty-six hours of work, including a final six hours of independent study. Based on the student’s interests and an evaluation of the statement of intent, portfolio, and transcripts, specific degree requirements are established for the postprofessional program offerings:

- **Design and Theory:** A postprofessional program providing an opportunity to examine and refine design philosophies and techniques. Participants may develop an individual program of study based on their specific design interests.
- **Historic Preservation:** A postprofessional program designed to provide knowledge and skills appropriate for architects who are engaged in preservation practice and policy, written and graphic documentation of historic structures, building pathology, materials conservation, and sensitive design for restoration or adaptive reuse.
- **Sustainable Design:** A postprofessional program emphasizing the integration of natural systems, building systems, and cultural systems into architectural design.
- **Urban Design:** Postprofessional graduate study designed to develop the student’s understanding of the urban environment and its users’ needs, and to promote the design skills he or she needs to improve the quality and efficiency of city life.

**MASTER OF ARTS**

The degree program consists of at least thirty semester hours of coursework, including a thesis. Students must demonstrate reading knowledge of French, Spanish, German, or another language appropriate to their area of study. A typical course sequence is described on the School of Architecture Web site at http://soa.utexas.edu/archhistory/programs/. An individual plan of study is defined for each student by the director of the program.

**MASTER OF SCIENCE IN ARCHITECTURAL STUDIES**

The Master of Science in Architectural Studies degree program consists of advanced academic work with a focus on interdisciplinary studies. This degree program is tailored to applicants who wish to pursue research and advanced academic study. It is available to students with or without a professional degree in architecture.

The program requires at least thirty semester hours of work and includes a thesis. An individual plan of study is defined for each student by the director of the concentration.

This degree does not fulfill the professional degree requirements for registration as an architect. More information about the program is available online at http://soa.utexas.edu/architecture/interdisc/.

**MASTER OF SCIENCE IN HISTORIC PRESERVATION**

The degree program consists of at least forty-eight semester hours of coursework, including a thesis or professional report. A typical course sequence is described on the School of Architecture Web site at http://soa.utexas.edu/hp/programs/. An individual plan of study is defined for each student by the director of the program.

**MASTER OF SCIENCE IN SUSTAINABLE DESIGN**

The degree program consists of at least forty-two semester hours of work, including a thesis or professional report. Up to twenty-four semester hours of coursework may be chosen in the student’s area of concentration. An individual plan of study is defined by each student in conjunction with the program director. A typical course sequence is described on the School of Architecture Web site.

**MASTER OF SCIENCE IN URBAN DESIGN**

The degree program requires at least thirty-six semester hours of work, including either a master’s design study or a thesis. Additional hours may be required for students without a prior degree in either architecture or landscape architecture. An individual plan of study is defined for each student by the program director.
DOCTOR OF PHILOSOPHY

The doctoral subcommittee of the Graduate Studies Committee determines course requirements, prescribes qualifying examinations, and approves dissertation topics. The degree plan requires a minimum of twenty-one hours of seminars and reading courses leading to the comprehensive examination. Nine of these hours are taken as a minor outside the School of Architecture. The program requires experience in design, which may be gained through coursework or in a variety of professional contexts, and reading proficiency in two foreign languages approved by the doctoral subcommittee. After passing the comprehensive examination, the student registers in the dissertation colloquium to develop a dissertation topic. The writing, oral defense, and revision of the dissertation follow.

DUAL DEGREE PROGRAMS

The following dual degree programs are offered within the School of Architecture. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community and regional planning</td>
<td>Master of Science in Community and Regional Planning/Master of Science in Sustainable Design</td>
</tr>
<tr>
<td>Sustainable design</td>
<td></td>
</tr>
<tr>
<td>Community and regional planning</td>
<td>Master of Science in Community and Regional Planning/Master of Science in Urban Design</td>
</tr>
<tr>
<td>Urban design</td>
<td></td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: Sutton Hall (SUT) 2.130, phone (512) 471-2398, fax (512) 471-0716; campus mail code: B7500
Mailing address: The University of Texas at Austin, Graduate Program in Architecture, School of Architecture, 1 University Station B7500, Austin TX 78712
E-mail: soa_grad@austin.utexas.edu
URL: http://soa.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013, however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ARCHITECTURE: ARC

180R. Proseminar in Architecture. Study of theories related to design, livability, and sustainability in the built environment. Includes collaboration with other students and research. One lecture hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and admission to the Master of Architecture (postprofessional) degree program.

381R. Advanced Visual Communication. Advanced topics in visual communication in such media as freehand drawing, modeling, photography, computer graphics, photogrammetry, and measured drawings. Five or six laboratory hours a week for one semester. With consent of the graduate adviser, may be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

381T. Technical Communication. Studio to provide skills in producing construction documents as they relate to the design and building process. Six laboratory hours a week for one semester. Prerequisite: Graduate standing; Architecture 385N, 394; concurrent enrollment in Architecture 695; and consent of the graduate adviser.

382. Professional Practice. Ethical, legal, economic, and administrative processes and responsibilities of the practitioner in architecture and allied fields. Topics may include preservation law, community development, participatory design, and other aspects of organizations; methods and roles in design, planning, and preservation of the built environment. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.
383S. Site Design. Fundamentals of building and landscape relationships. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

383T. Site, Landscape, and Urban Studies. Topics in the history, design, and preservation of building sites, landscapes, and rural and urban communities. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

384K. Environmental Control I. Survey of acoustics, color, light, illumination, and electrical and information systems in architectural interiors. Includes techniques of documentation. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

384L. Environmental Control II. Survey of heating, ventilating, air conditioning, vertical transportation, and plumbing systems in buildings. Includes techniques of documentation. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Graduate standing, Architecture 384K with a grade of at least C, and consent of the graduate adviser.

384T. Topics in Building and Environment Studies. Topics include daylighting and the history of building technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

385L. Construction II. Analysis of building assemblies and materials, envelope design, and structures. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

385M. Construction III. Theories of building construction and materials; structural component analysis and design. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing, Architecture 385L with a grade of at least C, and consent of the graduate adviser.

385N. Construction IV. Theories of building behavior and materials; structural system analysis and design. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing, Architecture 385M with a grade of at least C, and consent of the graduate adviser.

385T. Topics in Building Construction and Conservation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

386K. Theory of Architecture I. Examines how architecture carries meaning. Uses case studies of buildings constructed in the past forty years. Three lecture hours a week for one semester. Prerequisite: Graduate standing and admission to the graduate program in architecture or architectural studies.

386L. Theory of Architecture II. Survey of architectural theory since the Renaissance. Three lecture hours a week for one semester. Prerequisite: Graduate standing and admission to the graduate program in architecture or architectural studies.

386M. Topics in Architectural Theory. Study of critical theories and practices that affect the built environment. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

387F. World Architecture: Origins to 1750. Introduction to architectural types, principles, and building technologies from prehistory to the mid-eighteenth century. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Architecture 385K with a grade of at least C, and consent of the graduate adviser.

388R. Topics in the History of Architecture and Historic Preservation. Seminars and lecture/seminars on advanced topics in architectural history, historic preservation, and the history of building technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser. Additional prerequisites vary with the topic and are given in the Course Schedule.

389, 689. Research in Architecture. Investigation of problems in architecture, urban design, and development selected by the student with approval of the Graduate Studies Committee. Three or six lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

189R. Architectural Research. Investigation of problems selected by the student with approval of the supervising faculty member. One studio hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

692K. Historic Preservation Studio. Interdisciplinary studio integrating design and other preservation issues at scales from interiors to landscapes and urban districts. The equivalent of fifteen laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

393. Visual Communication. Study and application of drawing and other communication skills for architects. Six laboratory hours a week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Architecture 394, and consent of the graduate adviser.
693K. **Urban Design Studio.** Interdisciplinary studio integrating urban design at scales from interiors to landscapes and urban districts. The equivalent of fifteen laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

394. **Architectural Design: Vertical Studio.** Design problems dealing with subjective and objective decision making, investigation of physical and social contexts, and the practical requirements of sound building. Nine laboratory hours a week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Architecture 393, and consent of the graduate adviser.

695. **Advanced Architectural Design: Comprehensive Studio.** Comprehensive advanced studio to develop skills in assimilating concepts into a feasible building design. Fifteen laboratory hours a week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Architecture 394, and consent of the graduate adviser.

696. **Advanced Architectural Design.** Advanced problems in architectural design to help develop skills in areas of students’ and faculty member’s choice, including interior architecture and preservation, as well as landscape, urban, and sustainable design. The equivalent of fifteen laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, Architecture 394 or the equivalent, and consent of the graduate adviser.

697. **Master's Design Studio.** Forum for advanced study in architecture, addressing complex design problems and issues related to various architectural topics. The equivalent of eighteen laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

398R. **Master's Report.** Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in architectural studies and consent of the graduate adviser.

398T. **Supervised Teaching in Architecture.** Designed to orient the beginning teacher in effective methods of teaching architecture and related topics. Three lecture hours a week for one semester. Required for assistant instructors in architecture. Prerequisite: Graduate standing and consent of the graduate adviser.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and written consent of the graduate adviser.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Architecture 399R, 699R, or 999R, and written consent of the graduate adviser.

698. **Thesis.** For students seeking the Master of Science or Master of Arts degrees in the School of Architecture, those seeking the Master of Architecture as a postprofessional degree, and those seeking the Master of Architecture as a first professional degree who choose to complete the requirements of a concentration. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in architecture and consent of the graduate adviser; for 698B, Architecture 698A.
COMMUNITY AND REGIONAL PLANNING

Master of Science in Community and Regional Planning
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The community and regional planning program is housed within the School of Architecture, which is consistently ranked as one of the top ten schools of architecture in the nation. The program draws upon the resources available in the School of Architecture and across the University campus to offer a program of study combining current research and practice with intense student involvement in real-world projects.

Facilities for the study of community and regional planning are centrally located on campus in three adjacent and historically significant buildings: Battle Hall (1911), Sutton Hall (1918, renovated in 1982), and Goldsmith Hall (1933, expanded and renovated in 1988). The Architecture and Planning Library provides excellent resources for study and research in community and regional planning. Because of its interdisciplinary nature, the program also makes use of a wide range of resources available through the Lozano Long Institute of Latin American Studies, the Environmental Science Institute, the School of Social Work, the Center for Transportation Research, the Population Research Center, the Center for Research in Water Resources, the Bureau of Economic Geology, and other allied programs within the School of Architecture. The program’s computer laboratory provides more than seventy computer workstations, computer simulation and graphics workstations, geographic information system (GIS) workstations, and high-quality graphic production facilities and printers.

The program has a strong tradition of learning through service to the community, the region, the state, and the nation. A number of community planning projects and studies are produced through the program’s Center for Sustainable Development; the center facilitates the study and practice of sustainable design, planning, and development in Texas, the nation, and the world through complementary programs of research, education, and community outreach. Learning-through-service is also accomplished through the internship program administered by the Career Services Office. The program draws on the resources of state, regional, and local planning agencies to provide research and community service opportunities.

A full description of the current facilities is available at the community and regional planning Web site at http://soa.utexas.edu/.

AREAS OF STUDY

In conjunction with completion of the core portion of the curriculum, students may choose to specialize in a field within urban planning. An official specialization requires completion of a minimum of four elective courses plus a thesis or professional report within the chosen field. Areas of specialization include environmental and natural resources planning, land development and urban design, housing and community economic development, land use and infrastructure planning (including transportation planning), historic preservation (through cross-listed architecture courses), and other areas covered in dual degree programs listed below. Selection of an official field of specialization is not a requirement of the degree program. Students may instead choose to tailor the choice of elective courses to their specific interests.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Dean J. Almy
Kent S. Butler
Sarah Eileen Dooling
Michael Holleran
Terry D. Kahn
Ming-Chun Lee
Talia M. McCray
Steven A. Moore
Elizabeth Mueller
Michael Oden
Robert G. Paterson
Allan W. Shearer
Bjorn I. Sletto
Frederick R. Steiner
Patricia A. Wilson
Ming Zhang

ADMISSION REQUIREMENTS

There are no specific course prerequisites for admission to the master’s degree program. However, facility in basic computer skills (using spreadsheets and word processing) is assumed. Some entering students find introductory courses in statistics and microeconomics to be helpful, although such courses are not formal prerequisites.
To be admitted to the doctoral program, an applicant must have a master’s degree in community and regional planning or a related field, must have adequate preparation in the subject matter of the program, and must demonstrate competence in quantitative methods and planning theory.

To be admitted to any of the dual degree programs, the applicant must be admitted to each of the individual participating programs.

For more information about admission to the master’s or doctoral degree program or to any of the dual degree programs, consult the graduate adviser in care of the program or the community and regional planning Web site at http://soa.utexas.edu/.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN COMMUNITY AND REGIONAL PLANNING

Each student must complete forty-eight semester hours of coursework, including introductory courses in planning history, theory, and process, applied planning methods, GIS and visual planning tools, planning law, and financing public services. The student may then choose an area of specialization; for each specialization, at least four courses are required. During the final year, the student synthesizes his or her educational experience by taking an integrative planning studio and completing either a thesis or a professional report. With the assistance of the graduate adviser, each student develops an individual program based on his or her interests; each program of study must include at least thirty semester hours in community and regional planning or acceptable substitutes.

DOCTOR OF PHILOSOPHY

The doctoral degree requires forty-eight semester hours of work, including graduate coursework, directed research, and the dissertation. Each doctoral student must choose a specialization from the following: environmental and natural resources planning, land development and urban design, housing and community economic development, land use and infrastructure planning (including transportation), historic preservation (through cross-listed architecture courses), or a special field defined by the supervisor and the student and approved by the community and regional planning PhD Committee. The specialization is supplemented by advanced work in an outside field; a variety of supporting (outside) fields are available through other University programs. Depth and breadth of experience in planning theory and research design and methods are required of all doctoral students.

After completing the required coursework, the student advances to candidacy according to procedures set by the Graduate Studies Committee. Advancement to candidacy involves an evaluation of the student’s research proposal and a comprehensive written examination covering the inside field and the student’s coursework. A faculty committee reviews the student’s program of coursework and research proposal, evaluates the research in progress, and reads the dissertation.

DUAL DEGREE PROGRAMS

The community and regional planning program offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography</td>
<td>Doctor of Philosophy</td>
</tr>
<tr>
<td>Latin American studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Law</td>
<td>Doctor of Jurisprudence</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>

In addition, the following dual degree programs are offered within the School of Architecture. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community and regional planning</td>
<td>Master of Science in Community and</td>
</tr>
<tr>
<td>Sustainable design</td>
<td>Regional Planning/</td>
</tr>
<tr>
<td>Community and regional planning</td>
<td>Master of Science in Community and</td>
</tr>
<tr>
<td>Urban design</td>
<td>Regional Planning/</td>
</tr>
<tr>
<td></td>
<td>Master of Science in Urban Design</td>
</tr>
</tbody>
</table>
FOR MORE INFORMATION

Campus address: Sutton Hall (SUT) 2.130, phone (512) 471-1922, fax (512) 471-0716; campus mail code: B7500

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

COMMUNITY AND REGIONAL PLANNING:

CRP

380. Planning Theory and Practice. A three-semester sequence in planning practice and communications; basic planning methods; history, theory, and ethics of planning. Students complete a comprehensive planning project in the final semester. Three lecture hours a week for three semesters. Prerequisite: Graduate standing and admission to the community and regional planning master’s or doctoral degree program.

381. Management and Implementation. Public policy and administration, law, public finance, economics of the public sector, political economy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

382C. Physical Planning and Design. Subjects may include place-making, landscape and urban design, and physical planning and design at the national, regional, or local level. Three lecture hours a week for one semester. Some topics may require additional studio hours. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

383. Environment and Natural Resources. Seminars and workshops. Workshops are based on active research or cooperation with public or private clients. May also include studios. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

384. Transportation. Seminars and workshops on urban transportation policy and practice. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

385. Public Policy and Administration. Public policy and administration, law, public finance, economics of the public sector, political economy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

386. Development and Design. Subjects may include development and design at the national, regional, or local level. Three lecture hours a week for one semester. Some topics may require additional studio hours. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

387. Land Use and Environmental Planning. Seminars and workshops. Workshops are based on active research or cooperation with public or private clients. May also include studios. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
385C. Economic and Community Development. Theory and analysis of community and regional structure and function; social and political organization; economic structure and development; growth problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Urban and Regional Theory.
Topic 4: Community Development.
Topic 5: Local Development Planning in Latin America.
Topic 6: International Sustainable Social Development.
Topic 7: Social, Spatial, and Environmental Justice.
Topic 8: Built Environment and Public Health.
Topic 9: Sustainable Cities.
Topic 10: City and Regional Planning in Texas.
Topic 11: Planning and designing for the high-tech environment. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

685D. Planning Studio. An integrative and comprehensive planning studio project course, involving application of theory, research, fieldwork, and oral, graphic, and written communication. Six lecture hours and four laboratory hours a week for one semester. With consent of the graduate adviser, may be repeated for credit. Community and Regional Planning 685D and 395C may not both be counted, without consent of the graduate adviser. Community and Regional Planning 685D and 395D may not both be counted without consent of the graduate adviser. Prerequisite: Graduate standing.

386. Applied Planning Techniques. Quantitative and qualitative methods of planning analysis; computer models; geographic information systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Quantitative Methods.
Topic 3: Data Sources and Analysis. Major sources and types of data available in the public and private domains; data analysis and applications.
Topic 4: Qualitative Research Methods.
Topic 5: Introduction to Geographic Information Systems.
Topic 7: Planning Studio for Landscape and Urban Design.
Topic 8: Research Design.
Topic 9: Sustainable Land Use Planning.

387C. Infrastructure Planning. Policy and techniques for providing soft and hard urban infrastructure; infrastructure planning and analysis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Infrastructure Planning and Development.
Topic 2: Water Resources Planning.
Topic 3: Urban Parks and Open Space Planning.

388. Housing. Policy, production, maintenance, location, finance, and mortgages of single-family and multifamily housing; neighborhoods, gentrification, and public and private housing subsidy programs. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Housing Demand and Production.
Topic 2: Housing and Culture.
Topic 3: Affordable Housing Policy.
Topic 4: Affordable Housing Development and Design.
Topic 5: Housing Practice and Public Policy in Latin America.

389C. Land Use and Land Development. Private land development investment decisions; public regulatory mechanisms; the public and private land development process; financial feasibility and market analysis; impact fees and special ordinances. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Planning for Land Development.
Topic 2: Research in Land Development.
Topic 3: Landscape and Culture.
Topic 4: Images of the City.

390. Conference Course in Community and Regional Planning. Readings and case studies in current topical issues in planning and planning education; may include planning and designing for the high-tech environment. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

391D. Doctoral Seminar. Advanced theory and research methodology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and admission to the community and regional planning doctoral program.

Topic 1: Colloquium on Planning Issues.
Topic 2: Planning Theory Seminar.
Topic 3: Research Methodology Seminar.

392C. Historical Preservation. Includes topics in architectural history, with a focus on the twentieth century and Modernism; architectural conservation; preservation planning and cultural resource management; and design. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: History of American City-Building. Community and Regional Planning 392C (Topic 1) and 389C (Topic: History of American City-Building) may not both be counted.

Topic 2: Preservation History and Theory.
Topic 4: Research Seminar in Sustainable Preservation.
Topic 5: Historic Preservation: Planning and Practice.
395C. Planning Studio. An integrative and comprehensive planning studio project course, involving application of theory, research, fieldwork, and oral, graphic, and written communication. Three lecture hours and two laboratory hours a week for one semester. With consent of the graduate adviser, may be repeated for credit. Community and Regional Planning 395C and 685D may not both be counted without consent of the graduate adviser. Prerequisite: Graduate standing and consent of the graduate adviser.

395D. Planning Studio. Continuation of Community and Regional Planning 395C. Three lecture hours and two laboratory hours a week for one semester. With consent of the graduate adviser, may be repeated for credit. Community and Regional Planning 395D and 685D may not both be counted without consent of the graduate adviser. Prerequisite: Graduate standing, Community and Regional Planning 395C, and consent of the graduate adviser.

396. Independent Research in Community and Regional Planning. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

397. Planning Internship. Includes placement with a public or private planning agency, faculty supervision, and presentation of report. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

398. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in community and regional planning and consent of the graduate adviser; for 698B, Community and Regional Planning 698A.

398R. Master’s Professional Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option; a student may choose this option with faculty approval if the student also completes an internship. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in community and regional planning and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Community and Regional Planning 399R, 699R, or 999R.

INTERIOR DESIGN

Master of Interior Design

FACILITIES FOR GRADUATE WORK

Facilities for the study of interior design are centrally located on campus in three adjacent and historically significant buildings: Battle Hall (1911) and Sutton Hall (1918, renovated in 1982), designed by the distinguished American architect Cass Gilbert; and Goldsmith Hall (1933, expanded and renovated in 1988), designed by noted French architect Paul Philippe Cret, one of the planners of the original forty-acre campus.

The Architecture and Planning Library, a branch of the University Libraries, maintains more than 88,000 volumes, as well as the Alexander Architectural Archive with over 90 archival collections. The Architecture and Planning Library is distinguished by its extensive holdings of rare and scarce architecture and interior design collections. Over 17,000 volumes are housed in Special Collections, with special strengths in modernism, the Vienna Secession Movement, the Beaux-Arts, and the Picturesque. Special collections include the libraries of architects Charles W. Moore and Paul P. Cret, architectural historian Colin Rowe, as well as libraries of firms whose records are preserved in the Alexander Architectural Library.

The program is additionally supported by the Materials Labs collection, which is one of the largest and most comprehensive material collections of its kind at any college or university in the country. Currently, the Materials Lab has a growing collection, currently standing at 25,000 material samples and corresponding product literature (manufacturer catalogs, brochures, multimedia, etc.). The collection mainly consists of traditional building construction materials; however, it strives to be reflective of the current building and design market and has a particular focus on smart, innovative, emerging, and sustainable design materials and technologies.
The collections of the nearby Harry Ransom Humanities Research Center include china, clothing, decorative arts, furniture, silver, and textiles that contribute to the study of the interior. Historic rooms and suites on campus include the Willoughby-Blake Room, the John Foster and Janet Dulles Suite, the Republic of Texas Suite, the President’s Office, and the Esther Hoblitzelle Parlor. Other collections on campus include the 15,000 pieces of art, furniture, and accessories in the Elton and Martha Hyder collection and the collection of approximately forty chairs dating from the seventeenth through twentieth century that are housed in the Blanton Museum of Art.

The School of Architecture’s Visual Resources Collection contains audiovisual equipment, technical and design reference material, and more than 240,000 photographic slides and 73,000 digital images of interior design, architecture, and related works.

The Center for American Architecture and Design provides support and resources for the scholarly study of American architecture. Through lectures, exhibitions, seminars, symposia, fellowship support, and the collection of research materials, the center encourages a community of architecture and interior design scholarship.

Computer-aided design and research opportunities are provided by the School of Architecture’s computer laboratory, which maintains microcomputer equipment and terminals interfaced with the extensive computing facilities of Information Technology Services.

**AREAS OF STUDY**

The two master’s degree programs in interior design lead to professional and postprofessional academic degrees. The Master of Interior Design (first professional) degree fulfills the professional degree requirements for registration as an interior designer. The Master of Interior Design (postprofessional) degree offers students advanced studies, theory, and research for those holding a prior professional degree in interior design or architecture.

**GRADUATE STUDIES COMMITTEE**

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Elizabeth A. Danze
- Tamie Michele Glass
- Nancy P. Kwallek
- Carl Matthews
- Igor P. Siddiqui
- Lois Weinthal

**ADMISSION REQUIREMENTS**

**Master of Interior Design (first professional).** This degree program is open to qualified applicants who hold baccalaureate degrees in any discipline without a prior professional degree in interior design or architecture. Note: The first professional degree is a new program not yet offered. At this time and until further notice, the School of Architecture is not accepting applications for this option. Please check back in 2013 for status of the program start date.

**Master of Interior Design (postprofessional).** This degree program is open to qualified applicants with a prior professional baccalaureate degree in interior design or architecture.

**DEGREE REQUIREMENTS**

**Master of Interior Design (first professional).** Note: This new degree program is not yet offered. At this time and until further notice, the School of Architecture is not accepting applications for this option. Please check back in 2013 for status of the program start date. For students entering with degrees other than professional degrees in interior design or architecture, the Master of Interior Design is a first professional degree, with accelerated graduate professional courses designed to prepare the student for advanced work in interior design; the coursework is prescribed on the basis of the student’s previous college work as shown in transcripts, portfolio, statement of intent, résumé, and references. This program includes thirty-two hours of qualifying coursework (some course requirements may be waived upon review of transcripts and experience) prior to forty-nine semester hours of graduate work, including a master’s thesis contributing to the knowledge base of interior design or a master’s design studio.
**Master of Interior Design (postprofessional).** For students entering with a professional degree in interior design or architecture, the Master of Interior Design is a postprofessional degree. This program requires forty-eight semester hours of graduate work, including a master’s thesis contributing to the knowledge base of interior design or a master’s design studio.

**FOR MORE INFORMATION**

**Campus address:** Goldsmith Hall (GOL 2.308), phone (512) 471-1922, fax (512) 471-0716; campus mail code: B7500

**Mailing address:** The University of Texas at Austin, Graduate Program in Interior Design, School of Architecture, 1 University Station B7500, Austin TX 78712

**E-mail:** soa_grad@austin.utexas.edu

**URL:** http://soa.utexas.edu/

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**ARCHITECTURAL INTERIOR DESIGN: ARI**

**281. Visual Communications.** Introduction to using digital tools for communicating design, with an emphasis on integrating digital image, CAD, and 3-D software processes with hand drawing and modeling techniques. Subjects may include the manipulation of digital images, the combination of text and image, rendered perspectives, measured drawings, an introduction to 3-D modeling, and the use of advanced visual language. Some projects are based on work done in the student’s design studios. Six hours of lecture and studio a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

**381R. Topics in Representation.** Topics in the fundamental components of interior design and visual communication. Five or six laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

**381T. Topics in Emerging Technologies.** Examines tools, techniques, and methods used in simulating, constructing, and experiencing interior space. Studies how various emerging technologies affect interior design, from initial design to fabrication to completion. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

**382. Interior Design Practice.** Business procedures, professional practice, design project control and management, and professional ethics as they relate to interior design. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

**384K. Environmental Control I.** Survey of acoustics, color, light, illumination, and electrical and information systems in architectural interiors. Includes techniques of documentation. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

**384L. Environmental Control II.** Survey of heating, ventilation, air conditioning, vertical transportation, and plumbing systems in buildings. Includes techniques of documentation. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Graduate standing. Architectural Interior Design 384K with a grade of at least C, and consent of the graduate adviser.

**385L. Construction for Interior Design.** Core concepts in interior materials, assemblies, and systems. Includes material properties, environmental and sustainable issues, attachment, detailing, and product specifications. Projects encourage manipulation and assembly of various material systems. Includes case studies using material samples, and may include field trips to local fabrication sites. Six hours of lecture and studio a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

**385T. Topics in Materials and Tectonics.** Investigates traditional interior design materials and materials emerging from new technologies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

**386K. Seminar in Interior Design.** Introductory subjects in interior design. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

**386M. Topics in Interior Design Theory and Criticism.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.
388K. Interior Design History I. Survey of interior design from antiquity through the eighteenth century, including theoretical, social, technical, and environmental issues. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

388L. Interior Design History II. Study of function and aesthetics, and decoration and use, emphasizing interiors from the nineteenth century to the present. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Architectural Interior Design 388K with a grade of at least C.

388R. Topics in Interior Design History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser. Additional prerequisites may vary with the topic.

389, 689. Research in Interior Design. Investigation of problems selected by the student and approved by the graduate adviser. Three or six lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

693K. Interior Design Core Studio I. Explores interior spaces and their sequence and adjacencies. Studies individual rooms, their locations, and their uses in such fields as hospitality, health care, and entertainment. Special emphasis on the design of transitions from public spaces to personal spaces. Fifteen hours of lecture and studio a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

693L. Interior Design Core Studio II. Examination of the elements of interior space and scale, including specific human factors. Particular emphasis on the design, documentation, production, and placement of objects in interiors. Fifteen hours of lecture and studio a week for one semester. Prerequisite: Graduate standing; Architectural Interior Design 693K with a grade of at least C, and consent of the graduate adviser.

694. Advanced Design: International Studio. Advanced problems in international interior design. Students help design new residential or commercial buildings, incorporating local architectural style. Includes research of local historical texts. Taught abroad in locations that vary by semester, but may include Italy and Mexico. Fifteen studio hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, Architectural Interior Design 693K and 693L, and consent of the graduate adviser.

695. Interior Design: Technical Studio. Comprehensive studio that focuses on combining the elements that create a thorough interior design. Fifteen studio hours a week for one semester. Prerequisite: Graduate standing, Architectural Interior Design 693K and 693L, and consent of the graduate adviser.

696. Advanced Interior Design Studio. Studies advanced problems in interior design and examines design strategies and different phases of design. Topics may focus on interior design as it relates to retail, education, sustainability, and health care. Fifteen studio hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, Architectural Interior Design 693K and 693L, and consent of the graduate adviser.

197. Interior Design Internship. Practical application of design procedures in a professional design office. Sixteen to twenty hours of work a week for one semester (a total of at least 250 hours). Prerequisite: Graduate standing and consent of the graduate adviser.

LANDSCAPE ARCHITECTURE

Master of Landscape Architecture

FACILITIES FOR GRADUATE WORK

Facilities for the study of landscape architecture are centrally located on campus in three adjacent and historically significant buildings: Battle Hall (1911) and Sutton Hall (1918, renovated in 1982), designed by the distinguished American architect Cass Gilbert; and Goldsmith Hall (1933, expanded and renovated in 1988), designed by noted French architect Paul Philippe Cret, one of the planners of the original forty-acre campus. The program has close working relationships with the Department of Geography and the Environment, the Lady Bird Johnson Wildflower Center, and the Center for Maximum Potential Building Systems.

The Architecture and Planning Library, a branch of the University Libraries, maintains more than 84,000 volumes, including bound periodicals, professional reports, and all major architecture, landscape architecture,
areas of study

The Master of Landscape Architecture, first professional degree, is a professional degree program for students who do not have a background in landscape architecture.

The Master of Landscape Architecture, postprofessional degree, is a postprofessional degree program for landscape architecture professionals.

graduate studies committee

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Dean J. Almy
Miroslava M. Benes
Kelley A. Crews
Hope Hasbrouck
David D. Heymann
Allan W. Shearer
Jason S. Sowell
Frederick R. Steiner
Nichole Wiedemann

Admission Requirements

Master of Landscape Architecture (first professional). This degree program is open to qualified applicants who hold baccalaureate degrees in any discipline. Applicants with an accredited professional degree in architecture may be eligible for admission with advanced standing. Applicants with a nonaccredited preprofessional degree in architecture, landscape architecture, or environmental design may also be granted advanced standing.

Those who qualify are generally granted advanced standing of up to one or two terms, subject to review by the admissions committee. These individuals may be able to waive degree requirements by demonstrating equivalent study in any of the required course areas.

Master of Landscape Architecture (postprofessional). This degree program is open to qualified applicants who hold accredited professional degrees in landscape architecture.

Degree Requirements

The Master of Landscape Architecture, first professional degree, is an accelerated graduate program designed to prepare students for advanced work in landscape architecture. Upon admission, students...
must complete a structured core sequence of courses in design, visual communication, natural systems, history and theory, and technology in landscape architecture. Upon completion of the core sequence, students are qualified to begin advanced study in the discipline. Students in the first professional degree program must be enrolled full time and must complete at least seventy-nine semester hours of coursework. Students granted advanced standing normally complete their studies in two or more years, with fifty-four or more semester hours of coursework. The number of hours will vary according to the program of study outlined by the faculty upon admission.

The Master of Landscape Architecture, postprofessional degree, is a graduate program designed to provide individuals who have completed an undergraduate professional landscape architecture degree or its equivalent an opportunity to engage in advanced scholarship and professional development. Students in the postprofessional degree program normally complete their studies in two years, with a total of forty-eight semester hours of coursework.

**FOR MORE INFORMATION**

**Campus address:** Goldsmith Hall (GOL 2.308), phone (512) 471-1922, fax (512) 471-0716; campus mail code: B7500

**Mailing address:** The University of Texas at Austin, Graduate Program in Landscape Architecture, School of Architecture, 1 University Station B7500, Austin TX 78712

**E-mail:** soa_grad@austin.utexas.edu

**URL:** http://soa.utexas.edu/

---

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

**LANDSCAPE ARCHITECTURE: LAR**

380. **Summer Atelier in Landscape Architecture.** An introduction to the fundamental components of landscape architecture and graphic communication. Students are introduced to basic drawing and representational skills. Three lecture hours a week for one semester. Prerequisite: Graduate standing, admission to the Master of Landscape Architecture program, and consent of the graduate adviser.

381R. **Topics in Visual Communication.** Advanced topics in media and interpretation, such as freehand drawing, measured drawings, aspects of computer graphics, geographic information systems, and photography. Six laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

682. **Design and Visual Studies in Landscape Architecture I.** Core design studio introducing landscape architectural design, representation, and theoretical practices. Fifteen laboratory hours a week for one semester. Landscape Architecture 682 and 390 may not both be counted. Landscape Architecture 682 and 390K may not both be counted. Prerequisite: Graduate standing, Landscape Architecture 380, credit or registration for Landscape Architecture 385L and 388K, admission to the Master of Landscape Architecture program, and consent of the graduate adviser.

682T. **Design and Visual Studies in Landscape Architecture II.** Core design studio continuing the study of the issues, methods, and theories introduced in Landscape Architecture 682. Fifteen laboratory hours a week for one semester. Landscape Architecture 682T and 391 may not both be counted. Only one of the following may be counted: Landscape Architecture 381L, 682T, 391K. Prerequisite: Landscape Architecture 682 with a grade of at least C, credit or registration for Landscape Architecture 385L and 388L, admission to the Master of Landscape Architecture degree program, and consent of the graduate adviser.

384. **Topics in Horticulture and Plants in Design.** Study of habitat, site and technical conditions, and characteristics of plant typologies and their application to landscape practice. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.
385. Topics in Natural Systems. Elective seminars in aspects of environmental analysis, ecological and systemic approaches, sustainable development, and applied methods of geographic information systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

385K. Technology Workshop I. Introduces the principles, processes, and practices of site manipulation, description, and construction techniques. Includes systems of measurement, grading, earthwork, site circulation, and site drainage, and examines the representation, application, and integration of site-related operations. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing, Landscape Architecture 385K with a grade of at least C, and consent of the graduate adviser.

385L. Technology Workshop II. Materials and methods of landscape construction, advanced site work techniques, and theories for material selection and application within the design process. Examines the representation, application, and integration of detail and design intent. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing, Landscape Architecture 385K with a grade of at least C, and consent of the graduate adviser.

385M. Advanced Seminar in Landscape Technology. Examines advanced technologies and construction issues in landscape architecture, including the application and measurement of landscape operations within design. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Landscape Architecture 385L with a grade of at least C, and consent of the graduate adviser.

385N. Native Plants. Plant identification and principles of ecology using Central Texas habitats and plants as examples, including how soil, climate, and management affect plant success. Three lecture hours a week for one semester. Landscape Architecture 385L and 385N may not both be counted. Prerequisite: Graduate standing, and admission to the Master of Landscape Architecture program or consent of the graduate adviser.

386. Professional Practice. Ethical, legal, economic, and administrative processes and responsibilities of the landscape architect practitioner. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

387. Landscape Ecology. Introduction to foundational concepts in landscape ecology, with emphasis on structure, function, and change of ecological systems. Addresses design and planning in relation to biological and cultural resources. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

388. Topics in Landscape Architecture History and Theory. Seminars on advanced topics in history and theory, including analysis, readings, and critique of significant positions, practice, and discourse. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Landscape Architecture 388K or consent of the graduate adviser.

388K. History and Theories of Landscape Architecture I. Landscape architecture in formal, social, and cultural terms in the Western and Eastern worlds. Covers the development of ideas and principles related to context, designer, and text. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

388L. History and Theories of Landscape Architecture II. Landscape architecture from 1700 to the present, with a focus on design language, theoretical frameworks, and the critical components of contemporary landscape design and thought. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Landscape Architecture 388K with a grade of at least C, and consent of the graduate adviser.

388M. Postprofessional Seminar in Landscape Architecture. Examines fundamental aspects about the design of the built environment, design-related research, and design practices. Explores representation, process, evaluation, change, impact, and synthesis for design decision making based upon cultural values. Three lecture hours a week for one semester. Prerequisite: Graduate standing; admission to the Master of Landscape Architecture (first professional) degree program with advanced standing, or admission to the Master of Landscape Architecture (postprofessional) degree program; and consent of the graduate adviser.

389, 689. Research in Landscape Architecture. Investigation of topics in landscape architecture selected by the student with approval of the Graduate Studies Committee. Independent study. Prerequisite: Graduate standing and consent of the graduate adviser.

694T. Landscape Architectural Design. Core design studio presenting the issues, methods, and theories central to the representation, planning, and design of large-scale landscapes. Fifteen laboratory hours a week for one semester. Prerequisite: Graduate standing, Landscape Architecture 682T with a grade of at least C, credit or registration for Landscape Architecture 385M and 385N, and consent of the graduate adviser.

695. Comprehensive Landscape Studio. Core design studio that examines relationships between theory and practice. Students have the opportunity to study a landscape project from initial research and site investigation to detailed design, implementation, and technical detail. Fifteen laboratory hours a week for one semester. Prerequisite: Graduate standing, Landscape Architecture 385M and 694T with a grade of at least C in each, and consent of the graduate adviser.
696. **Advanced Design.** Elective studios offering students an opportunity to explore particular topics in landscape, often in collaboration with architecture and community and regional planning students. Fifteen laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, Landscape Architecture 695 with a grade of at least C, and consent of the graduate adviser.

397. **Master's Design Study in Landscape Architecture—Preparation.** Investigation of topics in landscape architecture selected by the student in preparation for Landscape Architecture 697K. The equivalent of three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

697K. **Master's Design Study in Landscape Architecture.** An independent design project in which the investigation, design process, and critical evaluation are formulated by the student. The project must have a theoretical and research base, provide a comprehensive exploration of a landscape design topic, and offer insight for the furthering of landscape studies. Eighteen laboratory hours a week for one semester. Prerequisite: Graduate standing, Landscape Architecture 696 and 397, and consent of the graduate adviser.
FACILITIES FOR GRADUATE WORK

Facilities for graduate study in business include state-of-the-art classrooms and seminar rooms, which are equipped with multimedia and computer terminal facilities. Computer classrooms, computer laboratories, a Financial Trading and Technology Center, and a behavioral science laboratory are also available. A variety of special collections and databases are available for research and study. In addition, there are extensive study and research facilities for individual and group projects.

Library holdings in business, economics, and related areas are unusually comprehensive; the University has several noteworthy collections, such as those on Latin America and Texas, that are of special interest to business students. Also available are personalized reference services, including library instruction classes, Web-based subject and course guides, and an extensive array of online business and statistical databases; a tax collection; and a large selection of materials to aid in productive problem solving. These holdings are located in the Perry-Castañeda Library and are available through the University Libraries Web site, http://www.lib.utexas.edu/.

Other facilities of interest, especially to students of international business, include the Center for International Business Education and Research, the Benson Latin American Collection, the Teresa Lozano Long Institute of Latin American Studies, the Center for Middle Eastern Studies, the Center for East Asian Studies, the South Asia Institute, and the Population Research Center. Additional opportunities for research are provided by the AIM Investment Center; the Center for Business, Technology, and Law; the Center for Customer Insight and Marketing Solutions; the Manufacturing Systems Center; the Real Estate Finance and Investment Center; the Center for Research in Electronic Commerce; the EDS Financial Trading and Technology Center; the Hicks, Muse, Tate & Furst Center for Private Equity Finance; the Herb Kelleher Center for Entrepreneurship; the IC² Institute; and the Supply Chain Management Center of Excellence.

The McCombs School of Business has its own computer network that links the school’s laboratories and other computing resources. The network is also connected to the University’s computing infrastructure. All Master of Business Administration (MBA) students are required to own a laptop computer.

The MBA Program Office provides information, academic advising, and student services to MBA students; contact information is given on page 51.

AREAS OF STUDY

Graduate study is offered in the following areas: accounting; business, government, and society; information, risk, and operations management; management; marketing; and technology commercialization. Students in the full-time program may concentrate their coursework in one of these areas. They may also choose one of the following specializations: brand management, corporate finance, customer insight, energy finance, entrepreneurship, global business, information management, investment management, operations management, private equity finance, real estate finance, social enterprise, strategic marketing, and other areas approved by the MBA Programs Committee.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

D. E. Hirst        Clemens Sialm
Ross G. Jennings    David B. Spence
Kyle Lewis         Rajashri Srinivasan
Thomas W. Sager

ADMISSION REQUIREMENTS

Several scheduling options are available to students seeking the MBA: full-time, executive, and evening programs in Austin; weekend programs in Dallas and Houston; and a weekend executive program in Mexico City at the Tecnológico de Monterrey–Campus Santa Fe.

Admission decisions for all programs are based on the applicant’s test scores, academic and professional background, letters of recommendation, and other factors.

Applicants to the Mexico City program may submit scores on the Graduate Management Admission Test (GMAT) or the Tecnológico de Monterrey Prueba de Admisión a Estudios de Posgrado (PAEP); all applicants who are not United States citizens must submit GMAT or Graduate Record Examinations General Exam (GRE) scores.

The admissions committee may consider waiving the GMAT/GRE requirement in the executive MBA programs in Austin and Mexico City when one of the following conditions is met: (1) fifteen years of postgraduate work experience, (2) five years of people/project management experience, (3) an advanced degree, (4) an expired GMAT.

TOEFL or IELTS scores are required of all applicants to the Mexico City program who are not United States citizens, and of all other applicants who received their undergraduate education in a non-English-speaking country.

Upon admission to the program, the student must pay a nonrefundable enrollment deposit to indicate that he or she accepts the offer of admission. The deposit is applied to the payment of tuition when the student enrolls. Students who demonstrate financial need may qualify for assistance to cover the deposit. The deposit is also required of students admitted to the dual degree programs described on page 51.

More information about the admission process for each program is published by the McCombs School at http://www.new.mccombs.utexas.edu/mba/.

DEGREE REQUIREMENTS

The objective of each of the programs described below is to develop influential business leaders who are able to assume high-level responsibilities in the rapidly changing national and international environment of the public and private sectors. The curriculum is designed to stimulate intellectual curiosity; to develop analytical and research ability; and to give students the ability to make sound managerial decisions, to plan, organize, and control activities in order to achieve established goals, and to manage people, organizations, and change. Students are expected to acquire the concepts, tools, and understanding to operate in and contribute successfully to new economic environments. Such environments are characterized by rapid technological change, global competition, and information-rich or information-deficient management decisions. Each program is designed to accommodate students with baccalaureate degrees in a wide variety of fields. Each affords the student a wide range of choices to complete a course of advanced study that integrates developments, theory, and applications involved in the exercise of executive and managerial administrative responsibilities.

FULL-TIME PROGRAM

The full-time MBA is a two-year program taught in Austin. Students enter the program in the fall and graduate at the end of the second spring semester. At least fifteen hours of coursework are required each semester. A one-hour career management course is required in the first semester.

The program requires at least sixty to sixty-two semester hours of coursework. Twenty-three hours are provided by required core courses. Students are required to take certain core courses in an assigned cohort.

During the first semester of the program, students are organized into cohorts of about seventy members. The students in each cohort take most core courses together. Within the cohort and in particular courses, students may be assigned to four- or five-person study groups to encourage group problem solving and teamwork and the development of leadership skills.

At least thirty-seven semester hours of approved graduate electives are required. The student may concentrate the elective coursework within a discipline, such as marketing; each concentration consists of a sequence of courses that offers strong preparation for
a particular career path. Students are not required to choose a concentration. Further information about prerequisites, requirements, and concentrations is available from the MBA Program Office, online at http://new.mccombs.utexas.edu/mba/full-time/, and by e-mail from texasmba@mccombs.utexas.edu.

**WEEKEND AND EVENING PROGRAMS IN AUSTIN**

A carefully planned program of continuing education and development for executives is essential in today’s dynamic business environment. The following programs provide this graduate business education for early-career to senior managers while permitting them to continue their careers.

**Executive MBA.** The executive MBA program is a two-year program designed to meet the needs of academically qualified midcareer professionals who wish to pursue an MBA degree while continuing to carry the full responsibilities of their jobs. Classes are held on alternate Fridays and Saturdays. This rigorous and demanding program requires a serious commitment from both the student and the student’s employer. All students must complete thirty-six semester hours of required coursework and six hours of electives.

Prospective students should have at least five years of experience in management. The average work experience of currently enrolled students exceeds twelve years. A brochure describing the program is available from the MBA Program Office. Information is also available at http://new.mccombs.utexas.edu/mba/emba.aspx, and by e-mail from texasemba@mccombs.utexas.edu.

**Evening MBA.** This three-year graduate business program is designed for working professionals who choose to work while pursuing the MBA. Classes are held on Monday and Tuesday evenings. Students attend classes in the fall, spring, and summer, and must complete forty-eight semester hours of coursework. The evening MBA program is designed to help high-potential managers become global business leaders.

Prospective students should have at least two years of work or professional experience. The average work experience of currently enrolled students is nearly six years. A brochure describing the program is available from the MBA Program Office. Information is also available at http://new.mccombs.utexas.edu/mba/emba.aspx.

**WEEKEND PROGRAMS OUTSIDE AUSTIN**

MBA at Houston and MBA at Dallas-Fort Worth. These rigorous, twenty-two-month graduate business programs are designed for managers and professionals who wish to pursue an MBA degree outside normal working hours. Classes are held Friday evenings from 4:00 PM to 8:30 PM and Saturdays from 8:00 AM to 5:30 PM on alternate weekends. Classes held in Dallas meet at the University of Texas Southwestern Medical Center at Dallas. Classes held in Houston meet at the University of Texas Health Science Center at Houston. In addition, the programs include two one-week intensive seminars in Austin and a week-long international trip.

The high academic standards and dedicated faculty are the same as in the full-time MBA program. Information about the Houston program is available at http://new.mccombs.utexas.edu/mba/houston.aspx; and about the Dallas-Fort Worth program, at http://new.mccombs.utexas.edu/mba/dallas.aspx.

**Executive MBA at Mexico City.** This two-year program for working professionals is taught by McCombs School faculty members at the Tecnológico de Monterrey—Campus Santa Fe. Students who complete the forty-two semester hours of coursework earn both the MBA degree from the University of Texas at Austin and a Master of Administration degree from Tecnológico de Monterrey—Campus Santa Fe. Classes meet Friday evenings and all day Saturday, usually on alternate weekends. In addition, students take part in three one-week intensive seminars, two in Austin and one at an international location. Information about the program is available at http://new.mccombs.utexas.edu/mba/mba-mexico.aspx.
DUAL DEGREE PROGRAMS

The McCombs School of Business offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Asian studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Communication studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Global policy studies</td>
<td>Master of Global Policy Studies</td>
</tr>
<tr>
<td>Journalism</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Latin American studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Law</td>
<td>Doctor of Jurisprudence</td>
</tr>
<tr>
<td>Mechanical engineering, with a</td>
<td>Master of Science in Engineering</td>
</tr>
<tr>
<td>concentration in manufacturing and</td>
<td></td>
</tr>
<tr>
<td>decision systems engineering</td>
<td></td>
</tr>
<tr>
<td>Middle Eastern studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Nursing, with a concentration in</td>
<td>Master of Science in Nursing</td>
</tr>
<tr>
<td>nursing systems</td>
<td></td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
<tr>
<td>Radio-television-film</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Russian, East European, and</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Eurasian studies</td>
<td></td>
</tr>
</tbody>
</table>

DOUBBLE DEGREE PROGRAM

Students interested in a Master of Business Administration degree with an international focus may seek admission to the Double Degree Program. This program allows students in the full-time MBA program to take a substantial part of their coursework at a partner school outside the United States. The student must complete at least thirty-six semester hours of graduate coursework in residence at the McCombs School and must also fulfill the partner school’s requirements for coursework in residence. Students who complete the program earn both the MBA from the University and the equivalent degree from the partner school.

Applicants must be proficient in English and must meet the language requirements of the partner school. The McCombs School offers this program in cooperation with the Chinese University of Hong Kong; Escuela de Administración de Negocios para Graduados, Lima, Peru; Fundação Getúlio Vargas, São Paulo, Brazil; Guanghua School of Management, Beijing, China; Pontificia Universidad Católica de Chile, Santiago; WHU—Otto Beisheim School of Management, Vallendar, Germany; and various campuses of the Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico. Additional partner schools may be added in the future. Further information on the Double Degree Program is published by the McCombs School at http://new.mccombs.utexas.edu/mba/full-time/program-information/international/double-degree.aspx.

FOR MORE INFORMATION

Campus address: College of Business Administration Building (CBA) 2.502, phone (512) 471-7698, fax (512) 471-4131; campus mail code: B6004
Mailing address: The University of Texas at Austin, MBA Program, McCombs School of Business, 1 University Station B6004, Austin TX 78712
E-mail: texasmba@mccombs.utexas.edu
URL: http://new.mccombs.utexas.edu/
Graduate Courses

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

Business Administration: BA

380C. Information Technology Management. Restricted to first-year students in the MBA program. Technical architecture, including hardware/software platforms, operating systems, networking and the Internet; development strategies; and management issues for the introduction of new technology. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380F. Accounting Information for Managerial Decision Making. Restricted to second-year students in the MBA program. Financial information regarding revenue, cost, and assets, with an emphasis on the interpretation of numbers to derive well-informed management decisions. Covers the role of taxes in business strategy. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380M. Management Science. Introduction to the structure and use of mathematical models and methods for analyzing managerial decision problems. Development and application of modeling concepts and skills underlying the analytical techniques used to solve such problems. Introduction to a range of computers, and use of the latest in computer-based decision support systems. Three lecture hours a week for one semester. Prerequisite: Admission to the McCombs School of Business.

280N, 380N. Operations Management. An introduction to the issues and decisions involved in the production of goods and services. Focuses on designing, operating, controlling, and improving the systems that accomplish production. For 280N, four lecture hours a week for half a semester; for 380N, three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the McCombs School of Business.

380S. Managerial Economics. Microeconomic and macroeconomic forces that influence an organization’s decisions: interest rates, business cycles, financial systems, input demand and supply, industry factors, market structure, and externalities. Three lecture hours a week for one semester. Prerequisite: Admission to the McCombs School of Business.

181C. Strategic Career Planning. Restricted to first-year students in the MBA program. Issues surrounding career planning, including exploration and implementation. Professional development issues, including self-assessment. One and one-half lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

281T, 381T. Marketing Management. An introduction to the marketing perspective on strategy development and to the elements of marketing analysis. Includes the functional decision areas of the marketing manager, such as products and product lines, pricing policies, branding, promotion and advertising, and channels of distribution, and how organizations use these components to create, capture, and sustain value for the firm. For 281T, four lecture hours a week for half a semester; for 381T, three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the McCombs School of Business.

382T. Managerial Accounting. The conceptual and operational relationship of planning and control with management and accounting information systems. Topics include data collection and analysis for short-range and long-range organizational decisions. Three lecture hours a week for one semester. Only one of the following may be counted: Business Administration 380E, 382T, Accounting 329, 335, 387 (Topic 1: Introduction to Managerial Accounting), 287 (Topic 5: Performance Management and Control). Prerequisite: Admission to the McCombs School of Business.

284T, 384T. Financial Accounting. The information needs of capital market participants in a dynamic and complex socioeconomic system; emphasis on interpretation, measurement, and disclosure of economic events. For 284T, four lecture hours a week for half a semester; for 384T, three lecture hours a week for one semester. Offered on the letter-grade basis only. Accounting 381 and Business Administration 284T, 384T may not both be counted. Prerequisite: Admission to the McCombs School of Business.

285T, 385T. Financial Management. Concepts and techniques employed in investment decision making, working capital management, and financing the activities of a business. For 285T, four lecture hours a week for half a semester; for 385T, three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the McCombs School of Business.

286T, 386T. Statistics. A unified approach to basic concepts in collection, analysis, and interpretation of data, emphasizing capabilities of different statistical methods and business applications. Students use statistical software packages. For 286T, four lecture hours a week for half a semester; for 386T, three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the McCombs School of Business.
287T. Legal and Regulatory Environment of Business. Examination of relationships between public and private institutions, with emphasis on the legal constraints on managerial decision making. Two lecture hours a week for one semester. Prerequisite: Admission to the McCombs School of Business.

388T. Strategic Management. Restricted to first-year students in the MBA program. Designed to help students develop a general management orientation. Subjects include the role of the general manager, formulating business and corporate-level strategy, managing strategic change, strategy implementation, and developing general managers. Three lecture hours a week for one semester. Business Administration 388T and Management 385 (Topic 49: Strategic Management) may not both be counted. Prerequisite: Graduate standing.

389T. Managing People and Organizations. Development of the general areas of theory most central to dealing with the varieties of social/psychological behavior of direct import to the administrator and manager. Three lecture hours a week for one semester. Prerequisite: Admission to the McCombs School of Business.

390C. Hardware, Software, and Telecommunications. Provides a broad familiarity with the latest advances in the fundamental concepts and terminology of computer architecture and software. Three lecture hours a week for one semester. Prerequisite: Admission to the McCombs School of Business and to the concentration in information systems management.

190D, 390D. Management Information Systems. The use of decision support systems and database management concepts in an organization for information management and processing by mainframe and personal computer. One or three lecture hours a week for one semester. Prerequisite: Admission to the McCombs School of Business.

390F. Information Systems Design and Implementation. Specification, design, implementation, and testing of information systems. Three lecture hours a week for one semester. Prerequisite: Admission to the McCombs School of Business.

390H. Managing Information. Management and use of information in organizations, including database management, analytical approaches for effective information management, and organizational issues. Three lecture hours a week for one semester. Prerequisite: Graduate standing and admission to the McCombs School of Business.

390J. Data Communications, Networks, and Distributed Processing. Functional aspects of data communications, computer networks, and distributed information systems, using campus computers and the network systems available in the classroom. Three lecture hours a week for one semester. Prerequisite: Admission to the McCombs School of Business.

191, 291, 391, 691. Special Studies in Business Administration. Conference course in any of the areas offered by the McCombs School of Business. May be repeated for credit when the topics vary. With consent of instructor, some topics may be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Finance.
Topic 2: Management.
Topic 3: Real Estate.
Topic 4: Risk Management.
Topic 5: Accounting. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule.

Topic 6: Marketing.

398L. Written and Oral Communication for International Students. Designed to provide students at the high-intermediate level of English proficiency with communication skills beyond pronunciation and grammatical accuracy. Three lecture hours a week for one semester. Prerequisite: Graduate standing, admission to a doctoral program in the McCombs School of Business, and consent of instructor.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in business administration, completion of the core courses for the degree, and consent of the supervising professor and the graduate adviser.

398T. Supervised Teaching in Business Administration. Teaching in the McCombs School of Business for two semesters under the close direction of the course instructor or supervisor; weekly group meetings with the instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing, approval of the department chair and the dean, and appointment as a teaching assistant.
FACILITIES FOR GRADUATE WORK

The physical facilities, computing systems, and research centers that support graduate work in the McCombs School are described on page 48.

AREAS OF STUDY

The objective of this program is to provide the student with a sound foundation in the body of knowledge of business administration, broad exposure to the discipline of accounting, and the greater depth in accounting required to specialize and to enter the profession with the prospect of rapid career progress, high-level responsibility, and future leadership. The program is designed to provide outstanding students with the educational foundation for successful careers in public accounting, industry, consulting, not-for-profit organizations, and educational and financial institutions.

The faculty has designed three concentrations within the MPA program: financial reporting and assurance, managerial accounting and control, and taxation. Each concentration is a sequence of courses that offers strong preparation for a particular career path. In addition, the student may choose a generalist curriculum.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Urton L. Anderson
Rowland Atiase
Shuping Chen
Michael B. Clement
Carlos Corona
James W. Deitrick
Robert N. Freeman
Michael H. Granof
D. E. Hirst
Ross G. Jennings
Steven J. Kachelmeier
William R. Kinney Jr.
Lisa L. Koonce
Volker Laux
Stephen T. Limberg
Robert G. May
John M. McInnis
Lillian F. Mills
Donald P. Newman
John R. Robinson
Jaime Joy Schmidt
Jeri Kristina Seidman
Michael G. Williamson
Yanhua Yang
Yong Yu

ADMISSION REQUIREMENTS

MASTER IN PROFESSIONAL ACCOUNTING

Applications to the MPA program are accepted for the fall semester only.

The Admissions Committee considers each completed application, giving particular attention to the statement of purpose, prior academic performance, letters of recommendation, extracurricular and community activities, honors and achievements, test scores, and work history (if applicable). Personal characteristics that add to the diversity of the class may also be considered, such as country of citizenship, family background, gender, multilingual skills, and socioeconomic history.

The MPA program is sufficiently flexible to accommodate students with bachelor's degrees in any field of study. However, students without a sufficient background in financial accounting may be required to complete undergraduate coursework before they begin the MPA curriculum.

Upon admission to the program, the student must pay a nonrefundable enrollment deposit to indicate that he or she accepts the offer of admission. The deposit is applied to the payment of tuition when the student enrolls. All fees and deposits are subject to change with appropriate approval. Students should consult General Information for the current amount of the enrollment deposit.

DOCTOR OF PHILOSOPHY

Admission to the PhD program is based on a holistic review by the PhD Admissions Committee of several factors, including the applicant's motivations for doctoral study, academic and work experience, and academic credentials. The number of applicants admitted is limited by the faculty's commitment to provide financial assistance, excellent teaching, and expert guidance to each student.
DEGREE REQUIREMENTS

MASTER IN PROFESSIONAL ACCOUNTING

The core of the MPA curriculum consists of twenty-four semester hours of coursework. Two of the core courses may be waived if the student has completed equivalent undergraduate work. In addition to the core, students complete eighteen hours in more specialized courses. They may choose one of the three tracks designed by the faculty—financial reporting and assurance, managerial accounting and control, and taxation—or they may choose courses to meet their specific academic and professional goals in the generalist curriculum.

Depending on their undergraduate backgrounds, students must earn from thirty-five to forty-two semester hours of credit to complete the program; all MPA students must complete at least nineteen semester hours in accounting. Students must complete at least two long-session semesters in residence in the MPA program. In order to graduate, the student’s overall, MPA, and accounting grade point averages must each be at least 3.00.

MASTER OF SCIENCE IN ACCOUNTING

The Master of Science in Accounting is offered only to students who are enrolled in the doctoral program in accounting. This degree is offered in three options: with thesis, with report, and without thesis or report. The thesis option requires at least thirty semester hours of credit; the report option, at least thirty-three hours; and the option without thesis or report, at least thirty-six hours. All coursework must be logically related, and the student’s entire program must be approved by the student’s primary adviser and the graduate adviser. The Graduate Studies Committee’s approval is not required.

DOCTOR OF PHILOSOPHY

The coursework for the doctoral degree includes four nonaccounting core courses, five accounting seminars, and coursework in two supporting fields outside accounting. Students also write first-year and second-year research papers. Those without teaching experience complete Business Administration 398T and teach an entry-level accounting course. Four or five years are generally needed to complete the coursework and dissertation phases of the degree program.

FOR MORE INFORMATION

MPA PROGRAM

Campus address: Graduate School of Business Building (GSB) 4.112C, phone (512) 471-6559, fax (512) 471-3365; campus mail code: B6400
Mailing address: The University of Texas at Austin, MPA Program, Department of Accounting, 1 University Station B6400, Austin TX 78712
E-mail: mpa@mccombs.utexas.edu
URL: http://www.mccombs.utexas.edu/mpa/

MSACC AND PHD PROGRAMS

Campus address: College of Business Administration Building (CBA) 4M.202, phone (512) 471-0157, fax (512) 471-3904; campus mail code: B6400
Mailing address: The University of Texas at Austin, PhD Program, Department of Accounting, 1 University Station B6400, Austin TX 78712
E-mail: accounting.phd@mccombs.utexas.edu
URL: http://www.mccombs.utexas.edu/dept/accounting/phd/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ACCOUNTING: ACC

180C. MPA Distinguished Speaker Lyceum. Discussion of current issues confronting the accounting profession. Two lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and admission to the traditional approach to the Master in Professional Accounting program.

380D. Advanced Topics in Financial Reporting. Examines issues in financial reporting from a user’s perspective, including how important economic transactions of large public companies are reflected in financial statements. Three lecture hours a week for one semester. May not be counted by students with credit for Accounting 380K (Topic 1: Financial Accounting Standards and Analysis I) or 380K (Topic 2: Financial Accounting Standards and Analysis II). Prerequisite: Graduate standing, admission to the Master of Business Administration program, and Business Administration 384T.

180K, 280K, 380K. Contemporary Accounting Topics. In-depth study of selected accounting topics. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some topics also require consent of instructor; these are identified in the Course Schedule.

Topic 1: Financial Accounting Standards and Analysis I. Accounting 326 and 380K (Topic 1) may not both be counted. Additional prerequisite: For students enrolled in the Master of Business Administration program, Business Administration 384T and 385T; for students enrolled in the traditional approach to the Master in Professional Accounting program, Accounting 381 or the equivalent and credit or registration for Business Administration 385T or the equivalent; for students enrolled in the integrated approach to the Master in Professional Accounting program, Accounting 356 and Finance 357 or the equivalent.

Topic 2: Financial Accounting Standards and Analysis II. Accounting 360 and 380K (Topic 2) may not both be counted. Additional prerequisite: Accounting 380K (Topic 1) or the equivalent or consent of instructor.

Topic 4: Introduction to Assurance Services. Only one of the following may be counted: Accounting 358C, 362, 380K (Topic 4). Additional prerequisite: Accounting 356, 381, Business Administration 384T, or the equivalent.

Topic 5: Introduction to Management Advisory Services. Additional prerequisite: Accounting 356, 381, Business Administration 384T, or the equivalent.

Topic 6: Issues in Accounting and Control for Nonprofit Organizations. Accounting 361 and 380K (Topic 6) may not both be counted. Additional prerequisite: Accounting 356, 381, Business Administration 384T, or the equivalent.

Topic 7: Financial Statement Analysis. Accounting 327 and 380K (Topic 7) may not both be counted. Additional prerequisite: Accounting 356, 381, Business Administration 384T, or the equivalent.


Topic 11: Introduction to Taxation. Only one of the following may be counted: Accounting 355, 364, 380K (Topic 11). Additional prerequisite: For students enrolled in the Master of Business Administration program, Business Administration 384T; for students enrolled in the traditional approach to the Master in Professional Accounting program, credit or registration for Accounting 381 or the equivalent.


Topic 14: Managing Information. Additional prerequisite: Accounting 356, 381, Business Administration 384T, or the equivalent.

Topic 15: Business and Systems Change. Additional prerequisite: Accounting 356, 381, Business Administration 384T, or the equivalent.


Topic 17: Cross-Functional Project Management. Additional prerequisite: Accounting 356, 381, Business Administration 384T, or the equivalent.

Topic 18: Project Management in Fast-Cycle Environments. Additional prerequisite: Accounting 356, 381, Business Administration 384T, or the equivalent.
Managerial accounting and financial statement analysis. Students in accounting information systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Additional prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

**Introduction to Managerial Accounting**
Accounting 381, Business Administration 384T, or the equivalent; for students in the traditional approach to the Master in Professional Accounting program, Account 381 or the equivalent.

**Financial Accounting**
Concepts and issues involved in the preparation and interpretation of financial statements; the use of financial information to evaluate and control an organization. Three lecture hours a week for one semester. Accounting 381 and Business Administration 384T; may not both be counted. Prerequisite: Graduate standing; admission to the traditional approach to the Master in Professional Accounting program, Accounting 381 or the equivalent; for students enrolled in the integrated approach to the Master in Professional Accounting program, Accounting 381 or the equivalent.

**Financial Accounting Issues in Business Decisions**
An integrative and intensive examination of financial accounting, with emphasis on management's alternative reporting strategies and investors' decisions. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Business Administration 384T or the equivalent.

**Managerial Accounting and Financial Statement Analysis**
Surveys the strategic uses of the most important elements of internal accounting systems, including cost accounting systems and management control systems used for planning and budgeting, and the use of publicly available financial accounting information to evaluate past performance, forecast future performance, and estimate the value of debt and equity securities. Meets all day on alternate Fridays and Saturdays. May not be counted by students with credit for Accounting 380K (Topic 7: Financial Statement Analysis) or Business Administration 380E.

**Studies in Accounting Information Systems**
Quantitative and/or computerized applications to business problems; computer-based accounting information systems; analysis of optimizing models; simulation of important functional activities; large-scale simulation of the firm. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; Accounting 356, Accounting 381, Business Administration 384T, or the equivalent, or consent of instructor, and Accounting 399, Accounting 387 (Topic 1: Introduction to Managerial Accounting), or the equivalent, or consent of instructor.

**Studies in Auditing**
Professional and technical aspects of practice; ethics and legal responsibilities; review of fieldwork, emphasizing materiality, sampling, and working papers; reporting problems, including long-form and special purpose reports; fraud examination and audit methods. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

**Introduction to Assurance Services**
Prerequisite: Accounting 387 (Topic 1: Principles of Systems Analysis). Three lecture hours a week for one semester. Some sections require two laboratory hours a week as well; these sections are identified in the Course Schedule. Accounting 365 and 382K (Topic 1) may not both be counted.

**Computer Auditing**
Additional prerequisite: Accounting 358C or 380K (Topic 4: Introduction to Assurance Services), and Accounting 380K (Topic 13: Information Technology for Accounting and Control) or the equivalent.

**Topics in Accounting Systems and Control**
**Database Management in Accounting**
**Topics in Information Systems**

**383K. Studies in Auditing, MPA Program.** Additional prerequisite: Accounting 358C, 380K (Topic 4: Introduction to Assurance Services), or the equivalent, or consent of instructor.

**383K. Management Auditing and Control.** Additional prerequisite: For students in the Master of Business Administration program, Business Administration 384T; for students in the traditional approach to the Master in Professional Accounting program, credit or registration for Accounting 381, Business Administration 384T, or the equivalent; for students in the integrated approach to the Master in Professional Accounting program, credit or registration for Accounting 358C or the equivalent.

**Auditing and Control, MBA Program.** Additional prerequisite: Accounting 387 (Topic 1: Principles of Systems Analysis) or the equivalent, and Business Administration 384T or the equivalent.

**Fraud Examination.** Additional prerequisite: For students in the Master of Business Administration program, Business Administration 384T or the equivalent; for students in the traditional approach to the Master in Professional Accounting program, Accounting 381, Business Administration 384T, or the equivalent, or consent of instructor; and Accounting 387 (Topic 1: Introduction to Managerial Accounting) or the equivalent, or consent of instructor; for students in the integrated approach to the Master in Professional Accounting program, Accounting 356 or consent of instructor, and Accounting 359 or the equivalent or consent of instructor.

**Topics in Auditing.** Additional prerequisite: Accounting 356, 359, 381, 387 (Topic 1: Introduction to Managerial Accounting), and Business Administration 384T, or their equivalents.
384. Research and Planning in Federal Taxes. Advanced analysis in federal taxation, with emphasis on historical and current developments; application of research techniques to income tax and estate tax planning; case studies and reports. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and admission to the Master in Professional Accounting degree program or consent of instructor.

Topic 1: Tax Research Methodology. Additional prerequisite: For students in the integrated approach to the Master in Professional Accounting program, Accounting 355 or the equivalent; for students in the traditional approach to the Master in Professional Accounting program, credit or registration for Accounting 380K (Topic 1), Introduction to Assurance Services.

Topic 2: Taxation of Entities I. Focuses on taxation of C corporations and their shareholders. Additional prerequisite: Credit or registration for Accounting 384 (Topic 1).

Topic 3: Taxation of Entities II. Focuses on flow-through entities, including partnerships. Additional prerequisite: Credit or registration for Accounting 384 (Topic 1).


Topic 5: Family Tax Planning—Estates, Trusts, and Gifts. Additional prerequisite: Credit or registration for Accounting 384 (Topic 1) or consent of instructor.


Topic 8: Miscellaneous Tax Topics. Restricted to students enrolled in the tax internship program. Additional prerequisite: Accounting 384 (Topic 1) and consent of instructor.

386K. Studies in Accounting Theory. Financial accounting theory; current pronouncements on theory; problems of income determination; accounting research and research methodology applied to accounting issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, admission to the doctoral degree program in accounting, and consent of instructor.

Topic 1: Contemporary Accounting Topics.
Topic 2: Introduction to Research Methodology in Accounting.
Topic 4: Analytical Research in Accounting.
Topic 5: Behavioral Research in Accounting.

Topic 6: Doctoral Research Topics. Offered on the credit/no credit basis only.


287, 387. Studies in Profit Planning and Control. The use of accounting information by managers within the organization for decision making, planning, and the design of control systems for implementing the organization’s strategy. Topics include long-range planning, annual profit planning, activity-based costing, cost prediction, strategic control systems, and performance evaluation. Case studies are used. For 287, four lecture hours a week for half a semester; for 387, three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Introduction to Managerial Accounting. Only one of the following may be counted: Business Administration 380E, 382T, Accounting 329, 359, 387 (Topic 1), 287 (Topic 5).

Topic 2: Topics in Profit Planning and Control. Additional prerequisite: Accounting 359, 387 (Topic 1), or the equivalent.

Topic 3: Strategic Cost. Additional prerequisite: Accounting 359, 387 (Topic 1), or the equivalent.

Topic 4: Strategic Control Systems. Additional prerequisite: Accounting 359, 387 (Topic 1), or the equivalent.

Topic 5: Performance Management and Control. Only one of the following may be counted: Business Administration 380E, 382T, Accounting 329, 359, 387 (Topic 1), 287 (Topic 5).

191C, 291C, 391C, 691C. Special Studies in Accounting. Conference course. May be repeated for credit. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing; admission to the Master in Professional Accounting program or the doctoral program in accounting; and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in the doctoral program in accounting and consent of the supervising faculty member and the graduate adviser; for 698B, Accounting 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in the doctoral program in accounting, completion of the core courses for the degree, and consent of the supervising faculty member and the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and fulfillment of the language requirement for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Accounting 399R, 699R, or 999R.
BUSINESS, GOVERNMENT, AND SOCIETY: 

180, 380. Topics in Business, Government, and Society. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

380C. Strategic Corporate Communication. Studies corporate efforts to inform, motivate, and persuade various constituencies, including investors, employees, communities, and regulators. Includes public relations, investor relations, and government relations. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381. Law, Ethics, and Corporate Social Responsibility. Examines corporate responsibility issues and the tools necessary to manage relationships with external stakeholders such as governments, nongovernmental organizations, and communities in legal, political, and cultural contexts. Three lecture hours a week for one semester. Business, Government, and Society 381 and Legal Environment of Business 380 (Topic 36: Law, Ethics, and Corporate Social Responsibility) may not both be counted. Prerequisite: Graduate standing.

381L. Social and Ethical Responsibility of Business. Examines ethical aspects of the managerial decision-making process and the application of fundamental ethical principles to business, legal, and social problems. Includes ethical implications of financial markets, race and gender discrimination, employee privacy, multinational business, and health, safety, environmental, and consumer issues. Three lecture hours a week for one semester. Business, Government, and Society 381L and Legal Environment of Business 380 (Topic 1: Social and Ethical Responsibility of Business) may not both be counted. Prerequisite: Graduate standing, and admission to the Master of Business Administration program or the Master in Professional Accounting degree program.

382D. Economics of Health Care. Explores the production and provision of health care in the United States. Includes the study of basic economic concepts, differences between health care and other goods, impact of regulatory policies, and the importance of health for economic development. May include international and ethical aspects of health care. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382E. Energy Economics. Studies domestic and international policy issues of energy and the environment, with a focus on market solutions to various problems and market limitations in the allocation of environmental resources. Also examines the economics of fossil fuel alternatives. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382L. Labor Economics. Studies the functioning of the labor market and examines determinants of wage and employment levels in perfect and imperfect labor markets. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382R. Economic Analysis of Law. Uses economic analysis to study law and its impact on business activity. Includes the economics of contract law, tort law, property law, securities regulation, antitrust law, intellectual property, and environmental law. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382S. Economics of Sustainable Business. Examines the policy and practical implications of sustainability. Topics covered may include property rights, air and water pollution, solid-waste disposal, hazardous substances, and wilderness preservation and the protection of endangered species. Three lecture hours a week for one semester. Prerequisite: Graduate standing.


384. Global Macroeconomic Policy. Practical study of global macroeconomic policy, including monetary policy, financial market regulation, and economic growth and development policies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385W. Business, Government, and Public Policy: Washington Campus. Restricted to students in the executive Master of Business Administration program. Studies the relationship between business and government throughout the formation and implementation of public policy; includes examination from economic, political, legal, and behavioral perspectives. Focuses primarily on the political, regulatory, and legal system of the United States and addresses issues covered further in the Washington Campus event, a week-long seminar with policy makers in Washington DC that precedes the course. The equivalent of three lecture hours a week for one semester. Business, Government, and Society 385W and Legal Environment of Business 380 (Topic 35: Business, Government, and Public Policy: Washington Campus) may not both be counted. Prerequisite: Graduate standing.

386. Market Structure and Performance. Studies industrial organization economics using game-theory to model strategic market behavior. Examines econometric methods used to test hypotheses regarding firm conduct and market performance. Explores profit-maximizing business strategies of firms with market power and strategic interactions among firms in imperfectly competitive markets. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389. Environmental Regulation of Business. Examines federal and state regulation of business activities that affect the environment and the potential liability of business for environmental damage. Three lecture hours a week for one semester. Business, Government, and Society 389 and Legal Environment of Business 380 (Topic 15: Environmental Regulation of Business) may not both be counted. Prerequisite: Graduate standing.

390. Behavioral and Institutional Economics. Uses aspects of the social sciences, including economics, psychology, and sociology to explore the evolution of economic organizations, the need for business regulation, bubbles and speculation, and economic herd behavior. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390E. Business in the Global Political Environment. Examines global business from a political science perspective. Includes the politics of international trade and investment and the regulatory expectations of national regulators and of international organizations such as the World Trade Organization and the World Bank. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390F. Federal Regulatory Policy. Studies the federal regulatory framework in the United States, including the processes through which regulations are promulgated and the stakeholders involved. Particular emphasis on cost-benefit analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390J. Modern Political Economy. Studies economic theory from Adam Smith to the modern day, with a focus on the interrelationship between economic models and political behavior. Explores the development of American capitalism; includes works from Marx, Hayek, Polanyi, and Williamson. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

191, 291, 391, 691. Conference Course in Business, Government, and Society. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
FINANCE

Master of Science in Finance
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Faculty members and graduate students in finance are involved in the work of several research centers: the AIM Investment Center; the Center for Energy Finance Education and Research (CEFER); the Hicks, Muse, Tate & Furst Center for Private Equity Finance; and the Real Estate Finance and Investment Center. Additional research centers that support graduate work in the McCombs School, as well as the school’s physical facilities and computing systems, are described on page 48.

AREAS OF STUDY

The graduate program in finance gives students opportunities for specialized study in behavioral finance, corporate finance, investments, financial intermediaries, international finance, and real estate.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Andres Almazan
Aydogan Alti
Fernando Anjos
Keith C. Brown
Jonathan B. Cohn
Alejandro Herman Drexler
Cesare Fracassi
George W. Gau
Thomas W. Gilligan
John M. Griffin
Beverly L. Hadaway
Bing Han
Jay C. Hartzell
Jennifer Huang
Shimon Kogan
Alok Kumar
James Richard Lowery Jr.
Stephen P. Magee
Robert Parrino
Ramesh K. S. Rao
Ehud I. Ronn
Jan Schneider
Clemens Sialm
Lewis J. Spellman
Laura T. Starks
Sheridan Titman

ADMISSION REQUIREMENTS

Admission to the program is extremely competitive. The admission decision is based on the applicant’s academic record, test scores, personal statement, résumé, and letters of recommendation.

Students must enter the program in a fall semester.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN FINANCE

The Master of Science in Finance is offered in three options: with thesis, with report, and without thesis or report. The thesis option requires at least thirty semester hours of credit; the report option, at least thirty-three hours; and the option without thesis or report, at least thirty-six hours. All coursework must be logically related, and the student’s entire program must be approved by the student’s primary adviser and the graduate adviser. The Graduate Studies Committee’s approval is not required.

DOCTOR OF PHILOSOPHY

The core of the program is a set of courses required of all students. The core is supplemented with special courses and electives. Students are required to study one minor field in addition to finance; typically, they choose economics, statistics, or mathematics, all of which provide skills important to financial research.

A required element of the student’s development as a scholar is the completion of first- and second-year summer papers. The quality of these two papers is a factor in judging the student’s progress in the program. Students must take a comprehensive examination at the end of their second year. They then undertake dissertation research.

Students normally complete coursework, research, and the dissertation in four or five years.

FOR MORE INFORMATION

Campus address: College of Business Administration Building (CBA) 6.222, phone (512) 471-5668, fax (512) 471-5073; campus mail code: B6600

Mailing address: The University of Texas at Austin, Graduate Program, Department of Finance, 1 University Station B6600, Austin TX 78712

E-mail: finphd@mccombs.utexas.edu

URL: http://www.mccombs.utexas.edu/dept/finance/phd/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

FINANCE: FIN

286. Valuation. Study of subjects such as financial modeling, derivatives in corporate finance, business valuation, and value-based management. Four lecture hours a week for half a semester. Prerequisite: Graduate standing and Business Administration 285T or 385T.

390. Seminar: Money and Capital Markets. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, Business Administration 285T or 385T, Finance 286, and credit or registration for Finance 394 (Topic 1: Advanced Corporate Finance) and 397 (Topic 1: Investment Theory and Practice).


Topic 2: Special Topics in Capital Markets and Financial Institutions. Study of issues and topics in the capital markets and financial institutions that are not covered in other courses.

394. Seminar: Financial Management and Theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and Business Administration 285T or 385T.


Topic 2: Financial Strategies. An integrated analysis of the interaction between the investment and operating policies of a corporation and its financial strategies. Additional prerequisite: Finance 286, 394 (Topic 1), and credit or registration for Finance 397 (Topic 1: Investment Theory and Practice).


Topic 6: Special Topics in Corporate Finance.

395. Finance Doctoral Seminar. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.


Topic 4: Empirical Methods in Asset Pricing. In-depth study of existing empirical work in asset pricing, including econometric and statistical methods.


Topic 6: Current Research Topics in Finance. Restricted to doctoral students in finance. Offered on the credit/no credit basis only.

Topic 7: Summer Research Topics. Restricted to doctoral students in finance. Provides an opportunity for students to develop and conduct original research projects.

Topic 8: Special Topics in Finance Theory.

Topic 9: Applied Finance Research. Restricted to doctoral students in finance. Provides an opportunity for students to develop and conduct original research.


397. Seminar: Investment Theory and Management. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and Business Administration 285T or 385T.

Topic 1: Investment Theory and Practice. Analysis of the investment decision-making process, asset allocation, security analysis, risk and expected return measurement, asset-pricing models, and international investment. Additional prerequisite: Credit or registration for Finance 286.
Topic 2: Portfolio Management and Security Analysis. Modern practices in managing investment portfolios, portfolio optimization methods, asset management for individual and institutional investors, and valuation of equity securities. Additional prerequisite: Finance 286 and 397 (Topic 1), and credit or registration for Finance 394 (Topic 1: Advanced Corporate Finance).

Topic 4: Financial Risk Management. Studies how firms manage their financial risk exposures and how they use derivative securities. Additional prerequisite: Finance 286 and 397 (Topic 1), and credit or registration for Finance 394 (Topic 1: Advanced Corporate Finance).

Topic 5: Fixed Income Analysis. Comprehensive analysis of debt securities and the techniques used to value these instruments. Additional prerequisite: Finance 286 and 397 (Topic 1), and credit or registration for Finance 394 (Topic 1: Advanced Corporate Finance).

Topic 6: Special Topics in Investments. Issues and topics in the investment area that are not covered in other courses. Additional prerequisite: Finance 286 and 397 (Topic 1), and credit or registration for Finance 394 (Topic 1: Advanced Corporate Finance).

397P. Investments Practicum. Project-based study with a focus on the application of finance principles to practical investment problems. At least fifteen lecture hours and sixty hours of project work scheduled throughout the semester. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in finance and consent of the graduate adviser; for 698B, Finance 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in finance and consent of the supervising faculty member and the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and fulfillment of the language requirement for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Finance 399R, 699R, or 999R.

**REAL ESTATE: R E**

386. Seminar in Real Estate Analysis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Business Administration 285T or 385T, and credit or registration for Finance 286.

Topic 1: Real Estate Markets. Overview of real estate principles, markets, and valuation. Introduction to the major types of commercial property, methods of analyzing real estate markets and investments, urban economics, and real estate institutions.

Topic 2: Real Estate Investment Decisions. In-depth coverage of approaches used to analyze real estate investments, including debt and equity. Additional prerequisite: Real Estate 386 (Topic 1).

Topic 3: Real Estate Analysis. Additional prerequisite: Finance 394 (Topic 1: Advanced Corporate Finance), 397 (Topic 1: Investment Theory and Practice), and Real Estate 386 (Topic 1); or consent of instructor.

Topic 7: Real Estate Decision Making. Additional prerequisite: Real Estate 386 (Topic 1).

388. Seminar in Real Estate Finance. Current aspects of real estate finance as they affect lenders, borrowers, and investors. Institutional changes affecting trends in real estate finance are presented within a decision-making framework. Special emphasis on real estate capital markets, public and private debt, and equity. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389. Real Estate Practicum. Project-based study with a focus on the application of real estate and finance principles to practical problems. At least fifteen lecture hours and sixty hours of project work scheduled throughout the semester. Prerequisite: Graduate standing, Business Administration 285T or 385T, Real Estate 386 (Topic 1: Real Estate Markets), and credit or registration for Finance 286.
INFORMATION, RISK, AND OPERATIONS MANAGEMENT

Master of Science in Information, Risk, and Operations Management
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Faculty members and graduate students in information, risk, and operations management are involved in the work of the Center for Business, Technology, and Law, the Center for Research in Electronic Commerce, the risk management and insurance program, and the Supply Chain Center of Excellence. Additional research centers that support graduate work in the McCombs School, as well as the school’s physical facilities and computing systems, are described on page 48.

AREAS OF STUDY

The program has three independent concentrations: information systems; risk analysis and decision making; and supply chain and operations management.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Ashish Agarwal
- Uttarayan Bagchi
- Anantaram Balakrishnan
- Anitesh Barua
- Patrick L. Brockett
- Carlos Marinho Carvalho
- Paul Damien
- James S. Dyer
- Qi Feng
- Stephen M. Gilbert
- Betsy S. Greenberg
- Bin Gu
- Genaro J. Gutierrez
- Dorothee Honhon
- Sirkka L. Jarvenpaa
- Prabhudev C. Konana
- Guoming Lai
- Leon S. Lasdon
- Robert E. McCulloch
- Reuben R. McDaniel Jr.
- Rafael Mendoza-Arriaga
- Douglas J. Morrice
- John R. Mote
- Kumar Muthuraman
- Maytal Saar-Tsechansky
- Thomas W. Sager
- James G. Scott
- Eldhurin Seshadri
- Thomas S. Shively
- Huseyin Tanriverdi
- Elistathios Tompatis
- Canan Ulu
- Andrew B. Whinston
- Thaleia Zariphopoulou

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN INFORMATION, RISK, AND OPERATIONS MANAGEMENT

The Master of Science in Information, Risk, and Operations Management is offered only to students who are enrolled in the doctoral program in information, risk, and operations management. This degree is offered in three options: with thesis, with report, and without thesis or report. The thesis option requires at least thirty semester hours of credit; the report option, at least thirty-three hours; and the option without thesis or report, at least thirty-six hours. All coursework must be logically related, and the student’s entire program must be approved by the student’s primary adviser and the graduate adviser. The Graduate Studies Committee’s approval is not required.

DOCTOR OF PHILOSOPHY

The doctoral program in information, risk, and operations management has three areas of concentration: information systems, risk and decision making, and supply chain and operations management. Degree requirements vary slightly among these. After the first year, each student must pass a qualifying examination that is based on the core courses in the appropriate area of concentration. Students concentrating in information systems must complete a first-year research paper.

In the second and third years of the program, students complete core coursework and take other methodological and contextual courses in the areas of their research interest. Although students are expected to begin working on research as soon as possible, they will spend increasing amounts of time on research as they progress through the second and third years. At the end of the second year, students in the information systems and risk and decision making areas of concentration complete a candidacy paper; students in the supply chain and operations management area of concentration complete a comprehensive examination that includes a research paper.

Following the candidacy research paper or the comprehensive exam, students undertake dissertation research, which concludes in a written dissertation

ADMISSION REQUIREMENTS

Admission to the program is extremely competitive. The admission decision is based on the applicant’s academic record, test scores, personal statement, résumé, and letters of recommendation.

Students must enter the program in a fall semester.
and an oral defense before the student’s dissertation committee. Students in the risk analysis and decision making or the supply chain and operations management areas of concentration must also pass an oral defense of their dissertation proposal prior to the final dissertation defense. For students in the information systems area of concentration, the requirement for a dissertation proposal is left to the discretion of the student’s adviser.

FOR MORE INFORMATION

Campus address: College of Business Administration Building (CBA) 5.202, phone (512) 471-3322, fax (512) 471-0587; campus mail code: B6500
Mailing address: The University of Texas at Austin, Graduate Program, Department of Information, Risk, and Operations Management, 1 University Station B6500, Austin TX 78712
E-mail: iromphd@mccombs.utexas.edu
URL: http://www.mccombs.utexas.edu/dept/irom/phd/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MANAGEMENT INFORMATION SYSTEMS: MIS

380. Seminar in Organizational Communication. Selected topics in organizational communication, written and oral. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

  Topic 1: Research Methodology in Business and Organizational Communication.
  Topic 2: Projects, Proposals, and Presentations. Communicating effectively in business using advanced writing and presentation concepts and techniques to increase individual and team effectiveness.
  Topic 3: Advanced Report Writing, Professional Reports, and Other Scholarly Papers.

380N. Topics in Information Management. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

  Topic 2: Managing Information. Understanding, designing, and controlling the information processing activities of an organization. Complements Business Administration 380C by focusing on information systems rather than information technology. Includes business intelligence, knowledge management, data modeling, group decision support systems, and electronic commerce. Offered on the letter-grade basis only. Additional prerequisite: Business Administration 380C.

  Topic 3: Business Process Excellence. Emerging technology, data and process modeling (flow focus for integrated applications), reengineering, and change management. Offered on the letter-grade basis only. Additional prerequisite: Business Administration 380C.

  Topic 4: Digital Economy and Commerce. Offered on the letter-grade basis only. Additional prerequisite: Management Information Systems 380N (Topic 2) and credit or registration for Management Information Systems 380N (Topic 3).

381N. Topics in Information Systems. Selected topics in information technology and management of information systems development. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

  Topic 1: Introduction to Data Management.
  Topic 2: Research in Information Systems: Organizational and Behavioral Perspectives.
  Topic 6: Research Seminar.

Topic 8: Managing Disruptive Innovations. Focuses on the management of disruptive technologies, including analyzing whether an emerging technology is sustaining or disruptive, identifying new markets for disruptive technologies, justifying investments in disruptive technologies, implementing disruptive technologies, and appropriating value from them. Offered on the letter-grade basis only.

Topic 9: Change Management Practicum I. Project-oriented course focusing on design of organizational change.


Topic 11: Research in Information Technology.


Topic 14: Global Information Technology Management.

Topic 15: Introduction to Electronic Commerce.

Topic 16: Information Systems Projects.

Topic 17: Client/Server Development.

Topic 18: Innovation, Technology, and Commercialization.


Topic 26: Research Methods in Information Systems. Restricted to doctoral students. Overview of research methods used to study information systems problems. Fundamental concepts and criteria for use with and evaluation of quantitative and qualitative, positivist and interpretive research methods. Current state-of-the-art applications.

382N. Topics in Information Management. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Managing Financial Information. Data modeling and information management for investment analysis and financial systems.

Topic 2: E-Business Change. Offered on the letter-grade basis only.

Topic 3: E-Business Application Development.


Topic 5: Managing Complexity.


Topic 7: Project Management in Fast-Cycle Environments.

Topic 8: Balanced Scoreboard: An Information Systems Perspective. Theory and tools that support the design and implementation of balanced scoreboard evaluation systems.

Topic 9: Data Mining for Business Intelligence.

Topic 10: Data Mining for Marketing.

383N. Topics in Information-Intensive Business Processes. Topics in management of information in specific industries or application areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Health Care Management.

Topic 2: Health Services Seminar.

Topic 3: Customer Insights.

Topic 4: Supply Chain Management.


Topic 6: Trading-Floor Technology.

Topic 10: Practicum in Multimedia Systems Development. Restricted to MBA and MPA students who have chosen the information management concentration. Additional prerequisite: Business Administration 380C and consent of instructor.

Topic 12: E-Business Innovation.

Topic 13: Managing Innovation in a Global Company. Examines innovation-based business strategies that rely on internal and external sources, processes in different organization forms, and market structures.

385. Management Information Systems. Overview of hardware and software life cycles; in-depth considerations of program design, including experience programming for large-scale computer systems in COBOL, FORTRAN, and/or BASIC. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in information, risk, and operations management and consent of the graduate adviser; for 698B, Management Information Systems 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in information, risk, and operations management and consent of the supervising faculty member and the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and fulfillment of the language requirement for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Management Information Systems 399R, 699R, or 999R.

OPERATIONS MANAGEMENT: O M

380. Seminar in Operations Management. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Management Science 380 and Operations Management 380 may not both be counted unless the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

Topic 1: Combinatorial Optimization. Concepts of computational complexity; the foundation of discrete mathematics and combinatorial theory.

Topic 2: Linear Programming. Model formulation: solution algorithms; duality theory; decomposition; sparse matrix issues; sensitivity and parametric analysis; optimization and matrix generation computer software.

Topic 3: Network Optimization. Applications, theory, and algorithms of the shortest path, maximum flow, and minimum cost flow problems. Discussion of classic and contemporary aspects of network optimization, including auction algorithms and cost-scaling techniques, to provide an integrated view of theory, algorithms, and applications. Additional prerequisite: Coursework in linear algebra and introductory coursework in operations management.


Topic 5: Business Process Simulation. Modeling with simulation languages; random number generation; statistical analysis of input and output; variance reduction techniques; computer software applications. Additional prerequisite: Introductory coursework in operations management and statistics.


Topic 8: Large-Scale System Optimization. Formulation and solution of large mathematical optimization models. Focus on algorithms that exploit special structure of linear and nonlinear programming models. Applications. Additional prerequisite: Coursework in advanced calculus and linear programming.

Topic 9: Stochastic Processes. Discrete stochastic systems, queueing processes, inventory models, replacement, renewal theory, Markovian processes. Additional prerequisite: Mathematics 362K or the equivalent; completion of calculus and mathematical statistics and probability is recommended.


Topic 11: Graduate Seminars. Required for doctoral students in operations management.

Topic 12: Logistics. Tools and concepts for the management of the flow of information, material, product, and cash between the initial suppliers of raw material and the ultimate consumers of finished goods.

Topic 13: Management Planning and Control of Complex Systems. Designed to provide guidance to doctoral students interested in research on new approaches to management planning and control of complex systems, and to MBA students interested in evaluating new practices currently being used in management planning and control activities.

Topic 15: Optimization I. Introduction to operations research and optimization, including linear programming, network models, deterministic dynamic programming, decisions under uncertainty, game theory, inventory models, and simulation. Emphasis on mathematical programming models and algorithmic approach of operations research problems. Only one of the following may be counted: Management Science 380 (Topic 25: Optimization I), Operations Management 380 (Topic 14: Optimization), 380 (Topic 15).
Topic 16: Optimization II. Designed to provide students, especially those involved in research, with more advanced optimization tools in several broad areas. Includes nonlinear programming, graph theory, integer programming, Markov chains, probabilistic dynamic programming, queueing theory, and metaheuristics. Emphasis on mathematical programming modeling and algorithmic approach of operations research problems. Only one of the following may be counted: Management Science 380 (Topic 26: Optimization II), Operations Management 380 (Topic 14: Optimization), 380 (Topic 16). Additional prerequisite: Operations Management 380 (Topic 15).

386. Current Issues in Operations Management. Strategic problems, policies, models, and concepts for the design and control of new or existing operations systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Management 386, Management Science 386, Operations Management 386. Prerequisite: Graduate standing.

Topic 1: Service Management.
Topic 2: Supply Chain and Operations Strategy.
Topic 3: Strategic Quality Management.
Topic 4: Operations Practicum.
Topic 5: Managing Projects.

392. Topics in Operations Management. Intensive analysis of operations management issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Management 392, Management Science 392, Operations Management 392. Prerequisite: Admission to the doctoral degree program and consent of instructor.

Topic 1: Operations Management Colloquium.

RISK MANAGEMENT: R M

391. Topics in Decision Analysis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Management Science 380 and Risk Management 391 may not both be counted unless the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

Topic 1: Decision Analysis. Descriptive and normative principles of decision making. Additional prerequisite: Admission to the PPA or MPA program or consent of instructor.

Topic 2: Managing Decisions under Risk. State-of-the-art methods and tools to analyze risky decisions and design optimal strategies. Practical knowledge and practice are emphasized.

Topic 3: Research Issues in Decision Making. Talks by students and faculty members with research interests in decision making, and group discussion of the talks and of students’ decision-related research. Additional prerequisite: Admission to the doctoral program in the Department of Information, Risk, and Operations Management.

Topic 4: Behavioral Decision Theory. The psychology of decision making: how and why our judgments are more fallible than we ordinarily suppose, and the extent to which predictive judgment can be improved through use of normative strategies that tell us how we should make judgments and decisions.

392. Topics in Quantitative Finance. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.


Topic 4: Mathematical Finance.

Topic 5: Computational Finance. Management Information Systems 383N (Topic 7: Computational Finance) and Risk Management 392 (Topic 5) may not both be counted.

395. Seminar: Risk Management. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Corporate Risk Management. Analysis of risk management and security needs of businesses and individuals; related insurance coverages and other tools available to deal with risk.


Topic 3: Risk Management and Finance. Examination of theories underlying risk management techniques for business and insurance mechanisms; theoretical analysis of problems and practices in risk management.

Topic 5: Managing Environmental Risk.

Topic 6: Risk Analysis and Management.

Topic 7: Managing International Risk. The global aspects of risk management; basic risk and crisis management principles pertinent to multinational firms; financially, legally, and culturally multinational marketplaces such as reinsurance markets, captive offshore insurance.

STATISTICS: STA

380. Seminar in Business Statistics. Selected topics in the applications of statistical methods to business problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.
   Topic 1: Correlation and Regression Analysis.
   Topic 2: Design of Experiments.
   Topic 3: Statistical Computing with SAS.
   Topic 4: Nonparametric Methods.
   Topic 6: Survey Research Methods.
   Topic 10: Mathematical Statistics for Applications. Introduction to the basic concepts of probability and mathematical statistics for doctoral degree students who plan to use statistical methods in their research but do not need a highly mathematical development of the subject. Topics include probability distributions and estimation theory and hypothesis testing techniques. Additional prerequisite: A calculus course covering integration and differentiation.
   Topic 11: Analysis of Variance. Additional prerequisite: Business Administration 386T or the equivalent.
   Topic 12: Applied Multivariate Methods. Additional prerequisite: Business Administration 386T or the equivalent, and familiarity with statistical software.

381. Sampling. Theory of sampling; sample design, including stratified, systematic, and multistage sampling; non-sampling errors. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Business Administration 386T.

287, 387. Business Analytics and Decision Modeling. Introductions to some of the basic concepts in quantitative business analysis that are used to support organizational decision making over various time frames. Explores methods that apply to all areas of an organization, with emphasis on financial decision making. For 287, four lecture hours a week for a half a semester; for 387, three lecture hours a week for one semester. Prerequisite: Graduate standing and admission to the McCombs School of Business.


Topic 14: Risk Analysis and Management. The quantification and analysis of risk, considered from several perspectives: financial risk measures, strategic risk measures, stochastic dominance rules, chance constrained programming, and safety-first approaches.

Topic 15: Research on Probabilistic Judgment. Research training and experience for graduate students and advanced Business Honors Program undergraduate students who are interested in probabilistic judgment. Additional prerequisite: Statistics 309H or the equivalent and consent of instructor.

Topic 16: Probability and Science in the Courtroom. The role of probability and scientific reasoning in legal judgments: differences between probability evidence and other types of evidence; legal and psychological implications of these differences; the role of statistics, formal analyses, and expert opinions in legal decisions; their impact on judges and jurors. Management Science 380 (Topic 20: Probability and Science in the Courtroom) and Statistics 380 (Topic 16) may not both be counted.
LEGAL ENVIRONMENT OF BUSINESS

LEGAL ENVIRONMENT OF BUSINESS: LEB

180, 380. Topics in the Legal Environment of Business. Selected topics on legal constraints affecting managerial decision making and business behavior. One or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 2: Antitrust Law and Economics. Legal regulation of anticompetitive market structures and business practices, including political, economic, and historical factors. Monopolies, mergers, horizontal and vertical restraints of trade, and price discrimination.

Topic 3: Law of Commercial Real Estate Finance and Development. The legal framework of commercial real estate finance and development, including basic real estate law concepts, legal aspects of financing techniques and instruments, subdivision land-use controls, environmental regulation of real estate development, and other topics.

Topic 4: Law for Finance. Covers all aspects of securities regulation, including the legal responsibilities and liabilities of investment bankers, stock analysts, hedge fund managers, auditors, and other securities industry professionals; corporate disclosure requirements; public offering rules; insider trading; mergers and acquisitions; shareholder rights; and relevant ethical and global implications.

Topic 5: The Law and the Multinational Corporation. Study of the legal environment in which the multinational enterprise operates, including negotiation and drafting of international contracts, international dispute resolution, expropriation, international investment regulation, letters of credit, tax havens, and cultural and ethical issues.

Topic 6: Intellectual Property and Antitrust. Relationships and tensions between laws designed to encourage competitive markets (antitrust laws) and those that grant limited monopolies (patents, copyrights, and trademarks).

Topic 7: Corporation Law. Legal framework for the formation and operation of partnerships and corporations, including limited liability partnerships and limited liability corporations; introduction to securities regulation concepts such as insider trading, mergers, and acquisitions.

Topic 8: Legal Environment of Business.

Topic 9: Law of the Entertainment Business. Legal aspects of management in the entertainment industry, including contractual and financing arrangements, licensing, and copyright.

Topic 10: Law of Wills, Trusts, and Estates. Planning and management of estates through the use of wills, trusts, and gifts; intestacy, guardianships, marital property systems, and prenuptial agreements.

Topic 11: Environmental Dispute Resolution. Theoretical and practical study of the prevention, management, and resolution of environmental disputes, such as those involving protection of endangered species, wetlands preservation, natural resource conservation, and liability for environmental damage and clean-up.

Topic 12: Legal Regulation of Unfair Competition. Competitive actions that violate state or federal law, such as intentional interference with the contractual relations of others, defamation in business contexts, and misappropriation of trade secrets. Ethical and international dimensions are included where appropriate.


Topic 14: Intellectual Property. Legal aspects of protecting intellectual property, including patents, trade secrets, trademarks, and copyrights; the contractual licensing of these property rights and other legal aspects of technology.

Topic 15: Legal Aspects of Marketing. State and federal laws on consumer protection, pricing, advertising, distribution, dealer control, and related topics. Ethical and international dimensions are included where appropriate.

Topic 16: Liability and Regulation of Accountants. State and federal regulations and tort and contract law principles that constrain accountants and create potential liability. Ethical and international dimensions are included where appropriate. Legal Environment of Business 380 (Topic 1) and 380 (Topic 17) may not both be counted.

Topic 17: Products Liability. Public policy, economics, and legal rules regarding liability for the manufacture or sale of defective products. Ethical and international dimensions are included where appropriate.
Topic 19: Employment Law. State and federal laws on hiring, supervising, disciplining, and terminating employees: wrongful discharge law, discrimination law, workers’ compensation and employee safety laws, and several related topics. Ethical and international dimensions are included where appropriate.

Topic 20: Creating and Enforcing Contracts. Legal rules and practical policies on creating, monitoring, and enforcing contractual rights in a wide variety of business settings. Ethical and international dimensions are included where appropriate.

Topic 21: Environmental Issues in Real Estate Transactions. Federal and state environmental regulations affecting commercial real estate transactions, including the Comprehensive Environmental Response, Compensation, and Liability (“Superfund”) Act, the Clean Water Act, the Endangered Species Act, wetlands regulation, and other related topics. Ethical and international dimensions are included where appropriate.

Topic 22: Law of Corporate Finance and Governance. Legal rules and regulations applicable to a broad range of corporate financial issues, including agency theory, limited liability, valuation, bondholder rights, dividend policy, accountant and investment banker liability, and capital structure and leverage. Ethical and international dimensions are included where appropriate.

Topic 23: Law of Corporate Mergers and Takeovers. Legal rules, policies, and economics of mergers, acquisitions, hostile takeovers, leveraged buyouts, and related topics. Ethical and international dimensions are included where appropriate.

Topic 24: Law of Real Estate Finance. Federal and state regulation of real estate finance. Topics include creation, transfer, and discharge of mortgagor’s and mortgagee’s interests; mortgage substitutes; foreclosures; priority of liens; bankruptcy; and government intervention in the private mortgage market. Ethical and international dimensions are included where appropriate.

Topic 25: Bankruptcy Law and Debtor-Creditor Relations. The legal framework governing the rights and duties of companies, and their owners, creditors, and other stakeholders, in times of severe financial distress. Includes liquidation and reorganization proceedings in bankruptcy as well as alternatives to bankruptcy. Ethical and international dimensions are included where appropriate.

Topic 26: Law for Entrepreneurs. Legal issues and principles affecting the business entrepreneur, including those related to formation of the appropriate type of business organization, capitalization, protection of personal assets from business liabilities, protection of innovative ideas, hiring key personnel, and related topics. Ethical and international dimensions are included where appropriate.

Topic 27: Cyberlaw. Highly focused coverage of intellectual property law (copyright, trade secret, patent, trademarks, and related topics) as it relates to computer hardware and software; substantial coverage of hardware and software licensing; Internet-related legal issues; antitrust issues in the computer industry; and other topics as time permits, such as encryption, privacy, and computer-system vendor liability.


Topic 29: Legal Environment of Business for MPA Students. Introduction to the legal system, with particular emphasis on its applications to the accounting profession. Additional prerequisite: Admission to the Master in Professional Accounting program.

Topic 30: Energy Law. Introduction to the legal issues facing energy-generating and energy service companies in a deregulating, though not fully deregulated, world. Includes the (de)regulation of generation, wholesale transactions, and retail service, as well as the contractual and other legal issues governing the commercial market for energy.

Topic 31: Energy Law. The responsibilities of the strategist for choosing, developing, and managing an overall e-business firm strategy in uncertain legal, market, technology, and policy environments.

Topic 32: E-Commerce: Law, Policy, and Strategy. Study of the legal isomorphism and strategic responses facing energy-generating and energy service companies in a deregulating, though not fully deregulated, world. Includes the (de)regulation of generation, wholesale transactions, and retail service, as well as the contractual and other legal issues governing the commercial market for energy.

Topic 33: The Legal Life Cycle of a Technology Start-up. Comprehensive coverage of the legal issues faced by a technology start-up firm, including choice of an organizational form, employee compensation issues, negotiating real estate leases, protecting intellectual property, raising capital, and taking the firm public. Additional prerequisite: Admission to the Master of Business Administration program.

MANAGEMENT

Master of Science in Management
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The physical facilities, computing systems, and research centers that support graduate work in the McCombs School are described on page 48.

AREAS OF STUDY

Students in the graduate program in management concentrate in either organization science or strategic management.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Emily Amanatullah
Caroline A. Bartel
Y Sekou Bermis
Ethan R. Burris
Johnny S. Butler
Craig Richard Crossland
Janet M. Dukerich
James W. Fredrickson
Melissa E. Graebner
David A. Harrison

Pamela R. Haunschild
Andrew D. Henderson
David B. Jemison
Kyle Lewis
Jeffrey Loewenstein
Luis D. Martins
Paul V. Martorana
Francisco Polidoro Jr.
Violina P. Rindova
Jennifer Whitson

ADMISSION REQUIREMENTS

Admission to the program is very competitive. Decisions are based on the applicant’s test scores, academic record, work experience, personal statement, and letters of recommendation.

Students must enter the program in a fall semester.

DOCTOR OF PHILOSOPHY

All students must complete five core courses: Management 390 (Topic 2: Introduction to Research Methods in Management), 390 (Topic 3: Research Methods in Management), 390 (Topic 4: Seminar in Organizational Behavior), 390 (Topic 5: Seminar in Organization Theory), and 393 (Topic 2: Contemporary Issues in Strategic Management). Students must also complete at least two courses in the concentration, at least two courses outside management, and at least three advanced statistics/methodology courses.

A required element in the student’s development as a scholar is participation in a faculty research project. Students generally begin this collaboration in the spring of their first year in the program. The quality of the student’s work on the project is a factor in judging the student’s progress in the degree program.

Students take the comprehensive examination, which assesses their knowledge of research methodology and of the field of management, at the end of the second year. They then undertake dissertation research as described in chapter 3. A well-prepared student generally completes the degree in five years.

FOR MORE INFORMATION

Campus address: College of Business Administration Building (CBA) 4.202, phone (512) 471-2622, fax (512) 471-3837; campus mail code: B6300
Mailing address: The University of Texas at Austin, Graduate Program, Department of Management, 1 University Station B6300, Austin TX 78712
E-mail: chris.scherwin@mccombs.utexas.edu
URL: http://www.mccombs.utexas.edu/dept/management/phd/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MANAGEMENT: MAN

283, 383. Current Issues in Organization Science. For 283, four lecture hours a week for half a semester; for 383, three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the letter-grade basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

  Topic 16: Leading People and Organizations. Designed to increase the student’s effectiveness as a manager through discussion of organizational behavior and design, and guidelines for applying these concepts.

  Topic 20: Art and Science of Negotiation. Offered on the letter-grade basis only. Additional prerequisite: Admission to the McCombs School of Business.

  Topic 22: Creating and Managing Human Capital. Covers issues related to making human resource decisions in a more effective manner. Uses a strategic perspective, with particular emphasis on the links between human resource decisions and a firm’s competitive position. Offered on the letter-grade basis only. Additional prerequisite: Admission to the McCombs School of Business.

  Topic 31: Organizational Change and Strategic Renewal.

285, 385. Current Issues in Strategic Management. For 285, four lecture hours a week for half a semester; for 385, three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the letter-grade basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.


  Topic 2: The Art of Leadership.


  Topic 8: Managing Corporate Diversification and Renewal. Offered on the letter-grade basis only.

  Topic 9: Strategic Analysis for High-Tech Industries. Management 385 (Topic 9) and Management Information Systems 381N (Topic 9: Strategic Analysis for High-Tech Industries) may not both be counted.

  Topic 20: Advanced Venture Development.


  Topic 23: Entrepreneurial Management.

  Topic 24: Entrepreneurial Growth.


  Topic 33: Managing and Marketing in the Global Arena. Offered on the letter-grade basis only.


  Topic 49: Strategic Management. Designed to help students develop a general management orientation. Subjects include the role of the general manager, formulating business and corporate-level strategy, managing strategic change, strategy implementation, and developing general managers. Business Administration 388T and Management 385 (Topic 49: Strategic Management) may not both be counted.

  Topic 61: Perspectives on Public Policy. Designed to prepare MBA students, both as individuals and in their professional careers as managers and leaders, for active and effective participation in the democratic process. Taught via video teleconferencing with instructors from the Washington campus.

  Topic 62: Corporate Governance. Examines the roles and responsibilities of organizational leadership in a variety of settings, including large and small companies, startups and established companies, global, single-country, and single-region companies, and nonprofit entities.

  Topic 63: Economics of Competitive Strategy. Develops and uses concepts from microeconomics, game theory, and the economics of industrial organization and applies these concepts to competitive decision making, using a combination of case analyses and lectures.

  Topic 64: Enterprise of Technology: From Mind to Market. Focuses on moving an idea from the mind of the researcher to the marketplace by examining the activities involved in commercializing a technology from conception to profitable enterprise.

  Topic 65: Management Consulting Practicum. Students work in supervised teams and develop recommendations to solve a real business problem for a client firm. Additional prerequisite: Consent of instructor.

390. Seminar: Organization Science. Intensive analysis of organizational science issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to the doctoral degree program and consent of instructor.
Red McCombs School of Business

Topic 1: Research in Organizational Science. Offered on the credit/no credit basis only.
Topic 3: Research Methods in Management.
Topic 4: Seminar in Organizational Behavior.
Topic 5: Seminar in Organization Theory.
Topic 6: Organizational Decision Making.
Topic 9: Behavioral Decision Theory.
Topic 11: Management of Knowledge Workers. The study of knowledge workers at four levels of analysis: as individuals, as team members, as organizational resources, and as national resources. Strong emphasis on theory building.

393. Seminar: Strategic Management. Intensive analysis of strategic management issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to the doctoral degree program and consent of instructor.
Topic 1: Foundations of Strategic Management.
Topic 3: Research in Strategic Management. Offered on the credit/no credit basis only.

Topic 5: Executive Leadership.
Topic 6: Management of Diversification.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in management and consent of the supervising faculty member and the graduate adviser; for 698B, Management 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, enrollment in the doctoral program in management, and consent of the supervising faculty member and graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and fulfillment of the language requirement for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Management 399R, 699R, or 999R.

MARKETING

Master of Science in Marketing
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The physical facilities, computing systems, and research centers that support graduate work in the McCombs School are described on page 48. Of particular relevance to marketing students are the McCombs School Behavioral Research Laboratory and the Center for Customer Insight and Marketing Solutions, which works to develop pragmatic, market-relevant management knowledge, skills, and experience.

AREAS OF STUDY

Graduate work in marketing is offered in the following areas: buyer behavior, marketing management, and quantitative methods.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Mark I. Alpert  Julie R. Irwin
Susan M. Broniarczyk  Romana Khan
Eli P. Cox III  Vijay Mahajan
William H. Cunningham  Leigh M. McAlister
Jade S. Dekinder  Robert A. Peterson
Jun A. Duan  Rajagopal Raghunathan
Andrew D. Gershoff  Raghunath S. Rao
Kate Gillespie  Garrett P. Sonnier
Linda L. Golden  Rajashri Srinivasan
Ty Henderson  Frenkel Ter Hofstede
Wayne D. Hoyer  Ying Zhang

ADMISSION REQUIREMENTS

Admission to the program is extremely competitive. Admission decisions are made by the Doctoral Admission Committee and are based on a balanced consideration of multiple factors, including academic credentials, test scores, work experience, personal statement, and letters of recommendation.
DEGREE REQUIREMENTS

MASTER OF SCIENCE IN MARKETING

The Master of Science in Marketing degree is offered only to students who are enrolled in the doctoral program in marketing. This degree is offered in three options: with thesis, with report, and without thesis or report. The thesis option requires at least thirty semester hours of credit; the report option, at least thirty-three hours; and the option without thesis or report, at least thirty-six hours. All coursework must be logically related, and the student's entire program must be approved by the graduate adviser.

DOCTOR OF PHILOSOPHY

To be admitted to candidacy for the doctoral degree, the student must (1) fulfill the core course requirements in marketing and research methods; (2) satisfy the first-year summer paper requirement; (3) complete course requirements in the area of specialization; (4) pass a written comprehensive exam by the end of the second year in the program; and (5) select a dissertation topic and dissertation committee. The student then submits a dissertation proposal for committee approval, conducts dissertation research, completes dissertation coursework, and defends the final dissertation research before the dissertation committee. A well-prepared student generally completes the program in four to five years.

FOR MORE INFORMATION

Campus address: College of Business Administration Building (CBA) 7.202, phone (512) 471-1126, fax (512) 471-1034; campus mail code: B6700
Mailing address: The University of Texas at Austin, Graduate Program, Department of Marketing, 1 University Station B6700, Austin TX 78712
E-mail: mktphd@mccombs.utexas.edu
URL: http://www.mccombs.utexas.edu/dept/marketing/phd/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

INTERNATIONAL BUSINESS: IB

191, 291, 391. Directed Studies in Global Management. Open only to second-year MBA students. Global business practices studied through lectures on campus and trips to international partner schools. One and one-half lecture hours a week for one semester, and thirty hours of fieldwork abroad. May be repeated for credit. Offered on the letter-grade basis only. Students may count more than three hours of credit only when the work is completed in different locations. Prerequisite: Graduate standing.

395. Seminar: International Trade. Study of contemporary topics in international trade and investment theories, policies, and problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the letter-grade basis only, while others are offered on the credit/no credit basis only; these sections are identified in the Course Schedule. Prerequisite: Graduate standing. Some topics also require consent of instructor; these are identified in the Course Schedule.

Topic 1: Global Strategic Management. The changing global business environment and the ways multinational corporations compete in this environment. Case studies and readings, followed by a global management computer simulation.

Topic 2: International Trade and Investment. The basis for international trade, foreign exchange determination, balance of payments, and international trade and investment policy. Macro-level aspects of the international economy, which provide the basis for the functioning of the global economy.

Topic 3: Global Business Operations. Overview of management in a multinational context, focusing on the multinational corporation; the economic, political, and social environments in which it operates; and its basic managerial concerns with finance, management, marketing, and personnel. Includes an international operations computer simulation.
Topic 4: Business in Developing Countries. The traditional challenges to business in developing countries and the new challenges of market liberalization. Similarities and differences among countries and regions.

Topic 5: Business in Japan. Comprehensive examination of macro-level and micro-level issues involved in conducting business in Japan and in competing with the Japanese in the global marketplace. Macro-level issues include government industrial policy, interfirm relationships, and United States–Japan trade relationships; micro-level issues include management style, foreign expansion strategy, research and development strategy, and distribution practices.

Topic 6: International Marketing Management. An overview of international marketing, with emphasis on the multinational corporation. Subjects include the changing international environment, researching and entering foreign markets, and the marketing mix in international marketing.

MARKETING: MKT

282, 382. Analysis of Markets. Introduction to the data and tools used to analyze the business environment and enable marketing decision making. Uses real-world data and problems to evaluate strategic market opportunities and assess the impact of marketing decisions in the marketplace. Discusses analytical and empirical tools that address strategic issues of market sizing, market selection, and competitive analysis, as well as product management, customer management, and marketing function management decisions. For 282, four lecture hours a week for half a semester; for 382, three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the letter-grade basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing.

Topic 1: Market Area Analysis. Marketing 382 (Topic 1) is same as Geography 394C. Conceptual and methodological aspects of analyzing the geographical dimensions of demand. Students complete a field project in which they apply concepts and techniques to the analysis of a problem.

Topic 2: Analytical Methods in Marketing. Basic analytical techniques that are used to improve market-oriented decisions: brand-switching, linear programming applications in advertising, competitive bidding, distribution and location models, conjoint measurement, and multivariate data analysis for strategy formulation. The course stresses the use of the models to deal with marketing variables and problems and the acquisition of relevant data. Case analyses and projects.

Topic 3: Business and Public Policy. Provides a historical framework in which to study key issues in contemporary government and business relations in the United States and, to a limited extent, in other countries. Settings range from the Depression and the New Deal to more recent periods of social regulation of business; topics range from the role of the international oil companies to the deregulation of the airlines.

Topic 4: Strategic Marketing. Strategic marketing decisions made at the corporate and business-unit levels, and organizational issues that affect the formulation and implementation of marketing strategy; an experiential course, taught primarily through the case method and a marketing strategy computer simulation game.

Topic 5: Current Topics in Consumer Marketing. Reasons for the shift in allocation from advertising to promotion, and implications of this shift for the structure of packaged-goods marketing.

Topic 6: Buyer Behavior in Global Markets. The application of marketing strategy and buyer behavior principles in the global environment.

Topic 7: Industrial Marketing. Concepts, theories, and models from industrial marketing strategy provide the foundation for case analyses of a variety of technology-intensive firms, primarily in electronics, data processing, and pharmaceuticals.

Topic 8: Product Policy and Tactics. Tactical and strategic product decisions, with emphasis on the former. Consumer goods, with some attention to the marketing needs of industrial products and service industries; decisions about a firm’s product portfolio. Uses case analyses and personal computer-oriented analytical exercises. Additional prerequisite: Completion of Master of Business Administration core courses.

Topic 9: Marketing Strategy for Small Business. Basics of marketing strategy and marketing plan development; students develop such a plan for a beginning business.

Topic 10: Quality and Competitiveness. The globalization of competition, the challenge to the United States position in the world economy, and the total quality management movement as a competitive response.

Topic 11: Customer Strategy. External resources for competitiveness, such as customer relationships that can help deliver superior quality and drive down costs. The course brings together experienced managers and students who have interned with them to explore issues underlying total quality in marketing. Additional prerequisite: Completion of an instructor-approved internship.

Topic 13: Pricing and Distribution Channel Strategies. Analysis of distribution and pricing decisions, factors that influence these decisions, and the role of pricing and distribution in the formulation of marketing strategy. Lecture/discussions, cases, and group projects.
Topic 14: Marketing of Services. Organizations that market services rather than goods; differences between tangible goods and services; unique service-marketing problems and opportunities.

Topic 15: Marketing High-Tech Products. The forces driving competition in industrial markets, with emphasis on technological products. This course focuses on honing students’ analytical skills for leveraging marketing decision making.

Topic 16: Project Management in Fast-Cycle Environments.

Topic 17: Data Mining for Business Intelligence. Offered on the letter-grade basis only.

Topic 18: Marketing Metrics. Examines the link between marketing decisions and financial performance. Offered on the letter-grade basis only. Additional prerequisite: Admission to the McCombs School of Business.

383. Acquisition, Consumption, and Disposition Behavior. The acquisition, consumption, and disposition of goods, services, time, and ideas by individuals, families, and organizations, examined from a managerial viewpoint. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

384. Marketing Research Methodology. An applied approach to advanced marketing research, covering both the design and execution of marketing research projects and the management of the marketing research function. Three lecture hours a week for one semester. Prerequisite: Graduate standing, three semester hours of coursework in marketing, and three semester hours of coursework in statistics.

386. Advanced Marketing Management. Major marketing concepts and variables, their interrelationships, and their implications for policy making, problem solving, and strategy formulation. Three lecture hours a week for one semester. Some sections are offered on the letter-grade basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing.

397. Seminar: Current Topics in Marketing. Survey and analysis of current marketing problems; their significance, evaluation, and probable outcome. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Marketing Theory and Development of Marketing Thought. Analysis of marketing phenomena and their causes. Provides a historical framework to study issues among key components of the marketing system (customers, distributors, and manufacturers).

Topic 2: Marketing Management and Strategy. Examination from the marketing perspective of the process of strategy development and implementation at various levels of the organization: corporate, strategic business unit, and product line/brand.

Topic 3: Buyer Behavior. Theoretical examination of the acquisition and consumption of goods, services, time, and ideas by individuals and groups.

Topic 4: Marketing Research Methods. Advanced statistical procedures and analytical methods for data analysis; reliability and validity of data.

Topic 5: Research Topics in Marketing. Current research issues, methods, and models in marketing; focus on both theory and methodology.

Topic 6: Advanced Research Methods in Marketing. New methodological developments and research procedures; selected topics.

Topic 7: Marketing Models. Analytical techniques and models developed by management scientists to aid marketing-oriented decisions in contexts such as marketing mix management, new product development, and product adoption.

Topic 8: Quantitative Marketing Strategy. Decision models and analytical procedures used in strategic decision making in marketing; strategic planning approaches, industry analysis (models related to growth in sales and competition), competitive structure (approaches for market structure analysis), and new product design and development models.

Topic 9: Behavioral Decision Research.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in marketing and consent of the graduate adviser; for 698B, Marketing 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in marketing and consent of the supervising faculty member.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Marketing 399R, 699R, or 999R.
The project-based Master of Science in Technology Commercialization (MSTC) at the McCombs School of Business focuses not only on general management knowledge and business skills but also on technology entrepreneurship, venture creation, and commercialization. The program is designed to give students the expertise necessary to convert scientific knowledge and technology to wealth by creating new products, services, and ventures. Students in the program study all aspects of starting and managing entrepreneurial and intrapreneurial ventures, assessing a technology’s commercial potential, and accelerating the movement of products and services from conception to market introduction and growth.

The one-year executive program provides graduate education for professionals while they continue their careers. Classes meet on alternate weekends, Friday evenings and all day Saturday, for twenty-three weekends. Each of the three semesters begins with an intensive week. The program begins with the MSTC Launch Week in Austin, Texas, in May. Another intensive week in August jump-starts the fall semester. The final semester begins with an intensive week in January that includes a required international trip. The MSTC program is offered both on campus and online. The coursework is rigorous and demanding, requiring a serious commitment on the part of the student.

AREAS OF STUDY

The master’s degree addresses challenges in both technology policy and technology enterprise.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

D. E. Hirst  
Ross G. Jennings  
Kyle Lewis  
Thomas W. Sanger  
Clemens Sialm  
David B. Spence  
Rajashri Srinivasan

ADMISSION REQUIREMENTS

The prospective student should have at least five years of professional experience, an above-average score on the Graduate Record Examinations General Test (GRE) or the Graduate Management Admission Test (GMAT), and an undergraduate grade point average of at least 3.00.

The Admissions Committee may consider waiving the GMAT/GRE requirement in the MSTC program when one of the following conditions is met: (i) fifteen years of postgraduate work experience, (2) five years of people/project management experience, (3) an advanced degree, (4) an expired GMAT.

DEGREE REQUIREMENTS

The program requires thirty semester hours of graduate coursework. Students must enter the program in the summer and must take courses in a prescribed sequence. There are no electives.

FOR MORE INFORMATION

Campus address: College of Business Administration Building (CBA) 2.502, phone (512) 471-2283, fax (512) 471-4311; campus mail code: B6004  
Mailing address: The University of Texas at Austin, MSTC Program, Red McCombs School of Business, 1 University Station, B6004, Austin TX 78712  
E-mail: mstc@mccombs.utexas.edu  
URL: http://www.mccombs.utexas.edu/mstc/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

Classes generally meet all day on alternate Fridays and Saturdays.

SCIENCE AND TECHNOLOGY COMMERCIALIZATION: STC

380. Converting Technology to Wealth. The process of commercialization through which knowledge (ideas, innovations, science, technology, talent, and expertise) is converted to wealth. The importance of technology innovation and commercialization to the economy of a country. Students perform a technology assessment. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

382. Marketing Technological Innovations. Marketing and persuasion in the process of taking a technology from idea to market. Examines marshaling support for technology development, matching technologies with market needs, and launching a product. Students develop a proposal and a marketing plan for taking a product to market. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

384. Strategic Analysis for Technology Commercialization. Technology strategy as part of business strategy. The use of models and other concepts to measure the effectiveness of commercialization; the analysis and measurement of risk. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

385. Creative and Innovative Management. Concepts, ideas, initiatives, and methods used to give an organization a new direction or mode of operation; implementation of new ideas; successful moves in new directions. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

386. Topics in Technology Commercialization. The process of technology commercialization, managing technology, and other topics that include the commercialization of technology. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

389. Problems in Specialized Fields. Independent study. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

390. Government Policies: Science and Technology Commercialization. How government policies affect research and development and commercialization; how organizations can influence these policies, maximize their usefulness, or minimize their interference with the ability to commercialize technology. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

391. Technology Transfer in the Global Economy. Technology transfer theories, concepts, and implementation techniques essential to successful commercialization efforts. Global commercialization efforts and processes for brokering technology internationally. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

393. Conference Course in Science and Technology Commercialization. Individual study in selected aspects of the commercialization of technology. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, admission to the technology commercialization program, and consent of the graduate adviser.

394C. Managing Product Development and Production. The current methods and best practices used by organizations to accelerate the product development process. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

395. The Art and Science of Market-Driven Entrepreneurship. Explores the process of creating new ventures. Includes the dynamics of growth-oriented firms, the roles of entrepreneur and intrapreneur in organizational environments, factors that drive the creative process, and the importance of entrepreneurship to the economy. Students develop a detailed, growth-oriented business plan for an enterprise or project based on a specific technology of their choice. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.

396. Technology Enterprise Design and Implementation. Explores business plan evaluation and implementation. Students develop an operational plan on how to launch a technology-based venture. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the technology commercialization program.
College of Communication

COMMUNICATION

Master of Arts
Master of Fine Arts
Doctor of Audiology
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

In addition to the extensive library and computer resources of the University, certain special resources provide support for graduate work in communication. Chief among these is the Jesse H. Jones Communication Center. Communication Building A (CMA) is a six-level building housing classrooms, offices, and sophisticated multimedia facilities. All of the instructional and office spaces are equipped with Ethernet. Communication Building B (CMB), a nine-level production building, houses Austin's public television station, KLRU, and the National Public Radio station KUT-FM. Also housed in Communication Building B are teaching and production facilities for the School of Journalism and the Department of Radio-Television-Film.

These facilities provide opportunities for programs of graduate study that cross departmental lines, that interrelate print and electronic media, or that combine the resources of the College of Communication in other ways not feasible in a single department. Additional facilities are listed in each graduate program’s section below.

AREAS OF STUDY

Graduate work in the College of Communication may lead to the Master of Arts, the Master of Fine Arts, the Doctor of Audiology, or the Doctor of Philosophy, or may be taken as a supporting field for a graduate degree in an area outside the college. For the Master of Arts or Doctor of Philosophy, the student may major in advertising, communication sciences and disorders, communication studies, journalism, or radio-televison-film; radio-televison-film majors may seek the Master of Fine Arts in production; communication sciences and disorders majors may seek the Doctor of Audiology degree. Advanced graduate work in communication may emphasize the processes of communication, or interdisciplinary combinations of areas of study, or appropriate subdivisions indicated by the courses taught and the specialties of faculty members.

ADMISSION REQUIREMENTS

The applicant must have an undergraduate degree from an accredited college or university and may be required to complete up to twelve semester hours of upper-division coursework in the area of the proposed graduate major. Each program reserves the right to examine the applicant orally or in writing or both regarding the subject matter prerequisite to graduate courses in the major.

DEGREE REQUIREMENTS

MASTER OF ARTS

The Master of Arts usually requires thirty semester hours of graduate coursework, although additional courses may be required to make up deficiencies.

MASTER OF FINE ARTS

The Master of Fine Arts is available only in video and film production or in writing for film and television. Information about the program is given on page 98.
DOCTOR OF PHILOSOPHY

The doctoral program cannot be defined in terms of a specific number of hours of credit, although a few core requirements may be stated. Beyond these core courses, the student is required to select a major area of study, to take courses recommended by an advisory committee in this area, and to pursue coursework in one or more supporting fields. The graduate programs in the college work closely together in the coordination of courses for the doctoral degrees in communication. Supporting fields are most commonly in the social and behavioral sciences, business, education, and linguistics, but the student may suggest other fields.

Core requirements include graduate courses in communication theory and research methodology specified by the departments. Foreign language or substitute research tool requirements are specified by Graduate Studies Committees. Students should consult the program's graduate adviser for specific requirements.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

COMMUNICATION: COM

281, 381. Seminar in Communication. Communication in a pluralistic society; nature of theory development; state of communication theory; conceptual models; sources of communication theory: semantic, linguistic, perceptual, sociological; information theory. Two or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Communication 281 is offered on the credit/no credit basis only. Prerequisite: For 281, graduate standing; for 381, graduate standing and at least twelve semester hours of upper-division coursework in the major.

384K. Information Networks. Historical development, design, and use of various kinds of information, communication, and computer-based networks; alternative conceptions of networking from the standpoint of different institutions, missions, disciplines, technologies, users, funders, and geographical areas; network management functions and networking as an alternative to development of intraorganizational resources; databases and data communications technology, standards, and operations. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385T. Seminar in Information Science and Knowledge Systems. Critical examination of theories, applications, trends, and problems in information science and knowledge systems, with emphasis on problems suggested by students. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

386. Seminar in Foundations for Library and Information Studies. Problems, issues, and trends, historical and current, in libraries, librarianship, information science, knowledge systems, and relevant technologies. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

DOCTOR OF AUDIOLOGY

The college offers the Doctor of Audiology (AuD) through the Department of Communication Sciences and Disorders. Information about the program is given on page 86.

FOR MORE INFORMATION

Campus address: Jesse H. Jones Communication Center (Academic) (CMA) 4.130, phone (512) 471-5775, fax (512) 471-8500, campus mail code: A0900
Mailing address: The University of Texas at Austin, Office of the Dean, College of Communication, 1 University Station A0900, Austin TX 78712
URL: http://communication.utexas.edu/
389C. Seminar in Archival Enterprise. Topics in the nature of, and current problems in, the techniques and administration of archival and manuscript repositories. Intended to stimulate creative thinking about the process and functions of archival administration. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

398T. Supervised Teaching in Communication. Required for assistant instructors. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

ADVERTISING
Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

In addition to the extensive library and computer resources available on the campus, certain special resources provide support for graduate work in advertising.

Classrooms and laboratories devoted to research and creative work in advertising include a copy and layout studio equipped with the latest computer technology for advertising design and production; the University Co-op Interactive Studio, which includes data banks of media and market studies for audience analyses, research on media trends and competitive expenditures, and other studies; the Leo Burnett Library, containing Clio award–winning commercials from 1960 to the present and creative advertising texts and periodicals; the John Paul Goodwin Conference Room, equipped for client and research presentations; and a collection of over a thousand television and radio commercials for studies on commercial trends, comparative appeals, and cultural developments.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Ronald B. Anderson
Lucinda Jane Atkinson
Neal M. Burns
Sejung M. Choi
Vincent Joseph Cicchirill
Isabella C. Cunningham
Minette E. Drumwright
Matthew Eastin
Geraldine R. Henderson
Leann Kahlor
Wei-Na Lee
Brad Love
Michael S. Mackert
John H. Murphy
Patricia A. Stout
Yongjun Sung
Gary B. Wilcox

ADMISSION REQUIREMENTS

The entering student must hold a bachelor’s degree from an accredited institution. All students must complete each of the following courses or its undergraduate equivalent prior to enrollment or during the first two semesters: Advertising 385 (Topic 1: Strategic Advertising Principles), 385 (Topic 3: Media Management), Marketing 320F (Foundations of Marketing), and a statistics course.

DEGREE REQUIREMENTS

The Master of Arts degree is offered in three options: with thesis, with report, and without thesis or report. The thesis option requires at least thirty-six semester hours of credit; the report option, at least thirty-three hours; and the option without thesis or report, at least thirty-nine hours. Advertising 380J, 382J, 387, and 388K are required. All students must also complete six to twelve semester hours in one or more minor areas of study, such as marketing, sociology, anthropology, journalism, psychology, or English. No more than nine semester hours of upper-division coursework may be counted toward the degree, with no more than six hours to be counted toward either the major or the minor requirement. These courses must be approved by the graduate adviser.

The program is flexible, allowing students to focus on their specific interests through elective and minor coursework. Most students complete the program in eighteen to twenty-four months.
Option II. The Master of Arts is offered both in a traditional format and in the Option II format. Option II provides a planned program of study that includes intensive summer work and special internationally focused enrichment opportunities. It gives students enrolled in participating academic programs access to a multinational and global experience. Option II students must complete a master's report.

DUAL DEGREE PROGRAMS

The Department of Advertising offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ADVERTISING: ADV

380J. Quantitative and Qualitative Research. An introduction to advertising research designs and procedures. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

381. Consumer Behavior. An interdisciplinary study using behavioral science concepts to explain consumer motivation, information processing, and consumption behavior; sociological and psychological factors affecting the consumption process and the marketing/advertising of goods and services. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Advertising 380J.

382J. Theories of Persuasive Communication and Consumer Decision Making. Communication and behavioral science theories as they relate to contemporary advertising practices. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

383. Supervised Individual Creative Studies. Conference course. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and written consent of instructor received prior to registering.

384. International Advertising. Study of the managerial, economic, legal, and cultural aspects of multinational advertising. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

385. Principles of Advertising Management. The study of planning, organization, and control of the advertising functions. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Advertising 370J or the equivalent, and consent of the graduate adviser.

386. Principles of Integrated Advertising. The application of management principles to the solution of integrated communications management problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

FIELD OF STUDY DEGREE

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: Jesse H. Jones Communication Center (Academic) (CMA) 7.142, phone (512) 471-1101, fax (512) 471-7018; campus mail code: A1200
Mailing address: The University of Texas at Austin, Graduate Program, Department of Advertising, 1 University Station A1200, Austin TX 78712
E-mail: gradvertising@austin.utexas.edu
URL: http://advertising.utexas.edu/
189, 389, 489. Problems in Specialized Fields of Advertising. Research project chosen from the area of the student’s major interest; a written report or creative project is required. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit when the topics vary. Students who take Advertising 189 must register for a topic of 189 for three consecutive semesters. Prerequisite: Graduate standing, consent of instructor, and written consent of the graduate adviser received prior to registering.


391K. Seminar in Advertising. Survey and analysis of current advertising issues and practices. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Interactive Advertising.
Topic 2: Advanced Account Planning.
Topic 3: Advanced Advertising Research.
Topic 4: Audiences for Nonprofit Organizations.
Topic 6: Media Research.
Topic 7: Public Relations Theory.
Topic 8: Quantitative Models in Advertising.

392. Issues in Advertising Theory and Research. Examination of important current areas in advertising research and theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to a doctoral program and consent of the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in advertising and written consent of the supervising faculty member and the graduate adviser received prior to registering; for 698B, Advertising 698A and written consent of the supervising faculty member and the graduate adviser received prior to registering.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in advertising and written consent of the supervising faculty member and the graduate adviser received prior to registering.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and written consent of the graduate adviser received prior to registering.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Advertising 399R, 699R, or 999R, and written consent of the graduate adviser received prior to registering.

COMMUNICATION SCIENCES AND DISORDERS

Master of Arts
Doctor of Audiology
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Facilities include state-of-the-art laboratories in all major research areas in communication sciences and disorders. Two audio laboratories in the College of Communication Instructional Media Center are also available. The Speech and Hearing Center of the College of Communication provides a comprehensive facility for clinical training and research. Additional facilities include Information Technology Services and state and community institutions and agencies.

AREAS OF STUDY

The graduate degree program in communication sciences and disorders provides training in speech/language pathology, audiology, deafness studies/education of the deaf, and speech and hearing science.
The Master of Arts provides graduate training in the following specializations.

**SPEECH/LANGUAGE PATHOLOGY**

Students in speech/language pathology complete a set of core courses and clinical practicum experiences. Students may also choose from a set of electives based upon their specific interests.

**AUDIOLOGY**

All students in audiology complete the same set of core courses and basic clinical practicum. Students may choose from a set of electives based upon their specific interests. The program of study is not designed to lead to professional certification. Students who are interested in professional certification in audiology should consider the Doctor of Audiology degree described below.

**DEAFNESS STUDIES/EDUCATION OF THE DEAF**

The specialization in deafness studies/education of the deaf is inactive. Current information about its status is available from the graduate adviser.

**SPEECH AND HEARING SCIENCE**

Students in speech and hearing science follow a broad, research-oriented program of study that is not designed to lead to professional certification. Additional information is available from the graduate adviser.

**DOCTOR OF AUDIOLOGY**

The Doctor of Audiology (AuD) provides academic and clinical education for those who plan to enter the profession of audiology. The degree program involves preparation for the diagnosis and nonmedical treatment of hearing and balance disorders; it is designed to prepare audiologists to meet the standards for Texas state licensure in audiology.

The program requires a minimum of eighty-three semester hours of coursework and is designed to be completed in four years. All preprofessional students in audiology complete the same set of core courses and basic clinical practicum. Students may choose from a set of electives based upon their specific interests. Research experiences are part of the curriculum, but a dissertation is not required.
DOCTOR OF PHILOSOPHY

The Doctor of Philosophy is a research degree; students can expect opportunities to work closely with the faculty on research and to participate in the publication of research findings. All students in this program are expected to achieve mastery of research design principles and methods appropriate to their program of study.

GRADUATE COURSES

Professional liability insurance is required of all students enrolled in off-campus clinical practicums in speech/language pathology or audiology. The insurance policy must cover the duration of the placement, beginning on or before the first day of the placement and extending through the final day of the placement.

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

COMMUNICATION SCIENCES AND DISORDERS: CSD

180E, 280E, 380E, 480E. Conference Course in Communication Sciences and Disorders. Readings in the literature of communication sciences and disorders designed to expand the graduate student’s opportunity for individual consultation both in research and in informational aspects of the work. One, two, three, or four conference hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

181L, 281L, 381L. Clinical Practicum. Supervised practicum in speech/language pathology or audiology. Two, four, or six clinical teaching hours and one, two, or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the graduate program in speech/language pathology or audiology.

383N. Seminar in Human Communication Development. Strategies for original research in developmental sequences of communication behaviors and for research in classroom applications; representative topics include linguistic behaviors, oral language development, and second language instruction. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

386N. Research in Communication Sciences and Disorders. Strategies and methodology in the design and analysis of research in communication sciences and disorders. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

190J. Business Applications. Issues associated with the development, operation, and management of businesses devoted to service delivery in audiology and speech-language pathology. One lecture hour a week for one semester. Prerequisite: Graduate standing.

391P. Anatomy and Physiology of the Auditory System. Topics associated with the structure and function of the auditory system, including hearing and balance mechanisms. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392S. Speech Perception: Theories and Clinical Aspects. Overview of theories and research findings related to human speech perception and recognition. Topics include acoustic characteristics of speech categorical perception, infant speech perception, and effects of hearing loss. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

293D, 393D. Evaluation and Remediation in Speech/Language Pathology. Core courses for clinical competence in speech/language pathology. Two or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Top 1: Voice Disorders.
Top 2: Developmental Speech Disorders.
Top 3: Fluency Disorders.
Top 4: Language Intervention with Infants and Toddlers.
Top 5: Developmental Language Disorders.
Top 6: Language Intervention with School-Age Children.

FOR MORE INFORMATION

Campus address: Jesse H. Jones Communication Center (Academic) (CMA) A2.112, phone (512) 471-2385, fax (512) 471-2957; campus mail code: A1100
Mailing address: The University of Texas at Austin, Graduate Program, Department of Communication Sciences and Disorders, 1 University Station A1100, Austin TX 78712
E-mail: csdgrad@austin.utexas.edu
URL: http://csd.utexas.edu/graduate/
293E, 393E. Topics Cognate to Speech/Language Pathol-
yogy. New developments in related areas and their ap-
plications to speech/language pathology. Topics include
infants and young children, clinical instrumentation, neu-
roanatomy, genetic considerations in speech/language
pathology, prosody. Two or three lecture hours a week for
one semester. May be repeated for credit when the topics
vary. Prerequisite: Graduate standing.

Topic 1: Dysphagia.
Topic 2: Measurement in Communication Sciences and
Disorders.

293F, 393F. Recent Developments in Speech/Language Pathol-
yology. Current developments in selected categories of
speech and language disorders; designed to provide depth
in one or more areas. Two or three lecture hours a week for
one semester. May be repeated for credit when the topics
vary. Prerequisite: Graduate standing.

Topic 1: Aphasia.
Topic 2: Acquired Speech Disorders.

393G. Measurement and Bias in Communication Sciences and
Disorders. Selected topics in speech/language pathology,
including pronunciation problems in second language
learning, remedial programs for the disadvantaged, and
multicultural assessment. Three lecture hours a week for
one semester. May be repeated for credit when the topics
vary. Prerequisite: Graduate standing.

Topic 1: Multicultural Research in Communication
Sciences and Disorders.

394C. Amplifying Systems in Aural Rehabilitation. Principles of
hearing aid circuitry and looped systems; ear molds and
acoustic properties thereof; electroacoustic properties of
hearing aids and selection procedures. Three lecture
hours a week for one semester. Prerequisite: Graduate
standing, and Communication Sciences and Disorders
378 or 396M or consent of instructor.

394D. Hearing Conservation. Auditory and nonauditory effects
of noise; damage-risk criteria; federal and state laws
governing noise and noise control; acoustic measure-
ment procedures; identification audiometry; ear protec-
tion; nonorganic hearing loss and evaluative procedures.
Three lecture hours a week for one semester. Prerequisite:
Graduate standing and Communication Sciences and
Disorders 378.

394E. Auditory Electrophysiology. Review of the auditory
nervous system; in-depth evaluation of electrodermal,
electroencephalographic, and electrocardiographic au-
diometry. Three lecture hours a week for one semester.
Prerequisite: Graduate standing, and Communication
Sciences and Disorders 378 or consent of instructor.

394F. Medical Audiology. Audiologic implications of pathology
and medical and/or surgical treatment of the ear; otologic
diagnoses. Three lecture hours a week for one semester.
Prerequisite: Graduate standing, and Communication
Sciences and Disorders 378 or consent of instructor.

394H. Auditory Rehabilitation. Acoustic, vocational, social, and
psychological rehabilitation of the hearing-impaired child
and adult. Three lecture hours a week for one semester.
Prerequisite: Graduate standing, and Communication
Sciences and Disorders 378 or consent of instructor.

394K. Problems in Audiology. A review of current literature on
diagnostic procedures; habilitation for hearing-impaired
children or rehabilitation for adults. Three lecture hours
a week for one semester. May be repeated for credit when
the topics vary. Prerequisite: Graduate standing; and
Communication Sciences and Disorders 373 and 378, or
consent of instructor.

Topic 1: Aural Habilitation.
Topic 2: Psychoacoustics. Anatomy and physiology of the
peripheral auditory system; behavioral measures of
auditory performance-masking, sound localization,
pitch and loudness perception, temporary and per-
manent hearing loss. Only one of the following may be
counted: Communication Sciences and Disorders
394K (Topic 2), Neuroscience 394P (Topic 6: Psy-
choacoustics), 394U (Topic 1: Psychoacoustics), Psychology
394U (Topic 5: Psychoacoustics).

395. Pediatric Audiology. Current methods of testing the
hearing of young children; included are identification,
electrophysiological and operant audiometry, and medical
aspects of hearing loss in children. Three lecture hours
a week for one semester. Prerequisite: Graduate stand-
ing, and Communication Sciences and Disorders 378 or
consent of instructor.

395C. Language Acquisition in Deaf Children. Examination of
current research studies in expressive and receptive
language function; relationships of research to existing
classroom procedures. Three lecture hours a week for one
semester. Prerequisite: Graduate standing and consent
of instructor.
395G. **Strategies for Speech Improvement of the Deaf.** Designs for evaluation and intervention to improve the speech of deaf students. Three lecture hours a week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Communication Sciences and Disorders 195L, and consent of instructor.

395H. **Problems in Deafness.** Selected topics on the implications of deafness for the deaf child’s development. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** Literacy.
**Topic 2:** Social Psychology of Deafness.
**Topic 3:** Instructional Practices.

395L. **Speech Improvement in the Hearing Impaired: Practice.** Supervised clinical experience conducting speech development activities with hearing-impaired children. Two hours of clinical teaching a week for one semester. Prerequisite: Graduate standing and concurrent enrollment in Communication Sciences and Disorders 395G.

395N. **Neurobiological Perspectives on Speech and Language.** Overview of sensory, motor, and neurophysiological correlates of speech and language. Topics include neuroanatomy and neurophysiology of the human brain, with emphasis on motor pathways, representation in the brain, neuroimaging, neuromotoric processing, and hemispheric specialization. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

396C. **Advanced Amplifying Systems.** Fitting of advanced amplification systems, including digital hearing aids, frequency modulation and other wireless systems, and assistive listening devices. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Communication Sciences and Disorders 394C.

396D. **Auditory Processing Disorders.** Assessment and treatment of disorders of the central auditory nervous system in children and adults. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

396E. **Advanced Auditory Electrophysiology.** Advanced diagnostic tools, including acoustic immittance, otoacoustic emissions, auditory evoked potentials, intraoperative monitoring, and vestibular function. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Communication Sciences and Disorders 394E.

396G. **Surgically Implanted Auditory Prostheses.** Determining candidacy for treatment, programming devices, and evaluating treatment outcomes associated with implantable hearing technologies. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Communication Sciences and Disorders 394F.

396M. **Instrumentation in Communication Sciences.** Electrophysiological and electroacoustic procedures in the study of communication behaviors. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

396N. **Speech Production and Perception.** Neurophysiological mechanisms underlying the encoding and decoding of speech. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Sciences and Disorders 315S, 358S, 396N, Linguistics 315, 358S. Prerequisite: Graduate standing.

397, 697, 997. **Clinical Externship in Audiology.** Restricted to students in the Doctor of Audiology program. Intensive clinical experience in a work setting. Individual instruction. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in communication sciences and disorders and consent of the graduate adviser; for 698B, Communication Sciences and Disorders 698A.

398P. **Research Project in Audiology.** Restricted to students in the Doctor of Audiology program. Research supervised by a faculty member. Includes reading and integrating the relevant literature. Students prepare research results in a manuscript suitable for publication. Individual instruction. Prerequisite: Graduate standing and Communication Sciences and Disorders 386N.

398R. **Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in communication sciences and disorders and consent of the graduate adviser.

398T. **Supervised Teaching in Communication Sciences and Disorders.** Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Communication Sciences and Disorders 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

Facilities available in the Department of Communication Studies include computers with full statistics packages, and ethnographic coding, transcription coding, authoring, editing, and Web design software; these computers also have access to Web survey software. Four carrels are available for confidential data viewing, and are equipped with high-quality Webcams, headphones, and digital transcription machines. The College of Communication’s Digital Media Labs provide access to world-class nonlinear audio and video workstations. The college’s Instructional Media Center has a library of more than two thousand audio- and videotapes and a conversation library of about two hundred hours of interpersonal interaction, both audiotaped and transcribed.

AREAS OF STUDY

The master’s and doctoral degree programs in communication studies provide training in the following areas: interpersonal communication, organizational communication, and rhetoric and language studies.

The Doctor of Philosophy degree with a major in communication studies is a research degree; doctoral students can expect opportunities to work closely with the faculty on research and to participate in the publication of research findings. All doctoral students are expected to achieve mastery of research design principles and methods appropriate to their program of study.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dawna Ballard</td>
<td>Roderick P. Hart</td>
</tr>
<tr>
<td>Larry D. Browning</td>
<td>Mark L. Knapp</td>
</tr>
<tr>
<td>Barry Brummett</td>
<td>Madeline M. Maxwell</td>
</tr>
<tr>
<td>George Edward Cheney</td>
<td>Matthew S. McGlone</td>
</tr>
<tr>
<td>Richard A. Cherwitz</td>
<td>Jorge Pena</td>
</tr>
<tr>
<td>Dana L. Cloud</td>
<td>Sally Kay Planalp</td>
</tr>
<tr>
<td>Rene M. Dailey</td>
<td>Keri K. Stephens</td>
</tr>
<tr>
<td>John A. Daly</td>
<td>Jurgen K. Streeck</td>
</tr>
<tr>
<td>Erin E. Donovan-Kicken</td>
<td>Natalie J. Stroud</td>
</tr>
<tr>
<td>Joshua G. Gunn</td>
<td>Scott R. Stroud</td>
</tr>
<tr>
<td>Sharon E. Jarvis</td>
<td>Anita L. Vangelisti</td>
</tr>
</tbody>
</table>

ADMISSION REQUIREMENTS

Entering students must have a bachelor’s degree (or the equivalent) from an accredited institution, and their undergraduate preparation should include at least nine semester hours of upper-division coursework in communication studies. All applicants must meet the requirements for admission to the Graduate School given in chapter 2.

Satisfying these minimum requirements does not guarantee admission. Each applicant’s credentials are scrutinized by each faculty member in the program. No single criterion, such as grade point average or GRE score, is given undue weight in the decision process; every attempt is made to assess the special strengths that the applicant might bring to the program.

DEGREE REQUIREMENTS

With the approval of the Graduate Studies Committee and the graduate dean, work toward the major may be divided among two or more areas in communication. To be counted toward the degree, all coursework in the major must be at the graduate level and must be completed with a grade of at least B. Students in the master’s degree program must complete a minimum of thirty semester hours of coursework, including a thesis, or a minimum of thirty-three semester hours, including a report. Doctoral students normally complete all requirements in four or five years of graduate study. Individual study programs must be arranged in consultation with the graduate adviser.

DUAL DEGREE PROGRAMS

The Department of Communication Studies offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Latin American studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>
FOR MORE INFORMATION

Campus address: Jesse H. Jones Communication Center (Academic) (CMA) A7.114, phone (512) 471-1942, fax (512) 471-3504; campus mail code: A1105

Mailing address: The University of Texas at Austin, Graduate Program, Department of Communication Studies, 1 University Station A1105, Austin TX 78712
E-mail: commstudies@austin.utexas.edu
URL: http://commstudies.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

COMMUNICATION STUDIES: CMS

180E, 280E, 380E, 480E. Conference Course in Communication Studies. Readings in the literature of communication studies designed to expand the graduate student’s opportunity for individual consultation both in research and in informational aspects of the work. One, two, three, or four conference hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

081M. Introduction to Graduate Studies in Human Communication. Discussion of communication research, theory, and professional development. One lecture hour a week for one semester. Prerequisite: Admission to the graduate program in communication studies.

383K. Communication Theory. Survey of philosophical and language-based approaches to communication; theory construction, research practices, scholarly writing. Three lecture hours a week for one semester. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

384K. Communication and Ethnography. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 3: Microethnography of Interaction. Introduction to the study of details of human interaction: the moment-by-moment organization of speech and embodied communication; the roles of different media of communication, such as language, gesture, and space; the construction of context; uses of the material environment; and the distribution of information in collaborative work settings.

386H. Seminar in Health Communication. Theory and research in health communication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections may also require consent of instructor or the graduate adviser.

386K. Theories of Interpersonal Communication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

386L. Group Communication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

Topic 1: Group Communication Processes. Study of theory and research in the dynamics of small groups, with emphasis on the interaction of message variables with other variables such as leadership, affiliation, cohesiveness, and social power.

Topic 3: Communicating in Groups and Teams. Focuses on the concepts and theories of communicative processes in task-oriented groups and work teams. Readings cover theory and research related to communication problems, dynamics, and practices in group and team settings. May also include the study of team development, decision making, and trends in group communication research.
386N. Research in Communication Studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

   Topic 1: Quantitative Research Methods. Broad coverage of social scientific techniques for collecting and analyzing communication data; includes measurement, design, and other areas. Some sections focus on organizational research.

   Topic 2: Qualitative Research Methods. The use of observational and interviewing research techniques for studying human communication.

386P. Issues in Interpersonal Communication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser.

   Topic 1: Nonverbal Communication. Current theory and research in such areas as involvement and intimacy, gender, touch, space, environment, nonverbal behavior in children, appearance, and lying. Various methods and measurement techniques for assessing eye gaze, body motion, facial actions, vocal signals, and multichannel events.

   Topic 5: Negative Interpersonal Communication. An overview of negative features of communication in interpersonal relationships. Examines avoidance, secrets, conflict, relational transgressions, negative emotions, and aggression and abuse.

   Topic 7: Stereotyping and Prejudice in Interpersonal Communication. Examines problems posed by stereotyping and prejudice in interpersonal communication, and the research and theory aimed at reducing their impact. Designed to provide opportunities to seek constructive ways of defining and addressing stereotyping and prejudice; emphasis on recent research in the formation, maintenance, and application of stereotypes.

   Topic 8: Metaphor in Communication. Examines the conceptual structure and expressive forms of the metaphor. Includes the study of classical and contemporary treatment of metaphor in linguistics, philosophy, and rhetoric. Also includes recent social scientific research on the use of figurative devices, such as metaphor, analogy, idiom, hyperbole, and euphemism, in strategic communication, specifically in managerial communication, political speeches, and religious discourse.

   Topic 9: Perspective Taking. Examines social scientific research and theories that illuminate human ability to understand or adopt the perspective of others.

386R. Issues in Relational Communication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

   Topic 1: Communication in Relationships. Theories of development and change; research methods; relationship types; gender and roles; emotion; self-disclosure; secrets; lying; compliments; conflict; complaints; persuasion; dissolution processes; rejuvenating, repairing, and maintaining relationships.

   Topic 2: Family Communication. Communication and attraction, courtship, marriage, the role of children in the marital relationship, sibling relationships, the effect of spouses’ occupations on the family, and dysfunctional families.

386S. Communication, Cognition, and Emotion. The cognitive elements involved in social interaction, such as memory, comprehension, plans, decision making, and schemas. Three lecture hours a week for one semester. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

389C. Seminar in Peace and Conflict. A survey of the literature and research in the communication of peace and conflict. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some topics also require consent of instructor or the graduate adviser.

090F. Research Internship. Participation in faculty-supervised research during the second full year of doctoral study. The equivalent of one lecture hour a week for one semester. Prerequisite: Graduate standing and eighteen semester hours of graduate credit at the doctoral level.

390J. Seminar in Philosophy and Rhetoric. Topis in rhetorical theory, including such areas as philosophy of argument, rhetoric and epistemology, and ethics of rhetoric. Three lecture hours a week for one semester. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

   Topic 1: Pragmatism and Rhetoric. Examines classical pragmatism, with a focus on its meaning in regard to theories of rhetoric and communication, ideal senses of community, the art of rhetoric, and method in the study of rhetoric.

   Topic 2: Comparative Rhetoric. Compares rhetorical practices from ancient and modern cultures. Examines various rhetorical traditions, as well as general methodological issues associated with analyzing rhetoric from non-Western traditions.

390M. Seminar in Language, Culture, and Interaction. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser.

390N. Political Discourse. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.
Topic 2: Rhetoric of Social Movements. Philosophies, strategies, and effects of modern sociopolitical and religious movements designed to produce change.

Topic 3: Campaign Communication. An introduction to research surrounding the actors and texts of political campaigns. Covers voters, candidates, consultants, new constituencies, advertisements, debates, speeches, news coverage, party conventions, and new media environments. Focuses on how political discourse affects political life in the United States.


Topic 5: Politics, Media, and the Individual. Current research and theory in the area of media and politics with particular emphasis on individual-level effects.

390P. Rhetorical Theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

Topic 1: Contemporary Rhetorical Theory. Investigation of recent definitions, issues, and trends in rhetorical theory, with emphasis on the philosophical bases of rhetoric and the relationship of rhetoric to other disciplines.

Topic 4: Burke and the Symbolic Form. Covers a selection of books by rhetorical theorist Kenneth Burke, as well as books and articles by recent scholars that use his ideas.

Topic 5: Foundations of Rhetorical Theory. Examines historical writings about rhetoric in the Western tradition, up through the Enlightenment. Covers various important figures in the history of rhetoric, including Plato, the sophists, Aristotle, Cicero, Quintilian, Augustine, Christine de Pizan, Vico, and Ramus.

Topic 6: Rhetoric and Social Style. A consideration of social style, including dress, entertainment, vehicles, and living arrangements as a system of communication. Special emphasis on the expressive and practical functions of such symbolic displays.

Topic 7: Rhetoric and Ideology. Explores Marxist contributions to rhetorical theory and criticism, with emphasis on ideology and hegemony.

Topic 8: Rhetoric of Publics and Counterpublics. Investigation of the role of rhetoric in public life in capitalism in history and today. Covers the roles of rhetoric and rhetorical criticism in the production and maintenance of publics, and discusses the formation and activities of social movements.

390S. Seminar in Organizational Communication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

Topic 1: Narrative Communication in Organizations. Current theories of narrative and their applications to organizations. Topics include gossip, day-to-day news, and dramatic enactments of organizational communication.

Topic 2: Power and Politics in Organizational Communication. The communication implications of sociological and managerial approaches to the study of power and politics, with emphasis on ideas about structure, culture, ideology, information, conformity, voice, and dissent.
390T. Organizational Communication Theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

Topic 2: Organizational Communication: Macro. An introduction to selected macro-level or systemic variables in organizations, such as structure, technology, and environments, and to the ways these variables relate to organizational communication processes.

Topic 3: Postmodern Organizational Communication Theory. An attempt to integrate the concern in cultural studies for structure with the stream of organizational theory that focuses on chaos. Readings include Clifford and Markus, Clifford, Deleuze and Guattari, March and Olsen, Weick.

390U. Consultation in Organizations. A review of social science literature and its application to problem solving and organizational development in field settings. Three lecture hours a week for one semester. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

392P. Seminar in Communication Technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.


398. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in communication studies and consent of the graduate adviser; for 698B, Communication Studies 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in communication studies and consent of the graduate adviser.

398T. Supervised Teaching in Communication Studies. Teaching communication studies under supervision. Three lecture hours a week for one semester. Prerequisite: Graduate standing. Some sections also require consent of instructor or the graduate adviser; these are identified in the Course Schedule.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Communication Studies 399R, 699R, or 999R.
THE PHOTOJOURNALISM TRACK IS DESIGNED FOR EXPERIENCED PHOTOJOURNALISTS WHO WISH TO ENHANCE THEIR VISUAL COMMUNICATION KNOWLEDGE AND MULTIMEDIA SKILLS. THE TRACK REQUIRES THIRTY-SIX SEMESTER HOURS OF COURSEWORK, INCLUDING A MASTER’S REPORT.

THE RESEARCH AND THEORY TRACK IS DESIGNED FOR STUDENTS WHO SEEK A GENERAL CONCEPTUAL FOUNDATION FOR MEDIA-RELATED CAREERS, OR WHO PLAN TO PURSUE DOCTORAL STUDY IN JOURNALISM OR COMMUNICATION. THE TRACK REQUIRES THIRTY SEMESTER HOURS OF COURSEWORK, INCLUDING A THESIS.

THE PROFESSIONAL RESEARCH HYBRID TRACK COMBINES COURSES FROM THE PROFESSIONAL AND RESEARCH AND THEORY MASTER’S TRACKS. THIS HYBRID WILL APPEAL TO PROFESSIONALS WITH SIGNIFICANT EXPERIENCE WHO SEEK TO UPDATE THEIR SKILLS, ESPECIALLY IN MULTIMEDIA, OR BUILD A RESEARCH AND THEORY FOUNDATION FOR PURSUING AN ACADEMIC CAREER. THE TRACK REQUIRES THIRTY SEMESTER HOURS OF COURSEWORK, INCLUDING A THESIS.

THE DOCTOR OF PHILOSOPHY DEGREE, WHICH IS A RESEARCH DEGREE IN JOURNALISM, EMPHASIZES AN INTERDISCIPLINARY APPROACH. WORKING WITH THE FACULTY AND THE GRADUATE ADVISER, EACH STUDENT DEVELOPS AN INDIVIDUAL PROGRAM OF WORK CENTERED AROUND FOUR AREAS OF CONCENTRATION. ALL STUDENTS MUST SELECT RESEARCH AND THEORY AS TWO OF THE AREAS OF CONCENTRATION. EACH AREA IS SUPPORTED BY A VARIETY OF COURSES THAT FOCUS ON CONCEPTS, MODELS, AND THEORIES, OR ON RESEARCH APPROACHES AND METHODOLOGIES.

THE FOLLOWING FACULTY MEMBERS SERVED ON THE GRADUATE STUDIES COMMITTEE IN THE SPRING SEMESTER 2011.

Rosental C. Alves  Dustin M. Harp
Gene A. Burd  Robert W. Jensen
Hsiang I. Chyi  Thomas Jerrold Johnson
Renita B. Coleman  Dominic L. Lasorsa
Tracy S. Dahlby  Maxwell E. McCombs
Dennis C. Darling  Paula M. Poindexter
Donna De Cesare  Stephen D. Reese
Mercedes L. De Uriarte  Maggie R. Rodriguez
Glenn Charles Frankel  George Sylvie
Homero Gil De Zuniga  Russell G. Todd

The Facilities for Graduate Work

With a mix of national and international scholars, former news media executives, and journalists, the School of Journalism faculty is one of the best and most balanced in the country. Students have access to excellent facilities and state-of-the-art equipment, as well as several special resources. The Harry Ransom Humanities Research Center houses collections such as the Watergate papers of Bob Woodward and Carl Bernstein, as well as the world’s first photograph, and the Dolph Briscoe Center for American History houses a variety of archived papers from journalism pioneers such as Walter Cronkite. These facilities and resources support graduate study in journalism that is designed to prepare students to succeed in the profession in a wide range of careers.

Areas of Study and Degree Requirements

Students can choose one of four tracks for the Master of Arts degree in journalism: professional, photojournalism, research and theory, or professional research hybrid. The professional track, designed for students seeking professional journalism careers, is intended for three types of students. One is the student with an undergraduate journalism degree and/or professional journalism experience who is already familiar with journalistic techniques and can broaden and advance his or her job qualifications through master’s level study. The second type of student has little experience in journalism but seeks professional training to supplement an undergraduate degree in another field, such as liberal arts, engineering, or political science. The third type of student has journalism experience outside the United States and seeks to develop an understanding of the purpose, principles, and process of American journalism. The track requires thirty-six semester hours of coursework, including a master’s report.

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.
ADMISSION REQUIREMENTS

Admission to the graduate program in journalism is competitive, and a number of criteria are carefully considered in admissions decisions. Students admitted to the Master of Arts program must hold a bachelor’s degree from an accredited institution. Students admitted to the Doctor of Philosophy program must hold a master’s degree from an accredited institution.

DUAL DEGREE PROGRAMS

The School of Journalism offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Latin American studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Global policy studies</td>
<td>Master of Global Policy Studies</td>
</tr>
<tr>
<td>Middle Eastern studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

JOURNALISM: J

380. Introduction to Research Methods. Research methods and ethics, from design to data analysis and report writing. Three lecture hours a week for one semester. Required of all candidates for the Master of Arts degree with a major in journalism. May be taken twice for credit. Prerequisite: Graduate standing.

380M. Advanced Projects in Photography. Advanced projects to demonstrate professional competence. Three lecture hours and four laboratory hours a week for one semester. May be taken twice for credit. Prerequisite: Graduate standing, Journalism 380 and 384, and consent of instructor and the graduate adviser.

380N. Advanced Projects in Journalism. Designed to prepare students to write the master’s report. Students develop professional projects to demonstrate their competence in specialized skills; students present, discuss, and critique their own and other students’ work. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380V. Visual Journalism. Basics of aesthetics, visual design, photography, Web publishing, and videography. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

380W. Writing and Reporting. Three lecture hours and three laboratory hours a week for one semester. Required of all first-year students in the Master of Arts in journalism program, professional track. Prerequisite: Graduate standing.

FOR MORE INFORMATION

Campus address: Jesse H. Jones Communication Center (Academic) (CMA) A6.144, phone (512) 471-5933, fax (512) 471-7979; campus mail code: A1000

Mailing address: The University of Texas at Austin, Graduate Program, School of Journalism, 1 University Station A1000, Austin TX 78712

E-mail: lisa.jaskolka@austin.utexas.edu

URL: http://journalism.utexas.edu/graduate/
381. Research Methods Seminar. Research techniques for investigating the control, content, audience, and effects of mass media. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. One topic is required of all candidates for the Master of Arts degree with a major in journalism. Graduate standing.

   Topic 1: Content Analysis.
   Topic 2: Experimental Design.
   Topic 3: Survey Research.
   Topic 4: Qualitative Methods.

382. Seminar in Mass Communication. Readings, research, analyses in mass communications; oral and written reports in an area approved by the instructor. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

   Topic 1: Sources of Communication Theory.
   Topic 2: Research in the Literature of Journalism.
   Topic 4: Agenda Setting.

383. International Communication Seminar. Role of the press in a democracy, under a dictatorship, and in a revolution; the mass media in England, France, the former Soviet Union, Latin America, and other areas; flow of international communication and obstacles to clear interpretation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

383P. Advanced Visual Design. Advanced exploration of visual design, including design principles, visual perception, typography, image making, use of color-printing techniques, and publication design. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 349T (Topic: Advanced Visual Design), 359T (Topic 3: Advanced Visual Design), 383P, 395 (Topic 5: Advanced Visual Design). Prerequisite: Graduate standing.

384. Mass Communication Theory. Study of the processes and effects of mass communication. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385. Social Functions and Role of the Mass Media. Contemporary issues and problems of the mass media in the United States. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386. Public Relations Seminar. Readings, research, and analyses in public relations. Examination of the role of public relations in social, economic, and political campaigns. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

   Topic 1: Research Analyses in Public Relations.
   Topic 2: Public Relations and Management.
   Topic 3: Specialized Application of Public Relations.
   Topic 4: International Public Relations.

387P. History of Photography. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 362E, 387P, 395 (Topic: History of Photography). Prerequisite: Graduate standing.

388. Seminar in Photographic Criticism. Study of the basis for photographic styles and of their manifestations in the history of photography or in the student’s own work. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389, 389P, 489. Problems in Specialized Fields. Research project chosen from area of student’s major interests; written report required. Independent study. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

   Topic 1: Photojournalism. Additional prerequisite: Journalism 380M.

389E. Professional Experience in Journalism. Supervised internship experience in a professional journalism setting. At least ten hours of fieldwork a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

389P. Independent Research: Photojournalism. May be repeated for credit. Prerequisite: Graduate standing.

390. Seminar in Journalism History. Research projects in the history of communication media; examination of the social, economic, and political relationships of the media within historical environments. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390P. Advanced Documentary Project. Advanced exploration of documentary storytelling skills, with an emphasis on the skills required for the master’s report. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing and Journalism 380M.

391. Urban Communication. Civic images, media dilemmas on urban growth, and decentralization; new telecommunications technology and the future “mediapolis” of postindustrial cities. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392. Seminar in Media Law. Research in selected areas of social and legal responsibilities of the media. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

   Topic 1: Constitutional Issues in Media Law.
   Topic 2: Studies in Regulation of the Mass Media.

395. Topics in Journalism. Contemporary social, professional, and intellectual concerns with the practice of journalism. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

   Topic 1: Professional Writing for Journalists.
   Topic 2: Advanced Photo Editing and Design. Advanced training in photo editing and publication design. Taught abroad; location may vary by semester. Only one of the following may be counted: Journalism 370K (Topic 1: Advanced Photo Editing and Design), 370K (Topic: Advanced Photojournalism in Czechoslovakia), 395 (Topic 2).
   Topic 3: Documentary Video. Production and editing of video for television and online newspapers. Three lecture hours and four laboratory hours a week for one semester.
Topic 4: Documentary Tradition of Latin America.
Same as Latin American Studies 381 (Topic 22: Documentary Tradition of Latin America). Study of still photographic and video documentary work by Latin Americans about Latin America. Production of photographic essays on Latin American culture. Three lecture hours and four laboratory hours a week for one semester.

Topic 6: Interactive Multimedia Research. Survey of research methods and theories related to new media, with a focus on emerging technologies of mass communication.

Topic 7: Business Journalism. Practical training and experience in business and financial reporting and writing.

Topic 8: Editorial Column Writing. Hands-on work in column writing.

Topic 9: International Reporting. Designed to provide students with skills in foreign reporting and an understanding of international news production processes, with special emphasis on Latin America.

Topic 10: Multimedia Journalism. Review of online reporting techniques, advanced multimedia skills, and current issues in new media. Three lecture hours and three laboratory hours a week for one semester.

Topic 11: Advanced Writing and Public Affairs Reporting. Three lecture hours and three laboratory hours a week for one semester.

Topic 12: Advanced Social Science Methods.

Topic 13: Framing Public Issues.

Topic 14: Qualitative Communication Theory.

Topic 15: Political Communication.

Topic 16: Proseminar in Journalism. Introduces doctoral students to major areas of research and selected researchers in journalism. Designed to help students cultivate scholarly skills, ethical norms, awareness of funding possibilities, and teaching skills.

Topic 17: Reporting Asia. Journalism 349T (Topic 17: Reporting Asia) and 395 (Topic 17) may not both be counted.

Topic 18: Theory Building.


Topic 20: Oral History as Journalism. Journalism 349T (Topic 7: Oral History as Journalism) and 395 (Topic 20) may not both be counted.

Topic 22: Alternative Media. Journalism 349T (Topic 8: Alternative Media) and 395 (Topic 22) may not both be counted.

Topic 23: Ethics in Journalism. Journalism 349T (Topic 12: Ethics in Journalism) and 395 (Topic 23) may not both be counted.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in journalism and consent of the graduate adviser; for 698B, Journalism 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in journalism and consent of the graduate adviser.

398T. Supervised Teaching in Journalism. Teaching under the close supervision of the course instructor; weekly group meetings with the instructor; individual consultations, and reports required throughout the teaching period. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing, appointment as a teaching assistant, and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and written consent of the graduate adviser received prior to registering.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Journalism 399R, 699R, or 999R, and written consent of the graduate adviser received prior to registering.

PUBLIC RELATIONS

PUBLIC RELATIONS: P R

391K. Seminar in Public Relations. Survey and analysis of current public relations issues and practices. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
FACILITIES FOR GRADUATE WORK

The extensive production facilities of the Jesse H. Jones Communication Center are available to graduate students in radio-television-film, as are the services of Information Technology Services. Research in media history, criticism, and theory is supported by the resources of the University Libraries, the Research and Collections Division of the Dolph Briscoe Center for American History, and the Harry Ransom Humanities Research Center, a major collection of primary materials in literature, film, and the arts. Students in global communication have available to them the nationally recognized resources of the Benson Latin American Collection, the Center for Middle Eastern Studies, and the South Asia Institute. Facilities and projects supported by the Telecommunications and Information Policy Institute are available to students in the policy and technology programs. The UT Film Institute sponsors opportunities for research projects and internships.

AREAS OF STUDY

Students seeking the Master of Arts or the Doctor of Philosophy pursue work in a number of concentrations, including ethnic and minority issues and the media; gender and sexuality issues and the media; global communication issues; media, culture, and society; critical and cultural studies; and technology, culture, and society. Students seeking the Master of Fine Arts study film, video, and digital media production; or writing for film and television.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Master of Arts
Jennifer Fuller
Andrew S. Garrison
Lalitha Gopalan
Donald W. Howard

Master of Fine Arts
Michael S. Kackman
Mary C. Kearney
Stuart D. Kelban
Shanti Kumar
Richard M. Lewis
Madhavi Mallapragada
Bruce W. Pennycook
Edward Akira Radtke
America B. Rodriguez
Thomas G. Schatz
Nancy Schiesari
Andrew B. Shea
Ellen R. Spiro
Janet Staiger
Laura L. Stein
Paul J. Stekler
Joseph Straubhaar
Sharon L. Strover
Kathleen R. Tyner
Samuel C. Watkins
Karin G. Wilkins

DEGREE REQUIREMENTS

The student is normally expected to begin coursework in the fall semester.

Master of Arts. The Master of Arts with thesis requires thirty semester hours of coursework, including three hours in Radio-Television-Film 395; the student must take this course in the fall semester of the first year. The Master of Arts with thesis is recommended for students who plan to continue their graduate work after receiving the master's degree. The Master of Arts with report requires thirty-three hours of coursework.

Master of Fine Arts. This degree is available in film, video, and digital media production; or writing for film and television. It is designed for the student with a demonstrated commitment to production or screenwriting as a professional, artistic, or academic pursuit. Production students complete a three-year, sixty-semester-hour program that allows them to develop a foundation of production skills by creating works in both traditional and nontraditional forms. Students must pass annual reviews of their work and must produce a final thesis project for public exhibition during the third year. Writing students complete forty-five hours of coursework in a program that allows them to explore writing for film and television. Students write original screenplays as well as those adapted from other material.

Both production and writing students must write a report.
Doctor of Philosophy. The Master of Arts or an equivalent degree is required for admission to the doctoral degree program. The program requires completion of at least forty-eight semester hours of coursework beyond the master’s degree; among these hours must be at least twelve hours in research-tools courses and twenty-one hours in the student’s area of specialization, including Radio-Television-Film 395, taken twice. The student works with a faculty adviser to plan specific course requirements in the area of specialization. In addition to this coursework, the student must pass comprehensive examinations in three academic areas. After successful completion of the comprehensive examinations, the student files an application for candidacy and writes the dissertation.

Upon admission to the graduate program, students must pay a nonrefundable enrollment deposit to indicate that they accept the offer of admission. The deposit is applied to the payment of fees when the student enrolls.

DUAL DEGREE PROGRAMS

The Department of Radio-Television-Film offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Latin American studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Middle Eastern studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
<tr>
<td>Russian, East European, and Eurasian studies</td>
<td>Master of Arts</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: Jesse H. Jones Communication Center (Academic) (CMA) A6.116, phone (512) 471-3532, fax (512) 471-4077; campus mail code: Ao800
Mailing address: The University of Texas at Austin, Graduate Program, Department of Radio-Television-Film, 1 University Station Ao800, Austin TX 78712
URL: http://rtf.utexas.edu/graduate/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

RADIO-TELEVISION-FILM: RTF

380. Research Theory and Design. Introduction to research theory and design. Designed to help students develop skills in understanding and critiquing current research, and in designing and proposing research projects. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

380C. Introduction to Screenwriting. Introduction to the study and practice of writing for film and television. Three lecture hours a week for one semester. Required of all production students. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

380G. Research Practices. Introduction to research implementation. Designed to help students develop skills in conducting a variety of research approaches. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.
380J. First-Year Screenwriting. Introduction to theory and practice in narrative writing for film and electronic media. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Required of students in the screenwriting area. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

380M. Advanced Screenwriting. Creation and development of written work for film and television production. Students will develop a major work, such as a full-length screenplay, and several shorter pieces. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

380N. Screenwriting Topics. Creation and realization of professional materials for film and television. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, Radio-Television-Film 380M or the equivalent, and consent of instructor and the graduate adviser.

380P. Production Workshop for Writers. Restricted to graduate students in radio-television-film. Exploration of cinematic storytelling through the production of short digital videos. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

881K. Principles of Film and Television Production. Study of film and video production aesthetics and techniques. Production costs borne by the student. Four lecture hours and four studio hours a week for two semesters, with additional studio hours to be arranged. Prerequisite: For 881KA, graduate standing and consent of instructor and the graduate adviser; for 881KB, Radio-Television-Film 881KA.

384. Communication Theory. A broad introduction to selected topics in communication theories. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

384C. Seminar: Communication Theory. An intensive investigation of selected topics in communication theories. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

384N. Internship in Film and Electronic Media. Practical working involvement with participating media production and research agencies. The equivalent of ten class hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

385K. History of Film. Survey of the history of the motion picture. Lectures and readings; screenings are required for some topics. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

385L. Seminar in Film History. Advanced study and research in major directors, genres, periods, and movements of film history. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

386. Analysis and Criticism of Film and Electronic Media. Analysis and explication of representative critics, critical systems, genres, and artists. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

386C. Seminar: Media Theory and Criticism. Advanced study in media theory and criticism. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

387C. Global Media. Study of global media systems, theories, and processes. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

387D. Communication for Development and Social Change. Study of how development institutions use communication strategies for social change, and how development discourse communicates assumptions about social change. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

387F. Comparative Media Systems. Study of media systems across cultural and political boundaries. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

387G. Global Communication. Study of global communication issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

387S. Topics in Global Communication. Study of issues in global communication, supplemented by film screenings. Three lecture hours and one two-hour film screening a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

387W. Global Media: Study Abroad. Restricted to graduate students in radio-television-film. Research, analysis, and criticism of global media systems and issues. Students study at institutions outside the United States. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.
288, 388, 488. Research Problems in Specialized Fields of Radio-Television-Film. Research project chosen from area of student’s major interests. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Credit earned depends on the nature of the research project. Some sections are offered on the letter-grade basis only; others are offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

288C, 388C, 488C. Research Problems: Doctoral Exam Preparation. Research and reading in preparation for doctoral examinations. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in radio-television-film and consent of the graduate adviser.

388M, 488M. Practicum in Film and Television Production. Production of projects in film and video. Production costs borne by the student. Three or four lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

388P. Topics in Film and Video Production. Production costs borne by the student. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

388R. Project in a Specialized Field of Radio-Television-Film. Completion of a research or creative project required for the report option of the master’s degree. The equivalent of three class hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in radio-television-film and consent of the graduate adviser.

388S. Research Problems in Specialized Fields of Radio-Television-Film: Production. The equivalent of at least three class hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

388T. Producing Film and Television. Comprehensive consideration of the production process from the standpoint of fiscal and creative management; preproduction and production planning using computer budgeting and scheduling. Software costs borne by the student. Three lecture hours a week for one semester, with studio hours to be arranged. Radio-Television-Film 388P (Topic: Producing Film and Television) and 388T may not both be counted. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

389. Media and Society. Study of selected issues related to media and society. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

389K. History of Broadcasting. Principal eras of broadcast development, audience patterns, legal and industrial precedents of broadcast practices, contemporary industrial and institutional perspectives in radio and television. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

390C, 490C. Introduction to Editing Processes. Study and practice in electronic editing and postproduction, with emphasis on computerized videotape editing. Software costs borne by the student. Three or four lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

390E. Advanced Video Postproduction: Audio. Theory and application of multitrack audio for video productions. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

390F. Topics in Production Crafts. Professional-level experiences in various topics in the production crafts. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in radio-television-film and consent of the graduate adviser.

390G. Introduction to Media Aesthetics and Techniques. Introduction to physical and aesthetic aspects of sound, light, and image and to the science and technologies that record and reproduce them. Three lecture hours and two studio hours a week for one semester, with additional studio hours to be arranged. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

390N. Issues in New Media. Issues in new media theory and practice. Three lecture hours a week for one semester, with one screening or studio session of at least two hours a week to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

393C. Telecommunication Information Systems. Study of the converging technologies of broadcasting, interactive telecommunications, and information processing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

393D. Cable Television and New Video Technology. Survey of cable television and other video technologies; analysis of regulation, policy, economics, and industry practices. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.
393N. Telecommunication and Information Policy. Analysis of major domestic and international policy issues related to new communications technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

393P. Special Topics in New Communications Technology. Applications and effects of new communication and information technology. Three lecture hours a week for one semester, with studio hours to be arranged if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

393Q. Special Topics in Digital Media. Applications and effects of digital media technologies. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

395. Theory and Literature. Advanced seminar surveying the literature of media and communication theories. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Topic 1: Theory and Literature for Doctoral Students: Social Science Approaches. Restricted to doctoral students. Surveys the literature of social science approaches to communication study.

Topic 2: Theory and Literature: Humanities Approaches. Surveys the literature of humanities approaches to media studies.

Topic 3: Theory and Literature in Media Studies for Master’s Students.

196, 296, 396, 496. Portfolio in Media Production. The equivalent of one, two, three, or four lecture hours a week for one semester. Prerequisite: Graduate standing in radio-television-film and consent of the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in radio-television-film and consent of the graduate adviser; for 698B, Radio-Television-Film 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in radio-television-film and consent of the graduate adviser.

398T. Supervised Teaching in Radio-Television-Film. Study of the teaching/learning process; practice in classroom presentation. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Required for appointment as an assistant instructor in radio-television-film; may be taken before or during the first semester of appointment. Prerequisite: Graduate standing and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the graduate adviser.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Radio-Television-Film 399R, 699R, or 999R, and consent of the graduate adviser.
College of Education

EDUCATION

Master of Arts
Master of Education
Master of Science in Health Education
Master of Science in Kinesiology
Doctor of Philosophy
Doctor of Education

AREAS OF STUDY

The College of Education offers graduate degree programs in the following areas: curriculum and instruction, educational administration, educational psychology, foreign language education, health education, kinesiology, mathematics education, science education, and special education.

DEGREE REQUIREMENTS

MASTER OF ARTS

In addition to fulfilling the general requirements for all master’s degrees, the student must complete at least twelve semester hours of advanced course preparation appropriate to the proposed area of concentration. Graduate advisers can provide information about these requirements and any others prescribed by the Graduate Studies Committees.

Before a student is admitted to candidacy, the Program of Work must be approved by the graduate adviser of the area of concentration and the graduate dean. Additional requirements and optional plans open to students in the areas of concentration in education are listed under the appropriate area headings or are available from the area graduate advisers.

MASTER OF EDUCATION

In addition to fulfilling the general requirements for all master’s degrees, the student must complete twelve semester hours of advanced course preparation appropriate to the proposed area of concentration. Graduate advisers can provide information about these requirements and any others prescribed by the Graduate Studies Committees.

Of the total number of semester hours required, at least eighteen must be in a particular area of concentration, which may be interdepartmental in scope and not necessarily confined to the College of Education.

Before the student is admitted to candidacy, the Program of Work must be approved by the graduate adviser of the area of concentration and the graduate dean. Additional requirements and optional plans open to students in the areas of concentration in education are listed under the appropriate area headings or are available from the area graduate advisers.

MASTER OF SCIENCE

A Master of Science is offered in health education and in kinesiology. In addition to fulfilling the general requirements for all master’s degrees, students in these programs must complete twelve semester hours of advanced course preparation appropriate to the proposed area of concentration, as well as with a thesis or a report under the direction of their adviser. Graduate advisers can provide information about these requirements and any others prescribed by the Graduate Studies Committees.
Before a student is admitted to candidacy, the Program of Work must be approved by the graduate adviser of the area of concentration and the graduate dean. Additional requirements and optional plans open to students in the areas of concentration in education are listed under the appropriate area headings or are available from the area graduate advisers.

DOCTOR OF PHILOSOPHY

The Doctor of Philosophy is a research degree. The student’s Program of Work includes courses in the field of specialization and supporting work outside the major. To be admitted to candidacy, the student is expected to pass a qualifying examination, written or oral or both, and to meet additional requirements established by the Graduate Studies Committee. Admission to candidacy must be approved by the Graduate Studies Committee and the graduate dean.

Additional requirements, if any, are given in the following sections.

DOCTOR OF EDUCATION

The Doctor of Education is a professional degree. Program requirements vary, but each must focus predominantly on the application of knowledge. The program normally entails an internship. The requirements for admission to candidacy and course requirements are similar to those for the Doctor of Philosophy degree.

Additional requirements, if any, are given in the following sections.

CURRICULUM AND INSTRUCTION

Master of Arts
Master of Education
Doctor of Philosophy
Doctor of Education

FACILITIES FOR GRADUATE WORK

The Perry-Castañeda Library offers an extensive collection of material on education, including the Curriculum and Textbook Collections. Students also have access to an array of electronic databases, journals, and books related to curriculum and instruction through the University Libraries Web site, http://www.lib.utexas.edu/. The College of Education’s Learning Technology Center includes facilities for television, laboratory teaching, and photography, a graphics laboratory, and a computer laboratory. Other campus facilities, including the UT Learning Center and the laboratories and systems of Information Technology Services, are used extensively, and ongoing research and instructional activities are carried out in local schools.

AREAS OF STUDY

Graduate study is offered in the following areas of specialization: bilingual/bicultural education, cultural studies in education, curriculum studies, early childhood education, instructional technology, language and literacy studies, physical education teacher education, and social studies education. Requirements for concentrations in foreign language education, science education, and mathematics education are given elsewhere in this catalog.
The following faculty members served on the Graduate Studies Committee during the spring semester 2011.

Jennifer Keys Adair
James P. Barufaldi
Leema G. Berland
Randy Bomer
Anthony L. Brown
Christopher P. Brown
Rebecca M. Callahan
Norma V. Cantu
Guadalupe D. Carmona-Domínguez
Darla M. Castelli
Noah De Lissovoy
Cesar Delgado
Susan B. Empson
Sherry L. Field
Douglas E. Foley
Kevin M. Foster
María E. Franquiz
Louis Harrison
James V. Hoffman
Deborah A. Horan
Elaine K. Horwitz
Joan Hughes
Xiaofen Keating
Min Liu
Anna E. Maloch

Jill A. Marshall
Helen Taylor Martin
Carmen M. Martínez-Roldán
Ramon Antonio Martínez
Melissa Mosley
Kathryn Marie Obenchán
Alba A. Ortiz
Deborah K. Palmer
Anthony J. Petrosino
Detra Price-Dennis
Diana Christine Pulido
Stuart Reifel
Paul E. Resta
Catherine Riegle-Crumb
Nancy L. Roser
Loriene Roy
Cynthia S. Salinas
Verónica G. Sardeña
Allison Skerrett
Walter M. Stroup
Jarvis W. Ulbricht
Luis Urrieta
Angela Valenzuela
Georghios Veletsianos
Mary J. Worthy

DOCTOR OF PHILOSOPHY

Students seeking the degree of Doctor of Philosophy must show evidence of related academic and professional experience, including a master’s degree or the equivalent.

PROGRAM REQUIREMENTS

Each student must complete at least eighteen semester hours of organized coursework in the Department of Curriculum and Instruction. The faculty in each specialization has established a minimum number of hours of coursework required for that program.

Core courses. All students must complete nine hours in courses that form the theoretical foundation for the study of curriculum and instruction. Courses must be taken in learning and instructional theory, curriculum theory and development, and cultural foundations of education.

Research methodology. At least twelve hours in research methodology are required, consisting of three hours in each of the following: philosophical foundations of research, qualitative methods, quantitative methods, and an advanced course in either qualitative or quantitative research methods.

Directed research. Twelve hours in directed research are required. This requirement may be fulfilled with organized coursework that has a substantial research component and requires a research project, or through faculty-guided research studies.

Specialization courses. This coursework is defined by the faculty in the area of specialization.

DEGREE REQUIREMENTS

MASTER OF ARTS

General requirements are those for the master’s degree that begin on page 22, except that students may count no more than six semester hours of upper-division coursework toward the degree. The thesis option requires thirty hours of coursework; the report option requires thirty-three hours. Students who choose the language and literacy studies specialization, however, complete thirty-six hours of coursework for either option. For specific requirements and optional plans, consult the graduate adviser.

MASTER OF EDUCATION

In addition to the general requirements for all master’s degrees, students must present evidence of appropriate teaching or related experience. The MEd generally requires thirty-six hours of coursework, without a thesis or a report. In some specializations, a thirty-three-semester-hour option is available. This option requires a report. For specific requirements and optional plans, consult the graduate adviser.
area, but all students are expected to submit evidence of research activity, either conducted or proposed, and usually developed as part of Curriculum and Instruction 396T. A favorable review results in the student’s continuation in the program. An unfavorable review may result in additional requirements or dismissal from the program.

Qualifying examination. To be admitted to candidacy for the degree, the student must pass a qualifying examination according to guidelines established by the faculty in the area of specialization.

Dissertation. The quality and significance of the dissertation must conform to the guidelines of the Graduate School. The PhD dissertation should make a significant contribution to knowledge and educational theory.

DOCTOR OF EDUCATION

The Doctor of Education is a professional degree. The degree program differs from that leading to the Doctor of Philosophy in its predominant focus on the application of knowledge and in the nature of the dissertation. At least three years of related professional experience and a master’s degree or the equivalent are required for admission to this degree program.

PROGRAM REQUIREMENTS

Each student must complete at least eighteen semester hours of organized coursework in the Department of Curriculum and Instruction. The faculty in each specialization has established a minimum number of hours of coursework required for that program.

Core courses. All students must complete twelve hours in courses that form the theoretical foundation for the study of curriculum and instruction. Courses must be taken in learning theory, instructional theory, curriculum theory, and cultural foundations of education.

Research methodology. At least six hours in research methodology are required.

Field research/internship. At least six hours in field research are required, completed over at least two semesters. This research is most often conducted in a school setting and may be done during an internship. It need not be done as part of an organized course but must be directed by a faculty member.

Specialization courses. This coursework is defined by the faculty in the area of specialization.

REVIEW AND EXAMINATION REQUIREMENTS

First review. When the student has completed approximately one year in residence, or about eighteen hours of coursework, the faculty will assess his or her progress and likelihood of finishing the program as shown by performance in coursework.

Midprogram review. After two semesters of field research or about two years in the program, the student submits for faculty review a written report based on the field research/internship. A favorable review results in the student’s continuation in the program. An unfavorable review may result in additional requirements or dismissal from the program.

Qualifying examination. To be admitted to candidacy for the degree, the student must pass a qualifying examination according to guidelines established by the faculty in the area of specialization.

Dissertation. The quality and significance of the dissertation must conform to the guidelines of the Graduate School. In general, the EdD dissertation should make a significant contribution to knowledge about educational practice.

FOR MORE INFORMATION

Campus address: George I. Sánchez Building (SZB) 406, phone (512) 471-5942, fax (512) 471-8460; campus mail code: D5700
Mailing address: The University of Texas at Austin, Graduate Program, Department of Curriculum and Instruction, 1 University Station D5700, Austin TX 78712
E-mail: cigrad@uts.cc.utexas.edu
URL: http://ci.edb.utexas.edu/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

CURRICULUM AND INSTRUCTION: EDC

380F. Sociocultural Foundations. Problems and issues in the study of education from a sociocultural perspective. Examines research in different fields, including history, sociology, and anthropology of education; innovative education reform in the field of multicultural education; and issues of racial, class, and gender inequality. Includes a critical assessment of the American public school system, with an emphasis on social justice. Three lecture hours a week for one semester. Prerequisite: Graduate standing and admission to a Doctor of Education or a Doctor of Philosophy degree program.

380G. Anthropology of Education. Same as Anthropology 388K (Topic 2: Anthropology of Education). A study of social life in contemporary American schools from an anthropological perspective. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and twelve semester hours of upper-division coursework in education or consent of instructor.

380R. Educational Research and Design. An introduction to the methodology of social science research, with a focus on the field of education. Examines the fundamental assumptions, principles, and procedures of research; the meaning of knowledge and the ways in which knowledge may be acquired and communicated to others; preparation and utilization of effective questions; principles of data collection and data analysis; drawing conclusions from data; and evaluation of current research. Three lecture hours a week for one semester. Curriculum and Instruction 380R and 384P (Topic 14: Educational Research and Design) may not both be counted. Prerequisite: Graduate standing and admission to a Master of Arts or a Master of Education degree program.

380T. Teaching Composition. Three lecture hours a week for one semester. Curriculum and Instruction 380T and 384P (Topic: Teaching Composition) may not both be counted. Prerequisite: Graduate standing.

381F. Introduction to Teaching and Teacher Education. Examines research on teaching, research in teacher education, and modes of inquiry. Three lecture hours a week for one semester. Prerequisite: Graduate standing and admission to a Doctor of Education or a Doctor of Philosophy degree program.

381J. Curriculum Organization. Designed for master’s degree students with majors outside curriculum and instruction and for doctoral students needing to update preparation. An overview of theories, principles, and issues in curriculum construction for modern education. The equivalent of three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

381M. Designs for Instruction. Examination of the instructional design process at one of the following levels: elementary school, secondary school, higher education, all-level. Emphasis on promising practices and current efforts toward improvement. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in education, and teaching experience.

381R. Introduction to Systems of Human Inquiry. Designed to provide students with the knowledge and competence in social science research methods required for careers in teaching or human services. Explores competing definitions of research; the idea of a research paradigm; characteristics of various forms of inquiry, including quantitative and qualitative research; and research methods in relation to issues of ethics and rigor. Three lecture hours a week for one semester. Curriculum and Instruction 381R and 385G (Topic: Introduction to Systems of Human Inquiry) may not both be counted. Prerequisite: Graduate standing and admission to a Doctor of Education or a Doctor of Philosophy degree program.

381T. Teaching Composition Institute. Designed to familiarize students with the teaching of writing. Examines research, theory, pedagogy, and writing curricula used in kindergarten through grade twelve schools. Three lecture hours a week for one semester. Curriculum and Instruction 381T and 684P (Topic: Teaching Composition II) may not both be counted. Some sections are offered on the credit/no credit basis only, and some are offered on the letter-grade basis only; these sections are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

382E. Teaching Elementary School Subjects. Examination of the discipline of the subject-field selected, coupled with intensive study of research findings, publications of learned societies, and advanced experimentation with the improvement of instruction. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in education, an undergraduate course in the subject-field selected (if appropriate), and teaching experience or consent of the graduate adviser.
Topic 1: Reading. Additional prerequisite: Curriculum and Instruction 370E (Topic 15: Reading/Language Arts) or the equivalent.

Topic 2: Language Arts.

Topic 3: Science.

Topic 4: Social Studies.

Topic 5: Mathematics.

Topic 6: Foreign Language. Additional prerequisite: Twelve semester hours of upper-division coursework in foreign language or consent of instructor.

Topic 7: The Humanities. An examination of personal values and such areas in the humanities as philosophy, music, art, drama, dance, and literature to provide richer educational experiences.

Topic 8: English as a Second Language. Additional prerequisite: Consent of instructor.

Topic 9: Early Childhood Education.

Topic 10: Bilingual Education. Additional prerequisite: Knowledge of Spanish.

382R. Fundamentals of Statistics. Designed for students majoring in the social sciences. Three lecture hours a week for one semester. Curriculum and Instruction 382R and 684P (Topic 15: Research Design and Analysis I) may not both be counted. Prerequisite: Graduate standing and admission to a Doctor of Education or a Doctor of Philosophy degree program.

382S. Teaching Secondary School Subjects. Examination of the discipline of the subject-field selected, coupled with intensive study of research findings, publications of learned societies, and advanced experimentation with the improvement of instruction. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division education, twelve semester hours of upper-division coursework in the subject-field of the topic or consent of instructor, and teaching experience or consent of the graduate adviser.

Topic 1: Reading.

Topic 2: English.

Topic 3: Science.

Topic 4: Mathematics.

Topic 5: Social Studies.

Topic 6: Foreign Language.

Topic 7: English as a Second Language.

Topic 8: Instructional Technology.

382T. Problems of College Teaching. Methods and procedures for teaching in specific fields selected by participants; major emphasis on successful classroom practices. Three lecture hours a week for one semester. Prerequisite: Graduate standing and an interest in teaching at the college level.

383C. Bibliography in Teaching and Curriculum. Survey of the scholarly literature in teaching and curriculum, with emphasis on bibliographic sources and techniques. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

383F. Curriculum Theory. An introduction to the central issues in curriculum theory. Includes historical and contemporary approaches to the philosophy and analysis of curriculum, and curriculum theory and practice. Emphasis on the issues of power, knowledge, and exclusion. Three lecture hours a week for one semester. Curriculum and Instruction 383F and 383N may not both be counted. Prerequisite: Graduate standing and admission to a Doctor of Education or a Doctor of Philosophy degree program.

383T. Instructional Theory. Identification and analysis of the major types of contemporary instructional theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

185G, 385G. Seminar: Program Development and Research. Advanced investigations of selected topics and problems in curriculum theory, program design, and research design at one of the following levels: elementary school, secondary school, higher education, all-level. The equivalent of one or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

Topic 3: Major Developmental Theories.

Topic 4: Second Language Acquisition.

Topic 5: The Second Language Learner. Additional prerequisite: Curriculum and Instruction 385G (Topic 4) or consent of instructor.

Topic 6: Linguistics and Language Teaching. Curriculum and Instruction 385G (Topic 6) is same as Linguistics 387. Designed primarily for participants in international education exchange programs. Application of the findings of linguistics to the teaching of language.

Topic 7: Language and Politics in Language Planning. Curriculum and Instruction 385G (Topic 7) is same as Middle Eastern Studies 381 (Topic 30: Language and Politics in Language Planning).

Topic 8: Adult Learning and Development.


Topic 10: Program Planning and Evaluation.


Topic 12: Collection and Analysis of Organizational Data. Using their own organizations as laboratories, participants learn how to define a useful focus for data gathering, identify appropriate sources of data, and analyze and present data efficiently and in ways that are useful to others in the organization. Students practice interviewing and observation, analysis of documents, development of questionnaires, and other strategies for data collection and analysis.

Topic 13: Consultation Skills.

Topic 14: Career Development.

Topic 15: Small Groups and Facilitation.

Topic 16: Facilitating Adult Learning.

Topic 17: Culture, Gender, and Race in Organizations.

Topic 18: Implementing Organizational Change.

Topic 20: Organizational Behavior.
Topic 21: Training and Development.
Topic 22: Organizational Development.
Topic 24: Qualitative Research: Mixed-Method Investigation. Additional prerequisite: Completion of one qualitative research methods course.
Topic 25: Life History Research.
Topic 26: Whole Systems Thinking.
Topic 27: Qualitative Research: Naturalistic Inquiry.
Topic 28: Multimedia Authoring.
Topic 29: Interactive Multimedia Design and Production.
Topic 30: Advanced Qualitative Research: Discourse Analysis. Additional prerequisite: Completion of one qualitative research methods course; completion of a graduate course in linguistics, sociolinguistics, or psycholinguistics; and admission to the doctoral program.
Topic 31: Advanced Science and Mathematics Education.
Topic 32: Computer-Supported Collaborative Learning.
Topic 33: Language, Culture, and Identity.
Topic 34: Constructivism and Instructional Design. Examines the philosophical, rhetorical, practical, and evaluative bases for constructivist approaches to instructional design. Students visit one constructivist classroom at the kindergarten through grade twelve level, and one at the college level.
Topic 35: Content and Instruction of Reform Algebra.
Topic 36: Critical Issues in Bilingual and Bicultural Education.
Topic 37: Critical Perspectives on Early Childhood Education. Designed to allow students to examine and evaluate early childhood education research, practice, and curricula; and to question preconceived notions about working with young children.
Topic 38: Cultural Knowledge of Teachers and Teaching. Explores the use of cultural theory and cultural knowledge in pedagogy, teacher identity, and teacher preparation. Focus on historically underserved student populations.
Topic 41: Curriculum History in Science and Mathematics Education. The historical development of mathematics and science curricula in the United States from the mid-nineteenth century to the present. Discusses politics, equity, the development of technology, and theories of learning; and examines current curricular trends. Additional prerequisite: Curriculum and Instruction 385G (Topic 59).
Topic 42: Curriculum in Science and Mathematics Education.
Topic 43: Curriculum Theories for Prekindergarten and Kindergarten.
Topic 44: Curriculum Theories for Prekindergarten and Kindergarten.
Topic 45: Design and Strategies for New Media. Explores human-computer interaction, with an emphasis on examining and understanding designs and strategies for new media. Uses an interactive, collaborative, multidisciplinary, and student-centered context.
Topic 49: Educational Communication: The Internet.
Topic 51: Feminist Participatory Action Research. An overview of feminist social-action theory and research. Studies social action within the local community setting and with community projects.
Topic 52: Foundations of Instructional Technology.
Topic 53: Curriculum and High-Stakes Testing. Explores the provisions of state and federal legislation regarding high-stakes testing, including the implications for culturally and linguistically diverse student populations, the motivations for use, and the impact upon curricula, teaching, and student academic performance.
Topic 54: The History of American Reading Instruction. A historical analysis of the methods and materials used in beginning reading instruction in American schools. Focuses on philosophical schools of thought, technological changes, societal issues, and research.
Topic 55: Historical Perspectives on Curriculum.
Topic 56: Service Learning as an Instructional Strategy.
Topic 57: Instructional Technology Planning and Management. Designed to help students understand the theory and practice of Web-based educational technology planning. Explores technology, strategic planning, and funding proposals.
Topic 58: Multicultural Education in Austin. Explores local educational and community resources for teaching from a multicultural and global perspective. Curriculum and Instruction 385G (Topic 58) and 385G (Topic: International Austin: Multicultural Classrooms) may not both be counted.
Topic 59: Knowing and Learning in Science and Mathematics Education. Explores various theories related to science, technology, engineering, and mathematics (STEM) epistemology. Includes memory and the structure of knowledge, problem solving and reasoning, and the foundations of learning.
Topic 60: Language Acquisition in Multicultural Special Education.
385H. Cultural Transmissions in America. Analysis of contemporary social, political, and economic trends in national and international life from the standpoint of educational implications. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in social science, and twelve semester hours of upper-division coursework in education.

385K. General Foundations of Education. Designed for curriculum and instruction doctoral students preparing for qualifying examinations and other master’s or doctoral degree students without previous work in foundations of education. General survey of basic concepts, topics, and policy issues in the foundations of education. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385R. Introduction to Quantitative Research. Designed to help students develop skills in a variety of approaches and methodologies used in research design that requires quantitative methods. Focuses on multivariate methods; and includes research questions, purposes, methodologies, instruments, measures, participant selection, data collection and data analysis methods, results, and conclusions. Three lecture hours a week for one semester. Curriculum and Instruction 385R and 684P (Topic 16: Research Design and Analysis II) may not both be counted. Prerequisite: Graduate standing; admission to a Doctor of Education or a Doctor of Philosophy degree program; and Curriculum and Instruction 385R, Educational Psychology 371, or an equivalent introductory statistics course and consent of the graduate adviser.

386R. Introduction to Qualitative Research. An introduction to the theoretical and methodological issues central to conducting qualitative research studies. Designed to help students develop practical research skills, and includes opportunities to evaluate current research, analyze data, observe, and interview. Three lecture hours a week for one semester. Curriculum and Instruction 385G (Topic: Qualitative Research in Educational Settings) and 386R may not both be counted. Prerequisite: Graduate standing and admission to a Doctor of Education or a Doctor of Philosophy degree program.

387R. Topics in Advanced Quantitative Research. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only, and some are offered on the letter-grade basis only; these topics are identified in the Course Schedule. Prerequisite: Graduate standing, Curriculum and Instruction 385R, and admission to a Doctor of Education or Doctor of Philosophy degree program.

388R. Topics in Advanced Qualitative Research. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only, and some are offered on the letter-grade basis only; these topics are identified in the Course Schedule. Prerequisite: Graduate standing, Curriculum and Instruction 385G (Topic: Qualitative Research in Educational Settings) and 387R (Topic 3) may not both be counted.

390T. Institute in Instruction. Various topics designed to help students analyze and improve instruction at one of the following levels: elementary school, secondary school, higher education, all-level. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Curriculum and Instruction 384P and 390T may not both be counted unless the topics vary. Some topics are offered on the credit/no credit basis only, and some are offered on the letter-grade basis only; these topics are identified in the Course Schedule. Prerequisite: Graduate standing.

Topic 1: Advanced Quantitative Analysis.

Topic 8: English as a Second Language. Additional prerequisite: Consent of instructor.

Topic 9: Bilingual Education.

Topic 10: Analysis of Teaching in Physical Education.

Topic 11: Archaeology Education for Social Studies.

Topic 12: Childhood and Adolescent Literature.


Topic 15: Elementary School Curriculum.


Topic 17: English as a Second Language: Literacy.

Topic 18: English as a Second Language: Reading.

Topic 19: Equity in Science and Mathematics Education.

Topic 20: Systemic Reform and Science and Mathematics Education. Curriculum and Instruction 384G (Topic: Systemic Reform and Science and Mathematics Education) and 390T (Topic 20) may not both be counted.


Topic 22: Improving Social Studies Education.

Topic 23: Instructional Telecommunications.

Topic 24: Introduction to Curriculum Studies. Designed to familiarize doctoral students with the theoretical, philosophical, sociocultural, and practical areas within the field of curriculum study.

Topic 25: Literature for Young Adults.

Topic 26: Multicultural Curriculum and Teaching.

Topic 27: The Planning and Management of Instructional Programs.

Topic 28: Practice in Reading Difficulties. A practicum in assessing and teaching elementary school students who struggle with reading. Class meetings take place at a local elementary school and include one-on-one tutoring with coaching and modeling by the instructor, small group support sessions, and seminars on issues related to reading difficulties.

Topic 29: Reading Difficulties. Introduces history, theory, research, and policy related to reading difficulties in school-age children and critically examines existing programs designed to address the needs of students with reading difficulties. Students study and employ teaching strategies in the context of cases and/or a practicum experience.

Topic 30: Research on Teaching.

Topic 31: Research on Teaching in Science and Mathematics Education. Curriculum and Instruction 384P (Topic: Research Teaching and Teacher Development in Science and Mathematics Education) and 390T (Topic 31) may not both be counted.

Topic 32: Seminar in Elementary School Curriculum.

Topic 33: Studies in Curriculum and Instruction.

Topic 36: Humanities and Literacy in Social Education.

392L. Philosophical Foundations of Education. Designed for master’s degree students without previous graduate work in philosophy or philosophy of education and for doctoral students who need to update preparation. A systematic overview of the field of philosophy of education. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and either twelve semester hours of coursework in upper-division education or consent of instructor.

196, 396. Doctoral Seminar. Research projects and creative investigations in a selected subject-field and developments in instructional practices and in research findings and methodologies. Offered at the following levels: elementary school, secondary school, higher education, all-level. The equivalent of one or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Curriculum and Instruction 196 is offered on the credit/no credit basis only. Prerequisite: Graduate standing, and admission to candidacy for the doctoral degree or consent of instructor.

196T, 296T, 396T. Directed Research in Curriculum and Instruction. Investigation of assigned problems under the direction of a Graduate Studies Committee member; development and demonstration of competence in research design and execution; production of acceptably written reports of a technical character. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit by doctoral students. Prerequisite: Graduate standing.

196V, 396V. Independent Study. May involve syntheses of literature, field investigations on selected topics, or other individual research topics. Conference course equivalent to one or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and twelve semester hours of graduate education.

397P. Graduate Internship. Supervised practice in a professional position. The equivalent of three or six lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and admission to approved internship program.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in curriculum and instruction and consent of the supervising professor and the graduate adviser; for 698B, Curriculum and Instruction 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in curriculum and instruction and consent of the graduate adviser.
398T. Supervised Teaching in Curriculum and Instruction. Supervised college teaching experience. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant or an assistant instructor.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Curriculum and Instruction 399R, 699R, or 999R; approved dissertation proposal must be on file with the graduate adviser.

EDUCATIONAL ADMINISTRATION

Master of Education
Doctor of Philosophy
Doctor of Education

FACILITIES FOR GRADUATE WORK

The University and the College of Education provide outstanding computer laboratories, instructional resource centers, and libraries. Students are also encouraged to view the whole intellectual and cultural life of the University as a resource to be explored.

The Department of Educational Administration has close working relationships with public and private schools, colleges, and universities that provide clinical sites, field experiences, and research opportunities. Many educational associations and agencies in Austin provide important additional resources for students and faculty members.

AREAS OF SPECIALIZATION

Students may choose from three specializations: community college leadership, higher education leadership, and public school executive leadership, including the educational policy and planning program, and state certificates in principalship and superintendency. Although each specialization involves unique coursework, a common core of knowledge is required of all students.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Walter G. Bumphus
Norma V. Cantu
V. R. Cardozier
Nolan Estes
Kevin M. Foster
Juan C. Gonzalez
Mark Anthony Gooden
Benjamin M. Harris
Julian V. Heilig
Jennifer J. Holme
Manuel J. Justiz
Marilyn C. Kameen
Norvell W. Northcutt
Ruben D. Olivarez
Martha N. Ovando
Soncia Reagins-Lilly
Richard J. Reddick
Pedro Reyes
John E. Rouche Jr.
Victor B. Saenz
Jay D. Scribner
Edwin R. Sharpe Jr.
Patricia A. Somers
Marilla D. Svinicki
Angela Valenzuela
Gregory J. Vincent
Jeffrey C. Wayman
James R. Yates
Michelle D. Young

ADMISSION REQUIREMENTS

Admission decisions are based on multiple criteria, including the applicant’s academic and professional qualifications. Applicants must submit an official score on the Graduate Record Examinations General Test and must have a grade point average of at least 3.00 in upper-division and graduate coursework. In addition, the applicant must be accepted into one of the areas of specialization listed above. The faculty for the specialization may establish additional admission requirements, such as participation in an assessment center, personal interviews, or other evidence of the student’s preparation for graduate work. Information about these requirements is available from the department.
Students entering one of the doctoral programs should hold a master’s degree or the equivalent. The master’s degree need not be in education, but the applicant is expected to have knowledge of the history or philosophy of education and of human learning.

DEGREE REQUIREMENTS

MASTER OF EDUCATION

This is a professional degree offered in two areas of specialization—higher education leadership and public school executive leadership. In the public school executive leadership specialization, the master’s degree is part of the state certification program. At least thirty-six semester hours of coursework are required, concentrated in one of the areas of specialization. Both specializations require at least twenty-one hours of approved coursework in the department and a minor of at least six hours outside the department. Of the nine hours of upper-division coursework that may be included in the program, no more than six may be in either the major or the minor.

DOCTOR OF PHILOSOPHY

Programs leading to this degree emphasize preparation for a research career in which the graduate will add to the core of knowledge in the fields of educational policy, leadership, and administration. Programs are oriented toward theory development and the development of research skills in a variety of methodologies and include a strong secondary emphasis in a cognate field. To be admitted to candidacy, a student must pass oral and written examinations both in core areas and in the area of specialization.

The student’s program must consist of at least sixty semester hours of coursework at the University in addition to dissertation hours, including at least forty-two hours in the Department of Educational Administration. The student must be in residence as a full-time student for two consecutive semesters. Students may register for no more than fifteen hours each semester and for no more than six hours each six-week summer term.

All students must complete the following work; additional work may be required in some areas of specialization.

1. Fifteen hours in core areas that form the theoretical foundation for the study of administration. Core areas include educational economics and finance policy, educational politics and policy, ethics and values, organizational design and behavior, and social and cultural contexts of education.
2. Fifteen hours of coursework unique to the specialization.
3. Fifteen hours (the minor) outside the College of Education but in areas supporting the field of educational administration; nine hours must be in a single theme or discipline or must form an integrated sequence.
4. Twelve hours in research methods courses, including Educational Administration 381P, 381Q, and 387Q. Knowledge of basic statistics is prerequisite to some research methodology courses; this knowledge may be demonstrated by coursework (which may not be counted toward the doctoral degree) or by examination.
5. A research apprenticeship individually designed to provide each student with research experience in his or her area of specialization.
6. The candidate must enroll for two consecutive semesters in dissertation courses.

The focus of the dissertation must be in-depth, original research that has the possibility of creating new knowledge and understanding of a particular educational construct. In addition, the implications of the dissertation research should be much wider than a specific problem in a specific context.

The student may have one member of his or her dissertation committee who has no affiliation to the University. This individual must have a doctoral degree and may also be required to meet other conditions.

DOCTOR OF EDUCATION

Programs for this degree emphasize preparation for leadership careers in a variety of educational settings. Programs are oriented toward the application of theory and knowledge to practical problems and toward the development of sophisticated management skills and intelligent, informed leadership. To be admitted to candidacy, a student must pass oral and written examinations both in core areas and in the area of specialization.

The student’s program must consist of at least fifty-seven semester hours of coursework at the University in addition to the treatise courses, including at least forty-two hours in the Department of Educational Administration. The student must be in residence as
a full-time student for two consecutive semesters or a semester and a summer session. Students may register for no more than fifteen hours each semester and for no more than six hours each six-week summer term.

All students must complete the following work; additional work may be required in some areas of specialization.

1. Twelve hours in core areas that form the theoretical foundation for the study of administration. Core areas include educational economics and finance policy, educational politics and policy, ethics and values, organizational design and behavior, and social and cultural contexts of education.

2. Twenty-four hours of coursework unique to the specialization.

3. Nine hours (the minor) outside the department but in areas supporting the field of educational administration.

4. Six hours in research methods courses, including Educational Administration 387Q and either 381P or 381Q. Knowledge of basic statistics is prerequisite to other research methodology courses. This knowledge may be demonstrated by coursework (which may not be counted toward the doctoral degree) or by examination.

5. One semester in an internship or practicum. The internship is individually designed to provide each student with on-site experience in the practice of educational leadership.

6. The candidate must enroll for two consecutive semesters in treatise courses.

The focus of the treatise must be on problems of practice and should address a specific problem or program in a given context. The treatise can examine a particular issue or evaluate a specific program in any educational institution.

The treatise committee must be comprised of five individuals. Two members, including the chair of the committee, must be members of the Graduate Studies Committee in the Department of Educational Administration. The third committee member must be a member of a Graduate Studies Committee from any other department within the University. The other two committee members must have no affiliation with the University. These individuals must each have doctoral degrees and have practical experience directly related to the proposed treatise. They may also be required to meet other conditions.

FOR MORE INFORMATION

Campus address: George I. Sánchez Building (SZB) 310, phone (512) 471-7551, fax (512) 471-5975; campus mail code: D5400

Mailing address: The University of Texas at Austin, Graduate Program, Department of Educational Administration, 1 University Station D5400, Austin TX 78712

URL: http://edadmin.edb.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

EDUCATIONAL ADMINISTRATION: EDA

381K. Systems for Observing and Analyzing Instruction. Provides skill in systematic observation, organized ways of examining teacher/student behavior in the classroom. Incorporates Texas Teacher Assessment Seminar training. Three lecture hours a week for one semester, with laboratory hours to be arranged. Prerequisite: Graduate standing.

381P. Quantitative Research Design and Analysis. Introduction to the knowledge base in measurement theory and quantitative research designs, including research designs appropriate to different research contexts; and analyzing, interpreting, and representing statistical data to scholarly and practitioner audiences. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Educational Psychology 371 or another introductory course in statistics, and Educational Administration 387Q or the equivalent.

381Q. Qualitative Research Design. Introduction to the utilization of theoretical frames; research questions or focus, and literature reviews; ethical issues; research design; research methods; data analysis; representations of data; interpretation of data; trustworthiness; implications; and strengths and limitations in the conduct of qualitative research. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Educational Administration 387Q or the equivalent.
381S. Advanced Qualitative Research. Examines in-depth exemplary qualitative studies and considers critical issues that have been raised in qualitative research. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Educational Administration 381Q and 387Q or their equivalents.

381T. Interactive Qualitative Analysis. Introduction to a systems theory of qualitative research, Interactive Qualitative Analysis (IQA), and direct experience in an integrated approach to research design, data collection, analysis, representation, and interpretation. Case studies are used with each of the major stages of a qualitative study. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Educational Administration 381Q and 387Q or their equivalents.

682G. Foundations in Educational Administration. A fused, multidisciplinary foundational core course covering major task areas, administrative theory and processes, and supporting knowledge from other disciplines. Six lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing. Admission by application only.

682H. Foundations in Educational Administration. A fused, multidisciplinary foundational core course covering major task areas, administrative theory and processes, and supporting knowledge from other disciplines. Six lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing. Admission by application only.

382M. Organizational Design and Behavior—Core Course. Theories of organization from structuralist, behaviorist, and critical traditions that are useful for diagnosing problems endemic to schools and colleges, and for developing skills necessary for administering complex educational systems. Study of concepts related to bureaucracy, organizational design, decision making, power and control, leadership, motivation, and organizational communication. Three lecture hours a week for one semester. Educational Administration 382M and 395 (Topic 7: Organizational Behavior and Decision Making) may not both be counted. Prerequisite: Graduate standing.

382T. Administration of the Individual School. Organization, direction, management, and leadership for the program of a single school. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and admission to an approved internship program for administrator preparation.

383, 683. Directed Advanced Studies. Group and individual studies of research literature; execution of investigative projects and reports of research. For 383, three lecture hours a week for one semester; for 683, the equivalent of six lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Individual Projects.
Topic 2: School-Community Relations.
Topic 3: Strategies of Educational Planning.
Topic 5: School Business Management.
Topic 6: Community College Programs.
Topic 7: Special Topics in Administration and Supervision.
Topic 8: School Restructuring and Renewal.
Topic 9: Special Topics in Educational Finance.
Topic 10: Principalship.
Topic 11: Americans with Disabilities.
Topic 13: Data-Based Decision Making for Principals.
The effective use of data for educational improvement from the principal’s perspective. Focus on how data better informs the improvement learning and educational practice.
Topic 14: Data-Based Decision Making in Schools.
Examines the effective use of data for educational improvement at all levels of a school district. Includes achievement tests, demographics, discipline data, program information, parental information, student work projects, and educator judgment.

683C. School Restructuring and Renewal. Critical examination of school restructuring, renewal research, and systemic change processes since 1975. Study and evaluation of school restructuring and renewal processes, and their underlying research bases, in conjunction with the influence patterns of teachers, principals, superintendents, school boards, parents, and state and national policy makers on the development and use of such concepts and processes. Six lecture hours a week for one semester. Prerequisite: Graduate standing.

384G. Seminar in Instructional Supervision. Systemic analysis of research and theory related to supervisory behavior in education. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

384L. Designing In-Service Education Programs. Designing, planning, evaluating, and directing in-service education and training for professional-level personnel. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385, 685. Practicum in Instructional Supervision. For each semester hour of credit earned, one class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites for Educational Administration 385: Enrollment in an approved internship program.

Topic 1: General, Elementary, and Secondary Programs.
Topic 2: Directing Instructional Services Programs.
Topic 3: Student Personnel Administration.
Topic 4: Practicum in Program Development.
Topic 5: Higher Education Administration.
385C. School Improvement: Instructional Leadership and Development. Designed to provide prospective school leaders with the conceptual, technical, and human-interaction skills necessary for school improvement. Focus on knowledge, principles, problems, and issues related to instructional leadership. Examines instructional supervision theory, goals, functions, supervisory models, and strategies that enhance teaching and learning. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

685D. Instructional Leadership. An integrated, problem-based specialization course covering major instructional task areas. Emphasis on change process theory, innovative school reform, restructuring, and leadership theory and practice. Six lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

387. The Community College. Evolution, role, and functions of the community college; patterns of organization; purposes and programs; current issues. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

387Q. Introduction to Systems of Human Inquiry. Designed for doctoral students. Introduction to the range of different epistemological perspectives that are used in the conduct of social science research, including the scientific method/positivism, postpositivism, interpretivism, postmodernism, critical theory, race-based and culture-based perspectives, and feminisms. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388E. Educational Economics and Finance Policy—Core Course. Survey of the theoretical and empirical literature related to the economic context of and finance policy within K–12 or higher education institutions. Separate K–12 and higher education sections are taught. Covers a wide range of concepts, processes, and policies, such as patterns of financing educational institutions; federal, state, and local governmental roles; revenue sources; costs; benefits; equity; efficiency; budgeting; and finance policy implementation. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388L. School Law. Legal bases for organizing and administering public and private school systems; statutes and court decisions affecting educational functions. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388M. Social and Cultural Contexts of Education—Core Course. The relationship of contemporary educational institutions, both public school and higher education, to their social setting. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388P. Educational Politics and Policy—Core Course. Survey of theoretical and empirical literature related to educational politics and policy concerning K–12 or higher education institutions, including political systems theory, intergovernmental relations, power and conflict, community relations and intergroup theory, and policies dealing with equity, quality, efficiency, and choice. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388S. A Comprehensive Exploration of P–16 Education. Issues related to an educational system that integrates the student experience from preschool through a four-year college degree. Three lecture hours a week for one semester. Prerequisite: Graduate standing and admission to the doctoral program in educational administration.

388V. Ethics and Values in Educational Administration—Core Course. Examination, from the point of view of various ethical systems, of issues of equity, distributive justice, codes of ethics in educational professions, treatment of students, and other issues that face administrators of educational systems. Designed to sensitize prospective educational leaders to the ethical content of educational decisions. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391C. Comparative Higher Education. Examination of the higher education systems and institutions of selected countries. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391D. Institutional Research and Planning. Study of the ways planning and governance are informed by data collection, analysis, and information-use strategies in order to improve institutions of higher education. Institutional research and planning functions in colleges and universities. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391E. The College Student. Study of the student population in contemporary colleges and universities, with emphasis on student development theory and the impact of campus environments on student development. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391F. Seminar: Issues in Higher Education and Specialization Qualification. Examines current issues in higher education from a practical and administrative perspective. In-depth examination of issues not covered or not covered in detail in other specialization courses. Students select, prepare, and present an instructional unit. Includes a significant technology-based/interactive component emphasizing independent and shared learning. The final individual project is submitted digitally and includes an oral and “practice teaching” component designed to demonstrate the student’s breadth of understanding of higher education. Three lecture hours a week for one semester. Prerequisite: Graduate standing and completion of all required coursework in the student’s doctoral specialization.
391C. Administrative Leadership in Higher Education. Examination of executive leadership in institutions of higher education. Includes consideration of roles, responsibilities, styles, and differences in more than one organizational context. Some consideration given to selection, replacement, training, guidance, development, and evaluation of leaders. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and admission to the doctoral program in educational administration or consent of instructor.

391J. Policy and Policy Development in Higher Education. Designed to enhance the student's understanding of policy as a concept, policy responsibilities of leadership, and policy development in higher education through formulating and refining institutional policy responses to select issues. Strong focus on critical thinking and policy writing skills. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and admission to the doctoral program in educational administration or consent of instructor. Educational Administration 388P is recommended but not required.

391K. Administration in Institutions of Higher Education. Administrative organization, functions, and practices within colleges and universities; roles of the administrator and principles of effective administrative practice; intensive study in selected areas of college operation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

391L. Organization and Administration of Higher Education. Introduction to the study of higher education. Analysis of all elements of higher education institutions, with particular attention to structure and governance. Three lecture hours a week for one semester. Educational Administration 391K (Topic 5: Organization and Administration of Higher Education) and 391R may not both be counted. Prerequisite: Graduate standing.

391S. History of Higher Education. The development of higher education since the Middle Ages, with emphasis on the development of higher education in the United States. Three lecture hours a week for one semester. Educational Administration 385 (Topic 10: History of Higher Education) and 391S may not both be counted. Prerequisite: Graduate standing.

391T. Higher Education Law. Legal principles relevant to post-secondary institutions. Emphasis on statutes and cases applicable to both public and private institutions; interpretation and compliance. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391D. Law and Disabilities. Issues of law and policy associated with serving people with disabilities, with emphasis on federal legislation. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391E. Education Futures. Technological forecasting methods as a basis for long-range planning in school organizations. The effects of demographic trends and alternative future scenarios on educational objectives and strategies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

394P. Personnel Administration: Managing Instructional Resources. Functions of school personnel offices. Topics include development of personnel administration; job descriptions; planning for personnel needs; recruitment, selection, and evaluation of personnel; and management of the personnel office. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395, 695. Topical Seminar. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Educational Administration 195 and 197N may not both be counted. Prerequisite: Graduate standing.

391Q. Higher Education Business Management. An examination of the nature, goals, and basic principles of the business management functions in colleges and universities. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
395E. **Class, Gender, and Race in Schools.** The problem of the public educational system's delivery of unequal academic results to students of different classes, genders, and races. Focus on a comprehensive, research-based understanding of educational inequities and on methods to develop schools that give all students an equal opportunity for academic achievement. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395F. **Foundations of Educational Policy.** Introduction to the history of the American educational system. Considers historical, economic, social, and political precedents when examining contemporary educational policy. Emphasis on policies related to race, ethnicity, class, and gender, and the recurring nature of controversial issues related to language, segregation, funding, and accountability. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395G. **Policy Implementation Seminar.** Examines the challenges and implementation of systemic school reform in the context of American cities. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395H. **Policy Issues in Data-Based Decision Making.** Policy issues, research, and theory surrounding effective educational data use that positively impacts educational improvement, practice, and student learning. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395J. **Poverty and Education Policy.** The social context of education, the development and expansion of concentrated poverty in central-city schools, and the relationship between poverty and educational performance as it affects schoolchildren and parents in closely related fields such as welfare, housing, employment and training, health care, food assistance, and day care. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395K. **Policy Research Problems.** Advanced doctoral seminar designed to help students develop research plans specifically for either a research proposal or a long-range research agenda. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395L. **Advanced Policy Seminar in Latino Education Issues.** Policy issues experienced by Latinos in the United States. Issues include testing, English as a Second Language programs, and bilingual education. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395M. **Critical Policy Analysis.** The analysis of policy, including traditional and critical approaches. Reviews methods and principles of policy analysis, the role of policy development, context, history, and micropolitical influences. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

396, 296, 396. **Research Apprenticeship.** For doctoral students. Group and individual projects in research design, research methodologies, and research execution. One, two, or three lecture hours a week for one semester. Prerequisite: Graduate standing, preparation satisfactory to instructor, and consent of the graduate adviser.

396R. **Dissertation Seminar.** Intensive examination of selected dissertation topics, issues of framing research problems, methodology of educational inquiry, and application of theoretical perspectives. Student reports on current research and panel discussions on significant issues in the study of education. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

397T. **Directed Research in Educational Administration.** Investigation of assigned problems under direction of a Graduate Studies Committee member; development and demonstration of competence in research design and execution; production of acceptably written reports of a technical character. Conference course. May be repeated for credit by doctoral students. Prerequisite: Graduate standing and consent of the graduate adviser.

197N. **Principalship Internship.** The equivalent of one lecture hour a week for one semester. Offered on the credit/no credit basis only. Educational Administration 195 and 197N may not both be counted. Prerequisite: Graduate standing and enrollment in the principalship program in educational administration.

399P, 697P, 997P. **Graduate Internship.** Supervised practice in a professional position; the number of hours required varies with the student’s program. With consent of the graduate adviser, may be repeated for credit when the positions vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and admission by internship committee.

399K, 699K, 999K. **Treatise.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree. Prior to registering, students must obtain University of Texas at Austin Institutional Review Board approval for research involving human subjects.

399L, 699L, 999L. **Treatise.** Offered on the credit/no credit basis only. Prerequisite: Educational Administration 399K, 699K, or 999K.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree. Prior to registering, students must obtain University of Texas at Austin Institutional Review Board approval for research involving human subjects.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Educational Administration 399R, 699R, or 999R.
EDUCATIONAL PSYCHOLOGY

Master of Arts
Master of Education
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Facilities for graduate study include an extensive library developed specifically for education and psychology, and the College of Education’s Learning Technology Center. The Educational Psychology Training and Research Area; Counseling, Learning, and Career Services; and state and community institutions and agencies in Austin can also be used for training and research.

AREAS OF STUDY

Professional training in educational psychology relates human cognition and behavior to the educational process as it occurs in the home, in peer groups, in nursery school through graduate school, in business and industry, in the military, and in other settings. In so doing, it includes study in the following areas: the biological bases of behavior; history and systems of psychology and of education; the psychological processes related to diversity and multicultural issues; the psychology of learning, motivation, cognition, and instruction; human development and culture (developmental, social, and personality psychology); psychological and educational measurement, statistics, evaluation, and research methodology; the professional areas of school psychology, counseling psychology, and counselor education, including clinical training in those areas; and general academic educational psychology.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

<table>
<thead>
<tr>
<th>Ricardo C. Ainslie</th>
<th>David J. Drum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Allen</td>
<td>Edmund T. Emmer</td>
</tr>
<tr>
<td>Germine H. Awad</td>
<td>Toni L. Falbo</td>
</tr>
<tr>
<td>Keisha L. Bentley</td>
<td>Michele R. Guzman</td>
</tr>
<tr>
<td>Susan N. Beretvas</td>
<td>Timothy Z. Keith</td>
</tr>
<tr>
<td>Gary D. Borich</td>
<td>Christopher J. McCarthy</td>
</tr>
<tr>
<td>Cindy I. Carlson</td>
<td>Kristin Neff</td>
</tr>
<tr>
<td>Stephanie W. Cawthon</td>
<td>Erika Alisha Patali</td>
</tr>
<tr>
<td>Kevin O. Coyle</td>
<td>Alissa R. Sherry</td>
</tr>
<tr>
<td>Barbara G. Dodd</td>
<td>Kevin D. Stark</td>
</tr>
<tr>
<td></td>
<td>Youngsuk Suh</td>
</tr>
<tr>
<td>Aaron B. Rochlen</td>
<td>Marie-Anne P. Suizzo</td>
</tr>
<tr>
<td>Stephanie S. Rude</td>
<td>Marilla D. Svinicki</td>
</tr>
<tr>
<td>Janay B. Sander</td>
<td>Deborah J. Tharinger</td>
</tr>
<tr>
<td>Diane L. Schallert</td>
<td>Richard Valencia</td>
</tr>
<tr>
<td>Alissa R. Sherry</td>
<td>Claire Ellen Weinstein</td>
</tr>
<tr>
<td>Kevin D. Stark</td>
<td>Tiffany A. Whittaker</td>
</tr>
</tbody>
</table>

DEGREE REQUIREMENTS

MASTER OF ARTS

The Master of Arts degree in educational psychology is available to students with specializations in academic educational psychology, quantitative methods, or school psychology. It is also available to students enrolled in the Doctor of Philosophy degree program who wish to complete a master’s degree on the way to the doctorate or who are allowed by the Graduate Studies Committee to elect a terminal master’s degree.

A minimum of twelve semester hours of upper-division coursework in psychology or educational psychology, or an appropriate equivalent, is a prerequisite for the degree. Further information about requirements and optional plans is available from the graduate advisor in educational psychology.

MASTER OF EDUCATION

This degree is offered for those fulfilling the requirements for a certificate as a school counselor, for which prior teacher certification or an equivalent approved by the Graduate Studies Committee in educational psychology is required; and for students intending to be counselors in postsecondary education settings. This degree is also available to students with specializations in academic educational psychology, quantitative methods, or school psychology. A minimum of twelve semester hours of upper-division coursework in psychology or educational psychology, or an appropriate equivalent, is a prerequisite for the degree. Further information about requirements and optional plans is available from the graduate advisor in educational psychology.
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

EDUCATIONAL PSYCHOLOGY: EDP

180E, 280E, 380E. Intermediate Discipline. Designed for students accepted in the doctoral program in educational psychology who need additional preparation in the areas covered by the topics. One, two, or three lecture hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: For educational psychology students, graduate standing; admission to the doctoral program in educational psychology; and consent of the adviser in the student’s area of specialization. For others, graduate standing and admission to a doctoral program.

Topic 1: Fundamental Statistics.
Topic 2: Selected Topics.

380G. General Discipline. Designed for master’s degree students with majors outside educational psychology and for doctoral students who need to update preparation. Advanced synthesis of basic literature, research approaches, and foundational knowledge in educational psychology and the behavioral sciences bearing on education. Three lecture hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in educational psychology or other behavioral sciences; and consent of the adviser in the student’s area of specialization.

Topic 1: Psychological Foundations of Education.

180P, 280P, 380P, 480P. Psychometrics. Theory, models, methods, and applications in psychometrics and program evaluation. For each semester hour of credit earned, one lecture hour a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the adviser in the student’s area of specialization.

Topic 1: Measurement and Evaluation. Additional prerequisite: Twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences.
Topic 2: Psychometric Theory and Methods. Additional prerequisite: Educational Psychology 371 and 380P (Topic 1), or consent of instructor.
Topic 3: Individual Testing. Additional prerequisite: Educational Psychology 380P (Topic 1) or consent of instructor.
Topic 4: Evaluation Models and Techniques. Additional prerequisite: Educational Psychology 380P (Topic 2) and 482K (Topic 1: Experimental Design and Statistical Inference), or consent of instructor.

FOR MORE INFORMATION

Campus address: George I. Sánchez Building (SZB) 504, phone (512) 471-4155, fax (512) 471-1288; campus mail code: D5800
Mailing address: The University of Texas at Austin, Graduate Program, Department of Educational Psychology, 1 University Station D5800, Austin TX 78712
E-mail: edpsych@teachnet.edb.utexas.edu
URL: http://www.edb.utexas.edu/education/departments/edp/
Topic 5: Advanced Psychoeducational Assessment and Evaluation. Additional prerequisite: Educational Psychology 380P (Topic 1) or consent of instructor.

Topic 6: Item Response Theory. Additional prerequisite: Educational Psychology 380P (Topic 2) or consent of instructor.

Topic 7: Multidimensional Scaling. Additional prerequisite: Educational Psychology 380P (Topic 2) or consent of instructor.

Topic 8: Test and Scale Construction. Additional prerequisite: Educational Psychology 380P (Topic 2) or consent of instructor.

Topic 9: Advanced Psychometrics. Additional prerequisite: Educational Psychology 380P (Topic 2) or consent of instructor.

Topic 10: Practicum in Evaluation. Additional prerequisite: Educational Psychology 380P (Topic 2) or consent of instructor.

Topic 11: Practicum in Psychometrics. Additional prerequisite: Educational Psychology 380P (Topic 2) or consent of instructor.

Topic 12: Practicum in Research and Evaluation Methodology. Additional prerequisite: Educational Psychology 380P (Topic 4) or consent of instructor.

Topic 13: Computerized Adaptive Testing. Additional prerequisite: Educational Psychology 380P (Topic 6) or consent of instructor.


Topic 15: Advanced Psychometrics Research. Additional prerequisite: Educational Psychology 380P (Topic 2) or consent of instructor.

Topic 16: Selected Topics.

381, 481. Psychological Counseling. Advanced study of the theories and processes of vocational, educational, and personal counseling at elementary school and secondary school levels, in colleges, and in the community. For each semester hour of credit earned, one lecture hour a week for one semester. Additional prerequisite: For educational psychology students, graduate standing and consent of the adviser in the student’s area of specialization; for others, graduate standing and twelve semester hours of upper-division coursework in education or psychology, including a course in measurement.

Topic 1: Counseling Theory and Procedure.

Topic 2: Theories of Counseling Psychology. Additional prerequisite: For students outside of counseling psychology, consent of instructor.

Topic 3: Seminar in Guidance: School Counseling.

Topic 4: Career Development. Additional prerequisite: For students outside of counseling psychology, consent of instructor.

Topic 5: Psychology of Career Counseling. Additional prerequisite: Educational Psychology 381 (Topic 4) or consent of instructor.

Topic 6: Assessment in Counseling Psychology. First course of a two-course sequence in psychological assessment. Introduction for doctoral students to the fundamentals of objective assessment, with emphasis on cultural and ethical considerations. Review of assessment techniques includes diagnostic interviewing, intelligence testing, achievement testing, objective personality testing, interpretation of assessment data, writing integrated reports, providing feedback, and making appropriate referrals. The second course in the sequence is Educational Psychology 381 or 481 (Topic 10).

Topic 7: Psychotherapeutic Group Processes. Theory and research in group practice; group functioning and membership; principles of group planning; and development of leadership skills through structured in-class role-playing.

Topic 8: Counseling Skills and Procedures. Designed to provide a foundation for the professional practice of counseling and the skills necessary for professional training in counseling and related fields. Studies basic interpersonal helping skills, clinical interviewing, and intervention strategies.


Topic 10: Rorschach and Thematic Apperception Test Interpretation. Second part of a two-course sequence in psychological assessment; continuation of Educational Psychology 381 and 481 (Topic 6). Additional prerequisite: Educational Psychology 381 or 481 (Topic 6); for students outside of counseling psychology, Educational Psychology 381 or 481 (Topic 6) and consent of instructor.

Topic 11: Gender Issues in Psychotherapy.

Topic 12: Psychology of Women and Gender.

Topic 13: Practicum in Counseling: MEd. May be repeated for credit. Additional prerequisite: For students who are not in the Master of Education degree program in educational psychology, consent of instructor.

Topic 14: Practicum in Counseling: Advanced MEd. May be repeated for credit. Additional prerequisite: For students who are not in the Master of Education degree program in educational psychology, consent of instructor.

Topic 15: Practicum in Counseling: PhD. May be repeated for credit. Additional prerequisite: For students outside of counseling psychology, consent of instructor.
Topic 16: Practicum in Counseling Seminar: Professional and Ethical Issues. Studies the American Psychological Association ethical code, Texas Mental Health Law, and material relevant to the practice of psychotherapy and assessment. Designed to familiarize students with the APA ethics code and stimulate critical thinking on ethics and ethical dilemmas. Includes application of ethics through case conceptualizations, as well as the study of historical and philosophical perspectives on ethics and ethical decision making. May be repeated for credit.

Topic 17: Practicum in Counseling: Group.

Topic 18: Selected Topics: Theories and Techniques of Counseling. Topics include Gestalt psychotherapy, cognitive-behavioral psychotherapy, forensic psychology, short-term psychotherapy, child and adolescent psychotherapy, and multicultural counseling.

Topic 19: Ethics in Counseling and Psychotherapy.

Topic 21: Selected Topics.

Topic 24: Substance Abuse Counseling and Theories. Studies biological mechanisms of categories of commonly abused substances and treatment approaches to addiction. Includes discussion of other forms of addiction, including food, sex, and internet, and addiction in diverse populations.

Topic 25: Approaches to Intervention. Various interventions, including those focused on systems, populations, needs, problems, and disorders. Interventions are differentiated according to modalities utilized, basic purpose, and principles and skills. Additional prerequisite: Consent of instructor.

Topic 26: Multicultural Counseling. Introduction to the history and development of multicultural counseling as an area of study within counseling psychology. Explores issues that can help counselors better understand diverse clients, such as acculturation, ethnic and racial identity development, racism, oppression, social justice, and cultural competency. Additional prerequisite: For students in the Master of Education degree program in educational psychology and for students outside of counseling psychology, consent of instructor.

Topic 27: Practicum in Counseling: Multicultural. Additional prerequisite: For students in the Master of Education degree program in educational psychology and for students outside of counseling psychology, consent of instructor.

Topic 28: Psychoanalytic Psychotherapy. Additional prerequisite: For non–educational psychology and non-psychology students, consent of instructor.

Topic 30: Psychological Issues in Legal Contexts. Designed to familiarize students with various psychological roles and influences in the courtroom, case law as related to expert testimony, ethical practice in forensic psychology, and with psychological testing and assessment procedures used and considered best practice in various forensic contexts.

Topic 31: Professional Issues in Counseling Psychology. Designed to fulfill American Psychological Association requirement. Designed to familiarize students with the primary tenets of counseling psychology and the identity and role of the counseling psychologist. Includes the history of counseling tradition, vocational issues, supervision and mentorship, and consultation; and the study of the cultural impact of counseling psychology and psychological issues, including aspects of diversity.

381M. Social Psychology and Behavioral Sciences in Education. Examination of issues, theories, and research in selected areas of social psychology and other behavioral sciences that have implications for education and higher education policies, programs, and practices. Three lecture hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in education or behavioral science, and consent of the adviser in the student’s area of specialization.

Topic 1: The Individual in Society.

Topic 2: Seminar in Social Psychology.

Topic 6: Families and Education in Three Cultures. Asian Studies 390 (Topic 4: Families and Education in Three Cultures) and Educational Psychology 381M (Topic 6) may not both be counted.

Topic 7: Selected Topics.

Topic 12: Psychology of Race, Prejudice, and Stereotypes. Studies the history and evolution of race, prejudice, and stereotyping from a social psychological perspective. Focuses on understanding the psychology of racial attitudes, prejudice, and stereotyping. Includes related ideas from the areas of anthropology, sociology, and biology.

182, 282, 382. Graduate Seminar. Discussion of critical issues in a field, and their implications for education; review of historical background and critique of current literature; development of theories, models, research proposals. For each semester hour of credit earned, one lecture hour a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the adviser in the student’s area of specialization.

Topic 1: Consultation Theory and Procedure.

Topic 2: Law, Education, and Psychology.

Topic 3: Organizational and Group Behavior.


Topic 5: Psychology of Teachers and Teaching. Additional prerequisite: For non–educational psychology students, consent of instructor.

Topic 6: Understanding Minority Group Children.

Topic 7: Child Abuse: Issues and Research.


Topic 9: Interpretive Social Science.

Topic 10: Selected Topics.

Topic 11: Reality Therapy.
182K, 282K, 382K, 482K. Quantitative Methods. For each semester hour of credit earned, one lecture hour a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing; six semester hours of coursework in mathematics; twelve semester hours of upper-division coursework in education, psychology, or other behavioral science, including Educational Psychology 371 or consent of instructor; and consent of the adviser in the student’s area of specialization.

Topic 1: Experimental Design and Statistical Inference.
Topic 2: Correlation and Regression Methods. Additional prerequisite: Educational Psychology 382K (Topic 1), 482K (Topic 1), or consent of instructor.
Topic 4: Survey of Multivariate Methods. Additional prerequisite: Educational Psychology 382K (Topic 1) or consent of instructor.
Topic 5: Analysis of Categorical Data.
Topic 6: Structural Equation Modeling. Additional prerequisite: Educational Psychology 382K (Topic 4) or consent of instructor.
Topic 8: Selected Topics.
Topic 9: Advanced Statistical Modeling. Additional prerequisite: Educational Psychology 382K (Topic 6), 384 (Topic 2: Hierarchical Linear Modeling), or consent of instructor.

382L. Learning and Motivation. History and systems of psychology applied to education; modern theories and current research in learning and human motivation, especially in relation to new educational media and to the educative process. Three lecture hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in educational psychology and/or psychology, and consent of the adviser in the student’s area of specialization.

Topic 1: Psychology of Learning.
Topic 2: Motivation and Emotion.
Topic 3: Instructional Psychology.
Topic 4: Cognition and Behavior.
Topic 5: Psycholinguistics.
Topic 6: Current Topics in Cognition. Additional prerequisite: One of the following: Educational Psychology 382L (Topic 1), (Topic 2), (Topic 3), (Topic 4), or (Topic 5).
Topic 7: Theories of Discourse Comprehension. Additional prerequisite: One of the following: Educational Psychology 382L (Topic 1), (Topic 2), (Topic 3), (Topic 4), (Topic 5), or consent of instructor.
Topic 8: Theory and Practice of Writing. Additional prerequisite: One of the following: Educational Psychology 382L (Topic 1), (Topic 2), (Topic 3), (Topic 4), (Topic 5), or consent of instructor.
Topic 9: Biological Basis of Behavior.

Topic 10: Practicum in Research in Human Learning. Additional prerequisite: One of the following: Educational Psychology 380G (Topic 2: Psychology of Human Learning), 382L (Topic 1), (Topic 2), (Topic 3), (Topic 4), or (Topic 5).
Topic 11: Selected Topics.
Topic 17: History and Systems of Psychology.
Topic 18: Child and Adolescent Psychopharmacology, Health, and Learning. Additional prerequisite: Educational Psychology 382L (Topic 9), 397 (Topic 1: Psychopathology), or consent of instructor.

184, 284, 384. Research Methodology. Theories and models for educational and psychological research. For each semester hour of credit earned, one lecture hour a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education or behavioral science, including an adequate background in statistics; and consent of the adviser in the student’s area of specialization.

Topic 2: Introduction to Linear Statistical Models.
Topic 3: Intermediate Topics in Linear Statistical Models. Additional prerequisite: Educational Psychology 384 (Topic 2) or the equivalent.
Topic 4: Introduction to Survey Research.
Topic 5: Practicum in Research Methodology.
Topic 6: Data Analysis Using SAS. Additional prerequisite: Educational Psychology 482K (Topic 1: Experimental Design and Statistical Inference) or consent of instructor.
Topic 7: Meta-analysis. Additional prerequisite: Educational Psychology 382K (Topic 2: Correlation and Regression Methods) or consent of instructor.
Topic 8: Qualitative Research Methods. Additional prerequisite: For non–educational psychology students, consent of instructor.
Topic 9: Data Analysis Using SPSS.
Topic 10: Selected Topics.
Topic 16: Hierarchical Linear Modeling. Additional prerequisite: Educational Psychology 382K (Topic 2: Correlation and Regression Methods) or consent of instructor.
Topic 17: Issues in Multicultural Research.
Topic 20: Research Design and Methods for Counselors.
385. Human Development. Biological, cultural, and psychological theories; interrelationships in the study of individual personality; group behavior; and the educative process. Three lecture hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences or consent of instructor; and consent of the adviser in the student’s area of specialization.

   Topic 1: The Individual through the Life Cycle.
   Topic 3: Human Development Practicum.
   Topic 4: Field Experience: Developmental, Social, Personality Psychology.
   Topic 5: Practicum in Research: Developmental, Social, Personality Psychology.
   Topic 6: Selected Topics.
   Topic 10: Literature Review and Methods. Additional prerequisite: For non–educational psychology students, consent of instructor.
   Topic 12: Adolescent Psychosocial Development. Examination and application of psychological research and theoretical frameworks that inform adolescent (ages 12–19) psychological, social, and identity development. Explores the social, cultural, and historical contexts that promote or impair resiliency in adolescents.

386N. Personality Psychology. Advanced investigations in personality dynamics and role expectations and the explanation and prediction of individual and group behavior; projective instruments and their analysis; synthesis through interview, self report, psychometrics, and sociometric data. Three lecture hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences; and consent of the adviser in the student’s area of specialization.

   Topic 1: Seminar in Personality Psychology.
   Topic 3: Adlerian Theory and Diagnostics.
   Topic 4: Object Relations Theory.
   Topic 5: Selected Topics.
   Topic 12: Self in Relation to Others.
   Topic 13: Mindfulness, Compassion, and the Self. Designed to give students firsthand experiential knowledge of mindfulness and compassion. Subjects include self-compassion, well-being, and self-concept.

189H, 289H, 389H, 489H. School Psychology. Study and application of theories, concepts, and techniques related to school psychology. For 189H, 289H, and 389H, one lecture hour a week for one semester for each semester hour of credit earned; for 489H, three lecture hours and two laboratory hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in educational psychology, psychology, or other behavioral sciences; and consent of the adviser in the student’s area of specialization.

   Topic 1: Law, Ethics, and History of School Psychology. Additional prerequisite: For non–educational psychology students, consent of instructor.
   Topic 2: Academic Assessment and Intervention. Additional prerequisite: Educational Psychology 389H (Topic 1); students in areas other than school psychology must also have consent of instructor.
   Topic 3: Interpersonal Intervention with Children and Adolescents. Additional prerequisite: Educational Psychology 480P (Topic 3: Individual Testing). 397 (Topic 2: Child Psychopathology), or approved equivalent; students outside of educational psychology must also have consent of instructor.
   Topic 4: Practicum in Interpersonal Intervention with Children and Adolescents. Additional prerequisite: Educational Psychology 389H (Topic 3) or approved equivalent; students in areas other than school psychology must also have consent of instructor.
   Topic 5: Family and School Systems.
   Topic 6: Practicum in Family Assessment and Intervention. Additional prerequisite: Educational Psychology 389H (Topic 3); students in areas other than school psychology must also have consent of instructor.
   Topic 7: Neuropsychological Assessment. Additional prerequisite: Educational Psychology 480P (Topic 3: Individual Testing) or consent of instructor.
   Topic 9: Cognitive-Behavioral Assessment and Intervention. Additional prerequisite: For non–school psychology students, consent of instructor.
   Topic 15: Infant and Preschool Assessment.
   Topic 16: Practicum in Psychological Assessment.
   Topic 17: The Rorschach Child.
Topic 19: Bilingual Assessment. Additional prerequisite: For non–school psychology students, consent of instructor.

Topic 20: Educational Disabilities in Schools. Additional prerequisite: for non–school psychology students, consent of instructor.

Topic 21: Social and Emotional Assessment with Children and Adolescents. Additional prerequisite: Educational Psychology 397 (Topic 2: Child Psychopathology) or approved equivalent; students in areas other than school psychology must also have consent of instructor.


Topic 23: Practicum in Cognitive-Behavioral Assessment and Intervention. Additional prerequisite: For non–school psychology students, consent of instructor.

391, 691. Child Development. Theory and research on the psychological development of young children; early stimulation and education; methodology and assessment techniques in research with children. Three or six lecture hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, and consent of instructor and the adviser in the student’s area of specialization.

Topic 1: Culture, Child Development, and Education. Examination of current theory and research from psychology, anthropology, and sociology on the roles of culture, ethnicity, and race in the development and education of children around the world. Includes parenting and socialization; cognitive, social, and emotional development; effect of socioeconomic status; culture change and acculturation; racism and critical race theory.

Topic 2: Selected Topics.

193, 293, 393. Field Experience. Observation and/or practice in an applied setting. The equivalent of one, two, or three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, admission to the doctoral program in educational psychology, and consent of instructor and the adviser in the student’s area of specialization.

Topic 1: Interpersonal Intervention with Children and Adolescents. Additional prerequisite: For non–school psychology students, consent of instructor.

Topic 2: Cognitive-Behavioral Assessment and Intervention. Additional prerequisite: For non–school psychology students, consent of instructor.

Topic 3: Assessment in Counseling.

Topic 4: Family Intervention.

Topic 5: Neuropsychological Assessment.

Topic 6: Psychodiagnostic Assessment. Additional prerequisite: For non–school psychology students, consent of instructor.

Topic 7: School Consultation.

Topic 8: Selected Topics.

194K, 394K, 694K. Internship in Educational Psychology. Required for doctoral students in accredited training programs in counseling psychology and school psychology. Predoctoral or postdoctoral internship in counseling psychology, mental health, school psychology, educational research, or college teaching in educational psychology. Part-time or full-time internship for one semester. Offered on the credit/no credit basis only. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Admission to candidacy for a doctoral degree, acceptance as an intern, and consent of instructor and the adviser in the student’s area of specialization.

Topic 1: Internship in Counseling Psychology.

Topic 2: Internship: Intervention in Human Development.


Topic 4: Applied Behavior Analysis.

Topic 5: Research Internship.


Topic 7: Internship: Research in Learning, Motivation, and Cognition.

Topic 8: School Psychology Internship.

395. Research. Individual research planned, carried out, and reported under the supervision of a Graduate Studies Committee member. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of the adviser in the student’s area of specialization, may be repeated for credit. Prerequisite: Admission to an approved program of graduate study and consent of instructor and the adviser in the student’s area of specialization.

196. Colloquium in Educational Psychology. Presentation and discussion of issues related to graduate study in educational psychology, including research proposals and developments in the field, by advanced graduate students, members of the faculty, and visiting lecturers. One lecture hour a week for one semester. Offered on the credit/no credit basis only. With consent of the adviser in the student’s area of specialization, may be repeated for credit. Prerequisite: Graduate standing and consent of the adviser in the student’s area of specialization.

Topic 1: Departmental Colloquium. Required of all doctoral students in educational psychology.

Topic 2: Doctoral Research Colloquium. Required of all doctoral students in educational psychology.

Topic 3: Counseling Psychology Colloquium. Required of all doctoral students in counseling psychology during their first year.

Topic 4: School Psychology Colloquium. Registration for at least three semesters required of all doctoral students in school psychology.

Topic 5: Human Development and Culture Colloquium. Required of all doctoral students in human development and culture.
Topic 6: Quantitative Methods Colloquium. Required of all graduate students in quantitative methods.

Topic 7: Learning, Cognition, Instruction Colloquium.

Topic 8: Selected Topics Colloquium.

396T. Directed Research. Investigation of assigned problems under the direction of a Graduate Studies Committee member; development and demonstration of competence in research design and execution; and production of an acceptably written research report. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the adviser in the student’s area of specialization.

Topic 1: Educational Psychology.

Topic 2: Counseling Psychology.

Topic 3: School Psychology.

Topic 4: Selected Topics.

Topic 5: Integration of Quantitative Methods.

397. Psychopathology. Recognition of psychopathology; its symptomatology and methods of dealing with it, including etiology and dynamics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For educational psychology students, graduate standing and consent of the adviser in the student’s area of specialization; for others, graduate standing and consent of instructor.

Topic 1: Psychopathology.

Topic 2: Child Psychopathology.

Topic 3: Child and Adolescent Depression and Suicide.

Topic 4: Selected Topics.

Topic 5: Crisis Intervention in Schools.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in educational psychology and consent of the adviser in the student’s area of specialization; for 698B, Educational Psychology 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in educational psychology and consent of the adviser in the student’s area of specialization.

398T. College Teaching Methodology. Supervised college teaching experience. Three lecture hours a week for one semester. With consent of the adviser in the student’s area of specialization, may be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the adviser in the student’s area of specialization.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the adviser in the student’s area of specialization.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Educational Psychology 399R, 699R, or 999R; and consent of the adviser in the student’s area of specialization.
FACILITIES FOR GRADUATE WORK

Students in foreign language education have access to research facilities in a large number of academic departments in the liberal arts, communication, and education colleges.

Students have access to extensive print and online resources in the Perry-Castañeda Library and in specialized libraries. In addition to textbooks and pedagogical material, the collections include titles in most classical and modern languages, translations of many important works, and secondary literature on the works and their social and literary contexts.

Other research sites include the Texas Language Center, the Texas Language Technology Center, the Linguistics Research Center, ESL Services, and the Learning Technology Center.

AREAS OF STUDY

The foreign language education program offers specializations leading to the Master of Arts and the Doctor of Philosophy degrees in teaching English as a foreign or a second language, and the teaching of modern and classical foreign languages, including Asian and Middle Eastern languages. At the doctoral degree level, there is also a specialization in applied linguistics. Each student’s degree program includes courses from relevant disciplines such as anthropology, communication studies, education, linguistics, psychology, and sociology, as well as language and literature. It may be concerned with language teacher training, research in language teaching and language acquisition, technology in language teaching, and theory and techniques of language materials production. Individual courses of study are arranged within these areas in accordance with the student’s abilities, interests, and career goals.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Peter F. Abboud
Aaron Bar-Adon
Carl S. Blyth
Hans C. Boas
Rebecca M. Callahan
Maria E. Franquiz
Thomas J. Garza
Mohammad Ghanoonparvar
Ian F. Hancock
Jacqueline M. Henkel
Frederick G. Hensey
Michael C. Hillmann
Elaine K. Horwitz
Orlando R. Keln
Sara E. Kimball
Dale A. Koike
Min Liu
Carol H. MacKay

Anna E. Maloch
Mohammad A. Mohammad
Deborah K. Palmer
Diana Christine Pulido
Cinzia Russi
Maximo R. Salaberry
Veronica G. Sardegna
Diane L. Schallert
Jurgen K. Streeck
Marilla D. Svinicki
Janet K. Swaffar
Per K. Urlaub
Luis Urrieta
Herman H. Van Olphen
Anita L. Vangelisti
John M. Weinstock
Helena Woodard
Mary J. Worthy

DEGREE REQUIREMENTS

MASTER OF ARTS

The program leading to the Master of Arts degree may consist of either thirty semester hours of coursework, including a six-hour thesis course, or thirty-three semester hours of coursework, including a three-hour course in which the student must produce a substantial report. Theses and reports are written under the guidance of a supervising professor and a reader. Further information is available from the graduate adviser.

DOCTOR OF PHILOSOPHY

The student is expected to achieve admission to candidacy by following the course requirements that have been set by the Graduate Studies Committee in foreign language education and passing such oral and written examinations as the committee specifies. Entering students are assigned to program advisers who assist in planning the Program of Work and the dissertation.
Most students require three years, including summer sessions, beyond the bachelor’s degree to complete the program; a significant proportion, however, require a longer period of time. Further information is available from the graduate adviser.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

FOREIGN LANGUAGE EDUCATION: FLE

196V, 296V, 396V. Conference Course. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in foreign language education and consent of the graduate adviser.

397P. Internship. Internship in teaching English as a second or foreign language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in foreign language education and consent of the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in foreign language education, admission to a field of specialization, completion of nine semester hours of coursework toward the degree, and consent of the graduate adviser; for 698B, Foreign Language Education 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in foreign language education, completion of nine semester hours of coursework to be counted toward the degree, and admission to a field of specialization.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Foreign Language Education 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

Excellent teaching and research laboratories are available to graduate students in kinesiology and health education. Special classrooms and computer facilities are available, as well as teaching laboratories for human anatomy, biomechanics, exercise physiology, exercise and sport psychology, motor control and learning, physical development and aging, and athletic training. Research laboratories are available for both basic and applied research with whole-body and subcellular investigations. Also available for field research are various schools, institutions, and agencies in Austin and surrounding communities.

AREAS OF STUDY

Most students major in either health education or kinesiology. Students may also pursue a general program, leading to the Master of Education, that allows for specialization in either health education or kinesiology but includes coursework in both areas.

HEALTH EDUCATION

The programs leading to the Master of Science in Health Education and the Master of Education and Doctor of Education degrees with a major in health education emphasize a developmental and research-based approach to health promotion across the lifespan. Students in the PhD program specialize in either health promotion or behavioral health.

All the health education degree programs provide students with a solid background in the social and behavioral foundations of health. Students have the opportunity to design a course of study suited to their interests and the research interests of the faculty. The program prepares students for academic, research, and applied careers in health promotion.

KINESIOLOGY

Students pursuing the Master of Science in Kinesiology specialize in exercise physiology, movement science, or sport management; doctoral students may also specialize in interdisciplinary sport studies. Within exercise physiology, master's degree students follow a general course of study or focus their work on clinical exercise physiology, sport sciences and nutrition, or exercise and sport psychology; doctoral students focus on human performance or exercise biochemistry. Students in movement science focus their work on biomechanics, motor control and learning, developmental science: pediatrics and aging, clinical movement science, or sport movement science.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Lawrence D. Abraham  
John Bartholomew  
Robert Matthew Brothers  
Jessica Duncan Cance  
Darla M. Castelli  
Laurence H. Chalip  
Edward F. Coyle  
Jonathan B. Dingwell  
Marlene A. Dixon  
Roger P. Farrar  
Neil H. Gottlieb  
B. C. Green  
Lisa Griffin  
Bob Heere  
Carole K. Holahan  
Thomas M. Hunt  
John L. Ivy  
Jody Jensen  
Estelle M. Jowers  
Harold Willis Kohl III  
Alexandra Loukas  
Keryn Elizabeth Pasch  
Fred L. Peterson Jr.  
Waneen W. Spirduso  
Mary A. Steinhardt  
Hiroyumi Tanaka  
Janice S. Todd

ADMISSION REQUIREMENTS

A student who lacks the prerequisite coursework described on page 130 may be admitted to the Graduate School, but he or she must then complete coursework in the appropriate areas in addition to degree requirements.
Health education. To be admitted to the general Master of Education program, the applicant must have completed an undergraduate major or at least twelve semester hours of upper-division coursework in physical education, kinesiology, and/or health education.

Health promotion. An applicant to the Master of Science in Health Education or Master of Education degree program with specialization in health promotion must have completed an undergraduate major in health education or a related discipline; the applicant must have completed at least three semester hours of coursework in each of the following areas: theory and methods of health education and/or health promotion, biological sciences, behavioral sciences, and statistics.

Doctoral degree programs. An undergraduate major in health education or a related discipline is required; the student must hold a master's degree or the equivalent and must have completed at least three semester hours of coursework in each of the following areas: biological sciences, behavioral sciences, theory and methods of health education and/or health promotion, and statistics. The applicant must also be sponsored by a member of the Graduate Studies Committee. Applicants to the PhD program must demonstrate the ability to conduct independent research.

KINESIOLOGY

Kinesiology. To be admitted to the general Master of Education program, the applicant must have completed an undergraduate major or at least twelve semester hours of upper-division coursework in physical education, kinesiology, and/or health education.

Exercise physiology. An applicant to the master's or doctoral degree program with specialization in exercise physiology must have an undergraduate major in kinesiology or a related discipline and must have completed coursework in human anatomy, exercise physiology, and biomechanics. Applicants who plan to focus on exercise and sport psychology must also have completed coursework in sport psychology; all other applicants to the exercise physiology specialization must have completed coursework in vertebrate physiology. Doctoral applicants must also be sponsored by a member of the Graduate Studies Committee and must demonstrate the ability to conduct independent research.

Movement science. An applicant to the master's or doctoral degree program with specialization in movement science must have an undergraduate major in kinesiology or a related discipline and must have completed coursework in human anatomy, exercise physiology, biomechanics, and motor control and learning. Doctoral applicants must also be sponsored by a member of the Graduate Studies Committee and must demonstrate the ability to conduct independent research.

Sport management. For admission to the master's or doctoral degree program with specialization in sport management, an undergraduate major in kinesiology or a related discipline is recommended; the student must demonstrate competency in management and marketing and in two of the following areas: sport ethics/philosophy, sport history, sport law, sport sociology, social psychology of sport, and sport economics. These competencies can be further developed in the first year of the program. Doctoral applicants must also be sponsored by a member of the Graduate Studies Committee and must demonstrate the ability to conduct independent research.

DEGREE REQUIREMENTS

MASTER OF SCIENCE

Master of Science in Health Education with thesis. The specialization in health promotion consists of at least thirty-six semester hours of graduate study. All students seeking the MSHealthEd concentrate coursework and research in an area of departmental specialization. Of the nine semester hours of upper-division coursework allowed in the program, no more than six hours may be included in either the major or the minor. The minor field consists of six semester hours taken outside the department. A statistics course, a course in research methods, and the thesis course are required.

Master of Science in Kinesiology with thesis. The specializations in exercise physiology and movement science consist of at least thirty semester hours of graduate study: the sport management specialization consists of at least thirty-six hours. All students seeking the MSKin concentrate coursework and research in an area of departmental specialization. Of the nine semester hours of upper-division coursework allowed in the program, no more than six hours may be included in either the major or the minor. The minor field consists
of six semester hours taken outside the department. A statistics course, a course in research methods, and the thesis course are required.

**Master of Science in Kinesiology with report.** The specializations in exercise physiology and movement science consist of at least thirty-three semester hours of graduate study; the sport management specialization consists of at least thirty-six hours. Students concentrate coursework and research in an area of departmental specialization. Of the nine semester hours of upper-division coursework allowed in the program, no more than six hours may be included in either the major or the minor. The minor field consists of six semester hours taken outside the department. A statistics course, a course in research methods, and the report course are required.

**MASTER OF EDUCATION**

This degree program consists of at least thirty-six semester hours of graduate study. Students concentrate coursework in an area of departmental specialization or pursue a general program in either kinesiology or health education. Of the nine semester hours of upper-division coursework allowed in the program, no more than six hours may be included in either the major or the minor. All specializations require at least twenty-one semester hours of approved coursework within the department and six hours outside the department. To complete any of the specializations, satisfactory performance in an approved culminating experience is required.

**DOCTOR OF PHILOSOPHY**

The Doctor of Philosophy is a research degree designed to prepare students as scholars in a designated area of specialization.

During the student’s first year in the program, the student works with his or her adviser to prepare a program of study, which must be approved by the Graduate Studies Committee. Prior to admission to candidacy for the doctoral degree, the student must successfully complete the comprehensive examination covering the area of specialization. The student must present the dissertation proposal to the Graduate Studies Committee. The dissertation must represent an independent scholarly investigation of a problem pertinent to the field of kinesiology or health education. It deals with basic questions in the area of specialization and must constitute a scholarly contribution to the body of knowledge in the profession.

The PhD programs in health education and kinesiology are outlined below. More detailed descriptions and requirements for each of the specializations are available from the graduate adviser.

**HEALTH EDUCATION**

The Doctor of Philosophy with a major in health education provides a specialization in either health promotion or behavioral health. Each student designs a program appropriate to his or her research interests. The program with a specialization in health promotion must include at least eighteen semester hours of core coursework in health education and a twenty-four-hour area concentration. The area concentration must consist of twelve hours of organized coursework taken within and twelve hours taken outside the department. In addition, the student must complete twelve hours of graduate coursework in statistics and research methods. The program with a specialization in behavioral health must include at least twenty-one semester hours of core coursework in health education and a twenty-one-hour area concentration. The area concentration must consist of nine hours of organized coursework taken within and twelve hours taken outside the department. In addition, the student must complete twelve hours of graduate coursework in statistics and research methods. Students in both specializations must complete research experience that includes at least six hours of independent study and eighteen hours in the dissertation courses.

**KINESIOLOGY**

The Doctor of Philosophy with a major in kinesiology involves specialization in exercise physiology, movement science, sport management, or interdisciplinary sport studies. Exercise physiology involves in-depth study in human performance or exercise biochemistry. Movement science students concentrate in biomechanics, motor control and learning, developmental science: pediatrics and aging, clinical movement science, or sport movement science. Sport management involves training students to undertake research in the management and marketing of sport organizations and enterprises. Interdisciplinary sport studies involves coursework in at least one academic department on campus other than the Department of Kinesiology and Health Education; the curriculum includes sport
history, exercise history, sport and gender, and other sociocultural aspects of sport.

Each student completes coursework in preparation for a comprehensive examination in one of these specializations. The program also includes a departmental elective taken outside the area of specialization; six semester hours of graduate coursework in statistics, biometry, or an appropriate area of mathematics; nine hours of supporting work outside the department; research experience that includes at least six hours of independent study; and eighteen hours in the dissertation courses.

**DOCTOR OF EDUCATION**

The Doctor of Education is a professional degree program that emphasizes preparation for the highest levels of professional practice.

**HEALTH EDUCATION**

The University has approval to offer the Doctor of Education degree with a major in health education. Information about the status of this program is available from the Department of Kinesiology and Health Education.

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**HEALTH EDUCATION: HED**

386. Research Methodologies. Disciplines of research methods, research design, data-producing techniques, treatment and interpretation of data, reporting on research. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

395. Advanced Topical Studies. Group and individual studies of advanced topics; critique and synthesis of research findings and of literature. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**KINESIOLOGY**

The University also has approval to offer the Doctor of Education degree with a major in kinesiology. Information about the status of this program is available from the Department of Kinesiology and Health Education.

**FOR MORE INFORMATION**

Campus address: L. Theo Bellmont Hall (BEL) 222, phone (512) 471-1273, fax (512) 471-8914; campus mail code: D3700

Mailing address: The University of Texas at Austin, Graduate Program, Department of Kinesiology and Health Education, 1 University Station D3700, Austin TX 78712

E-mail: khegradinfo@teachnet.edb.utexas.edu
URL: http://www.edb.utexas.edu/khe/

Topic 1: Research Methods: Proposal Writing. Additional prerequisite: Educational Psychology 371 or an equivalent introductory statistics course with a grade of at least C.


Topic 3: Work Site Health Promotion.

Topic 4: Intervention Mapping: Health Promotion Program Development.


Topic 6: Theories of Health Behavior.

Topic 7: Foundations of Epidemiology.

Topic 8: Theories of Substance Abuse.

Topic 11: Human Sexuality.

Topic 12: Child and Adolescent Health Psychology.

Topic 16: Organizational and Social Change for Health Promotion.
Topic 17: Mind/Body Health. The scientific basis for mind/body health; overview of clinically tested mind/body interventions in each dimension of health: emotional, psychological, physical, spiritual, intellectual, and social.


Topic 19: Public Health Communication: Case Studies. Introduction to applications of social cognitive learning theory and innovation diffusion theory in the design of campaigns to change health behaviors.

Topic 20: Adult Development, Aging, and Health. An introduction to the theories and methods of child and adolescent risk and resilience. Examines resilience processes in populations at elevated risk for negative outcomes and explores how the empirical research of the past two decades has contributed to the development of preventive intervention programs aimed at strengthening resilience in at-risk youth.

Topic 21: Risk and Resilience in Children and Adolescents. An introduction to applications of social cognitive learning theory and innovation diffusion theory in the design of campaigns to change health behaviors.

Topic 22: Politics of Health and Long-Term Care Reform.

Topic 23: Health Issues in Gerontology. An introduction to physical, psychological, and social perspectives on aging, with an emphasis on health and health care of older adults. Explores the impact of an aging society on socioeconomic, political, and health care systems.


Topic 25: Politics and Policies in an Aging Population. The impact of an aging population on social institutions; the utility of different approaches to the social welfare demands of an ethnically and racially diverse population.


196, 296, 396. Doctoral Seminar. Individual or shared project research with reports evaluated by seminar participants and the instructor. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and written consent form.

296T, 396T. Directed Research in Health Education. Investigation of assigned problems under the direction of a Graduate Studies Committee member; development and demonstration of competence in research design and execution; production of an acceptably written research report. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent form.

197, 397. Research Problems. Individual or group research in a specialized area of health education. The equivalent of one or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent form.

397P, 697P. Graduate Internship. Supervised practice in a professional organization or institution. The equivalent of nine or eighteen laboratory hours a week for one semester. May be repeated for credit by doctoral students. Prerequisite: Graduate standing and admission by internship committee.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in health education and written consent of the graduate adviser; for 698B, Health Education 698A and written consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and written consent form.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Health Education 399R, 699R, or 999R; and written consent form.

KINESIOLOGY: KIN

382. Conference-Laboratory. Laboratory or workshop-type instruction dealing with selected problems in specialization areas of kinesiology. Conference course. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 4: Biomechanics Laboratory. Additional prerequisite: Kinesiology 395 (Topic 36: Biomechanics of Human Movement), two semesters of calculus, and one semester of college physics (mechanics); or consent of instructor.

Topic 6: Advanced Laboratory Techniques in Exercise Physiology. Knowledge and skills needed to assess the metabolic characteristics of the rat, to evaluate the metabolic characteristics of skeletal muscle, and to perform essential biochemical assays and procedures that are typically used in biochemical and molecular biology experiments. Additional prerequisite: Consent of instructor.
Topic 7: Clinical Exercise Physiology: Theory and Practice. Designed for students interested in assessing physical fitness and well-being and designing exercise programs in corporate, community, clinical, occupational, and commercial settings. Students receive practical experience assessing physical fitness. Additional prerequisite: Kinesiology 325K or the equivalent.

Topic 8: Laboratory Techniques in Sport Sciences. The theory and practice of modern laboratory and field techniques used to evaluate human physical performance and physiological function. Additional prerequisite: Kinesiology 325K or consent of instructor.

Topic 9: Motor Development: Assessment. Review of screening, diagnostic, or programmatic motor assessment instruments. Includes test psychometrics, test content, appropriate population, and comparable or competing assessments. Additional prerequisite: Kinesiology 312M or the equivalent, Kinesiology 395 (Topic 45: Seminar in Motor Development), or consent of instructor.

386. Research Methodologies. Disciplines of research methods, research design, data-producing techniques, treatment and interpretation of data, reporting on research. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Research Methods: Proposal Writing. Required of all candidates for the master's degree in kinesiology with thesis or report. Additional prerequisite: Educational Psychology 371 or an equivalent introductory statistics course with a grade of at least C.


395. Advanced Topical Studies. Graduate seminar in topics related to specialization areas. Three lecture hours a week for one semester. Additional hours may be required for some topics; these topics are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Ergogenic Aids for Exercise. Additional prerequisite: Kinesiology 325K or consent of instructor.

Topic 2: Cardiac Metabolism. Additional prerequisite: Kinesiology 395 (Topic 46), and Chemistry 339 or consent of instructor.


Topic 4: Biomechanics of Sport. Additional prerequisite: Kinesiology 324K and 326K.

Topic 5: Exercise and Preventive Medicine. Additional prerequisite: Kinesiology 325K.

Topic 8: Motor Control: Neuromuscular Bases. Additional prerequisite: Kinesiology 336 or consent of instructor.

Topic 9: Motor Control: Performance and Learning. Additional prerequisite: Kinesiology 315 or consent of instructor.

Topic 10: Neural Control of Posture and Locomotion. Additional prerequisite: Kinesiology 336 or consent of instructor.

Topic 12: Muscle Physiology and Plasticity. Additional prerequisite: Kinesiology 395 (Topic 46) or consent of instructor.


Topic 15: Conditioning for Competitive Athletes. Additional prerequisite: Kinesiology 325K or consent of instructor.

Topic 16: Cardiovascular Response to Exercise. Additional prerequisite: Kinesiology 325K or consent of instructor.


Topic 21: Children's Exercise and Activity. Physiological bases for changes in exercise and sports performance and in exercise capacity throughout childhood and adolescence. Includes aspects of cardiovascular, respiratory, and metabolic changes and issues related to thermoregulation, training, gender, and health and fitness. Additional prerequisite: Kinesiology 321M or consent of instructor.


Topic 25: Fat Metabolism during Exercise. Additional prerequisite: Kinesiology 395 (Topic 46), or 325K and consent of instructor.

Topic 26: Legal Issues in Sport.

Topic 27: Athletics Administration.


Topic 29: Ethics in Sport.

Topic 32: Sport Marketing. Additional prerequisite: An introductory undergraduate or graduate survey course in marketing.

Topic 33: Musculoskeletal Biomechanics. Synthesis of properties of the musculotendon and skeletal systems to construct detailed computer models that quantify human performance and muscular coordination. Additional prerequisite for kinesiology students: Mathematics 341, Kinesiology 395 (Topic 36), and consent of instructor.

Topic 36: Biomechanics of Human Movement. Same as Biomedical Engineering 383 (Topic 4: Biomechanics of Human Movement). Additional prerequisite: Kinesiology 326K, two semesters of calculus, one semester of college physics (mechanics), and consent of instructor.

Topic 38: Carbohydrate Metabolism during Exercise.


Topic 43: Psychology of Exercise. The benefits of exercise in moderating negative psychological states such as anxiety, stress reactivity, and depression. Additional prerequisite: Kinesiology 325K.

Topic 44: Sport Finance. Designed to reinforce students' understanding of finance and its role in sport and health promotion programs, and to provide students with the knowledge and skills needed in the administration of sport and health promotion programs.
Topic 45: Pediatric Motor Development. Additional prerequisite: Kinesiology 321M or consent of instructor; Kinesiology 336 is recommended.

Topic 46: Advanced Exercise Physiology I. Designed to provide students with the essential graduate background for the application and practice of exercise physiology. The integration of the nervous, skeletal muscle, and cardiovascular systems from the subcellular level to the whole-organism level. Additional prerequisite: Kinesiology 325K.

Topic 47: Advanced Exercise Physiology II. The physiological and metabolic response to exercise, with emphasis on integrating the whole-body and cellular responses. In a variety of topics, students review basic physiology, focus on responses during exercise, and apply their findings to situations in the clinical and sporting environments. Additional prerequisite: Kinesiology 395 (Topic 46).

Topic 48: Social Psychology of Sport and Physical Activity. The theoretical structure that underlies social psychology as it has been applied to sport. Emphasis on the psychological concerns that confront coaches in their interactions with individual athletes and teams. Additional prerequisite: Kinesiology 311K or consent of instructor.

Topic 49: Sports Nutrition. The nutritional needs of people whose physical activity ranges from recreational to elite competitive athletics. Development of practical dietary strategies that recognize the unique nature of sport and the role of diet in promoting optimal physiological adaptation to training. Three lecture hours and one and one-half discussion hours a week for one semester. Additional prerequisite: Kinesiology 324K or consent of instructor.

Topic 50: Sport Psychology. The general field of experimental sport psychology, with emphasis on the psychological components of individual performance. Designed to prepare students to discuss the important questions, methodology, and experimental literature in selected areas of sport psychology. Additional prerequisite: Kinesiology 311K or consent of instructor.


Topic 52: Organizational Behavior in Sport. Determinants and consequences of individual motivation and attitudes in organizations generally and in sport organizations specifically. Theory related to the individual often responsible for motivating people toward organizational goals, the leader. Additional prerequisite: For students in the College of Education, Management 320F or the equivalent; for others, Management 320F or the equivalent, and consent of instructor.

Topic 53: Sport Public Relations and Sales. Detailed study of the relationship between the media, corporate sponsorship, and sport. Focus on various media techniques utilized by sport managers and sport sponsorship basics. Additional prerequisite: Kinesiology 395 (Topic 32) or the equivalent or consent of instructor.

Topic 54: The Biology of Aging.

Topic 55: Assessment of Physical Function in Older Adults. Introduction to the goals, issues, and procedures that relate to the clinical assessment of physical function in the elderly (sixty-five and older).

Topic 56: Sport and Special Event Management. Introduction to key considerations when planning, implementing, and evaluating an event. Considers the organization of the events industry worldwide and examines how events link to other sectors of the economy. Specialized skills for the management and marketing of events. Students have the opportunity for hands-on practice in the use of the necessary tools for planning, programming, administering, and evaluating an event.

Topic 57: Strategic Management for Sport Organizations. The strategic management process and the problems and possibilities encountered when assessing, formulating, implementing, and evaluating an organization’s strategic effort. Students analyze case studies and simulate running a sport business, setting corporate strategies while applying strategic concepts and techniques within a practical decision-making framework. Additional prerequisite: Kinesiology 395 (Topic 32) or 395 (Topic 44) or 395 (Topic 52) or consent of instructor.

Topic 58: Sport Consumer Behavior. An examination of contemporary theory and research on the subject of sport consumer behavior.

Topic 59: Biomechanics in Clinical Settings. Designed to provide students with the basic biomechanical competence required to understand how normal human movements are generated, how movements are altered by injury or pathology, and how clinical intervention can improve performance. Additional prerequisite: Kinesiology 324K and 326K, or the equivalent.

Topic 60: Sport Policy. The formulation and analysis of sport policies: the uses of policy analysis in sport settings; environmental, economic, and sociopolitical impacts of sport, including policy implications.

Topic 61: Central Questions in Biomechanics and Motor Control. Designed to allow students to explore specific topics of current interest in biomechanics and/or motor control; to learn to evaluate the scientific literature in areas of current debate or controversy; and to develop scientifically sound, relevant, and experimentally testable research hypotheses. Additional prerequisite: Kinesiology 382 (Topic 4: Biomechanics Laboratory), and Kinesiology 395 (Topic 36) or written consent of instructor.

Topic 62: Aging and Cardiovascular Function and Disease Risks. Cardiovascular changes associated with aging; scientific issues and hypotheses in the area of aging and cardiovascular function and disease risks; and presenting critical analyses of these issues. Additional prerequisite: An upper-division course in human or vertebrate physiology.
**Topic 63: Introduction to Nonlinear Dynamics in Biological Systems.** Same as Biomedical Engineering 383J (Topic 5: Introduction to Nonlinear Dynamics in Biological Systems). Basic concepts of nonlinear mathematics and their application to biological systems. Additional prerequisite: Two semesters of college-level calculus and consent of instructor.

**Topic 64: Neuromuscular Aspects of Fatigue and Training.** The role of the central nervous system during muscular fatigue and exercise training. Additional prerequisite: Consent of instructor.

**196, 396. Doctoral Seminar.** Individual or shared project research with reports evaluated by seminar participants and the instructor. The equivalent of one or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent form.

**296T, 396T. Directed Research.** Investigation of assigned problems under direction of a Graduate Studies Committee member; development and demonstration of competence in research design and execution; production of an acceptably written research report. Conference course. May be repeated for credit. Prerequisite: Graduate standing and written consent form.

**197, 397. Research Problems.** Individual or group research topics in a specialization area of kinesiology. One or three conference or lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent form. Some sections also require consent of instructor; these are identified in the Course Schedule.

**197P, 397P. Graduate Internship.** Supervised practice in a professional organization, business, or institution. The equivalent of three, nine, or eighteen laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, a University grade point average of at least 3.00 and a grade point average in the major department of at least 3.00, and written consent form.

**698. Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in kinesiology and written consent of the graduate adviser; for 698B, Kinesiology 698A and written consent of the graduate adviser.

**398R. Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in kinesiology and written consent of the graduate adviser.

**399R, 699R, 999R. Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and written consent form.

**399W, 699W, 999W. Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Kinesiology 399R, 699R, or 999R; and written consent form.

---

**SCIENCE EDUCATION**

**MATHEMATICS EDUCATION**

**Master of Arts**

**Master of Education**

**Doctor of Philosophy**

---

**Facilities for Graduate Work**

Facilities for graduate work include state-of-the-art computer, multimedia, and videoconferencing laboratories, laboratories for science and mathematics research, field-based sites for implementation studies in local school districts, and numerous federal- and state-funded research and development projects in science and mathematics education. The University Libraries contain more than eight million volumes and provide access to a wide variety of print-based and electronic research tools, the latter through their Web site, http://www.lib.utexas.edu/. Library units serving mathematics and the sciences include the Kuehne Physics Mathematics Astronomy Library, the Mallet Chemistry Library, the Walter Geology Library, the Life Science Library, and the McKinney Engineering Library.
AREAS OF STUDY

Graduate study in science and mathematics education is offered through an interdisciplinary program that combines content preparation with educational research and scholarship, in a setting that fosters and supports tight links to educational practice. The program is anchored by a set of core courses addressing learning, instruction, curriculum, technology, equity, policy, and systemic reform in science and mathematics education, at the elementary, secondary, and postsecondary levels. Students may choose to specialize in science education, mathematics education, or a combination of the two. Coursework is chosen from departments in the College of Education and the College of Natural Sciences, as well as other appropriate University colleges.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Lawrence D. Abraham
- Jill A. Marshall
- David T. Allen
- Helen Taylor Martin
- Efrain P. Armendariz
- Mona Mehdy
- James P. Barufaldi
- Richard J. Meyer
- Leema G. Berland
- Edward W. Odell
- Christopher W. Bielawski
- Shelley M. Payne
- Meinhard B. Cardenas
- Anthony J. Petrosino
- Guadalupe D. Carmona-Domin
- Catherine Riegle-Crumb
- Richard H. Crawford
- Stanley J. Roux Jr.
- Cesar Delgado
- Michael P. Starbird
- Kenneth R. Diller
- Walter M. Stroup
- Susan B. Empson
- Edward C. Theriot
- Austin M. Gleeson
- Philip U. Treisman
- Brent L. Iverson
- Jack S. Turner
- David A. Laude
- Katherine A. Willets
- Michael P. Marder
- Clark R. Wilson

DEGREE REQUIREMENTS

MASTER’S DEGREES

Prerequisites for admission to each master’s degree program are a baccalaureate degree and coursework in education and in science and mathematics.

Master of Arts. The program consists of thirty-five semester hours, with at least twenty-one hours at the graduate level. The major field is composed of eighteen hours in education, including nine hours in the science and mathematics education core course sequence, three hours of research methodology, and six hours for researching and writing the thesis. The minor field consists of twelve hours in science and/or mathematics. An additional five hours may be drawn from coursework chosen by the student in conjunction with the graduate adviser. A degree plan without thesis or report is also available. Students in this option take six additional hours of coursework in a concentration of interest.

Master of Education. The program is the same as the program for the Master of Arts described above, with one exception: in addition to the requirements for a Master of Arts, students must be certified to teach at the elementary or secondary level. Students may earn certification to teach through additional coursework while enrolled in the Master of Education program.

Summer option for master’s degrees. Some students may be able to pursue either master’s degree by enrolling in the summer option. Under this option, the required coursework is completed in three consecutive summer terms, with some additional coursework completed online during the fall and spring semesters.

The summer option consists of thirty-three semester hours composed of nine hours in education, fifteen hours in mathematics and science content courses, two hours of research methodology, and four hours of related coursework. The option requires a report instead of a thesis, completed in a three-hour report course.

To qualify for the Master of Arts summer option, students must have experience teaching mathematics and/or science. To qualify for the Master of Education summer option, students must be certified to teach at the elementary or secondary level. More information on the summer option can be found at the program’s Web site at http://uteachweb.cns.utexas.edu/students/future/masters/.

DOCTOR OF PHILOSOPHY

Students seeking the degree of Doctor of Philosophy must show evidence of related professional and academic experience, including a master’s degree or the equivalent in a science or mathematics content area.

PROGRAM REQUIREMENTS

Core courses. Students must complete the fifteen-semester-hour core course sequence in science education and mathematics education through the Department of Curriculum and Instruction. A description of the sequence is available from the graduate program. It is
highly recommended that students enroll each semester in Curriculum and Instruction 185G (Topic: Science and Mathematics Education Forum).

Research methodology. Students must complete at least twelve hours of coursework in research methodology.

Content courses. Students must complete fifteen semester hours of coursework in science or mathematics. This requirement is waived for students who enter the program with a master’s degree in mathematics or one of the sciences.

Related courses. Students are expected to broaden and deepen their Program of Work by taking a variety of related courses consonant with their scholarly interests.

This coursework must be chosen in consultation with the graduate adviser; a list of possible courses is available from the graduate program.

FOR MORE INFORMATION

Campus address: George I. Sánchez Building (SZB) 462, phone (512) 471-7354 or 471-3747, fax (512) 471-8460; campus mail code: D5700
Mailing address: The University of Texas at Austin, Science and Mathematics Education, 1 University Station D5700, Austin TX 78712-0379
E-mail: sflynn@mail.utexas.edu or ajpetrosino@austin.utexas.edu or wstroup@mail.utexas.edu
URL: http://sme.edb.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

SCIENCE-MATHEMATICS EDUCATION: SME

180, 380. Topics in Teaching Science, Mathematics, and Engineering. Classroom applications of research in science, technology, engineering, and mathematics education, and related policy issues. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

196T, 296T, 396T. Directed Research in Science and Mathematics Education. One, two, or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in science or mathematics education and consent of the graduate adviser; for 698B, Science-Mathematics Education 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in science or mathematics education and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Original research and writing of dissertation for the Doctor of Philosophy. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the graduate adviser.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Science-Mathematics Education 399R, 699R, or 999R.
SPECIAL EDUCATION

Master of Arts
Master of Education
Doctor of Philosophy
Doctor of Education

FACILITIES FOR GRADUATE WORK

The University has an array of facilities that offer outstanding opportunities for research and study. Students may work with individual faculty members, many of whom have obtained external funding for research, development, training, and model demonstration projects involving the Texas Education Agency and school districts throughout Texas. In addition, students may work cooperatively with faculty members affiliated with the Assistive and Instructional Technology Laboratory, the Office of Bilingual Education, the Meadows Center for Preventing Educational Risk, and the Vaughn Gross Center for Reading and Language Arts. The Perry-Castañeda Library contains extensive holdings in special education and related fields. Students also have access through the University Libraries Web site to electronic databases, journals, and books related to special education. The College of Education’s Learning Technology Center provides access to a wide range of hardware and software useful for instructional development and for research. Practicum and internship opportunities are provided by a number of local schools, state facilities, and community agencies.

AREAS OF STUDY

The Department of Special Education offers graduate degrees in six areas of specialization: autism and developmental disabilities, early childhood special education, learning disabilities/behavioral disorders, multicultural special education, rehabilitation counseling, and special education administration. Graduate study prepares students for leadership roles in fields that serve children, youth, and adults with disabilities, and their families. Students may also complete coursework to fulfill requirements for a post-baccalaureate special education teaching certificate, for certification as a behavior analyst, or for certification in public school leadership. Although there is considerable overlap between degree and certification requirements, additional courses beyond the degree plan are usually necessary.

Master’s degree program. The master’s degree prepares students to provide special education or rehabilitation counseling services to individuals with disabilities and their families. Through coursework and field-based experiences, students acquire knowledge and skills in the areas of advocacy, collaboration, instruction, and professional standards of legal and ethical practice, and in the sociocultural, linguistic, economic, and technological contexts in which services are provided.

Doctoral degree program. The doctoral program prepares students to assume leadership positions in institutions of higher education and in local, state, and national agencies that provide services to individuals with disabilities and their families. The core areas of study focus on advocacy, leadership roles as members of the profession, standards of legal and ethical professional practice, and developing programs and services and/or conducting research that contribute to the quality of life for individuals with disabilities and their families. Students also develop the foundation for ongoing professional development and an appreciation of the sociocultural, linguistic, economic, and technological contexts that shape the development and delivery of services.

AREAS OF SPECIALIZATION

Autism and developmental disabilities provides opportunities for students to develop skills in designing, implementing, and evaluating educational interventions for people with autism and developmental disabilities.

Early childhood special education focuses on the development of early intervention programs for children from birth through six years of age, reflecting a family-centered philosophy and application of the most recent theoretical concepts in natural and inclusive settings.

Learning disabilities/behavioral disorders provides advanced coursework in learning disabilities, behav-
ioral disorders, assessment, strategies for developing, implementing, and evaluating instructional and behavioral interventions, instructional design, and assistive technology. Students also participate in field-based experiences that help prepare them for instructional and/or leadership roles.

**Multicultural special education** focuses on critical issues, knowledge, and skills related to the complex relationships between culture, race and ethnicity, language, and disability. This specialization is designed to prepare students for leadership roles in the provision of culturally and linguistically responsive educational services for exceptional children and youth from diverse backgrounds.

**Rehabilitation counseling** is designed to prepare students to counsel youth and adults with disabilities who are experiencing difficulties related to personal and vocational adjustment.

**Special education administration** offers students advanced training appropriate to general and special education administrative positions, creating an interface between general education administration and special education. This specialization is available only to doctoral students.

---

**GRADUATE STUDIES COMMITTEE**

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Diane P. Bryant  
Terry S. Falcomata  
Andrea Lynn Flever  
Shernaz B. Garcia  
Amanda L. Little  
Mark F. O’Reilly  
Alba A. Ortiz  
Randall M. Parker  
Barbara L. Pazey  
Herbert J. Rieth  
James L. Schaller  
Audrey M. Sorrells  
Sylvia F. Thompson  
Sharon Vaughn  
James R. Yates  
Nina Isabel Zuna

---

**DEGREE REQUIREMENTS**

**Master of Arts.** The Master of Arts degree is offered in all concentrations except special education administration. The Master of Arts requires at least thirty-three semester hours of coursework, including six hours for researching and writing a thesis. The general requirements for the master’s degree set a minimum standard. Information about additional requirements is available from the graduate coordinator.

**Master of Education.** Two Master of Education degree plans are available in each concentration except special education administration. The Master of Education degree with report requires at least thirty-three semester hours of coursework, including three hours for preparing the report. The Master of Education degree without thesis or report requires at least thirty-six semester hours of coursework. The general requirements for the master’s degree set a minimum standard. Information about additional requirements is available from the graduate coordinator.

**Doctor of Philosophy.** Because the Doctor of Philosophy is a research degree, the program is structured to provide students with both academic and practical experience in conducting research in university and other research settings. Degree plans focus on students’ areas of specialization; research; interdisciplinary studies; and professional skills related to research, teaching, and service. The dissertation is expected to be a theoretically based piece of original research that contributes to knowledge in special education or rehabilitation counseling. In addition to coursework, all students are expected to become actively involved in a variety of professional activities, such as supervision of student teachers, conference presentations, publications, and college teaching.

**Doctor of Education.** Although the requirements for this degree are similar to those for the Doctor of Philosophy, the Doctor of Education emphasizes applied research, and the program is designed to prepare students for leadership roles in a variety of educational settings. Requirements include a focus on program evaluation, organizational decision making, policy and law, and personnel preparation. The Doctor of Education dissertation may be a theoretically based piece of original research; it may also represent a scholarly investigation in special education or rehabilitation counseling that contributes to policy development, professional practice, or both. Graduates are prepared to assume leadership roles at the district, state, or national agency levels.
FOR MORE INFORMATION

Campus address: George I. Sánchez Building (SZB) 306, phone (512) 471-4161, fax (512) 471-2471; campus mail code: D5300

Mailing address: The University of Texas at Austin, Graduate Program, Department of Special Education, 1 University Station D5300, Austin TX 78712
E-mail: steph.hill@mail.utexas.edu
URL: http://www.edb.utexas.edu/sped/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

SPECIAL EDUCATION: SED

380. Multicultural Special Education. Study of critical issues in culture, language, and disability. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Special Education 380 and 395 may not both be counted unless the topics vary; Special Education 380 and 395 may not both be counted unless the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, sociology, or other behavioral sciences; and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Language Acquisition and Assessment in Multicultural Special Education. Language acquisition among culturally and linguistically diverse learners in general and special education, with emphasis on effective assessment and instruction.

Topic 4: Assessment in Multicultural Special Education. Cultural and linguistic factors related to the assessment of language-minority students; the best practices in psychoeducational procedures.

Topic 6: Advanced Research Topics in Multicultural Special Education. Current and emerging research on individuals with disabilities who are from culturally and linguistically diverse backgrounds. Provides students with opportunities to review research literature on topics of interest to them, and to explore their writing skills. A process approach to writing is used to familiarize students with the APA guidelines for preparing scholarly manuscripts.

Topic 7: Cross-Cultural Interactions in Multicultural Special Education. Introduction to principles of intercultural communication for educators. Emphasis on strategies for effective cross-cultural communication in a variety of educational settings, including general and special education.

Topic 8: School-Community Relations in Multicultural Special Education. Traditional methods of parent and school relations; emerging and innovative models for communication between the school and the community; the intent of the course is to explore school-community interactions in the context of the dynamics of culture, race, language, politics, history, economics, and religion.

Topic 9: Development of Personnel Preparation and Programming in Multicultural Special Education. Designed to prepare students to develop standards-based multicultural personnel preparation programs that emphasize research-based practices and that improve student outcomes and promote recruitment, retention, and quality of personnel for teaching culturally and linguistically diverse populations with disabilities in pluralistic settings.

Topic 10: Cultural and Linguistic Diversity in Special Education and Rehabilitation Counselor Education. An overview of issues, problems, and emerging practices related to culturally and linguistically diverse students served in special education.

Topic 11: Educational Planning for Multicultural Special Education.

Topic 12: Educational Leadership in Multicultural Special Education. Overview of issues affecting equal access to quality education for culturally and linguistically diverse learners with disabilities.

Topic 13: Sociocultural Foundations of Special Education. An in-depth examination of key knowledge, including sociocultural theory and conceptual models, used in teaching culturally and linguistically diverse students with disabilities in special education and inclusive settings.

Topic 14: Cultural and Linguistic Diversity in Special Education and Rehabilitation Counselor Education. An overview of issues, problems, and emerging practices related to culturally and linguistically diverse students served in special education. Web-based instruction. No class meetings.
383. **Learning Disabilities.** Nature and concomitant results of minimal brain damage as it affects the characterisits and learning behavior of children; assessment and appraisal instruments; and activities and materials for stimulation of learning. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences, including a course in special education; and consent of instructor. Additional prerequisites vary with the topic and are given in the *Course Schedule*.

**Topic 1: Introduction to Learning Disabilities.** Basic terms and definitions, the nature of specific learning disorders, theoretical models, and empirical classification systems.

**Topic 6: Teaching Students with Dyslexia and Reading Difficulties.** Theories and practices associated with dyslexia; terminology, assessment, and remedial strategies are emphasized.

**Topic 7: Assessment in Special Education.** The basic concepts related to the assessment of exceptional individuals.

**Topic 8: Instructional Adaptations I.** Design, implementation, and evaluation of instruction for elementary- and secondary-level students with mild to moderate disabilities who receive special education services.

**Topic 9: Instructional Adaptations II.** Issues in the education of students with mild to moderate disabilities, including assessing students, evaluating instruction and instructional materials, and adapting and implementing instruction.

384. **Early Childhood Special Education.** Education variables related to educational services and research for young children are investigated in terms of etiology, assessment, curriculum models, educational settings, and interdisciplinary programming. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences, including a course in special education; and consent of instructor. Additional prerequisites vary with the topic and are given in the *Course Schedule*.

**Topic 1: Overview of Early Childhood Special Education.** The educational and emotional needs of young disabled children (birth to age six) and the techniques for implementing a “whole child” educational approach to meet the needs of the child and the family.

**Topic 2: Current Research in Early Childhood Special Education.** Latest ECSED research and theory as related to past, present, and anticipated trends. Emphasis is on writing a program, research proposal, or publishable article. May be repeated for credit.

**Topic 3: Parent Education Models.** The grief stages of parents; parent involvement models available to promote optimum parent-child and parent-professional relationships.

**Topic 4: Introductory Practicum in Early Childhood Special Education.** Teaching experience with disabled children in a center setting. Assessment and curriculum procedures are applied in developing an appropriate education for an individual child or small groups of children.

**Topic 5: Advanced Practicum in Early Childhood Special Education.** Teaching experience with a large group of children in a center setting. Program management and evaluation procedures are applied to a total curriculum, so that the student assumes a lead teacher and/or consultant role during training.

**Topic 6: Assessment and Programming of Early Childhood Special Education.** Experience in assessing a disabled child in a naturalistic setting. Formal and informal assessment procedures for children from birth through age six.

**Topic 7: Medical/Educational Overview: Birth to Age Three.** Overview of hospital-to-school early intervention techniques for meeting the medical and educational needs of preterm, low-birth-weight, and at-risk children and their parents.

**Topic 8: Medical/Educational Parent Education and Involvement: Birth to Age Three.** Research, design, and implementation of a functional child-parent program. Students develop their own programs for working with parents of children with specific problems or disabilities.

**Topic 9: Medical/Educational Assessment: Birth to Age Three.** Experience planning, assessing, and implementing educational programs for at-risk infants and toddlers. Emphasis is on interagency coordination and the use of the transdisciplinary team to meet the family’s and the child’s needs with a minimum of personnel.

**Topic 10: Medical/Educational Programming: Birth to Age Three.** Medical information on pre-, peri-, and postnatal effects of medical problems and extended hospital stays. Impact of medical intervention on the infant’s and the family’s development.

**Topic 11: Medical/Educational Practicum in Early Childhood Special Education.** Early intervention in a neonatal intensive care unit or on a follow-up team for medically fragile high-risk children.

**Topic 12: Overview of Early Childhood Special Education.** The educational and emotional needs of young disabled children (birth to age six) and the techniques for implementing a “whole child” educational approach to meet the needs of the child and the family. Web-based instruction. No class meetings.

**Topic 13: Early Language Intervention.** Web-based instruction. No class meetings.

**Topic 14: Family Support and Intervention.** Web-based instruction. No class meetings.

Topic 16: Medical and Educational Assessment and Intervention. Web-based instruction. No class meetings.


Behavioral Disorders. Discussion of behavioral disorders, contributory factors; psychological and educational diagnoses applied to educational programming. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences, including a course in special education; and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 10: Introduction to Behavioral Disorders. Introduction to the nature and needs of children with behavior disorders and to effective management methods and teaching strategies. The admission, review, and dismissal process is described and practiced so that students can work as members of an interdisciplinary team.

Topic 11: Foundations of Positive Behavioral Support and Classroom Management. Study of the basic principles of human behavior, and the application of those principles to teaching positive behavior support and designing effective classrooms. Designed to prepare teachers and clinicians who will be in general and special education settings with children of all ages with and without disabilities.


Topic 13: Educating Students with Significant Behavioral Support Needs. Designed to provide students with an overview of promising and preferred practices for educating children and youth with emotional and behavioral disorders (EBD). Emphasis on children and youth whose behaviors challenge the prevailing social and educational traditions and values of schools, communities, and families.

Rehabilitation Counseling. Study of rehabilitation counseling; basic orientation and process and procedures; related biomedical, psychological, and community aspects; specialized programs and field experiences. Three lecture hours a week for one semester; or meetings as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, sociology, or other behavioral sciences; and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Introduction to Rehabilitation Counseling. Orientation to rehabilitation; historical developments, philosophy, disability, legal basis, organizational structure, facilities, and related professions. Field visitations.

Topic 2: Adjustment to Disabling Conditions and Illness. Psychodynamic principles of adjustment to disability, individual perception of illness, and motivation for recovery; including somatopsychological and psychosomatic aspects.

Topic 3: Medical/Paramedical Aspects of Rehabilitation Counseling. Contributions of the medical profession; terminology, etiology, prognosis, therapeutic services, restorative techniques, and assessment of limitations and capacities in typical disabilities.

Topic 4: Rehabilitation Counseling Process and Procedures. Systematic study of the rehabilitation counseling process, including required basic counselor skills, techniques, services, community resources, and professional ethics.

Topic 5: Prepracticum in Rehabilitation Counseling. Supervised, field-based observation and experience in rehabilitation counseling. Three lecture hours a week for one semester, with additional hours to be arranged.

Topic 6: Practicum in Rehabilitation Counseling. Individually supervised and systematically organized participation in rehabilitation counseling, case management, and professional skill development. Additional prerequisite: Consent of instructor.

Topic 7: Specialized Problems in Rehabilitation Counseling. Intensive study of specialized problems related to specific disability groups, counseling methods, and concepts in vocational placement.

Topic 8: Supervised Clinical Practice in Rehabilitation Counseling. Supervised clinical experience in rehabilitation settings; integration of theory and practice through supervision of experience, seminars, and individual conferences.

Topic 9: Rehabilitation Counseling Theories. Current rehabilitation counseling theories with specific applications in rehabilitation settings. Current issues in rehabilitation counseling, case management, planning, and service delivery for specific disability groups.

Topic 11: Vocational Assessment and Job Placement. The application of career development and job placement concepts to people with disabilities. Occupational choice, vocational counseling, occupational aspects of disability, pertinent laws and regulations.

Topic 14: Group Counseling in Rehabilitation Counseling. Basic issues and key concepts of the group process. Analysis of the therapeutic process, stages of development, and practices.

Topic 15: Case Management in Rehabilitation Counseling. Management aspects of the rehabilitation counselor’s job, including writing job descriptions; applying the selection and appraisal processes; applying civil rights laws that affect services to disabled persons; using the five functions of management; and working in a re-engineered environment.

Topic 16: Rehabilitation Counseling Theories. Web-based instruction. No class meetings.

Topic 18: Vocational Assessment and Job Placement. The application of career development and job placement concepts to people with disabilities. Occupational choice, vocational counseling, occupational aspects of disability, pertinent laws and regulations. Web-based instruction. No class meetings.


Topic 20: Adjustment to Disabling Conditions and Illness. Psychodynamic principles of adjustment to disability, individual perception of illness, and motivation for recovery; including somatopsychological and psychosomatic aspects. Web-based instruction. No class meetings.

Topic 21: Prepracticum in Rehabilitation Counseling. Supervised, field-based observation and experience in rehabilitation counseling. Web-based instruction. No class meetings.

Topic 22: Medical/Paramedical Aspects of Rehabilitation Counseling. Contributions of the medical profession; terminology, etiology, prognosis, therapeutic services, restorative techniques, and assessment of limitations and capacities in typical disabilities. Web-based instruction. No class meetings.

388. Autism and Developmental Disabilities. An intensive study of the psychological, sociological, physiological, and educational factors relating to the assessment, learning styles, and teaching of children with autism and other developmental disabilities. Includes affective, cognitive, and psychomotor development of the physically disabled and those with multiple developmental disabilities. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences, including a course in special education; and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 3: Teaching Individuals with Autism and Developmental Disabilities. Development of highly specialized skills needed to teach those with developmental disabilities. Emphasis is on the basic principles of learning that underlie effective instructional strategies and on ways to structure the environment to promote learning.

Topic 5: Enhancing Communication Potential in People with Autism and Developmental Disabilities. Communication intervention for those with developmental disabilities. Designed to help students learn to assess communication behavior and to create intervention programs that enhance existing communication skills and teach new skills. Hands-on experience with a variety of augmentative and alternative communication systems.

Topic 6: Educational Implications of Autism and Developmental Disabilities. Introduction to the learning and behavioral characteristics of those with developmental disabilities, including autism and related developmental disorders. Designed to give students an understanding of the educational needs of those with developmental disabilities and of ways to address those needs through special education and related services.

Topic 7: Challenging Behavior and Developmental Disabilities. The nature, assessment, and treatment of the challenging behaviors that are prevalent in individuals with developmental disabilities, such as aggression, self-injury, property destruction, tantrums, and stereotyped movements.

Topic 8: Research on Inclusion for Students with Autism and Developmental Disabilities. Literature relevant to the inclusion of students with developmental disabilities, including classic readings on the history and philosophy of inclusion; analysis of the evidence supporting current best-practice models. Emphasis on critical reading of empirical studies on the efficacy of inclusive education.

Topic 9: Assessment Research in Autism and Developmental Disabilities. Research related to the assessment of students with developmental disabilities, examined in the context of the theoretical orientations that underlie the major assessment strategies. Includes a review of studies related to the development and validation of contemporary assessment instruments and discussion of the scientific process involved in developing and validating assessment tools.

Topic 10: Advances in the Understanding and Treatment of Autism. Review of recent advances in the understanding and treatment of autism and related developmental disorders. The social forces that shape research and scientific understanding and the political forces that influence the delivery of education and related services, as well as implications for effective leadership in special education.
389. Special Education Administration. Study of the content and process of special education administration, including technological forecasting methods, case law as it applies to people with disabilities, management of problem employee styles, and related topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences, including a course in special education; and consent of instructor.

No class meetings.

Topic 1: Administration of Special Education Programs. Application of principles of administration and leadership to problems associated with special education and instruction for special populations.

Topic 2: Educational Futures. Students are directed toward career goals: affective change toward the future and change processes; acquisition of knowledge about several technological forecasting methods and of skill in the use of one method.

Topic 3: Special Education Administration Seminar: Current Issues in Special Education.

Topic 4: Law and Disabilities. An examination of case law that covers definitions, equal educational opportunity, employment, accessibility, freedom of choice, freedom from residential confinement, housing and zoning restrictions, equal access to medical services, procreation, marriage, children, contracts, ownership and transfer of property, voting, and holding public office.

Topic 5: Special Populations. Leadership issues associated with serving school-age children through federal and state “title” programs, including English as a second language, bilingual education, and Chapters I and II. Also covered are alternative schools; programs for juvenile offenders, pregnant students and young mothers, and at-risk students such as those who have potential for suicide; and services for the homeless, the abused, and chemical abusers. Students read the significant literature and develop knowledge and skill in planning and designing delivery models.

393. Graduate Seminar in Special Education. Discussion of critical issues; critiques of literature; development of theories and models regarding disabling conditions. The equivalent of three class hours a week for one semester. May be repeated for credit when the topics vary. Special Education 380 and 393 may not both be counted unless the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, or other behavioral sciences; and consent of instructor.


Topic 13: Issues in Special Education. Issues and challenges affecting decision-making and practices by special education teachers, general education teachers, assessment personnel, and school administrators in the treatment and education of students with disabilities. The primary goal is to advance students' understanding of the contributions of history, legislation, policy, research, practice, and recent trends as they apply to the resolution of major issues in special education and programs for students with disabilities.

Topic 17: Instructional Designs Using Assistive Technology. The design of instruction for students with disabilities by using assistive and instructional technologies.

Topic 18: Collaboration. Strategies such as collaborative consultation and teamwork models, which are used to improve learning outcomes for students with diverse learning needs.


394, 694. Practicum in Special Education. Supervised field placement in specialized settings serving exceptional children and youth. Conference course. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

395. Independent Study. Individual research planned, executed, and reported under supervision. May be repeated for credit when the topics vary. Special Education 380 and 395 may not both be counted unless the topics vary. Prerequisite: Admission to an approved program of graduate study or to candidacy for the doctoral degree in education, or graduate standing and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Independent Study in Special Education Administration.

Topic 2: Independent Study in Behavioral Disorders.


Topic 6: Independent Study in Rehabilitation Counseling.

Topic 7: Independent Study in Early Childhood Special Education.

Topic 15: Independent Study in Multicultural Special Education.

395D. Doctoral Seminar in Special Education and Rehabilitation Counselor Education. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to an approved program of graduate study or to candidacy for the doctoral degree in education, and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Special Education Administration.
Topic 2: Behavioral Disorders.
Topic 4: Rehabilitation Counseling.
Topic 5: Early Childhood Special Education.
Topic 7: Multicultural Special Education.

695S. Professional Seminar. Forum for students to become familiar with the areas of study, research, and professional practice within special education. Students also refine their professional writing and communication skills, critically evaluate current and emerging research in the field, and examine the historical, legal, philosophical, and theoretical foundations of special education. Three lecture hours a week for two semesters. Required of all doctoral students. Prerequisite: For 695SA, graduate standing and admission to the doctoral program in special education; for 695SB, Special Education 695SA.

696. Research Mentoring. Designed to develop the knowledge and skills students need in order to conduct research. Under the supervision of a three-member committee, students develop a publishable-quality synthesis of the professional literature on a topic related to their research interests. Conference course. Offered on the credit/no credit basis only. Required of all doctoral students prior to admission to candidacy. Prerequisite: For Special Education 696A, graduate standing, completion of specialization core requirements, at least three graduate courses in research methods and data analysis, and consent of the graduate adviser; for Special Education 696B, 696A.

396C. Trends and Issues in Special Education and Rehabilitation Counseling. An examination of current trends and issues in areas within special education and rehabilitation counselor education that influence policies and procedures in the public schools, teacher preparation programs, and community agencies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; twelve semester hours of upper-division coursework in education, psychology, sociology, or other behavioral sciences; and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Trends and Issues in Early Childhood Special Education.
Topic 2: Trends and Issues in Learning Disabilities/Behavioral Disorders.
Topic 4: Trends and Issues in Rehabilitation Counselor Education.

Topic 5: Trends and Issues in Special Education Administration.

396R. Research Methods and Data Analysis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in education, and consent of instructor.

Topic 1: Research Methodology in Special Education.
Topic 2: Single-Subject Research Design. The use of single-subject research designs to make data-based decisions about program effectiveness and student outcomes; integration of applied research into classroom instruction as part of evidence-based professional practice in educating students with severe and multiple disabilities.

Topic 3: Advanced Data Analysis in Special Education.

396T. Directed Research in Special Education. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in education, and consent of instructor.

Topic 1: Directed Research in Special Education Administration.
Topic 2: Directed Research in Behavioral Disorders.
Topic 4: Directed Research in Learning Disabilities.
Topic 6: Directed Research in Rehabilitation Counseling.
Topic 7: Directed Research in Early Childhood Special Education.
Topic 8: Directed Research in Severe and Multiple Disabilities.
Topic 13: Directed Research in Multicultural Special Education.

397C. Advanced College Teaching. Supervised teaching experience at the college level. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, admission to an approved program of graduate study or admission to candidacy for the doctoral degree in special education, Special Education 398T, and consent of the graduate adviser.

397P, 697P. Graduate Internship. Supervised practice in a professional position. The equivalent of three or six lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in education, and consent of instructor.

397S. Supervised Teaching in Special Education. Instruction in the supervision of student teachers and observers at the undergraduate level. Conference course. Prerequisite: Graduate standing, appointment as a teaching assistant and supervisor of undergraduate student teachers, and consent of instructor.
698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in special education and consent of the supervising professor and the graduate adviser; for 698B, Special Education 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in special education and consent of the graduate adviser.

398T. College Teaching in Special Education. Three lecture hours a week for one semester. Required for teaching assistants and assistant instructors. Prerequisite: Graduate standing.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Special Education 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

The Cockrell School of Engineering has outstanding research and teaching facilities on the main campus and at the J. J. Pickle Research Campus. Details are given in the individual program descriptions that follow.

AREAS OF STUDY

Graduate work in engineering may lead to the Master of Science in Engineering or the Doctor of Philosophy in the following majors: aerospace engineering, biomedical engineering, chemical engineering, civil engineering, electrical and computer engineering, engineering mechanics, materials science and engineering, mechanical engineering, operations research and industrial engineering, and petroleum engineering. The Master of Science in Engineering is also offered in architectural engineering; in environmental and water resources engineering; and, through an alternatively scheduled program, in engineering management. Information about the concentrations offered in each field is given in the program descriptions that follow.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN ENGINEERING

This degree is offered in three options: with thesis, with report, and without thesis or report. All three options may not be available in any one field of study; information about the options in each of the fields is given in the program descriptions.

DOCTOR OF PHILOSOPHY

The Doctor of Philosophy is a research degree. The student pursues coursework approved by the Graduate Studies Committee in the field of specialization and in supporting work outside the major. Before admission to candidacy, the student is expected to pass qualifying examinations and to meet additional requirements established by the Graduate Studies Committee. Admission to candidacy must be approved by the committee and the graduate dean. A dissertation that is an original contribution to scholarship and is the result of independent investigation in the major area is required of every candidate.

ALTERNATIVELY SCHEDULED PROGRAMS

Several alternatively scheduled programs allow professionals to pursue the Master of Science in Engineering while working full time. Classes generally meet once a month on Fridays and Saturdays. Students may major in engineering management or in electrical engineering with a concentration in either software engineering or integrated circuits and systems. Additional information about alternatively scheduled programs is published by the Center for Lifelong Engineering Education at http://lifelong. engr.utexas.edu/degree/index.cfm.
DUAL DEGREE PROGRAMS

The Cockrell School offers two dual degree programs: one in mechanical engineering (manufacturing and decision systems engineering) and business administration, and one in civil engineering and public affairs. More information is available from the graduate adviser in each program.

INTERCOLLEGIAL PROGRAMS

Graduate engineering study may also be a component of the master’s and doctoral degrees in computational science, engineering, and mathematics described on pages 491–496.

AEROSPACE ENGINEERING

Master of Science in Engineering
Doctor of Philosophy

OBJECTIVES

The aerospace engineering graduate program focuses on teaching and research in analytical, computational, and experimental methods in the areas of aerothermodynamics and fluid mechanics; solids, structures, and materials; structural dynamics; guidance and control; and orbital mechanics. The student may concentrate in any of these five areas. The objectives of the program are to enable the student to attain a deeper understanding of aerospace engineering fundamentals, a knowledge of recent developments, and the ability as a master’s degree student to participate in research and as a doctoral degree student to conduct individual research. The goals are accomplished through coursework, seminars, and active research programs.

AREAS OF STUDY AND FACILITIES

Aerothermodynamics and fluid mechanics. This concentration involves study and research in experimental, theoretical, and computational aerodynamics, gas dynamics, turbulence, plasma dynamics, heat transfer, and combustion. Research is presently being conducted in nonequilibrium and rarefied gas flows, turbulence control, shock-boundary layer interactions, thermal and glow-discharge plasmas, turbulent mixing/combustion, numerical methods for turbulent reacting flows, multiphase combustion nanoparticle synthesis in flames, and advanced optical diagnostics and sensors. Facilities include Mach 2 and Mach 5 blowdown wind tunnels, a 1.25-second low-gravity drop tower, a 5’ x 7’ low-speed wind tunnel, a 15” x 20” water channel, a laser sensor laboratory, combustion facilities, a plasma engineering laboratory, and extensive laser and camera systems for advanced flow diagnostics. The excellent computational facilities include a variety of workstations, a 256-core Linux cluster, and access to very-large-scale, high-performance computers.

Solids, structures, and materials. This concentration involves study and research in mechanics of composite materials, fracture mechanics, micromechanics of materials, constitutive equations, mechanical behavior at high strain rates, structural analysis, and structural stability. Experimental facilities include equipment for static structural testing; digital data acquisition equipment; uniaxial and biaxial materials-testing machines; custom loading devices; environmental conditions.
chambers; microscopes; photomechanics facilities; composites processing equipment; facilities for microstructural analysis; and high-speed imaging and high-strain-rate mechanical testing facilities. Computing facilities include workstations, high-performance computers, and networks of workstations.

**Structural dynamics.** This concentration involves study and research in theoretical, computational, and experimental structural dynamics, including aeroelasticity, rotor dynamics, morphing structures, adaptive structures, vibration and noise control, and computational techniques for very-large-scale vibration analysis. Computational and experimental facilities include high-performance shared- and distributed-memory multiprocessor systems, actuators, sensors, balances, and data-acquisition systems for structural testing, system identification, and control. Facilities for testing aeroelastic models on a whirl test stand or in a wind tunnel are also available.

**Guidance and control.** This concentration involves study and research in system theory, control theory, optimal control theory, time-delay observers, estimation theory, and stochastic control theory, and the application of these theories to the navigation, guidance, control, and flight mechanics of aerospace vehicles. Research is primarily analytical and numerical in nature. Excellent computational and experimental facilities are available for the study of various guidance and control applications.

**Orbital mechanics.** This concentration involves study and research in the applications of celestial mechanics, analytical dynamics, geophysics, numerical analysis, optimization theory, estimation theory, and computer technology to model the dynamic behavior of natural and artificial bodies in the solar system. Two areas of interest are satellite applications and spacecraft design.

Satellite applications involve the study of active and passive satellite remote sensing for research in earth, ocean, atmospheric, and planetary science; satellite positioning, primarily using the Global Positioning System (GPS) for earth science research; and satellite tracking and instrumentation, including altimeters, for a variety of geophysical and geodetic studies, including the study of Earth's gravity field and rotation. Research is supported by a large database of satellite remote sensing measurements, a variety of computer resources, GPS receivers, and image processing equipment.

Spacecraft design involves the application of all disciplines of aerospace engineering to the design of aerospace vehicles, missions, and related systems. Experimental facilities include a satellite laboratory containing high-gain antennas for satellite tracking and a clean room area for fabrication and testing of space flight hardware. Research is primarily applied in nature and involves the synthesis of information from all engineering disciplines, mathematics, the natural sciences, economics, project management, and public policy.

---

**GRADUATE STUDIES COMMITTEE**

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Maruthi R. Akella
- Jeffrey K. Bennighof
- Srinivas V. Bettaipour
- Graham F. Carey
- Noel T. Clemens
- Clinton N. Dawson
- Leszek F. Demkowicz
- Raynor L. Duncombe
- Wallace T. Fowler
- David B. Goldstein
- Rui Huang
- Thomas J. Hughes
- Todd E. Humphreys
- David G. Hull
- Stelios Kyriakides
- Chad M. Landis
- Kenneth M. Liechti
- Glenn Lightsey
- Lori A. Magruder
- Belinda Marchand
- Hans M. Mark
- Mark E. Mear
- Cesar A. Ocampo
- J. T. Oden
- Laxminarayanan L. Raja
- Venkatramanan Raman
- Krishnaswa Ravi-Chandar
- Gregory J. Rodin
- Bob E. Schutz
- Jayant Sirohi
- Byron D. Tapley
- Charles E. Tinney
- Philip L. Varghese
- Mary F. Wheeler

---

**ADMISSION REQUIREMENTS**

The prerequisite for graduate study in aerospace engineering is a bachelor’s or master’s degree in aerospace engineering or in a related field of engineering or science. Graduate study in orbital mechanics is possible for those with degrees in engineering, science, or mathematics.

**DEGREE REQUIREMENTS**

**Master of Science in Engineering.** Students seeking the master’s degree have three options, each requiring a total of thirty semester hours of credit. The thesis option requires twenty-four semester hours of coursework plus six hours in the thesis course. The report option requires twenty-seven hours of coursework plus three hours in the report course. The option without a thesis or report requires thirty semester hours of coursework.
Students receiving financial aid through the sponsorship of the department are expected to choose the thesis option. The report option and the option without a thesis or report each can be completed in one year.

Regardless of the option chosen, a student is required to take six hours of supporting coursework outside of their technical area. Only courses completed on the letter-grade basis may be counted toward the degree. Only three hours of business-related courses may be counted. Students may count no more than six hours of upper-division undergraduate coursework toward the degree.

The following is a template for the student beginning the thesis option in a fall semester. A student who follows this schedule will be considered to be making satisfactory progress toward the degree.
1. Take courses during the fall and spring semesters and begin research.
2. Complete research for thesis during the summer.
3. Complete coursework in the second fall semester.
4. Write thesis and graduate within one and one-half years.

Doctor of Philosophy. The PhD program consists of coursework, qualifying examinations, and the dissertation. Students who have master’s degrees must complete at least twenty-four hours of coursework; those who enter the graduate program with bachelor’s degrees must complete at least forty-eight hours of coursework.

To be admitted to candidacy for the Doctor of Philosophy degree, the student must pass both a written and an oral examination. The written examination is general in nature and covers subject matter studied through the first year of graduate work. The oral examination is in the student’s specialty area and is conducted by a committee of faculty members whose interests are in that area. Students may not take courses on the credit/no credit basis until they have passed the written qualifying examination.

The following is a template for the student with an MSE degree who begins the doctoral degree program in a fall semester. A student who follows this schedule will be considered to be making satisfactory progress toward the degree.
1. Take courses during the fall and spring semesters and begin research.
2. Pass the written qualifying exam during the summer.
3. Pass the oral qualifying exam soon after the written exam.
4. Apply for candidacy before the end of the second fall semester.
5. Continue research for the next two years.
6. Write the dissertation and graduate within five years.

FOR MORE INFORMATION

Campus address: W. R. Woolrich Laboratories (WRW) 215D, phone (512) 471-7595, fax (512) 471-3788; campus mail code: C0600
Mailing address: The University of Texas at Austin, Graduate Program in Aerospace Engineering, Department of Aerospace Engineering and Engineering Mechanics, 1 University Station C0600, Austin TX 78712
E-mail: ase.grad@mail.ae.utexas.edu
URL: http://www.ae.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

AEROSPACE ENGINEERING: ASE

380P. Mathematical Analysis for Aerospace Engineers. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
Topic 1: Analytical Methods I. Introduction to modern mathematics, real analysis of functions of one variable, linear algebra, elements of real analysis of functions of many variables, calculus of variations.
381P. System Theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Linear Systems Analysis. Linear dynamical systems; controllability and observability; stability; realization theory; state-feedback and observers.

Topic 2: Multivariable Control Systems. Multivariable feedback systems; factorizations and controller parameterization; limitations and trade-offs of feedback; robust stability and performance; robust H_∞ and H_2 control methods. Additional prerequisite: Aerospace Engineering 381P (Topic 1) or the equivalent.

Topic 3: Optimal Control Theory. Necessary conditions and sufficient conditions for the parameter optimization and optimal control problems; engineering applications.


Topic 6: Statistical Estimation Theory. Least squares; sequential and batch processors; optimal, linear, recursive, maximum likelihood, and minimum variance estimates; square-root filtering; filter divergence; discrete and continuous Kalman filters.


382Q. Fluid Mechanics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Foundations of Fluid Mechanics. Fundamental equations; constitutive equations for Newtonian fluids; inviscid, incompressible potential flow; viscous flow including exact solutions and boundary layer theory; compressible flow.


Topic 10: Plasmas and Reactive Flows. Fundamental description of plasmas and reactive flows. Includes derivation of common governing transport equations for a broad class of electrically conducting and nonconducting reactive gases, and electromagnetic field interactions with gases, gas-phase and surface kinetics, transport properties, and applications.

382R. Aerodynamics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 3: Hypersonic Aerodynamics. Characteristics and assumptions of hypersonic flow; hypersonic similarity; Newtonian theory; constant density solutions.

Topic 5: Advanced Computational Methods. Development and implementation of numerical methods for solution of transport equations; computational grid generation; applications to fluid flows, including shock waves.


384P. Structural and Solid Mechanics. Three lecture hours or two lecture hours and three laboratory hours a week for one semester, depending on the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.


Topic 4: Finite Element Methods. Same as Computational Science, Engineering, and Mathematics 393F and Engineering Mechanics 394F. Derivation and implementation of the finite element method; basic coding techniques; application to problems of stress and diffusion. Three lecture hours a week for one semester. Aerospace Engineering 384P (Topic 4) and Computational and Applied Mathematics 394F may not both be counted.

Topic 6: Advanced Structural Dynamics. Analysis of complex flexible systems; discretization of complex structures by the finite element method; advanced computational methods for large finite element models. Three lecture hours a week for one semester. Additional prerequisite: Aerospace Engineering 384P (Topic 3) or Engineering Mechanics 384L or the equivalent.

Topic 8: Selected Topics in Aeroelasticity. Classical and contemporary topics in aeroelasticity; general introduction to aeroelastic phenomena, including flutter, divergence, control reversal, and flexibility effects on stability and control; aeroelastic tailoring; active control concepts; unsteady aerodynamic theories for lifting surfaces and bodies; aeroelastic system identification, including nonlinear systems (theory and laboratory applications). Three lecture hours a week for one semester.

Topic 11: Mechanics of Composite Materials. Constitutive equations; micromechanical and macromechanical behavior of laminas; strength and stiffness in tension and compression, theory of laminated plates; strength of laminates; delamination. Three lecture hours a week for one semester.

387P. Flight Mechanics, Guidance, Navigation, and Control. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 2: Mission Analysis and Design. Mission design and mission constraints, launch windows; rendezvous analysis; orbital design interactions with thermal and structural analysis; design of a typical mission.

Topic 6: Optimal Spacecraft Trajectories. Optimal control of spacecraft; primer vector theory; impulsive maneuvers; finite burn high/low thrust maneuvers; solar sails; numerical methods; applications to contemporary trajectory problems using single or multiple spacecraft.

388P. Celestial Mechanics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 2: Celestial Mechanics I. N-body problem; three-body problem; restricted three-body problem; Jacobian integral; zero-velocity curves; equilibrium points; stability; linearized solutions; variational equations; periodic orbits; the two-body problem; variation of parameters; Lagrange’s planetary equations; applications to near-earth and deep-space trajectories; numerical methods.

Topic 3: Celestial Mechanics II. Hamiltonian mechanics; dynamical systems; canonical transformations; invariant manifolds; Poincaré surfaces of section; applications to restricted n-body problems; applications to sun-earth-moon or sun-planet-moon particle trajectory problems. Additional prerequisite: Aerospace Engineering 388P (Topic 2).

389P. Satellite Applications. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Determination of Time. Concepts of time; fundamental reference system; polar motion; practical methods in time determination and dissemination; historical and present-day time scales; atomic clocks; time transfer via satellite.

Topic 2: Satellite Geodesy. Representations of planetary gravitational fields; determination of spherical harmonic coefficients; geoids and gravity anomalies; temporal variations in the geopotential; planetary rotational dynamics.

Topic 7: The Global Positioning System. Comprehensive review of the theory and applications of the Global Positioning System (GPS), including the space segment, the control segment, the user segment, dilution of precision, GPS time, anti-spoofing, selected availability, differential/kinematic/dynamic techniques, field procedures, and GPS data collection and analysis. Applications of ground-based, aircraft-based, and satellite-based GPS receivers.

Topic 8: Satellite Control Systems. Spacecraft equations of motion; linearization and stability, classical control methods; digital and sampled data systems; multivariable control; attitude determination and control; momentum management; coupled modes; and case studies in satellite control.
Topic 9: Synthetic Aperture Radar: Principles and Applications. Synthetic Aperture Radar (SAR) imaging for Earth remote sensing, including image formation concepts and interpretation, radar interferometry processing and strategies, surface deformation, topographic mapping, and polarimetric applications.

396. Special Topics. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

397. Graduate Seminar. Student, faculty, and visitor presentations of current research topics. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

Topic 1: Orbital Mechanics Seminar.
Topic 2: Aeronautics Seminar.
Topic 3: Guidance and Control Seminar.
Topic 5: Structural Dynamics Seminar.

397K, 697K. Research. Three or six hours of research a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Research in Structural Dynamics.
Topic 2: Research in Fluid Mechanics.
Topic 3: Research in Guidance and Control.
Topic 4: Research in Orbital Mechanics.

ARCHITECTURAL ENGINEERING

Master of Science in Engineering

OBJECTIVES

The objectives of the graduate program in architectural engineering are excellence in engineering education, research, and professional service. The program seeks to educate students to assume leadership positions in engineering practice, research, and education. The program also seeks to advance the state of the art and of the practice of architectural engineering at both fundamental and applied levels through extensive research programs, and to disseminate this research through professional and scholarly activities. The architectural engineering program encompasses construction engineering and project management, construction materials, building energy and environments, indoor air quality, building performance, and structural engineering. Students may also take courses in other disciplines, such as environmental and water resources engineering, geotechnical engineering, ocean engineering, mechanical engineering, and transportation engineering, and in interdisciplinary areas.

FACILITIES FOR GRADUATE WORK

The Architecture and Planning Library and the McKinney Engineering Library offer excellent reference facilities. Well-equipped laboratories, including the Phil M. Ferguson Structural Engineering Laboratory, are available in the areas of static and dynamic structural testing of building systems and structural elements of steel, reinforced and prestressed concrete, masonry, timber, and polymers. The structures laboratories, which include both architectural and civil engineering facilities, contain a wide range of loading machines and equipment, environmental chambers, and facilities for...
model testing. The virtual design laboratory provides state-of-the-art computer workstations. The construction laboratories include a well-equipped computer cluster on the main campus and a high-bay laboratory for construction automation research at the J. J. Pickle Research Campus. The automation laboratory includes a large-scale hydraulic robot test bed, a large rectilinear manipulator, and many computer workstations; at any one time, several full-scale prototyping projects are under way. The Construction Materials Research Group laboratory is equipped with facilities for proportioning and batching; for chemical, mechanical, and microstructural testing; and for durability evaluation of concrete and polymer concrete. Also available are the latest computer facilities.

AREAS OF STUDY

Graduate study and research is offered in construction engineering and project management, construction materials, building energy and environments, building performance, indoor air quality, and structural engineering.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Oguzhan Bayrak  Atila Novoselac
Carlos H. Caldas  William J. O’Brien
David W. Fowler  James T. O’Connor
Todd A. Helwig  Jeffrey A. Siegel
James O. Jirsa  Michael Webber
Richard E. Klingner  Dan L. Wheat
Howard M. Liljestrand  Ying Xu

DEGREE REQUIREMENTS

The following requirements for the Master of Science in Engineering degree with a major in architectural engineering are in addition to the general requirements for the master’s degree. The thirty-semester-hour plan with thesis requires twenty-four hours in organized courses and six hours in the thesis course. Of the twenty-four hours of organized coursework, six to twelve hours may be in a minor area of concentration; the remaining twelve to eighteen hours must be in the major. The courses must be logically related and the program must be approved by the graduate adviser.

A thirty-semester-hour degree plan is also available under the report option, which includes a report prepared in Architectural Engineering 398R according to procedures set by the Graduate School; and under an option that includes a report prepared in Architectural Engineering 398D, or an approved program of coursework only, according to procedures set by the Graduate Studies Committee. Coursework in both architectural and civil engineering may be used to fulfill major area course requirements.

FOR MORE INFORMATION

Campus address:  Ernest Cockrell Jr. Hall (ECJ) 5.200, phone (512) 471-4921, fax (512) 471-0592; campus mail code: C1752
Mailing address:  The University of Texas at Austin, Graduate Program in Architectural Engineering, Department of Civil, Architectural, and Environmental Engineering, 1 University Station C1752, Austin TX 78712
E-mail:  caee.grad@engr.utexas.edu
URL:  http://www.caee.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ARCHITECTURAL ENGINEERING: ARE

381E. Design of Energy Efficient and Healthy Buildings. Design of buildings for low energy use and optimal indoor air quality. Includes ventilation, energy efficiency, moisture problems, and prevention by design. Three lecture hours a week for one semester. Prerequisite: Graduate standing in engineering or graduate standing and consent of instructor.

382. Independent Studies in Architectural Engineering. Investigation of problems in building construction, selected by the student with approval of the graduate adviser. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered
Research Studies in Architectural Engineering. Three lecture hours a week for one semester, or the equivalent in conference hours, or as stated for the topic. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Construction and Project Management.
Topic 2: Structures.
Topic 3: Materials and Methods.
Topic 4: Environmental Engineering.
Topic 5: Design Principles and Procedures.

383. Research Studies in Architectural Engineering. Three lecture hours a week for one semester, or the equivalent in conference hours, or as stated for the topic. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Construction and Project Management.
Topic 2: Structures.
Topic 3: Materials and Methods.
Topic 4: Forensic Engineering: Materials and Structures. Same as Civil Engineering 397F. Methods of forensic analysis; role of the expert witness; methods of dispute resolution; case studies; term project. Two lecture hours a week for one semester, with three laboratory hours a week for presentation of case studies.

389H. HVAC Design. Design of heating, ventilation, and air-conditioning systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing and three of the following courses: Architectural Engineering 346N, Civil Engineering 319F, Mechanical Engineering 320, 326, 330, 339.

389T. Indoor Air Quality: Transport and Control. Transport and control of indoor pollutants. Includes particulate removal and pollutant transport into and within indoor environments. Three lecture hours a week for one semester. Prerequisite: Graduate standing in architectural or civil engineering.

389P. Project Automation. Three lecture hours a week for one semester. Some topics may require additional hours; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

395Q. Project Controls. Three lecture hours a week for one semester. Some topics require two lecture hours and three laboratory hours a week; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

395R. Project Information Systems. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.


395S. Project Organization. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 4: Project Management. Same as Civil Engineering 395S (Topic 4: Project Management). Overall aspects of project and portfolio management from inception to successful operation: project selection and feasibility, contracting methods, project scheduling, cost control systems, project communications, project scope and quality management, human resource management, partner selection and management, project leadership, project closeout, and global project management.

395T. Project Technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

395U. General Topics in Construction Engineering and Project Management. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 3: Advanced Legal Concepts. Same as Civil Engineering 395U (Topic 3: Advanced Legal Concepts). Contracts, documentation requirements, claims avoidance, and settlement of claims by alternative dispute resolution. Students conduct and present in-depth studies of the most frequent causes of claims (delay, disruption, acceleration, soil conditions, and changes) and consider the way the court establishes causation and determines damages.
OBJECTIVES

Graduate degrees in biomedical engineering have been offered by the University since 1974. The undergraduate degree program and the Department of Biomedical Engineering were established in 2001. The department fosters a unique environment in which scholars and scientists may excel in both fundamental research and its translation to clinical applications.

The mission of the UT Austin graduate program in biomedical engineering is to educate students in the fundamentals of engineering and science as they affect biology and medicine and to perform multidisciplinary, disease-oriented research at the molecular, cellular, organ, and systemic levels. The program aims fully to integrate biology and engineering research and education at the graduate level.

The graduate program has more than a hundred students, with backgrounds in biology, chemistry, physics, and various engineering disciplines. Students come from all over the United States and the world to gain unique knowledge and experience. Apart from coursework and research in some of the world's premier laboratories, there are many opportunities for personal and professional development through interaction with industry professionals, conference attendance, and seminars with leaders in the field.

Doctoral and master’s thesis students receive full financial support, either through teaching assistant or graduate research assistant positions or through one of many fellowships. More than half the students in the program have fellowships from a source like the National Science Foundation, IGERT, the Graduate School, or the Cockrell School of Engineering.

FACILITIES FOR GRADUATE WORK

The Department of Biomedical Engineering has offices and laboratories in the Biomedical Engineering Building, completed in 2008. Research is also conducted at the partner institutions in Houston, at the University of Texas Medical Branch at Galveston, and at the University of Texas Health Science Center at San Antonio. Students have access to facilities for research in biochemical and protein engineering, cell and tissue engineering, gene therapy, cell-electronic interfaces and nanostructure engineering, cell biomechanics, whole-body biomechanics and gait analysis, thermal engineering, optical spectroscopy and imaging, ultrasound imaging, laser-tissue interactions, image processing, biosignal analysis and computer graphics, protein bioinformatics, functional genomics, protein modeling, and computational disease diagnosis.

In addition to individual research laboratories, a number of core facilities are available for research at the medical school campuses. The following are located on the University of Texas at Austin campus:
Institute for Cellular and Molecular Biology core facilities. The Institute for Cellular and Molecular Biology (ICMB) was created by the College of Natural Sciences to foster the growth of modern cell and molecular biology research at the University. The ICMB provides four core user facilities. The DNA and Genomics Facility provides automated sequencing and fragment analysis. Two ABI Prism 377 DNA sequencers and an ABI 3700 DNA analyzer are used. The ABI 3700 is a capillary-based sequencer that allows up to six hundred samples to be run daily; the facility currently analyzes more than two thousand samples monthly, with a success rate of about 95 percent. An average run generates readable data between five hundred and seven hundred bases, and turnaround time is one or two days.

The Protein Microanalysis Facility provides de-novo N-terminal protein/peptide sequencing, internal sequencing/peptide mapping, amino acid composition analysis, peptide synthesis, and mass spectrometry (ESI-MS, LC-MS, and MALDI-TOF-MS). Liquid chromatography, high-pressure liquid chromatography (HPLC), and capillary electrophoresis are available for preparative and analytical runs. Two protein sequencers, an amino acid analyzer, a peptide synthesizer, a capillary electrophoresis system, an analytical HPLC system, an electrospray mass spectrometer, and a MALDI-TOF mass spectrometer are operated in the facility. The running of gels and electroblotting for sequencing also can be arranged.

The Microscopy and Imaging Facility contains a 100-kv transmission electron microscope (TEM), a high-resolution 100-kv TEM, a scanning electron microscope (SEM), a flow cytometer, and a laser scanning confocal microscope. The laser scanning fluorescence confocal microscope features a krypton/argon mixed gas laser, an ultraviolet laser, and DIC optics in an inverted microscope. Three channels can be monitored simultaneously at high resolution. The lasers supply excitation at 354/361 nm, 488 nm, 568 nm, and 647 nm.

The IGERT Microscopy/Spectroscopy User Facility contains four major pieces of equipment. A user-facility manager is available to provide training and assistance.

1. A deconvolution microscope workstation with full-featured image processing software, coupled with a high-resolution, low-light camera, can computationally reassign (deconvolve) the out-of-focus components of a through-focus series of a specimen using either user-defined theoretical or measured-point spread functions. The image processing software has features for both the quantitation of image sets and extensive three-dimensional reconstruction and volume rendering.

2. A Fourier transform infrared (FTIR) spectrophotometer with added auxiliary experimental module can be used in grazing angle and transmission modes for the characterizations of thin films and monolayers.

3. An ultraviolet/visible diode array spectrophotometer with Peltier temperature-controlled cuvette holder collects simultaneous wavelengths in either absorbance or transmittance modes. This ability is required to characterize samples with rapid reaction times and to follow enzyme kinetics.

4. A cuvette-based scanning spectrofluorometer with a laser fluorescence lifetime module is used to study a wide variety of liquid and solid samples in both steady-state and time-resolved fluorescence modes. The intensity-based, time-domain system accurately measures fluorescence decays over multiple time scales; coupled with the dye laser/frequency doubler, it allows accurate measurements of solid samples with low quantum yields or turbid liquid samples with high scattering properties.

Texas Materials Institute and Center for Nano and Molecular Science and Technology core facilities. The Texas Materials Institute (TMI) maintains core facilities in electron microscopy, surface analysis, polymer characterization, and X-ray scattering. The Center for Nano and Molecular Science and Technology (CNM) is a multidisciplinary, collaborative research center focused on several emerging areas of research. A multi-departmental effort of the College of Natural Sciences and the Cockrell School of Engineering, CNM houses extensive shared user facilities, including a picosecond fluorescence lifetime spectrometer/microscope; an FTIR spectrometer; a near-field scanning optical microscope; organic thin film fabrication equipment; beam lithography systems; a molecular force probe microscope; a transmission electron microscope; and a time-correlated single photon counting facility.

Animal Resources Center facilities. The Animal Resources Center (ARC) is a fourteen-thousand-square-foot state-of-the-art facility in which animal surgical procedures are performed. A separate building houses transgenic and knock-out animals. The facility is fully staffed and equipped in compliance with NIH and AAALAC guidelines for accreditation. Available are animal operating rooms, support staff, equipment for preparing tissue specimens, and veterinary consultation for both animal husbandry and surgery.
Computer and computational facilities. All research groups maintain computers for use by their graduate students, and each academic unit has one or more core computer facilities. The University also has core computer user facilities across campus. In addition, advanced computational facilities are maintained by the Institute for Computational Engineering and Sciences (ICES). Extensive computing facilities are available to faculty members and students, including a scientific visualization lab, a medium-sized massively parallel processing computer, a network of eighteen RS6000s networked by optic fiber, and many X-terminals. Also available are a forty-five-node Intel Paragon and a thirty-two-node Cray J90.

Library facilities. The University has outstanding library facilities, including a general collection of 2.5 million volumes in the Perry-Castañeda Library and topical collections in specialized libraries like the Mallet Chemistry Library, the McKinney Engineering Library, and the Life Sciences Library.

AREAS OF STUDY

The biomedical engineering program is interdisciplinary, with a faculty that includes members of the School of Biological Sciences, the Departments of Kinesiology and Health Education, Chemistry and Biochemistry, Psychology, Biomedical Engineering, and several other departments in the Cockrell School of Engineering. In addition, several faculty members from the University of Texas Medical Branch at Galveston, the University of Texas Health Science Center at San Antonio, the University of Texas Health Science Center at Houston, and the University of Texas M.D. Anderson Cancer Center serve on the Graduate Studies Committee and supervise biomedical engineering students.

The current research of this faculty is focused in the following areas: biomedical imaging and instrumentation, cellular and biomolecular engineering, computational biomedical engineering, and instrumentation. Research activities embrace such topics as bioinstrumentation, modeling and control of biological systems, nerve fiber regeneration, biomedical computer and information technology, biomechanics, cell and tissue mechanics, thermal processes, musculoskeletal modeling, acquisition and analysis of in vivo and ex vivo spatial human biomechanics data, acquisition of physiological data by noninvasive means, cell and tissue engineering, design and testing of novel fluid and drug delivery systems, effects of laser radiation on biological material, laser applications in medicine, coherence imaging of biological materials, pulsed photothermal tomography, biorheology, visual system instrumentation, computer vision, production and purification of genetically engineered proteins, DNA and drug delivery, cell-electronic interfaces, acquisition and processing of neurological signals, neuroprostheses, applications of finite element modeling in medicine, acoustics and ultrasound, image processing, thermography, hyperthermia, genomic signal processing, biological and medical informatics, and nanotechnology.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011. The names are organized by institution.

University of Texas at Austin

Lawrence D. Abraham
Catherine G. Ambrose
Ananth Annapragada
Chandrajit L. Bajaj
Aaron Blair Baker
Ronald E. Barr
Adela Ben-Yakar
Alan C. Bovik
Claudio Cavasotto
Shaochen Chen
Jodie L. Conyers
Kevin N. Dalby
Kenneth R. Diller
Jonathan B. Dingwell
Andrew K. Dunn
Andrew Ellington
Stanislav Emelianov
Robert H. Flack
Wilson S. Geisler III
George Georgiou
Joydeep Ghosh
Lisa Griffin
Robin Gutell
Mark F. Hamilton
Daniel Johnston
Yin Liu
Edward M. Marcotte
Mia K. Markey
Thomas E. Milner
Tessie J. Moon
Richard R. Neptune
John A. Pearce
Nicholas A. Peppas
Martin Poenie
Gregory Reece
Pengyu Ren
David Res
Krishnendu Roy
Henry G. Rylander III
Christine E. Schmidt
Jason B. Shear
Li Shi
Jack W. Smith
Hugh D. Smyth
D. M. Snodderly
Laura J. Saggis
Delbert Tesar
James W. Tunnell
Jonathan W. Valvano
Bugao Xu
Xiaojing Zhang
Zhiwen Zhang

University of Texas Medical Branch at Galveston

George C. Kramer
Massoud Motamed

University of Texas Health Science Center at Houston

John H. Byrne
Yong-Jian Geng
Dianna M. Milewicz
Ponnada A. Narayana
Harel Shouval
Michael H. Smolensky
Shelton R. Taylor
Yunzhi Yang

University of Texas M. D. Anderson Cancer Center

James A. Bankson
Mary E. Edgerton
Peter R. Gascoyne
Ann Gillenwater
John D. Hazle
Anshu Mathur
Konstantin V. Sokolov
**ADMISSION REQUIREMENTS**

The graduate adviser and the Admissions Committee make all admission decisions. Standards for entrance into the program exceed the minimum standards established by the University. Students must have a bachelor’s degree with the following coursework or equivalent knowledge: freshman biology, freshman inorganic chemistry, differential equations, probability and statistics, and calculus-based physics. An applicant with a degree in an area other than engineering must take specified preliminary coursework before applying to the graduate program in biomedical engineering. The coursework does not need to be completed at UT Austin. Information about the admission process is given at [http://www.bme.utexas.edu/](http://www.bme.utexas.edu/).

Admission decisions are based on a careful review of all aspects of each applicant’s file, including score on the Test of English as a Foreign Language, if needed, grade point average, Graduate Record Examinations scores, letters of recommendation, personal statement, and previous research or work experience. Only the most qualified applicants are accepted. Admission is not based on test scores and grade point averages alone; other important factors include the applicant’s statement of purpose, reference letters, résumé, and transcripts. The number of students admitted each semester depends on the availability of supervising faculty members to provide research facilities and possible financial support. Most students are admitted for doctoral study, but students interested in the MSE are also considered on a case-by-case basis.

All applicants whose native language is not English must submit a score on the Test of English as a Foreign Language (TOEFL).

**DEGREE REQUIREMENTS**

The Master of Science in Engineering and the Doctor of Philosophy degree programs include a core curriculum and courses from one or more areas of specialization selected with the approval of the graduate adviser. Specializations are offered in cellular and molecular imaging, cellular and biomolecular engineering, and computational biomedical engineering and bioinformatics. The graduate adviser and the Executive Committee of the Graduate Studies Committee must approve deviation from the prescribed curriculum.

**MASTER OF SCIENCE IN ENGINEERING**

The master’s degree requires at least thirty semester hours of coursework, including six hours in the thesis course and eighteen hours of biomedical engineering coursework. The remaining six semester hours should be selected from courses outside the field of biomedical engineering. These additional courses must be logically related to the student’s program and must be approved by the graduate adviser.

A thesis is normally expected; however, with the consent of the graduate adviser, the student may follow a degree plan that includes a report or one with neither thesis nor report. The report option requires thirty semester hours of coursework, consisting of six courses in the major, three courses in supporting work, and three hours in the report course. The plan without thesis or report requires thirty semester hours of coursework, consisting of at least six courses in the major and up to four courses in supporting work.

**DOCTOR OF PHILOSOPHY**

Doctoral degree students complete at least twenty-six semester hours of coursework beyond the baccalaureate degree, in addition to conducting research necessary to write a dissertation under the direction of a faculty supervisor. The twenty-six hours of coursework must be composed of one course from each of the three specializations mentioned above, two seminar courses, one biological/clinical course, a mathematics course, and three other supporting graduate-level courses.

After the first year of study, the student must pass both written and oral components of the qualifying examination. The student must present a written and oral dissertation proposal to the dissertation committee within two years of enrollment in the program. The written proposal must be formatted according to the guidelines of the National Science Foundation or the National Institutes of Health. Before taking the oral examination, the student is expected to formulate a hypothesis and propose an approach to a selected research problem with a selected supervisor. The student is examined specifically on the proposed research. After the oral examination, the dissertation committee determines if the student should complete additional coursework. At least one faculty member outside the biomedical engineering Graduate Studies Committee must participate in examining and supervising the student.
DUAL DEGREE PROGRAM

DOCTOR OF PHILOSOPHY/DOCTOR OF MEDICINE

The graduate program in biomedical engineering participates in a dual degree program with the University of Texas Medical Branch at Galveston (UTMB). Admission is restricted to United States citizens and permanent residents. Applicants must apply separately to and be admitted to both the PhD program in biomedical engineering at the University of Texas at Austin and the medical school at UTMB. Students accepted into the dual degree program spend their first two years of study in the medical school at UTMB, followed by three to four years of doctoral work at UT Austin. Students then return to UTMB to complete the MD degree. The degrees are conferred separately by each institution. Additional information may be found at http://www.bme.utexas.edu/.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

BIOMEDICAL ENGINEERING: BME

180J, 380J. Fundamentals of Biomedical Engineering. One or three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Only topic 3 is offered under the number 180J.

Topic 1: Mathematical Modeling in Biomedical Engineering. Conservation of mass, momentum, energy, and charge; first and second laws of thermodynamics; first- and second-order differential equations; nonlinear differential equations; partial differential equations as applied to biomedical engineering problems. Normally offered in the fall semester only.

Topic 2: Quantitative Systems Physiology and Pathophysiology. Modeling of physiological systems from the molecular and cellular levels to the systems level; focus on the neuromuscular and cardiovascular systems. Normally offered in the fall semester only. Additional prerequisite: An undergraduate physiology course or the equivalent, and consent of instructor.

Topic 3: Principles of Biomeasurement. Principles of signal measurement in the biomedical field; survey of transducers used for chemical, mechanical, electrical, and thermal biomedical measurements; analysis of how signals are converted into digital form; analysis of noise; aliasing; data storage. Normally offered in the fall semester only.

Topic 4: Fields, Forces, and Flows in Physiological Systems. Introduction to mathematical models that integrate different energy domains and length scales, with an emphasis on the coupling between them. Normally offered in the spring semester only. Additional prerequisite: Biomedical Engineering 380J (Topic 1) and 380J (Topic 2).

Topic 5: Biostatistics, Study Design, and Research Methodology. Principles for hypothesis testing; confidence limits; regression analysis; correlation; analysis of variance; experimental design and factorial analysis; discriminant analysis; applications of statistics. Normally offered in the spring semester only. Additional prerequisite: An undergraduate probability theory course or the equivalent, and consent of instructor.

FOR MORE INFORMATION

Campus address: Biomedical Engineering Building (BME) 3.308AF, phone (512) 475-8500, fax (512) 471-0616; campus mail code: Co800
Mailing address: The University of Texas at Austin, Graduate Program, Department of Biomedical Engineering, 1 University Station Co800, Austin TX 78712
E-mail: bme-grad@engr.utexas.edu
URL: http://www.bme.utexas.edu/
Topic 6: Analysis of Biomedical Engineering Systems
I. Quantitative examination of the cardiovascular and respiratory systems from the cell to system levels. Presents the cardiovascular and respiratory systems in three phases: (1) anatomy and physiology; (2) energetics (thermodynamics), cellular processes, and engineering analysis; and (3) engineered devices, instrumentation, and imaging for therapeutics and diagnosis. Additional prerequisite: A course in physiology, proficiency in MATLAB, and consent of the graduate adviser.

Topic 7: Analysis of Biomedical Engineering Systems
II. Computational techniques used in biomedical engineering. Students propose and conduct an engineering design study relevant to a selected medical problem. Additional prerequisite: Biomedical Engineering 380J (Topic 6).

080M. Dual MD/PhD Program with UT Medical Branch. Preclinical medical study at the University of Texas Medical Branch at Galveston. May not be taken concurrently with another course at the University of Texas at Austin. Pre-requisite: Graduate standing and admission to the MD/PhD dual degree program in biomedical engineering.

081. Interinstitutional Enrollment. Restricted to biomedical engineering students enrolled in courses at the University of Texas Health Science Center at Houston or the University of Texas M. D. Anderson Cancer Center. May not be taken concurrently with another course at the University of Texas at Austin. Prerequisite: Graduate standing in biomedical engineering.

381J. Topics in Cell and Molecular Imaging. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in engineering and consent of instructor. Additional prerequisites may vary with the topic and are given in the Course Schedule.


Topic 2: Laser-Tissue Interaction: Optical. Same as Electrical Engineering 385J (Topic 16: Laser-Tissue Interaction: Optical). The optical behavior of random media such as tissue in interaction with laser irradiation. Approximate transport equation methods to predict the absorption and scattering parameters of laser light inside tissue. Port-wine stain treatment; cancer treatment by photochemotherapy; and cardiovascular applications.

Topic 3: Biomedical Imaging: Signals and Systems. Same as Electrical Engineering 385J (Topic 18: Biomedical Imaging: Signals and Systems). Physical principles and signal processing techniques used in thermal, ultrasonic, and radiographic imaging, including image reconstruction from projections such as CT scanning, MRI, and millimeter wave determination of temperature profiles. Additional prerequisite: Electrical Engineering 371R.


Topic 5: Therapeutic Heating. Same as Electrical Engineering 385J (Topic 26: Therapeutic Heating). Engineering aspects of electromagnetic fields that have therapeutic applications: diathermy (short wave, microwave, and ultrasound), electrosurgery (thermal damage processes), stimulation of excitable tissue, and electrical safety.

Topic 6: Noninvasive Optical Tomography. Same as Electrical Engineering 385J (Topic 28: Noninvasive Optical Tomography). Basic principles of optical tomographic imaging of biological materials for diagnostic or therapeutic applications. Optical-based tomographic imaging techniques including photothermal, photoacoustic, and coherent methodologies.

Topic 7: Digital Image and Video Processing. Digital image acquisition, processing, and analysis; algebraic and geometric image transformations; two-dimensional Fourier analysis; image filtering and coding. Additional prerequisite: Credit or registration for Biomedical Engineering 335 or Electrical Engineering 351K.

382J. Topics in Cellular and Biomolecular Engineering. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in engineering and consent of instructor.


Topic 2: Introduction to Biochemical Engineering. Microorganisms in chemical and biochemical synthesis; genetic manipulation of cells by classical and recombinant DNA techniques; enzyme technology; design of bioreactors and microbial fermentations; and separations of biological products. Normally offered in the fall semester only.

Topic 3: Molecular Sensors and Nanodevices for Biomedical Engineering Applications. Introduction to a variety of methods used to detect biological molecules with optical and electrical transduction mechanisms. Covers the classical approaches to biosensors for the detection of specific molecules in biological systems.

Topic 4: Advanced Engineering Biomaterials. Overview of biomaterials, including prosthetics, ceramics, metal implants, and polymers, with specific emphasis on properties and applications. The immunology of material-tissue interactions and the issues of biocompatibility.
383J. Topics in Computational Biomedical Engineering and Bioinformatics. Three lecture hours a week for one semester, or as required by the topic. Additional prerequisites may vary with the topic and are given in the Course Schedule.

**Topic 1: Network Thermodynamics in Biophysics.** Modeling and simulation methods for nonlinear biological processes, including coupling across multienery domains; practical implementation by bond graph techniques. Additional prerequisite: Mechanical Engineering 344J or consent of instructor.


**Topic 4: Genomic Signal Processing and Bioinformatics.** Exploration of technologies such as sequencing, DNA microarrays, and protein mass spectrometry for high throughput acquisition of molecular biological data. Mathematical analysis and modeling of these data, and biological and medical predictions made by these analyses and models. Additional prerequisite: Knowledge of Mathematica, MATLAB, or a programming language.

**Topic 7: Data Mining.** Analyzing large data sets for interesting and useful information; online analytical processing, finding association rules, clustering, classification, and function approximation; scalability of algorithms and real-life applications.

**Topic 8: Systems Biology.** The biological function of genetic and biochemical networks from a quantitative perspective. Students use mathematical tools to model network modules, such as biological switches, oscillators, and amplifiers. Discusses recent papers on a variety of biological problems that can be addressed with a systems biology approach. Additional prerequisite: Biology 311C (or 211 and 212) and Mathematics 427K, Chemistry 369J or an introductory course in biochemistry, and knowledge of MATLAB, are recommended.

384J. Topics in Instrumentation. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in engineering and consent of instructor. Additional prerequisites may vary with the topic and are given in the Course Schedule.

**Topic 1: Biomedical Instrumentation I.** Same as Electrical Engineering 385J (Topic 3: Biomedical Instrumentation I). Application of electrical engineering techniques to analysis and instrumentation in biological sciences: pressure, flow, temperature measurement; bioelectric signals; pacemakers; ultrasonics; electrical safety; electrotherapeutics.

**Topic 2: Biomedical Instrumentation II: Real-Time Computer-Based Systems.** Same as Electrical Engineering 385J (Topic 17: Biomedical Instrumentation II: Real-Time Computer-Based Systems). Design, testing, patient safety, electrical noise, biomedical measurement transducers, therapeutics, instrumentation electronics, microcomputer interfaces, and embedded systems. Four structured laboratories and an individual project laboratory.

**Topic 3: Biosignal Analysis.** Same as Electrical Engineering 385J (Topic 15: Biosignal Analysis). Theory and classification of biological signals such as EEG, EKG, and EMG. Data acquisition and analysis procedures for biological signals, including computer applications.

**Topic 4: Bioelectric Phenomena.** Same as Electrical Engineering 385J (Topic 3: Bioelectric Phenomena). Examines the physiological bases of bioelectricity and the techniques required to record bioelectric phenomena both intracellularly and extracellularly; the representation of bioelectric activity by equivalent dipoles and the volume conductor fields produced.

**Topic 5: Projects in Biomedical Engineering.** Same as Electrical Engineering 385J (Topic 32: Projects in Biomedical Engineering). An in-depth examination of selected topics, such as optical and thermal properties of laser interaction with tissue; measurement of perfusion in the microvascular system; diagnostic imaging; interaction of living systems with electromagnetic fields; robotic surgical tools; ophthalmic instrumentation; noninvasive cardiovascular measurements. Three lecture hours and six laboratory hours a week for one semester. Additional prerequisite: Biomedical Engineering 384J (Topic 1).
**385J. Topics in Biomedical Engineering.** Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Biomedical Engineering 385J and 387J may not both be counted unless the topics vary. Prerequisite: Graduate standing in biomedical engineering and consent of instructor.

**Topic 12: Biomedical Heat Transfer.** Heat transfer in biological tissue; determination of thermodynamic and transport properties of tissue; thermal effects of blood perfusion; cryobiology; numerical modeling methods; clinical applications. Normally offered in the fall semester only. Additional prerequisite: Mechanical Engineering 339, Chemical Engineering 335, or the equivalent.

**Topic 35: Ten Unsolved Questions in Neuroscience.**

**Topic 36: Engineering Applications of Immunology and Disease Pathology.**

**Topic 37: Functional Imaging: Principles, Approaches, and Applications.**

**Topic 38: The Synaptic Basis for Learning and Memory.** Abstract models and biophysical models of synaptic plasticity. Includes guest lectures from experimentalists working in this field. Biomedical Engineering 385J (Topic 38) and Neuroscience 385L (Topic 4: The Synaptic Basis for Learning and Memory) may not both be counted.

**386. Seminars in Biomedical Engineering.** The equivalent of three class hours a week for one semester. Any number of topics may be taken for credit, and, with consent of instructor, any topic may be repeated for credit. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing in biomedical engineering, or graduate standing and consent of instructor.

**Topic 1: Nanobiotechnology Research.**

**Topic 2: Biomedical Imaging and Informatics Research.**

**Topic 3: Stem Cell Basics.**

**387J. Topics in Biomedical Engineering.** Three lecture hours a week for one semester. Taught by distance learning methods. May be repeated for credit when the topics vary. Biomedical Engineering 385J and 387J may not both be counted unless the topics vary. Prerequisite: Graduate standing. Additional prerequisites vary with the topic and are given in the Course Schedule.

**Topic 1: Nanomedicine in Healthcare.** Examines fundamentals of nanostructured materials for medical application; includes liposomes, dendrimers, carbon nanotubes, fullerenes, and silicon nanostructures for applications ranging from DNA chips to injected therapeutic and diagnostic agents. Also includes the study of relevant characterization techniques and ethical and regulatory issues.

**396. Research Internship.** Students participate in research in an industry, clinic, or academic laboratory setting selected with the approval of the faculty adviser. At least twenty hours of fieldwork a week for one semester. Offered on the credit/no credit basis only. May be counted only once toward either the master’s or the doctoral degree. Prerequisite: Graduate standing.

**197, 297, 397, 597, 697. Research Problems.** Problems selected by the student with approval of the faculty adviser. For each semester hour of credit earned, three laboratory hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in biomedical engineering.

**197E. Professional Responsibilities in Imaging.** One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

**197N. Integrated Biomedical Engineering Seminar.** Designed to support students’ professional development as well as their broad understanding of the biomedical engineering research enterprise. One lecture hour a week for one semester. Prerequisite: Graduate standing.

**197R, 297R, 397R. Imaging Research Seminar.** For each semester hour of credit earned, one lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

**198. Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in biomedical engineering and consent of the graduate adviser; for 698B, Biomedical Engineering 698A.

**398R, 699R, 999R. Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

**399W, 699W, 999W. Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Biomedical Engineering 399R, 699R, or 999R.
OBJECTIVES

The graduate program in chemical engineering is designed to provide students with the opportunity to develop advanced competence in transport phenomena, thermodynamics, and reaction engineering for the application of chemistry to the advancement of society. Through formal coursework and mentoring, each student is expected to acquire the tools to develop and transmit new knowledge and processes in a focused area of chemical engineering. The focused research areas include bioengineering, environmental engineering, interfacial phenomena, electronic materials, nanomaterials, polymers, process modeling and control, separations, and surface science.

PROGRAM EDUCATIONAL OBJECTIVES

Upon graduation, those who earn advanced chemical engineering degrees are expected
1. To apply knowledge of mathematics, chemistry, physics, computing, safety, and engineering to solve problems of analysis, design, optimization, and control of components, systems, and processes important in chemical engineering practice.
2. To demonstrate the skills required to lead and/or participate effectively on interdisciplinary teams.
3. To recognize the importance of lifelong education in meeting professional and personal goals.
4. To demonstrate proficiency in writing and oral presentation skills, and recognition of the importance of effective communication and its many different forms.
5. To articulate and practice professional, ethical, and societal responsibilities.

FACILITIES FOR GRADUATE WORK

The Department of Chemical Engineering contains laboratories, offices, and all facilities necessary for research and instruction. Some research in the separations area is conducted at the J. J. Pickle Research Campus. Excellent library facilities include the Mallet Chemistry Library, the McKinney Engineering Library, and the Kuehne Physics Mathematics Astronomy Library.

The extensive computer facilities available for graduate student research include more than one hundred microcomputers and workstations in the Chemical and Petroleum Engineering Building as well as the systems of Information Technology Services. Computer graphics capabilities are available. State-of-the-art analytical instrumentation, located within the department and in other departments, is available for use by chemical engineering graduate students.

The department enjoys close relations with the chemical, petroleum, and materials processing industries. A number of cooperative research projects are carried out with the support of private companies. A substantial portion of the graduate student research is supported through federal grants and contracts.

AREAS OF STUDY

Biochemical and biomedical engineering. Protein engineering, fermentations, genetic engineering technology, mammalian tissue culture, biomaterials, biosensors, cell and tissue engineering, virus removal from blood, hemodialysis.


Energy resources. Secondary and tertiary oil recovery, flow processes in porous media, acid gas treating.

Environmental engineering. Air pollution modeling and control, atmospheric chemistry.

Materials and processes for microelectronics. Plasma processing, etching, chemical vapor deposition, selective laser sintering, supramolecular self-assembly and organization, colloidal systems, mesoscopic materials.

Meso- and molecular-scale modeling and simulation. Statistical and micromechanical modeling and Monte Carlo, Brownian, and molecular dynamics simulations of reactions, complex fluids, polymers, and biological molecules.
Polymer engineering. Synthesis; processing; reaction injection molding; properties, with specific emphasis on blends, transport, and thermodynamic behavior; membranes; microelectronics; thin film; composition.

Process engineering. Chemical reaction engineering and catalyst development; optimization; process simulation, dynamics, and control; fault detection, rheology and simulation of suspensions.

Separations. Membrane separations, distillation, absorption, supercritical extraction.

Other areas. Aerosol physics and chemistry, surface phenomena, crystal chemistry and physical properties, electrochemistry, electronic and optical materials, electrical impedance tomography.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

David T. Allen
Hal S. Alper
Roger T. Bonnecaze
James R. Cheilikowsky
Lydia M. Contreras-Martin
Thomas F. Edgar
John G. Ekerdt
Christopher J. Ellison
Benny D. Freeman
Venkat Ganesan
George Georgiou
Adam Heller
Gyeong S. Hwang
Keith P. Johnston
Brian A. Korgel
Douglas R. Lloyd
Arunagam Manthiram
Jennifer A. Maynard
Charles B. Mullins
Donald R. Paul
Nicholas A. Peppas
Danny D. Reible
Gary T. Rochelle
Peter J. Rossky
Isaac C. Sanchez
Christine E. Schmidt
Mukul M. Sharma
Thomas M. Truskett
Carlton G. Willson

ADMISSION REQUIREMENTS

Students with a Bachelor of Science in Chemical Engineering degree from a school accredited by the AIChE-ECPD usually fulfill the requirements for consideration for admission. Other students, including those with a bachelor’s degree in chemistry, physics, engineering, engineering science, or geology (geochemistry), must have a background that the Graduate Studies Committee considers satisfactory for the study of advanced chemical engineering. Six nonelective undergraduate chemical engineering courses are required as part of the course program in this case.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN ENGINEERING

The student's program of coursework is selected with the advice of the graduate adviser and must be approved by the Graduate Studies Committee.

Master of Science in Engineering with thesis. For students electing this option, thirty semester hours of coursework, including six hours in the thesis course, are required. At least twelve hours of graduate coursework (the major) must be in chemical engineering, and at least six hours (the minor) must be outside chemical engineering. Only graduate courses in chemical engineering count toward the degree, but up to six hours of upper-division coursework outside chemical engineering may be included in the minor. A grade point average of at least 3.00 must be attained on graduate coursework in the major.

A thesis problem is selected after the student has consulted members of the Graduate Studies Committee. The thesis research problem should be selected during the first semester and initial research begun at that time. At least one full year is required to complete the master's degree program.

Master of Science in Engineering with report. This option requires thirty hours of coursework,including three hours in the report course. At least fifteen hours must be completed in graduate-level chemical engineering courses and at least six hours must be outside chemical engineering. Up to six hours of upper-division coursework may be counted. A grade point average of at least 3.00 must be attained on graduate coursework in the major.

Master of Science in Engineering without thesis or report. For students electing this option, thirty semester hours of coursework are required. At least eighteen semester hours must be completed in graduate coursework in chemical engineering, and at least six hours must be outside chemical engineering. Up to six hours of upper-division coursework may be included. No research is required, but a grade point average of at least 3.00 must be attained on graduate coursework in the major. Enrollment in this option must be approved by the chairman of the Graduate Studies Committee in Chemical Engineering.
DOCTOR OF PHILOSOPHY

A student may choose to pursue the doctoral degree without first obtaining a master’s degree. Before admission to candidacy, the student must have a master’s degree in chemical engineering or an equivalent amount of graduate credit and a passing grade on a written qualifying examination that covers material normally presented in an accredited undergraduate chemical engineering curriculum. The doctoral candidate must also pass preliminary and final oral examinations covering the research program.

For a student with a Bachelor of Science degree, at least three years are required to complete the Doctor of Philosophy degree program.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

CHEMICAL ENGINEERING: CHE

180C. Laboratory Safety. Safe laboratory practice. Training in use of fire extinguishers and first aid. Case studies of laboratory accidents. One lecture hour a week for one semester. Prerequisite: Graduate standing in chemical engineering.

381N. Fluid Flow and Heat Transfer. Advanced treatment of fluid flow and heat transfer problems in chemical engineering. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381P. Advanced Analysis for Chemical Engineers. Applications of mathematical methods to chemical engineering problems, with emphasis on differential equations, linear analysis and matrices, and real analysis and complex variables. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

384, 684. Introduction to Research. The equivalent of three or six class hours a week for one semester. Any number of topics may be taken for credit, and, with consent of instructor, any topic may be repeated for credit. Prerequisite: Graduate standing in chemical engineering, or graduate standing and consent of instructor.

Topic 2: College Teaching in Engineering and Science.
Topic 3: Aerosol Science and Technology.

FOR MORE INFORMATION

Campus address: Chemical and Petroleum Engineering Building (CPE) 3.408, phone (512) 471-6991, fax (512) 475-7824; campus mail code: CO400
Mailing address: The University of Texas at Austin, Graduate Program, Department of Chemical Engineering, 1 University Station CO400, Austin TX 78712
E-mail: T@che.utexas.edu
URL: http://www.ch.che.utexas.edu/

Topic 9: Kinetics and Catalysis.
Topic 10: Biochemical Engineering.
Topic 11: Transport Phenomena.
Topic 12: Advanced Materials.
Topic 17: Biomolecular Recognition.
Topic 18: Chemical Technology.
Topic 19: Design for Environment.
Topic 21: Kinetic Processes in Materials. Examination of the connection between structure and various kinetic processes that occur in different classes of materials, metals, ionic crystals, inorganic glasses, and polymers. Discusses the kinetic theory of gases and Brownian dynamics.
Topic 23: Biomedical Polymer Seminar.

384K. Chemical Kinetics and Surface Chemistry. Application of chemical reaction kinetics to the prediction and determination of reaction rates and reaction selectivity. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Chemical Engineering 387K or consent of instructor.

185, 285, 385, 685. Research. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing in chemical engineering, or graduate standing and consent of instructor.

385M. Surface Phenomena. Liquid/fluid interfaces including equilibrium and nonequilibrium phenomena. Topics covered include capillarity, thermodynamics, surface rheology, and streaming potentials. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
386K. **Theory of X-Ray Diffraction.** Application of basic diffraction theory to polycrystalline and single crystal materials. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

386L. **Laboratory Experiments in X-Ray Diffraction.** Application of X-ray diffraction techniques to the examination of polycrystalline and single crystal materials. Two or three lecture hours and three or four laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

387K. **Advanced Thermodynamics.** Applications of thermodynamics to chemical engineering processes. Three lecture hours a week for one semester. Prerequisite: Graduate standing in chemical engineering, or graduate standing and consent of instructor.

387M. **Mass Transfer.** Advanced treatment of diffusional mass transfer operations in chemical engineering. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388K. **Separations Processes.** Advanced treatment of modern chemical engineering separations processes. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391. **Elements of Modern Control Theory.** Introduction to fundamentals of dynamic optimization and system theory; applications to engineering processes. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392. **Polymer Science.** Details of polymerization mechanisms; structure-property relationships, fundamentals of processing, and characterization of high polymers. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395C. **Chemical Processes for Microelectronics.** Introduction to the chemical processes and the manufacturing operations used in microelectronics device fabrication. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395E. **Polymer Science and Engineering Laboratory.** Training in the preparation and instrumental characterization of polymers, blends, and compounds. Twelve laboratory hours a week for one semester. Prerequisite: Graduate standing.

395G. **Chemical Engineering Economics and Business Analysis.** Study of the economic decisions faced by chemical engineers. Discounted cash flow techniques. Personal finance, managerial economics, and other special topics. Three lecture hours a week for one semester. Only one of the following may be counted: Chemical Engineering 342, 379 (Topic: Chemical Engineering Economics and Business Analysis), 395G. Prerequisite: Graduate standing in chemical engineering, or graduate standing and consent of instructor.

395J. **Product and Process Development.** Product and process innovation in the process industries; screening criteria; needs-requirements research; evaluation. Three lecture hours a week for one semester. Chemical Engineering 379 (Topic: Product and Process Development) and 395J may not both be counted. Prerequisite: Graduate standing in chemical engineering, or graduate standing and consent of instructor.

395K. **Design for Environment.** Overview of environmental assessment tools for chemical processes and products, including life cycle and risk assessments. Overview of design tools for improving environmental performance of chemical processes, including unit operations and flow sheet analysis methods. Three lecture hours a week for one semester. Only one of the following may be counted: Chemical Engineering 341, 384 (Topic 19: Design for Environment), 395K. Prerequisite: Graduate standing in chemical engineering, or graduate standing and consent of instructor.

397M. **Graduate Research Internship.** Research associated with enrollment in the Graduate Research Internship Program (GRIP). The equivalent of three lecture hours a week for one semester. Prerequisite: Graduate standing in chemical engineering and consent of instructor and the dean of the Cockrell School of Engineering.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in chemical engineering; for 698B, Chemical Engineering 698A.

398R. **Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in chemical engineering and consent of the graduate adviser.

398T. **Supervised Teaching in Chemical Engineering.** Teaching under the close supervision of the instructor for one to four semesters; weekly group meetings; individual consultation; reports. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Chemical Engineering 399R, 699R, or 999R.
OBJECTIVES

The objectives of the graduate program in civil engineering are excellence in engineering education, research, and professional service. The program seeks to educate students to assume leadership positions in engineering practice, research, and education. The program also seeks to advance the state of the art and of the practice of civil engineering at both fundamental and applied levels through extensive research programs, and to disseminate the research outcomes through professional and scholarly activities. The program’s thematic areas include architectural engineering, construction engineering and project management, construction materials, environmental and water resources engineering, geotechnical engineering, ocean engineering, structural engineering, and transportation engineering, as well as interdisciplinary areas of study.

FACILITIES FOR GRADUATE WORK

The Department of Civil, Architectural, and Environmental Engineering occupies eight floors in Ernest Cockrell Jr. Hall, which also houses the McKinney Engineering Library and computer facilities for use by civil engineering students. In addition, the facilities of Information Technology Services are available to students working on problems in any of the areas listed below. Laboratories are equipped and staffed to provide for both instruction and research.

Architectural engineering. The program and facilities in architectural engineering are described on pages 154–155.

Construction engineering and project management. The construction laboratories include a well-equipped computer cluster on the main campus and a high-bay laboratory for construction automation research at the J. J. Pickle Research Campus. Software includes three-dimensional computer-assisted drafting and modeling packages, statistical packages, construction project management software, office suites, discrete modeling and simulation packages, advanced communication hardware, and software developed through research. The automation laboratory at the J. J. Pickle Research Campus includes a large-scale hydraulic robot test bed, a large rectilinear manipulator, three-dimensional laser scanning facilities, and many computer workstations.

Several specially developed management programs are employed in graduate courses and for research. The University’s Project Management and Construction Services department conducts field trips to University buildings under construction and assists with graduate student research studies conducted at these sites.

Construction materials. The graduate program in construction materials emphasizes concrete materials, including the characterization and testing of cements, aggregates, concrete, and polymer concrete. Research and coursework focus on the materials science, property development, field performance, durability, forensics, and repair of concrete materials. The Construction Materials Research Group Laboratory, which includes the Concrete Durability Center and the International Center for Aggregates Research, is located at the J. J. Pickle Research Campus. Excellent facilities are available for proportioning and batching concrete, mechanical testing, and durability testing, including both accelerated tests and outdoor exposure sites. A closed-loop servo-controlled loading system, fatigue testing, and other loading facilities are available, as are laboratories that have the capability to perform a wide range of materials tests, including freezing and thawing, alkali-silica reaction, shrinkage, creep, aggregate characterization, rapid chloride, and corrosion evaluation. Microscopes, X-ray diffraction, and thermal analysis instrumentation are also available.

Environmental and water resources engineering. Program. This program is designed to educate engineers who will solve environmental and water resources problems by applying concepts of sustainability and fundamental principles from the natural sciences, mathematics, mechanics, economics, and other underlying disciplines. To achieve this objective, the program offers a breadth of possible research and study areas.
The faculty is one of the largest and most diverse in the nation, with expertise ranging from environmental fluid mechanics to water resources planning and from pollutant transport to treatment processes. The major areas of emphasis are treatment process engineering, air resources engineering, environmental remediation, water quality, water resources engineering, and ocean engineering. Because the program requires no specific courses, each student’s education can be designed to meet his or her goals. The faculty offers a wide variety of courses, and students may choose courses in other related fields, such as chemical engineering, chemistry, geology, mathematics, microbiology, petroleum engineering, physics, and public policy. Once a student chooses a particular study area, he or she works closely with the faculty member or members conducting research in that area. Each student’s program of study includes a balanced combination of coursework, seminars, and research. Well-equipped research laboratories, state-of-the-art instrumentation, and superb computation facilities support the graduate program, as do cooperation and coordination with research faculties and laboratories in physical, chemical, biological, and social sciences and other engineering disciplines.

Facilities. Environmental and water resources engineering laboratories are well-equipped for both basic and applied state-of-the-art research in virtually all environmental and water resources areas. On campus, the program has twenty thousand square feet of space on three floors of Ernest Cockrell Jr. Hall for physical, chemical, and biological analyses and for research on water, wastewater, and hazardous waste treatment processes. Facilities include a clean room for metal or particulate analysis, four laboratories with temperature and humidity control, numerous hoods for the safe handling of hazardous chemicals and biological samples, and an instrumentation laboratory for characterization of analysis of environmental samples in air, water, and soil matrices. Additional analytical equipment is available in other departments on the main campus.

The Computational Hydrodynamics Laboratory in Ernest Cockrell Jr. Hall has a high-performance computer cluster (sixteen nodes of eight cores each, Intel Xeon E5420 processors). This cluster provides the necessary platform for solving nonlinear flow problems about complex hull and/or propulsor geometries (involving cavities or free surfaces), and for developing algorithms for the design of efficient propeller or tidal turbine blades using nonlinear optimization techniques.

The Program in Air Resources Engineering maintains five thousand square feet of laboratory space in five laboratories at the Center for Energy and Environmental Resources. These laboratories also include facilities for studying outdoor sources of volatile organic compounds and indoor sources and sinks of volatile chemicals. A wide range of instrumentation is available for field monitoring in both indoor and outdoor environments. The Center for Energy and Environmental Resources also maintains extensive computational resources for air quality modeling and energy and climate change research.

The Center for Research in Water Resources is located at the J. J. Pickle Research Campus. Computational research focuses on applications of geographic information systems using ArcInfo and ArcView, simulation of pollutants in soil and groundwater, and assembly and synthesis of historical water quantity and quality information. The experimental research uses scaled physical models, models of innovative wastewater treatment facilities, and field monitoring of water quality. The twenty-four-thousand-square-foot laboratory includes general- and special-purpose fixed and tilting channels and instrumentation and data acquisition systems for laboratory and field studies.

Geotechnical engineering. This program is designed to offer students a broad range of activities with a solid basis in the core areas of geotechnical engineering. Graduates receive a strong background in the basics through courses in geotechnical engineering, which offer the foundation for a successful professional career. In addition, the program exposes students to research activities that are at the forefront of developments in the field.

The geotechnical engineering laboratories are located in the Ernest Cockrell Jr. Hall and at the Pickle Research Campus. The laboratories include modern workstations for conducting standard geotechnical tests, including index tests, flexible wall permeameter tests, one-dimensional and triaxial consolidation, direct shear tests, and triaxial shear tests.

The soil dynamics laboratory has extensive facilities for combined resonant column and torsional shear testing. Large-scale multimode equipment is available for dynamic laboratory testing with specimens up to 0.3 meters in diameter. The geosynthetics laboratory includes tensile testing devices, a large-scale pullout testing device, large-scale time-temperature testing equipment, as well as specialized interface shear tensile devices. The unsaturated soils laboratory includes
The ground improvement/pore fluid engineering research laboratories include one cyclic direct simple shear and one cyclic triaxial device; both devices can be run under static/cyclic loading with stress/strain complete servo control. Special setups for testing grouted soils, including static triaxial setups, are available as well. The laboratories have an advanced rheometer than can measure the engineering properties of fluids, suspensions, and gels. A mid-size one-dimensional shaking table is under construction.

The rock mechanics laboratory is equipped to carry out uniaxial and triaxial tests with confinement of up to 70 MPa; and with the possibility of controlling the pore pressure up to 70 MPa; and direct shear tests both in stiffness control and in load control; all of the above equipment is completely servocontrolled, and any sensor may be used to program the tests. Additional rock testing capabilities include: slake durability, point load, Brazilian (indirect tensile), Cerchar, brittleness, Sievers’ J, abrasion value (on rock and soil), rebound hardness (Schmidt Hammer), pulse velocity and dynamic elastic constants, swelling, unit weight, porosity, and water content.

The centrifuge laboratory includes a high G-level centrifuge permeameter that was developed with the specific objective of expediting the measurement of the hydraulic characteristics of soils. It includes a water flow control system and an in-flight data acquisition system capable of collecting data under accelerations in excess of 500 Gs. In-flight instrumentation includes systems suitable to measure the infiltration rate (flow pump and outflow transducer), volumetric water content (time domain reflectometry), matric suction (tensiometers), and volumetric changes (displacement transducers). A small prototype centrifuge is also available in the laboratory for hydraulic testing of soil samples.

For model studies of foundation systems, two large test tanks are available together with loading and tracking systems to install, monitor, and load a variety of foundation types. Equipment available for field measurement programs includes fiber optical strain gauges, inclinometers, and time domain reflectometry moisture probes.

A large-scale calibration chamber is available for testing 2.1-meter cubical samples under three-dimensional states of stress for dynamic, cyclic, and static conditions. A second calibration chamber is available for testing in situ tools and model foundations. For dynamic field testing, the program has a broad array of equipment for measuring in situ stress wave velocities using borehole and surface wave methods, as well as vane, cone, and dilatometer devices. A vibroseis truck, which is capable of applying static, cyclic, and dynamic loads up to fifty thousand pounds, is available for field measurements at geotechnical, foundation, and pavement sites. Three hydraulic shakers, field instrumentation, and teleparticipation equipment are available to the department as a participant in the Network for Earthquake Engineering Simulation (NEES).

Ocean engineering. Students interested in ocean engineering and in offshore structures may develop an appropriate course of study in consultation with the faculty. These programs are typically interdisciplinary, including work in hydrodynamics, structural analysis and dynamics, steel design, soils and foundations, and computational methods. Students may also participate in the work of the Offshore Technology Research Center.

Structural engineering. The graduate program in structural engineering addresses the analysis and design of reinforced and prestressed concrete, timber, steel, masonry, and composite structural systems. Extensive experimental research facilities are available for the observation and study of the behavior of structures under a variety of loadings. The graduate program also focuses on model-based simulation of challenging multidisciplinary engineering problems. Current research endeavors address modeling of the dynamic response of structures, performance of structures in the offshore environment, wind and earthquake engineering, soil-structure interaction, the response of structures to extreme loads, inverse problems and the nondestructive probing of structures, modeling of material behavior and aging processes, structural reliability, problems in computational mechanics, and the propagation of waves and their interactions. Several research projects integrate analytical and computational work with experimental studies.

Most of the experimental studies in structural engineering are conducted in the Phil M. Ferguson Structural Engineering Laboratory, located at the J. J. Pickle Research Campus. Ferguson Laboratory is one of the largest, best-equipped structural research facilities in the world. Multistory structures and full-size multigirder bridge structures have been tested. The laboratory contains three test slabs, 40' × 80', 40' × 60', and 30' × 60'. One of the test floors surrounds a 600-
kip universal test machine that permits testing full-size plate girders. In addition, a unique three-dimensional test facility consisting of a 44' × 32' test floor, combined with two perpendicular vertical walls, each nineteen feet high, permits three-dimensional loading. Fatigue testing capabilities permit study of full-size components under random amplitude and frequency to simulate actual service conditions. A number of closed-loop servo-controlled loading systems are available. Cables, such as those used in cable-stayed bridges, can be tested in fatigue up to loads of three million pounds in the cable testing facility. A materials-testing facility is also located in the Ferguson Laboratory. For structural fire engineering research, test frames and furnaces are available for elevated temperature tests of structural materials, components, and connections. Data acquisition systems are available that are suitable for static, dynamic, and fatigue loading programs. The systems are controlled by the laboratory's own computer systems. Direct access to the main University computer facility is also available.

Excellent computational facilities are available to all students in structural engineering in support of both instructional and research activities. These include (1) the Civil Engineering Learning Resource Center (LRC), a general-use, twenty-four-hour access facility equipped with more than 150 workstation-class computers ranging from single-core/single-processor to multicore/multi-processor machines and several dedicated color laser printers, plotters, and flatbed scanners; (2) the Virtual Design Lab, a smaller computational facility equipped with several workstations that provide students with access to the latest suite of high-end CAD and graphics software; (3) a student lounge equipped with computational centers that can be used for team projects; (4) a graduate student computational laboratory equipped with high-end workstations dedicated to research activities; and (5) a similarly equipped graduate computational laboratory housed at the Ferguson Structural Engineering Laboratory. In addition, for research demanding supercomputing resources, students and their faculty advisers have access to the Texas Advanced Computing Center's (TACC) supercomputers, which include Ranger, currently the largest open-science computing system in the world, featuring 62,976 computing nodes, 123 TB of aggregate memory, and peak performance of about 0.5 petaFLOPS. The TACC also provides access to other massively parallel systems and visualization clusters. Access to computational resources is facilitated through the network infrastructure that comprises both wired and wireless segments; the wireless network covers most of the University’s main campus.

**Transportation engineering.** The University’s proximity to the headquarters of governmental transportation agencies provides ready access to the facilities and records of these organizations by graduate students, in planning, behavioral modeling and demand prediction, geometric and structural design, policy making, and operation of streets, highways, and transit and nonmotorized transportation systems. The Center for Transportation Research administers an extensive cooperative research program with the Texas Department of Transportation, the United States Department of Transportation, as well as a spectrum of sponsored projects with other agencies, including the Transportation Research Board, and the National Science Foundation.

Equipment for specialized and routine testing of materials used for constructing and maintaining transportation facilities is available. The bituminous materials laboratory includes state-of-the-art asphalt binder and asphalt concrete testing equipment, an environmental control chamber, and mix preparation and aggregate handling facilities.

Facilities are provided for studying traffic operations, including traffic volume counters, speed meters, motor-driven movie cameras, video cameras and recorders, projectors, portable delay recorders, and other special measuring and recording equipment.

The Transportation Infrastructure and Information Systems Laboratory provides the capability to conduct research in analysis and simulation of large-scale infrastructure systems. The Transportation Equilibrium, Simulation, and Optimized Networks Laboratory allows research on large-scale complex networks with a focus on transportation systems. In addition, the University’s high-performance computers and hardware and software in the department’s Learning Resources Center are available to support research in transportation networks, infrastructure systems, land uses, and traffic operations.

**Libraries.** In addition to the Perry-Castañeda Library and libraries in physics and mathematics, geological sciences, life sciences, and chemistry, a complete library of books, periodicals, and society proceedings in civil engineering is housed in the McKinney Engineering Library.
AREAS OF STUDY

Civil engineering majors may specialize in architectural engineering, construction engineering and project management, construction materials, environmental and water resources engineering, geotechnical engineering, ocean engineering, structural engineering, or transportation engineering. In addition, the Department of Civil, Architectural, and Environmental Engineering offers the Master of Science in Engineering with a major in environmental and water resources engineering. This program is described on pages 169–170. The requirements for both majors (civil engineering and environmental and water resources engineering) are given on pages 173–174.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

David T. Allen
Neal E. Armstrong
Michael E. Barrett
Oguzhan Bayrak
Halil Berberoglu
Amit Bhasin
Chandra R. Bhat
John E. Breen
Carlos H. Caldas
Randall J. Charbeneau
Richard L. Corsi
Chadi Said El Moltar
Michael D. Engelhardt
Ofodike A. Ezekoye
Gregory L. Fenves
Raissa Patricia Ferron
Kevin J. Foilhard
David W. Fowler
Karl H. Frank
Wassim M. Ghannoum
Robert B. Gilbert
Todd A. Helwig
Ben R. Hodges
James O. Jirsa
Maria G. Juenger
Loukas F. Kallivokas
Lynn E. Katz
Spyridon A. Kinnas
Kerry A. Kinney
Mary Jo Kirisits
Richard E. Klingner
Kara Kockelman
Desmond F. Lawler
Fernanda L. Leite
Howard M. Liljestrand
Randy B. Machemehl
David R. Maidment
Joseph F. Malina Jr.
Lance Manuel
Elena C. McDonald-Buller
Daene C. McKinney
Attila Novoselac
William J. O’Brien
James T. O’Connor
Jon E. Olson
Paola Passalacqua
Gary A. Pope
Jorge A. Prozzi
Ellen M. Rathje
Danny D. Reible
Jeffrey A. Siegel
Gerald E. Speitel Jr.
Kenneth H. Stokoe II
John L. Tassoulas
Pulvio Tonon
Steven T. Waller
C. Michael Walton
Michael Webber
Dan L. Wheat
Eric B. Williamson
Sharon L. Wood
Ying Xu
Zhanmin Zhang
Jinying Zhu
Jorge G. Zornberg

ADMISSION REQUIREMENTS

A Bachelor of Science degree from a program in engineering accredited by ABET is the general prerequisite for admission to a graduate program in civil engineering. An applicant whose training does not meet this prerequisite may be accepted but will be required to pass a sequence of courses stipulated by the Graduate Studies Committee that will make up the deficiencies in undergraduate preparation. A list of the required courses is available from the graduate adviser.

DEGREE REQUIREMENTS

Full-time students, and both teaching and research assistants, are required to register for nine semester hours of coursework during each long-session semester. These nine hours may include special problems, seminar, thesis, and dissertation courses.

MASTER OF SCIENCE IN ENGINEERING

Students who follow the thirty-semester-hour plan with thesis must complete a major in civil engineering consisting of eighteen to twenty-four semester hours, including the thesis course, and a minor of six to twelve semester hours outside the area of concentration. Included in the major and minor must be at least eighteen semester hours in engineering. The courses must be logically related and the individual program must be approved by the graduate adviser.

A thirty-semester-hour degree plan is also available under the report option, which includes a report prepared in Civil Engineering 398R according to procedures set by the Graduate School; and under an option that includes a report prepared in Civil Engineering 398D, or an approved program of coursework only, according to procedures set by the Graduate Studies Committee.

Majors for the master’s degree may be chosen in any area or combination of areas listed under “Areas of Study” above.

DOCTOR OF PHILOSOPHY

To be admitted to candidacy for the doctoral degree, the student must pass a preliminary (qualifying) examination administered by a committee, appointed by the graduate adviser, of at least three members of the civil engineering faculty, two of whom may be in the major
DUAL DEGREE PROGRAM

The Department of Civil, Architectural, and Environmental Engineering offers the following dual degree program in cooperation with the Lyndon B. Johnson School of Public Affairs. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

CIVIL ENGINEERING: C E

380P. Ocean Engineering Principles: Theory and Applications. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; and Mathematics 427K and a course in fluid mechanics, or consent of instructor.

Topic 3: Principles of Hydrodynamics. Motion of a viscous or ideal fluid, waves and wave body interactions, lifting surfaces, cavitating flows, computational hydrodynamics.

Topic 4: Boundary Element Methods. Formulation and numerical implementation of boundary element methods; applications to problems in fluid mechanics, structural analysis, and solid mechanics.
380S. Environmental Fluid Mechanics. Fundamentals of fluid mechanics applied in natural systems; analysis of energy; momentum, diffusion, turbulence, and stratification in lakes, rivers, and estuaries. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 319F or consent of instructor.

380T. Computational Environmental Fluid Mechanics. Basics of numerical methods as applied to the solution of the steady and unsteady fluid flow equations, such as the Euler and the Navier-Stokes equations and the advection-diffusion equation. Emphasis on finite volume methods as applied to fluid mechanics problems in civil and environmental engineering. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Civil Engineering 380S or an equivalent graduate course in fluid mechanics, and knowledge of a programming language.

380W. Water Resources Engineering Research Seminar. Presentations and discussions on various topics in water resources engineering. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

381E. Design of Energy Efficient and Healthy Buildings. Design of buildings for low energy use and optimal indoor air quality. Includes ventilation, energy efficiency, moisture problems, and prevention by design. Three lecture hours a week for one semester. Prerequisite: Graduate standing in engineering or consent of instructor.

381P. Computer Methods in Structural Analysis. Linear and nonlinear analysis of trusses and frames; introduction to structural stability; and computational aspects of linear and nonlinear structural analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

381R. The Finite Element Method. Introductory concepts; weighted residual methods; strong and weak forms; boundary conditions; global v. local basis functions; error estimates; smooth and nonsmooth problems; one-dimensional second- and fourth-order problems; two-dimensional potential and plate problems; two-dimensional and three-dimensional elasticity; dynamic and eigenvalue problems; numerical, computational, and meshing issues; applications using commercial software. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 381P or consent of instructor.

381T. Numerical Modeling of Physical Systems. Survey of numerical methods; weighted residuals, finite differences, finite elements, boundary elements; applications to equilibrium, eigenvalue, and propagation problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381W. Introduction to Wave Physics. An introductory course in the theory and modeling of propagating waves. Subjects may include scalar waves in 1-D and 2-D, traveling and standing waves, flexural waves in beams, dispersion, phase and group velocity, vector waves in 2-D and 3-D, waves in infinite media and semi-infinite media, P waves, SH waves, SV waves, Rayleigh and Love surface waves, Stoneley waves, reflection and transmission at interfaces, numerical modeling, radiation conditions, scattering and radiation from obstacles, and fluid-solid interaction. Three lecture hours a week for one semester. Civil Engineering 381W and 397 (Topic: Wave Propagation Analysis) may not both be counted. Prerequisite: Graduate standing.

382L. Plastic Design in Metals. Principles and methods of plastic analyses and design, and their applications to continuous beams, frames, plates, connections, and multistory buildings. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Civil Engineering 335, and consent of instructor.

382N. Structural Systems. Application of systems engineering principles to planning, design, and construction of building and bridge structures with emphasis on performance requirements and economic factors. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

383C. Experimental Methods in Structural Engineering. Survey of experimental methods used in structural engineering, including loading and measurement techniques and systems used in structural research. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

383D. Steel Bridge Design. Design of steel highway bridges, including the analysis and design of composite girders, box girder, and cable-stayed bridges. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 362N or the equivalent.

383F. Structural Fire Engineering. Behavior and design of structures subjected to fire; heat transfer fundamentals and modeling of fires; material properties at elevated temperature; structural fire resistance and protection; calculating structure-fire response. Three lecture hours a week for one semester. Civil Engineering 383F and 397 (Topic: Structural Fire Engineering) may not both be counted. Prerequisite: Graduate standing.

383L. Advanced Reinforced Concrete Members. Behavior of reinforced concrete members; critical review of specifications; limit states; anchorage and development of reinforcement; shear; torsion. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Civil Engineering 331, and consent of instructor.

383N. Advanced Reinforced Concrete Structures. Behavior of reinforced concrete structures, with emphasis on ductility and detailing of frames, slabs, and braced (shearwall) structures. Detailing for seismic loads. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Civil Engineering 383L, and consent of instructor.
383P. **Prestressed Concrete.** Theory, advantages, and limitations; various systems of prestressing; composite construction; continuous span theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Civil Engineering 331, and consent of instructor.

383R. **Repair and Strengthening of Reinforced Concrete Structures.** Evaluation of condition, strength, serviceability, and ductility of existing structures; criteria for rehabilitation; retrofit techniques for change in function, loading, and seismic forces. Three lecture hours a week for one semester. Civil Engineering 383P and 397 (Topic: Repair and Strengthening of Reinforced Concrete Structures) may not both be counted. Prerequisite: Graduate standing and consent of instructor.

383S. **Structural Concrete Bridges.** Planning, design, and construction of reinforced concrete and prestressed concrete bridges, including arch, frame, girder, and cable stay systems; aesthetics, economy, and durability. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and credit or registration for Civil Engineering 383P.

383T. **Plasticity in Structural Concrete.** Application of plasticity theory to structural concrete columns, girders, frames, and joints. Development and application of transparent detailing methods such as truss models, strut-and-tie models, and both strip and yield line methods for slabs. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 383L, and consent of instructor.

383U. **Dynamic Response of Structures.** Single and multidegree-of-freedom systems; dynamic load factors, response to harmonic excitation; damping; modal analysis; direct integration of equations of motion; analysis in time and frequency domains; application to earthquake, wind, wave, and traffic loadings. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 383P or consent of instructor.

383V. **Earthquake Engineering.** Earthquake characteristics; seismic loads; elastic and inelastic response; analysis and design of buildings for earthquakes. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 383P or consent of instructor.

384A. **Structural Reliability.** Load and resistance factors in reliability-based design; first- and second-order reliability methods; Monte Carlo simulation techniques with variance reduction and importance sampling refinements; reliability of systems; fault-tree and event-tree models; inverse reliability procedures; and random fields and stochastic finite element analysis for reliability analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

384B. **Blast-Resistant Structural Design.** Physics of explosions and basic blast phenomenology; structural loading due to blast effects; nonlinear dynamic response of blast-loaded structures; protective design; progressive collapse. Three lecture hours a week for one semester. Civil Engineering 384T and 397 (Topic: Blast-Resistant Structural Design) may not both be counted. Prerequisite: Graduate standing and consent of instructor.

385D. **Water Resources Planning and Management.** Application of engineering economics, microeconomic theory, and operations research to the planning and management of water systems; major topics include flood control, hydroelectric power, water supply, multiobjective planning, and urban water resource management. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385G. **Transboundary Water Resources.** Introduction to planning, policy, and development of water resources in the international setting, with emphasis on transboundary situations. Basic concepts of water rights and international law pertaining to transboundary water use and protection; economic analysis and applications to transboundary water resources problems; international development goals and how these relate to water supply and use. Three lecture hours a week for one semester. Civil Engineering 385G and 397 (Topic: Transboundary Water Resources) may not both be counted. Prerequisite: Graduate standing.

385J. **Hazardous Waste Management.** Legal and technological approaches to effective and sustainable control of hazardous wastes and contaminated sites, studied through problem evaluation and solution. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 342 or consent of instructor.

385K. **Water Quality.** Analysis of water quality in natural systems and of effects of wastewater discharges. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**Topic 1:** Stream, Impoundment, and Estuarine Analysis I. Basic physical, chemical, and biological properties of streams, impoundments, estuaries, and coastal waters; methods for analysis of water quality problems. Additional prerequisite: Civil Engineering 341 and one year of chemistry, or consent of instructor.

**Topic 2:** Stream, Impoundment, and Estuarine Analysis II. Application of methods of analysis to development of a water quality management plan for a water body in Texas. Additional prerequisite: Civil Engineering 385K (Topic 1).

**Topic 3:** Water Quality Modeling. Mathematical modeling of water quality, including dissolved oxygen, nutrients, and toxic substances in lakes, reservoirs, rivers, and estuaries. Additional prerequisite: Civil Engineering 385K (Topic 1) or consent of instructor.

**Topic 4:** Water Pollution Ecology. Advanced topics in the application of engineering solutions to ecological problems in freshwater and marine environments.

385L. **Water and Wastewater Treatment.** Principles of sustainable treatment of domestic and industrial water, wastewater, and sludges. Three lecture hours or two and one-half lecture hours and one laboratory hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**Topic 1:** Physical and Chemical Treatment. Three lecture hours a week for one semester. Additional prerequisite: Civil Engineering 342 or consent of instructor.
**Topic 2: Biological Wastewater Treatment and Sludge Processing.** Three lecture hours a week for one semester. Additional prerequisite: Civil Engineering 342 or consent of instructor.

**Topic 3: Advanced Treatment Processes.** Project-based course addressing advanced topics in treatment process design: alternative designs, computer models, laboratory testing, economics, and least-cost designs. Two and one-half lecture hours and one laboratory hour a week for one semester. Additional prerequisite: Civil Engineering 385L (Topic 1).

**385M. Unit Operations in Water and Wastewater Treatment.** Physical, chemical, and biological unit operations for sustainable water and wastewater treatment. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 385L (Topic 1: Physical and Chemical Treatment or Topic 2: Biological Wastewater Treatment and Sludge Processing) or consent of instructor.

**385N. Industrial Wastewater Treatment.** Industrial wastewater characteristics; methods of in-plant control; application of various biological, chemical, and physical processes in practical water pollution control systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and credit or registration for Civil Engineering 385L or consent of instructor.

**385R. Land Treatment of Wastes.** Principles of the use of land in management of municipal and industrial wastewaters, sludges, and solids; includes problem evaluations. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 342 or consent of instructor.

**385S. Stochastic Hydrology.** Probability and statistics applied to the solution of hydrological problems; extreme event frequency analysis, time series analysis of hydrologic data, autocorrelation and spectral analysis, theory of regionalized variables and applications. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Civil Engineering 311S or an equivalent course in statistical methods.

**385W. Drinking Water: Treatment and Public Health Issues.** Fundamentals and applications of drinking water treatment processes, interactions among treatment processes, source water quality, and public health issues. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Civil Engineering 385L (Topic 1: Physical and Chemical Treatment), and consent of instructor.

**386M. Water Treatment and Wastewater Treatment Plant Design.** Design of water and wastewater treatment facilities; pumps and hydraulic considerations; design of wastewater collection systems; design of systems for handling and disposal of residuals. Specific facilities may be selected to meet individual interests. Six hours of lecture and design laboratory a week for one semester, with appropriate field trips to operating facilities. Prerequisite: Graduate standing, and credit or registration for Civil Engineering 385L or consent of instructor.

**386P. Engineering Fracture Mechanics.** Application of fracture mechanics to fracture-safe design of metal structures; material behavior and analysis of components containing cracks. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

**386R. Inelastic Behavior of Materials.** Introduction to theories of inelastic behavior; theory of plasticity; applications to materials such as steel, concrete, and soils; implementation of constitutive equations in structural analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

**387C. Geoenvironmental Engineering.** Hydraulic conductivity of soils; clay behavior; compacted clay barriers; unsaturated soil behavior and barriers; geosynthetics and geosynthetic barriers; contaminants and solid waste; liquid drainage layers; stability of landfills; contaminant transport through barriers. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

**387G. Geoenvironmental Engineering.** Fundamental concepts of geology, including geologic time and plate tectonics. Interactions among earth materials, landforms, and geologic processes across a range of spatial and temporal scales. Emphasizes common interests shared by engineers and geologists, as well as gaps between the disciplines, such as those posed by the geologic vocabulary. Three lecture hours and three laboratories of fieldwork a week for one semester. Prerequisite: Graduate standing in civil engineering.

**387L. Soil Mechanics I.** Three lecture hours a week for one semester; some topics require additional hours. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**387M. Soil Mechanics II.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**387P. Soil Mechanics II.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**387R. Soil Mechanics III.** Three hours a week for one semester; some topics may require additional hours. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
387T. Decision, Risk, and Reliability. Principles and theory for modeling uncertainty in civil engineering, analyzing how uncertainties affect performance, and developing rational bases for design and decision making under uncertain conditions. Three lecture hours a week for one semester. Prerequisite: Graduate standing and an introductory course in probability and statistics.

388N. Engineering and Management of Municipal and Industrial Residuals. Characterization and collection of solid wastes; biological, chemical, and physical principles and integrated systems applicable to the treatment and disposal of municipal and industrial residuals. Two lecture hours and three discussion hours a week for one semester, with occasional field trips. Prerequisite: Graduate standing in civil or environmental engineering, or graduate standing and consent of instructor.

389C. Advanced Technical Communication for Engineers. Advanced work in theory and practice of communicating research and design results to a variety of audiences, in print, orally, and through multimedia. Students use their own work and writing projects as the material to communicate. Three hours a week for one semester, including lecture and laboratory. Prerequisite: Graduate standing.

389H. HVAC Design. Design of heating, ventilation, and air-conditioning systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing and three of the following courses: Architectural Engineering 346N, Civil Engineering 319F, Mechanical Engineering 320, 326, 330, 339.

389T. Indoor Air Quality: Transport and Control. Transport and control of indoor pollutants. Includes particulate removal and pollutant transport into and within indoor environments. Three lecture hours a week for one semester. Prerequisite: Graduate standing in architectural or civil engineering.

390J. Engineering Microbiology. Fundamentals of microbiology and biochemistry as applied to environmental pollution and sustainable treatment processes, energetics and kinetics of microbial growth, and biological fate of pollutants; introduction to laboratory techniques. Three hours a week for one semester, including lecture and laboratory. Prerequisite: Graduate standing.

390L. Environmental Analysis. Advanced analytical procedures for the sampling, monitoring, and analyses of air, liquid, and other wastes. Six hours of lecture and laboratory a week for one semester. Prerequisite: Graduate standing in one year of chemistry, and consent of instructor.

390N. Water Pollution Chemistry. Advanced topics in the application of engineering solutions to chemical problems in freshwater and marine environments. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390P. Environmental Organic Chemistry. Advanced subjects in the environmental chemistry of organic contaminants in groundwater, soil, and air systems; includes sustainable chemistry. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390Q. Chemical Dynamics in the Environment. Environmental chemodynamics: interphase equilibrium, reactions, transport processes, and related models for anthropogenic substances across natural interfaces (air-water-sediment-soil) and associated boundary regions. Three lecture hours a week for one semester. Civil Engineering 390Q and 397 (Topic: Chemodynamics) may not both be counted. Prerequisite: Graduate standing.

390R. Engineering Microbiology Applications. Application of microbiology and molecular biology tools for monitoring environmental systems and biological treatment processes. Six hours of lecture and laboratory a week for one semester. Civil Engineering 390R and 397 (Topic: Engineering Microbiology Applications) may not both be counted. Prerequisite: Graduate standing and Civil Engineering 390J.

391C. Analysis and Design of Transportation Systems I. Introduction to conceptual, methodological, and mathematical foundations of analysis and design of transportation services; review of probabilistic modeling; application of discrete choice models to demand analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391D. Analysis and Design of Transportation Systems II. Operations research techniques for modeling system performance and design of transportation services; routing and scheduling problems, network equilibration, and spatially distributed queueing systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.
391E. Advances in Transportation Demand Analysis. Developments in the econometric and behavioral aspects of demand analysis and forecasting; supply-demand integration; dynamic models. Applications to passenger and freight transportation and other infrastructure services. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391F. Advanced Theory of Traffic Flow. Relations among traffic variables; distribution functions; single lane and multilane traffic flow; characterization of traffic in cities; kinematic waves; yellow signal dilemma; merging; fuel consumption; emissions; and special topics. Emphasis on the interplay among theory, experimentation, and observation. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391H. Urban Transportation Planning. Interrelationship of transportation and the urban environment; methodologies for planning multimodal transportation systems and developing feasible alternatives; emphasis on developing insight into the transportation problem and the planning process rather than on solving specific problems of limited scope. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391J. Transportation Planning: Methodology and Techniques. Analysis of a wide range of planning studies to establish the logic and foundation for the transportation planning process. Emphasis on techniques of estimation and forecasting population, economic activity, land use, and mobility patterns; determination of goals and objectives; decision making; economic analysis; and alternative evaluation. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391L. Advanced Traffic Engineering. Characterization and analysis of arterial street and freeway traffic operations using theoretical and experimental techniques, especially computer simulation. Introduction to the most current analysis and optimization tools for control device design and implementation. Three lecture hours and three hours of supervised work a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391M. Advanced Geometric Design. Geometric design of highways and guideways, including topics on levels of service, alignment, vehicle operations, intersection and interchange design, roadside design, lighting, and economics. Three lecture hours and one hour of supervised laboratory work a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391N. Engineering System Evaluation and Decision Making. Advanced methods for selection of transportation and other infrastructure systems in the presence of multiple criteria, multiple decision makers, and uncertainty. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391P. Highway and Airport Pavement Systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

   Topic 1: Theory and Behavior of Pavements. Theories of pavement behavior and concepts of pavement design.

   Topic 2: Design and Performance of Pavements. Pavement performance evaluation and the application of theory to the design of pavements.


391Q. Bituminous Materials. Design and use of asphalt mixtures; chemical, physical, and rheological properties of asphalt; and practical applications in highways, airports, and other construction. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391R. Airport Design and Operation. Aircraft characteristics, site selection, airport configuration, capacity, terminal design, traffic control, and interfacing with other transportation modes. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391T. Contemporary Transportation Issues. Consideration, analysis, and evaluation of recent transportation-related innovations and developments. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

391V. Infrastructure Management Principles. The basic concepts and principles of infrastructure management. Life and performance models required for a sound management system. The concepts of modeling performance (including maintenance and repair) for facilities such as buildings, bridges, and air fields. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391W. Transportation Systems Operations and Control. Concepts and advanced methods for the design of control strategies for transportation systems operations, including highway traffic systems (signalized street networks and freeways), transit systems, and private carrier operations, including airlines. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

392C. Transportation Network Analysis I. Transportation network analysis focusing on planning and optimization. Includes precise algorithms for finding transport network equilibrium flows and applications that relate to these flows, routing algorithms, deterministic equilibrium, transportation network design, and stochastic extensions. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
392D. Transportation Network Analysis II. Provides analytical framework for transportation network analysis focusing on stochastic and dynamic conditions. Includes precise algorithms employed for finding dynamic network equilibrium flows via simulation, mathematical programming approaches and applications that relate to these flows, time-dependent and/or online routing algorithms, simulation-based dynamic traffic assignment, linear programming DTA models, dynamic network design, and stochastic extensions. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Civil Engineering 392C.

392E. Acquisition and Analysis of Transportation Data. Methods and technologies for the acquisition and analysis of data on various aspects of transportation systems, including properties of different data sources and types; stated versus revealed preferences; traffic sensing; survey design; sampling strategies; probabilistic methods of data analysis; overview of statistical methods and various regression models, including random-utility, ordered-choice, simultaneous-equations, time-series, and spatial econometric models. Three lecture hours a week for one semester. Civil Engineering 392E and 397 (Topic 18: Acquisition and Analysis of Transportation Data) may not both be counted. Prerequisite: Graduate standing.

392L. Experimental Measurements of Soil Properties. Theoretical and practical knowledge of transducers, sensors, and data acquisition systems for soil and general laboratory testing. Experimental techniques used to characterize properties of geomaterials. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

392M. Public Transportation Engineering. Introduction to public transportation systems, including demand forecasting, operations, and design. Includes statistical methods, driver and vehicle scheduling, algorithms, and survey sampling techniques. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392P. Sustainable Pavement Engineering. Pavement design; back calculation; use of locally available materials for pavement construction; recycled asphalt pavements and shingles; warm mix and cold mix asphalt; industrial by-products and waste incorporated in pavement materials; emerging technologies for sustainable pavement design and pavement management. Three lecture hours a week for one semester. Civil Engineering 392P and 397 (Topic: Sustainable Pavement Engineering) may not both be counted. Prerequisite: Graduate standing, and Civil Engineering 366K, 367P, 391P (Topic 2: Design and Performance of Pavements), 391Q, or consent of instructor.

392R. Discrete Choice Theory and Modeling. Methods and statistics of model estimation, with emphasis on maximum-likelihood; individual choice theory; binary choice models; unordered multinomial and multidimensional choice models; sampling theory and sample design; ordered models and aggregate prediction with choice models; introduction to advanced concepts, such as unobserved population heterogeneity, joint stated preference and revealed preference modeling, and longitudinal choice analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392S. Intermodal Transportation Systems. Strategic planning of intermodal freight transportation systems (infrastructure and rolling stock). Freight logistics, intermodal technology, and intermodal terminal operations. Intermodal freight transportation policy, planning, and operational systems and programs. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392T. Transport Economics. Application of economic theory and principles to transportation systems analysis and evaluation. Topics include individual travel demand decisions, optimal private and public transport supply (including pricing strategies), location choice and land valuation, transport-market imperfections, and welfare-based transport policy. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392U. Transportation Systems Management. Evolving concepts of transportation agency organization, management, and delivery of transportation programs, products, and services. Separation versus integration of transport policymaking and service delivery functions; emerging models for delivering programs and services, such as outsourcing, privatization, and state-owned enterprises; review of national and international experiences with innovative approaches and the benefits and costs associated with change. Three lecture hours a week for one semester. Civil Engineering 392U and 397 (Topic 21: Transportation Systems Management) may not both be counted. Prerequisite: Graduate standing.

392V. Methods to Characterize Bituminous Materials. Introduction to the design and performance prediction of asphalt mixtures. Experimental and computational methods used to characterize the chemical and mechanical properties and performance of bituminous materials at several different length scales. Includes computational models. Three lecture hours a week for one semester. Civil Engineering 392V and 397 (Topic: Characterization of Bituminous Materials) may not both be counted. Prerequisite: Graduate standing, and Civil Engineering 366K, 391Q, or consent of instructor.
392W. Characterization of Viscoelastic Materials. Test methods and physical models used to characterize the mechanical response of linear and nonlinear viscoelastic materials. Use of correspondence principles to solve simple boundary value problems for linear viscoelastic materials. Introductory topics on modeling damage and nonlinear response of viscoelastic materials. Three lecture hours a week for one semester. Civil Engineering 392W and 397 (Topic: Characterization of Viscoelastic Materials) may not both be counted. Prerequisite: Graduate standing.

393. Advanced Concrete Materials. Comprehensive coverage of Portland cement concrete materials. Topics include cement and aggregate properties, chemical and mineral admixtures, concrete microstructure and the effects of chemical and mechanical properties, durability issues, concrete construction, and special concretes. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing, and Civil Engineering 314K or an equivalent materials course.

393C. Experimental Methods in Cement Chemistry. Cement chemistry, hydration, and microstructural formation; analytical techniques used in the investigation of cement and concrete. Three lecture hours a week for one semester. Civil Engineering 393C and 397 (Topic: Experimental Methods in Cement Chemistry) may not both be counted. Prerequisite: Graduate standing, Civil Engineering 351, 393, or the equivalent, and consent of instructor.

393M. Environmental Engineering Research Seminar. Presentation and discussion of environmental topics in surface water, groundwater, air resources, and land resources. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

393N. Novel Structural Materials. Material selection criteria, including mechanical and environmental factors; selected case studies of emerging materials, including derivation of properties and potential applications. Three lecture hours a week for one semester. Civil Engineering 393N and 397 (Topic: Novel Structural Materials) may not both be counted. Prerequisite: Graduate standing and consent of instructor.

393S. Structural Engineering Research Seminar. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

394. Interaction of Soils and Structures. Beams on foundation, laterally loaded piles, applications of the finite-element method, beam-columns with nonlinear soil support, and behavior of pile groups. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and a course in soil mechanics or consent of instructor.

Topic 1: Dynamic Soil-Structure Interaction. Fundamentals of wave propagation; determination of foundation stiffnesses; mat foundations on the surface of a layered soil; embedded foundations; pile foundations; effect of foundation conditions on dynamic response of structures to applied loads (machine foundations) and to seismic excitation. Additional prerequisite: Consent of instructor.

394K. Engineering Hydrology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. With consent of instructor, any topic may be repeated for credit. Prerequisite: Graduate standing; and a basic course in hydrology and in differential equations, or consent of instructor.


Topic 2: Surface Water. Rainfall runoff processes, hydrograph theory, linear and nonlinear hydrologic system models, hydrologic and hydraulic streamflow routing, rainfall and flood flow frequency analysis, watershed models.


394M. Advanced Analyses in Geotechnical Engineering. Development and application of linear and nonlinear finite element procedures for solution of geotechnical engineering problems related to embankments, excavations, static soil-structure interaction, and seepage. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

395P. Project Automation. Three lecture hours a week for one semester. Some topics may require additional hours; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.


Topic 2: Introduction to Construction Automation and Integration. Same as Architectural Engineering 395P (Topic 2: Introduction to Construction Automation and Integration). Construction automation and integration activities, methods for opportunity identification and financial analysis of systems, and tools from several disciplines that are used in construction automation and integration; students prepare a project that synthesizes this information.
Topic 3: Design of Automated Construction Systems. The elements of construction systems, including mechanisms, sensors, and control; systems design methods and concerns. Students develop an individual design project.

Topic 4: Sensing in Civil Engineering. Sensor types and properties, data acquisition, sensor data analysis, sensor fusion, and classes of civil engineering applications. Students are encouraged to work on projects related to their research areas.

395Q. Project Controls. Three lecture hours a week for one semester. Some topics require two lecture hours and three laboratory hours a week; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Project Controls. Fundamentals of planning, scheduling, and cost management on projects. Topics include network scheduling, activity and resource management, cost loading and cost control, and computer tools used for project controls, such as schedule simulation and three-dimensional and four-dimensional CAD.

Topic 2: Project Production Systems. Advanced topics in project controls, including supply chain management, procurement, interorganizational controls and incentives, process modeling, and simulation.

Topic 3: Decision and Risk Analysis. Fundamentals of decision analysis and risk assessment; construction engineering/project management applications in decision analysis; methods of risk management; overview of project insurance.

Topic 4: Metrics. Measurement systems and benchmarking approaches for many aspects of construction projects. Included are measurement systems for design effectiveness, construction productivity, safety, cost and schedule controls, and overall industry statistics.


Topic 6: Quantitative Methods for Project Analysis. Practical methods of data analysis for evaluating project performance metrics. Includes quantitative methods for solving everyday problems such as bid selection, capital budgeting, assignment of resources, equipment replacement analysis, and the optimization of capital structure. Techniques for developing models under conditions of risk using Microsoft Excel and add-ins such as At Risk. Civil Engineering 395R (Topic 6) and 397 (Topic: Quantitative Methods for Project Analysis) may not both be counted.

Topic 7: Building Information Modeling for Capital Projects. Building information models in plan execution for a building construction project. Focus on implementation of building information modeling concepts throughout the lifecycle of a building, from planning and design to construction and operations. Civil Engineering 395R (Topic 7) and 397 (Topic: Building Information Modeling for Capital Projects) may not both be counted.

395S. Project Organization. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Human Resources Project Management. Evaluation of individual, group, and organizational behavior in construction work. In-depth study of communication, decision making, and the relationship between controls and behavior.

Topic 2: Construction Productivity. Construction productivity improvement by group field studies. In-depth study of the way overtime, changes, weather, and staffing levels influence productivity. Industrial engineering techniques are applied to the construction environment to improve the use of equipment and human and material resources.

Topic 4: Project Management. Same as Architectural Engineering 395S (Topic 4: Project Management). Overall aspects of project and portfolio management from inception to successful operation: project selection and feasibility, contracting methods, project scheduling, cost control systems, project communications, project scope and quality management, human resource management, partner selection and management, project leadership, project closeout, and global project management.
395T. Project Technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 3: Heavy Civil Construction. Methods and materials in heavy civil construction; earthwork, concrete, structural steel, and deep foundations; equipment selection, configuration, productivity, and safety issues; site and craft planning, environmental issues, and optimization modeling; and field studies.

Topic 6: Value Management Processes I. Industry value management processes, including value engineering and life cycle costing, process simplification, function analysis concept development, design to capacity, constructability, modularization and preassembly, and design effectiveness.

Topic 7: Value Management Processes II. Industry value management processes, including mechanical reliability modeling, predictive maintenance, design for maintainability, waste minimization and pollution prevention, sustainable design and construction, planning for startup, lean construction, postoccupancy evaluation, and knowledge management and lessons learned systems.

Topic 8: Industrial Construction. Methods and materials in industrial construction; heavy lifts, mechanical equipment, process piping, electrical, and instrumentation work; equipment selection, configuration, productivity, and safety issues; preassembly, modularization, and work planning in the industrial environment; and field studies.

395U. General Topics in Construction Engineering and Project Management. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Front-End and Contractor Planning. Principles and applications of advanced project planning techniques for capital facility owners and contractors. Effective owner front-end planning of capital facilities, including team alignment, and preproject planning processes and tools. Contractor preconstruction planning, including team selection, scope and budget review, procurement, strategic sequencing, and planning assessment tools.

Topic 3: Advanced Legal Concepts. Same as Architectural Engineering 395U (Topic 3: Advanced Legal Concepts). Contracts, documentation requirements, claims avoidance, and settlement of claims by alternative dispute resolution. Students conduct and present in-depth studies of the most frequent causes of claims (delay, disruption, acceleration, soil conditions, and changes) and consider the way the court establishes causation and determines damages.

Topic 4: Construction Safety. Causes and effects of construction safety incidents, proactive preventative strategies, and tactics. Civil Engineering 395U (Topic 4) and 397 (Topic: Construction Safety Management) may not both be counted.

395V. Seminar/Conference Course in Construction Engineering and Project Management. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Doctoral Research Methods Seminar. Construction research methods seminar, including concepts and practice of research in construction engineering and management. Research methodologies and steps in the research process, including review and framing research questions. Students develop and critique a research proposal.

Topic 2: Conference Course. Topic 3: Construction Industry Seminar. Construction industry issues and best practices, such as front-end planning and zero accident techniques, developed by the Construction Industry Institute (CII). Guest lecturers include CII management staff and visiting industry leaders. Emphasis on implementation of proven practices on projects.

396L. Air Resources Engineering. Sources, transport, fate, impacts, characteristics, and control of air contaminants; source control and prevention; urban air quality; occupational and residential indoor air quality. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Air Pollution Chemistry. Classification, transport, transformation, deposition, sampling, and analysis of particulate and gaseous air pollutants in urban, regional, and global-scale systems. Emphasis on sustainable engineering.

Topic 3: Air Pollution Control. Design of air pollution control systems for stationary sources. Technical, regulatory, and economic fundamentals related to the control of gaseous and particulate emissions.


Topic 5: Atmospheric Transport and Dispersion Modeling. Mathematical models of contaminant transport in the atmosphere; atmospheric turbulence and air pollution meteorology; Gaussian plume, gradient transport, and higher-order closure models; theoretical development and practical applications to engineering problems.
Topic 6: Human Exposure to Indoor Air Pollution. Human exposure to air pollution in the built environment, including the effects of sustainable building design on human exposure to toxic air pollutants. Subjects may include inhalation intake fractions for risk calculations and comparisons of sources of air pollution, transmission of airborne infectious disease, pharmacokinetic modeling, and case studies involving several important air pollutants. Civil Engineering 396L (Topic 6) and 397 (Topic: Human Exposure to Toxins) may not both be counted.

396M. Advanced Topics in Atmospheric Science. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and semester hour of credit earned, the equivalent of one additional hours. May be repeated for credit. Some topics may be offered on a credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor. Additional prerequisites vary with topics. With consent of instructor, any topic may be repeated for credit. Some topics may be offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 4: Freight Transportation. Topics include review of transport systems analysis; shipper objectives; demand and supply modeling; freight flow data; network analysis; truck size and weight policies; finance.

Topic 5: Infrastructure Management Systems. Concepts and principles of infrastructure management and performance, with emphasis on bridge and pavement management systems.

Topic 6: Traffic Science Seminar. Topics range from fundamentals of vehicular traffic science to relevant methodologies in physics, applied mathematics, and operational science.


Topic 17: Air Sampling and Analysis. Collection and analysis of air samples for gaseous and particulate contaminants. Gas flow rate and calibration techniques, stationary source sampling and analysis, indoor air sampling, ozone and NOx ambient air monitoring.

Topic 20: Computer Methods for Civil Engineers. Essential methods for computer-aided problem solving in transportation and other civil engineering areas. Topics may include computer operating systems concepts; the Internet and World Wide Web site design; advanced programming with C programming language; data structures; file manipulation and management; Monte Carlo simulation techniques; interfacing with spreadsheets, SQL databases, and computer-aided design packages; introduction to Geographic Information Systems. Team programming is emphasized.

Topic 22: Intelligent Transportation Systems Seminar. Introduction to Intelligent Transportation Systems (ITS) concepts, evolution, and current initiatives. Program evolution from Mobility 2000, through IVHS and strategic planning activities by the Department of Transportation and ITS America, to current operational tests and deployment projects.

Topic 32: Hydrodynamics of Propulsors and Dynamic Positioning Systems. Hydrofoil and lifting surface theory, actuator disk and lifting line theory, vortex-lattice and panel methods, blade design techniques, propulsor-inflow and propulsor-hull interaction, unsteady blade and shaft forces, and modeling of sheet cavitation.

Topic 35: Introduction to Structural Mechanics. Discussion of force and stress, vectors and tensors; equilibrium; displacement and deformation; compatibility; constitutive equations, with examples from linear elasticity, linear viscoelasticity, and plasticity; principle of virtual work; elastic structures, principle of minimum potential energy, reciprocity theorem; critical equilibrium, stability; linear theories of beams, plates, and shells.

Topic 37: Intelligent Infrastructure Systems. Concepts, frameworks, and models of intelligent infrastructure systems, with emphasis on the application of new technologies and advanced modeling techniques to the engineering and management of infrastructure systems.

Topic 50: Water Resources Development and Policies. Analysis of water resources projects, particularly international water projects, with emphasis on engineering and planning considerations and their relation to governmental policies.
Topic 54: Water Pollution Control. The application and evaluation of new concepts in water pollution abatement and advanced water and wastewater treatment.

Topic 56: Air Pollution Control. Evaluation of new theoretical approaches to air pollution control.

Topic 78: Design of Offshore Structures. Selection of design storm; wave forces on structures; preliminary analysis of steel jacket platforms; joint design; fatigue considerations; foundation design; dynamic effects and responses.

397F. Forensic Engineering: Materials and Structures. Same as Architectural Engineering 383 (Topic 4: Forensic Engineering: Materials and Structures). Methods of forensic analysis; role of the expert witness; methods of dispute resolution; case studies; term project. Two lecture hours a week for one semester, with three laboratory hours a week for presentation of case studies. Prerequisite: Graduate standing and consent of instructor.

397K. Stability of Structures. Stability as it relates to actual behavior and design; elastic and inelastic theories; evaluation of specifications; columns, beams, and frames. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

397L. Advanced Structural Metals. Elastic and inelastic design methods for steel members, connections, and structures; torsion of open and closed sections, welding, plate buckling, and column stability; bracing design. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Civil Engineering 335, and consent of instructor.

397N. Nondestructive Testing Techniques. Basic signal processing knowledge; introduction to wave propagation theory; nondestructive testing (NDT) principles and applications to steel structures; evaluation of concrete structures and foundations; NDT methods selection; emerging technologies. Three lecture hours a week for one semester. Civil Engineering 397N and 397 (Topic: Nondestructive Testing Techniques in Civil Engineering) may not both be counted. Prerequisite: Graduate standing.

197S, 297S, 397S, 697S. Special Independent Studies in Civil Engineering. Independent study. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of adviser.

Topic 14: Master’s Research.
Topic 15: Dissertation Research.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in civil engineering and consent of the graduate adviser; for 698B, Civil Engineering 698A.

398D. Departmental Report. Preparation of a report to fulfill the requirement for the master’s degree under the departmental report option. Individual instruction. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in civil engineering and consent of the supervising professor and the graduate adviser.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the Master of Science in Engineering degree under the Graduate School report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in civil engineering and consent of the supervising professor and the graduate adviser.

398T. Supervised Teaching in Civil Engineering. Special training in teaching methods and procedures for civil engineering courses, including laboratory courses; the development of new material and methods to update present courses. Three lecture hours a week for one semester. Prerequisite: Graduate standing in civil engineering and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Civil Engineering 399R, 699R, or 999R.
OBJECTIVE

The objective of the electrical and computer engineering faculty is to provide a graduate program that is both broad and deep, covering the diverse technical areas within electrical and computer engineering. Ten areas of study within the program support this objective: biomedical engineering; computer engineering (including computer architecture and embedded processors); electromagnetics and acoustics; energy systems; integrated circuits and systems; manufacturing systems engineering; plasma/quantum electronics and optics; solid-state electronics; software engineering; and communications, networks, and systems. In each area, a program of study can be designed to meet the educational objectives of each student.

FACILITIES FOR GRADUATE WORK

Facilities are available for graduate work in almost all specialties of electrical and computer engineering, from experimental, theoretical, and computational perspectives. Graduate activities of the department are housed principally in the Engineering-Science Building, with ready access to several special-purpose facilities located in the Applied Computational and Engineering Sciences Building and at the J. J. Pickle Research Campus.

The McKinney Engineering Library and the Kuehne Physics Mathematics Astronomy Library, located near the Engineering-Science Building, provide a rich source of literature to support graduate activities in electrical engineering. Also available for use in education and research are the extensive facilities of Information Technology Services, including more than two hundred computer workstations in the Engineering-Science Building. Nationally recognized centers for multidisciplinary research in which electrical and computer engineering faculty members participate include the Center for Electromechanics, the Computer Engineering Research Center, the Microelectronics Research Center, the Texas Materials Institute, the Wireless Networking and Communications Group, and the Center for Perceptual Systems. Numerous facilities for experimental research are provided by the well-equipped research laboratories within the department.

AREAS OF STUDY

Graduate courses and research are offered with varying degrees of specialization in the following general areas. Topics of specialization within each area reflect the research interests of the faculty.

Biomedical engineering. The research of this faculty is focused in the following areas: biomedical instrumentation (primarily cardiovascular measurements, including clinical applications of admittance volume measurement), very-large-scale integration biomedical circuits (biosensors, lab-on-a-chip, and handheld MRI), bioelectromagnets (RF surgery, electromagnetic field exposure, and quantitative assessment of thermal damage processes), image and signal processing (feature extraction and diagnostic interpretation), machine learning, and health information technologies (data mining and electronic medical records archiving and analysis).

Communications, networks, and systems. This area involves research and design in the fields of networking, communications, signals, and systems: analysis and synthesis of systems, and the processing of information for the purposes of identification, communication, control, and security; linear and nonlinear systems and modeling techniques; and analysis, simulation, and experimental research for a wide range of communications systems and applications, including information theory, digital communications, wireless communications, digital signal processing, antennas and propagation, ad hoc and sensor networks, queueing theory, stochastic processes, probability, networking control theory and active networks, optimization, nonlinear systems, estimation, and signal, image, and video processing.
Computer engineering. This area involves the theory, design, and implementation of custom and reconfigurable digital systems, computer architecture and embedded processors, and computer systems and networks. Investigations include parallel processing, computer arithmetic, neural networks, machine learning, data mining, fault-tolerant computing, computer vision, embedded systems, and hardware/software codesign.

Electromagnetics and acoustics. This area includes the study of electromagnetic and acoustic phenomena ranging from ultralow frequencies to microwaves. The activities in electromagnetics involve research in antenna design, radar scattering, fast computational algorithms, metamaterials, wireless propagation channels, microwave and millimeter-wave integrated circuits, and guided wave devices and systems. The activities in acoustics involve research in transducers, microelectromechanical systems, atmospheric and underwater acoustics, and noise and vibration control.

Energy systems. This area involves research in the production, distribution, and use of electric energy. Present investigations are concerned with renewable and alternative energy, advanced electrical machines, power system–related analyses, simulation of power systems, energy system economics and optimization, open-access transmission, energy efficiency and demand-side management, power system harmonics, power quality, distributed generation, power electronics, electromagnetic levitation, intelligent machines and drives for robotics and control, and electromechanical devices for pulsed power applications.

Integrated circuits and systems. This area involves all aspects of analysis, design, synthesis, and implementation of digital, analog, mixed-signal, and radio frequency (RF) integrated circuits and systems for applications in computing, sensing, and communications. Research in the area spans levels of abstraction from devices to systems on-chip (SoC), and involves transceiver architectures, data converters, signal processing systems, integrated bio-chips, high-performance and low-power design, fault tolerance, design for manufacturability (DFM), design for test (DFT), verification, and computer-aided design (CAD).

Manufacturing systems engineering. This area emphasizes the application of computers, information sciences, and information systems to the development of equipment and software systems for manufacturing. Students take the required core courses, Electrical Engineering 380N (Topic 7: Design of Computer-Controlled Systems), 380N (Topic 9: Fundamentals of Robotics and Mechatronics), and 390C, and additional elective courses in a specialized option. These specialization options include integrated circuit manufacturing and factory automation, including development of new test and measurement equipment.

Plasma/quantum electronics and optics. This area involves research in plasma dynamics, optics, quantum-optic and photonic devices, and plasma processing of semiconductors. Plasma investigations include the design of plasma diagnostics, high-order spectral analysis of plasma waves, and plasma-enhanced chemical vapor deposition. Research in quantum electronics includes optical systems, lasers and laser applications, optical signal processing, optoelectronic devices, and lightwave systems. Investigations include quantum transport studies of double barrier heterostructures, components for very-high-speed communications and computation, high-energy laser applications in materials synthesis and processing, nanophotonic devices and materials, and plasmonics.

Software engineering. This research area involves all aspects of engineering software systems. In addition to the problem of requirements, research and study in the area addresses architecting, designing, building, testing, analyzing, evaluating, deploying, maintaining, and evolving software systems. Problems investigated include theory, techniques, methods, processes, tools, middleware, and environments for all types of software systems in all types of domains and applications. This area of study is also available through the alternatively scheduled program in software engineering to professionals who are working full time.

Solid-state electronics. This track focuses on the development and improvement of micro- and nanoelectronic, optoelectronic, and electromechanical devices, and associated materials for a variety of applications. Devices include nanoscale and nontraditional complementary metal-oxide-semiconductor (CMOS) transistors, and beyond CMOS transistors; photodetectors, photodiodes and lasers, solar cells, and nanostructure optical metamaterials; and electronic and microelectromechanical sensors and actuators including chemical and biological sensors. Material systems include unstrained and strained conventional column IV and III-V semicon-
ductors; organics and polymers; novel materials such as graphene and topological insulators; and insulators such as silicon dioxide and high and low dielectric permittivity materials; along with their thin films and heterostructures.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

<table>
<thead>
<tr>
<th>Faculty Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jacob A. Abraham</td>
</tr>
<tr>
<td>J. K. Aggarwal</td>
</tr>
<tr>
<td>Deji Akinwande</td>
</tr>
<tr>
<td>Andrea Alu</td>
</tr>
<tr>
<td>Jeffrey G. Andrews</td>
</tr>
<tr>
<td>Aristote Arapostathis</td>
</tr>
<tr>
<td>Adnan Aziz</td>
</tr>
<tr>
<td>Chandrajit L. Bajaj</td>
</tr>
<tr>
<td>Ross Baldick</td>
</tr>
<tr>
<td>Sanjay K. Banerjee</td>
</tr>
<tr>
<td>Seth R. Bank</td>
</tr>
<tr>
<td>Suzanne Barber</td>
</tr>
<tr>
<td>Don S. Batory</td>
</tr>
<tr>
<td>Michael F. Becker</td>
</tr>
<tr>
<td>Mikhail A. Belkin</td>
</tr>
<tr>
<td>Adela Ben-Yakar</td>
</tr>
<tr>
<td>Alan C. Bovik</td>
</tr>
<tr>
<td>James C. Browne</td>
</tr>
<tr>
<td>Constantine Caramanis</td>
</tr>
<tr>
<td>Craig M. Chase</td>
</tr>
<tr>
<td>Ray T. Chen</td>
</tr>
<tr>
<td>Julian Cheng</td>
</tr>
<tr>
<td>Derek Chiou</td>
</tr>
<tr>
<td>Michael D. Dahlin</td>
</tr>
<tr>
<td>John H. Davis</td>
</tr>
<tr>
<td>Gustavo A. De Veciana</td>
</tr>
<tr>
<td>Inderjit S. Dhillon</td>
</tr>
<tr>
<td>Ananth Dodabalapur</td>
</tr>
<tr>
<td>Mircea D. Driga</td>
</tr>
<tr>
<td>Stanislav Emelianov</td>
</tr>
<tr>
<td>Mattan Erez</td>
</tr>
<tr>
<td>Brian L. Evans</td>
</tr>
<tr>
<td>Robert H. Flake</td>
</tr>
<tr>
<td>Donald S. Fussell</td>
</tr>
<tr>
<td>Vijay K. Garg</td>
</tr>
<tr>
<td>Andreas M. Gerstlauer</td>
</tr>
<tr>
<td>Ranjit Gharpurey</td>
</tr>
<tr>
<td>Joydeep Ghosh</td>
</tr>
<tr>
<td>John B. Goodenough</td>
</tr>
<tr>
<td>Mack Grady</td>
</tr>
<tr>
<td>Neal A. Hall</td>
</tr>
<tr>
<td>Gary A. Hallock</td>
</tr>
<tr>
<td>Mark F. Hamilton</td>
</tr>
<tr>
<td>Arjang Hassibi</td>
</tr>
<tr>
<td>Robert W. Heath Jr.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Faculty Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul S. Ho</td>
</tr>
<tr>
<td>Warren A. Hunt Jr.</td>
</tr>
<tr>
<td>Lizy K. John</td>
</tr>
<tr>
<td>Christine L. Julien</td>
</tr>
<tr>
<td>Stephen W. Keckler</td>
</tr>
<tr>
<td>Sarfraz Khurshid</td>
</tr>
<tr>
<td>Miryung Kim</td>
</tr>
<tr>
<td>Alexis Kwasinski</td>
</tr>
<tr>
<td>Jack C. Lee</td>
</tr>
<tr>
<td>Calvin Lin</td>
</tr>
<tr>
<td>Hao Ling</td>
</tr>
<tr>
<td>Mia K. Markey</td>
</tr>
<tr>
<td>Kathryn S. McKinley</td>
</tr>
<tr>
<td>Robert Melancton Metcalfe</td>
</tr>
<tr>
<td>Thomas E. Milner</td>
</tr>
<tr>
<td>J. S. Moore II</td>
</tr>
<tr>
<td>Dean P. Neikirk</td>
</tr>
<tr>
<td>Scott Nettles</td>
</tr>
<tr>
<td>Michael E. Orshansky</td>
</tr>
<tr>
<td>Zhigang Pan</td>
</tr>
<tr>
<td>Yale N. Patt</td>
</tr>
<tr>
<td>John A. Pearce</td>
</tr>
<tr>
<td>Dewayne E. Perry</td>
</tr>
<tr>
<td>Keshav K. Pingali</td>
</tr>
<tr>
<td>Edward J. Powers Jr.</td>
</tr>
<tr>
<td>Theodore S. Rappaport</td>
</tr>
<tr>
<td>Leonard F. Register</td>
</tr>
<tr>
<td>Rodney S. Ruoff</td>
</tr>
<tr>
<td>Henry G. Rylander III</td>
</tr>
<tr>
<td>Sujay Sanghavi</td>
</tr>
<tr>
<td>Surya Santoso</td>
</tr>
<tr>
<td>Sanjay Shakkottai</td>
</tr>
<tr>
<td>Peter H. Stone</td>
</tr>
<tr>
<td>Nan Sun</td>
</tr>
<tr>
<td>Earl E. Swartzlander Jr.</td>
</tr>
<tr>
<td>Ahmed Hossam Tewfik</td>
</tr>
<tr>
<td>Nur A. Touba</td>
</tr>
<tr>
<td>Emanuel Tutuc</td>
</tr>
<tr>
<td>Jonathan W. Valvano</td>
</tr>
<tr>
<td>Haris Vikalo</td>
</tr>
<tr>
<td>Sriman Vishwanath</td>
</tr>
<tr>
<td>Emmett Witchel</td>
</tr>
<tr>
<td>Ali E. Yilmaz</td>
</tr>
<tr>
<td>Edward T. Yu</td>
</tr>
</tbody>
</table>

ADMISSION REQUIREMENTS

To enter the graduate program in electrical and computer engineering, a student should normally have an undergraduate degree in this field. A student with a degree in another field may enter if his or her background is appropriate for the chosen area of specialization; however, deficiencies in undergraduate preparation must be made up at the discretion of the Graduate Studies Committee. Standards for entrance into the program generally exceed the minimum standards established by the University; a departmental admissions committee recommends admission or nonadmission of individual applicants.

Graduate students in electrical and computer engineering are expected to be proficient in English. Any student who does not meet the proficiency standards of the University or the department may be required to complete a three-semester-hour English course. The course is counted toward the student’s course load for the semester but is not counted toward the fulfillment of course requirements for the graduate degree.

DEGREE REQUIREMENTS

Entering students are urged to seek a compatible supervising professor. Students may work toward a Master of Science in Engineering degree or, with the approval of the Graduate Studies Committee, may proceed directly to the Doctor of Philosophy degree. More information about course loads, course selection, degree requirements, financial aid, and related matters is available from the office of the graduate adviser.

MASTERC OF SCIENCE IN ENGINEERING

There are three options for obtaining the master’s degree. The thesis option requires thirty semester hours of coursework, of which six hours are earned in the thesis course. The report option requires thirty semester hours of coursework, of which three hours are earned in the report course. The master’s degree without thesis or report requires thirty semester hours of coursework. All coursework for the master’s degree must be taken on the letter-grade basis. No more than six semester hours of upper-division undergraduate coursework may be counted toward the required hours. Students may not earn a grade lower than a C in any course, and only one course with a grade of C or C+ may be counted toward the required hours.

All coursework in and outside electrical engineering must be logically related, and the student’s entire program must be approved by the supervising committee, the graduate adviser, and the graduate dean. Specific regulations regarding the master’s degree program are available from the graduate adviser.
Alternatively scheduled programs in software engineering and integrated circuits and systems. These master's degree programs are available in addition to the course of study offered in the traditional program within the department. They are designed for engineers and computer professionals who are employed full time. Classes are scheduled once a month on Fridays and Saturdays throughout the academic year; at least two calendar years of study are needed to complete the program. Students are required to prepare a master's report as part of their course requirements. Students complete thirty semester hours of coursework, of which three hours are earned in the report course. Students may not earn a grade lower than a C in any course, and only one course with a grade of C or C+ may be counted toward the required hours. Additional information about alternatively scheduled programs is published by the Center for Lifelong Engineering Education at http://lifelong.engr.utexas.edu/degree/index.cfm.

Doctor of Philosophy

Early in the doctoral degree program, the prospective candidate should select a supervising professor, after discussion with and consent of the faculty member so chosen. As early as possible thereafter, the candidate should prepare a tentative Program of Work, with the advice and approval of the supervising professor.

Formal entry into the doctoral program is achieved when the student is admitted to candidacy for the Doctor of Philosophy degree. The Graduate Studies Committee considers the student’s admission to candidacy, upon completion of at least one full semester in residence, after a thorough review of the student’s overall academic record and performance on a doctoral qualifying examination. A detailed description of the procedure for admission to candidacy is available from the graduate adviser. The doctoral program typically requires two to four years of work after the master’s degree.

For More Information

Campus address: Engineering-Science Building (ENS) 101, phone (512) 232-1458, fax (512) 475-7692; campus mail code: Co803
Mailing address: The University of Texas at Austin, Graduate Program, Department of Electrical and Computer Engineering, 1 University Station Co803, Austin TX 78712
E-mail: ecegrad@ece.utexas.edu
URL: http://www.ece.utexas.edu/grad/

Graduate Courses

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

Electrical Engineering: EE

380K. Introduction to System Theory. Introduction to linear dynamical systems and differential equations, state space analysis and applications to feedback control, functional analytic methods, realization theory, stability theory, and elements of optimal control. Three lecture hours a week for one semester. Prerequisite: Graduate standing and credit or registration for Mathematics 365C.

380L. Computer Systems in Engineering. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 5: Engineering Programming Languages. Higher-level languages for engineering design and problem solving; object-oriented programming in C++ and Unix systems programming.

Topic 6: Operating Systems. Input/output systems calls, drivers and descriptors, and integrated circuits. Design and implementation of hardware and software for a Unix-like operating system.

Topic 7: Introduction to Pattern Recognition and Computer Vision. Pattern recognition topics, including Bayesian decision theory, maximum likelihood and estimation, nonparametric techniques, and linear discriminant functions. Computer vision topics, including geometric camera models and calibration, geometry of multiple views and stereopsis, structure from motion, and tracking. Emphasis varies each semester.
Topic 8: Computer Vision Systems. Discussion of current research results and exploration of new directions in computer vision systems. Includes linear discriminant functions, nonmetric methods, unsupervised learning and clustering, model-based vision, segmentation using probabilistic methods, and content-based image and video analysis. Application of the techniques to real-world vision systems. Emphasis varies each semester.


Topic 10: Data Mining. Analyzing large data sets for interesting and useful information. Includes online analytical processing, finding association rules, clustering, classification, and function approximations. Scalability of algorithms and real-life applications.


380N. Topics in System Theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and Electrical Engineering 380K.

Topic 4: Learning Systems and Cybernetic Machines.
Topic 5: Stochastic Control Theory. Dynamic programming in finite and infinite horizon, models with imperfect state information, ergodic control problems, adaptive and risk-sensitive control. Additional prerequisite: Electrical Engineering 381J.
Topic 7: Design of Computer-Controlled Systems.
Topic 8: Algorithms for Parallel and Distributed Computation. Computational and Applied Mathematics 380N and Electrical Engineering 380N (Topic 8) may not both be counted.

Theory of robotics and mechatronics, with emphasis on control, sensing, actuation, low- and high-level vision. Introduction to manipulator geometry, kinematics, dynamics, and planning of trajectories. Robotics laboratory.

Topic 10: Robotics II.

381J. Probability and Stochastic Processes I. Probability spaces, random variables, expectation, conditional expectation, stochastic convergence, characteristic functions, and limit theorems. Introduction to Markov and Gaussian processes, stationary processes, spectral representation, ergodicity, renewal processes, martingales, and applications to estimation, prediction, and queueing theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Electrical Engineering 351K or the equivalent.

381K. Topics in Communication Theory and Signal Processing.
Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Detection Theory.
Topic 2: Digital Communications. Characterization of communication signals and systems (bandpass signals and systems, signal space representation, digitally modulated signals, and spectral characteristics), optimum receivers for additive white Gaussian noise (correlation demodulator, matched-filter demodulator, performance for binary and M-ary modulation, and noncoherent receivers), error control codes (block and convolutional), and bandlimited channels (ISI and equalization). Additional prerequisite: Electrical Engineering 351K, 351M, and 360K.

Topic 3: Satellite Communication. Overview of satellite communication systems, including analog and digital transmission, link budgets, RF aspects, onboard systems, earth stations, current satellite communication systems and services, Global Positioning Systems (GPS), the role of standards and regulations, and orbital mechanics. Additional prerequisite: A graduate or upper-division introductory communication course.

Topic 4: Performance Evaluation.


Topic 6: Estimation Theory.

Topic 7: Information Theory. Source and channel coding theorems, Kolmogorov complexity, network information theory, and connections with large deviations.

Additional prerequisite: Electrical Engineering 371M.

Topic 8: Digital Signal Processing. Signals and systems; generalized functions; z-transforms; Fourier series and transforms; fast Fourier transform; sampling, quantization, and aliasing; digital filter design; discrete-time random processes; multirate processing; filter banks and subband decomposition; nonlinear digital filters. Additional prerequisite: Electrical Engineering 351K and 351M.
Topic 9: Advanced Signal Processing. Signal modeling; optimum filtering; spectral estimation; fast algorithms; and applications in array signal processing, speech coding, and digital communication. Additional prerequisite: Electrical Engineering 351K, 381K (Topic 8), and Mathematics 340L.

Topic 11: Wireless Communications. Introduction to fundamental aspects of wireless communications. Channel modeling, radio propagation, cellular concepts, fading and multipath countermeasures (equalization, diversity, channel coding), spread spectrum, and basic multiple access techniques. Additional prerequisite: Electrical Engineering 351K and 371M, or their equivalents.


381L. Digital Time Series Analysis and Applications. Digital implementation of higher-order spectra and other techniques useful in analyzing, interpreting, and modeling random time series data from linear and nonlinear physical systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing in engineering or natural sciences.

381M. Probability and Stochastic Processes II. Random walk and Brownian motion; renewal and regenerative processes; Markov processes; ergodic theory; continuous parameter martingales; stochastic differential equations; diffusions; stochastic control; multidimensional stochastic models. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Electrical Engineering 381J.

381R. Advanced Wireless Communications. Wireless channel models; performance of digital communication in fading channels; fading channel capacity; selection and maximal ratio combining; space-time codes and transmit diversity; introduction to multi-antenna systems; adaptive modulation; code division multiple access (CDMA) and spread spectrum; orthogonal frequency division multiple access (OFDMA); introduction to multiuser information theory; multiuser diversity and opportunistic scheduling; cooperative communications; and capacity of ad hoc networks. Three lecture hours a week for one semester. Electrical Engineering 381R and 381V (Topic: Advanced Wireless: Space-Time Communications) may not both be counted. Prerequisite: Graduate standing and Electrical Engineering 381J and 381K (Topic 2: Digital Communications).

381S. Space-Time Communication. Multiple-input multiple-output (MIMO) wireless communication, including discrete-time signal models, equalization, and channel estimation; channel models; channel capacity; average probability of error in fading channels; channel coding; transmit and receive diversity; space-time codes; spatial multiplexing; precoding and limited feedback; space-time adaptation; multiuser communication; multiuser information theory; practical multiuser algorithms; and applications in recent standards. Three lecture hours a week for one semester. Electrical Engineering 381S and 381V (Topic: Advanced Wireless: Space-Time Communication) may not both be counted. Prerequisite: Graduate standing and Electrical Engineering 381J and 381K (Topic 2: Digital Communications).

381V. New Topics in Communications, Networks, and Systems. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

382C. Topics in Computer Engineering. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Engineering Design of Software and Software Systems. The software development process; selection and application of software design methods; evaluation of software designs.

Topic 2: Creation and Maintenance of Distributed Software Systems. Creation of large distributed software applications, with emphasis on specification, failure models, correctness, security.


Topic 4: Software/Hardware Engineering Project Management. Requirements for a project management plan; role of the manager of the software development life cycle; economic and customer-driven factors.

Topic 5: Large Software/Hardware/Communications Systems Engineering. Techniques used to specify and design systems of software, hardware, and communications components. Creation of a requirements document and system specification.

Topic 6: Software for Highly-Available Distributed Applications. Software architectures. Software engineering approaches; scenario-based engineering processes to analyze problem domain; domain modeling and representations; creation of component-based reference architecture providing an object-oriented representation of system requirements.

Topic 8: Methodologies for Hardware/Software Co-design. Techniques used to design complex hardware/software systems; emphasis on specification, modeling, estimation, partitioning, verification/validation, and synthesis.
Topic 9: Embedded Software Systems. Dataflow models, uniprocessor and multiprocessor scheduling, hardware/software codesign, hierarchical finite state machines, synchronous languages, reactive systems, synchronous/reactive languages, heterogeneous systems.


Topic 11: Requirements Engineering.

382L. Theory of Digital Systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Switching Theory. General theory and realization algorithms for combinational, sequential, and array logic.

Topic 2: Graph Theory and Applications. Elementary graph theory concepts; graph theory algorithms and applications in multicomputer architecture, switching and coding theory, data structures, computer networks, programming, algorithm analysis, diagnosis and fault tolerance.

382M. Design of Digital Systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: VLSI Testing. Hardware and software reliability analysis of digital systems; testing, design for testability, self-diagnosis, fault-tolerant logic design, error-detecting and error-correcting codes.

Topic 2: Dependable Computing. Design techniques for reliable, fault-tolerant, fail-safe and fail-soft systems; fault diagnosis and fault avoidance methods at program and system levels; experimental and commercial fault-tolerant computer systems.


Topic 7: VLSI I. CMOS technology; structured digital circuits; VLSI systems; computer-aided design tools and theory for design automation; chip design.

Topic 8: VLSI II. Microelectronic systems architecture; VLSI circuit testing methods; integration of heterogeneous computer-aided design tools; wafer scale integration; advanced high-speed circuit design and integration.

Topic 9: Simulation Methods in CAD/VLSI. Techniques and algorithms for simulating large-scale digital and analog circuits.


Topic 11: Verification of Digital Systems. Automatic verification of digital systems; formal models and specifications, equivalence checking, design verification, temporal logic, BDDs, logical foundations, automata theory, recent developments.

Topic 12: System Design Metrics. Analysis of design at chip, board, and system levels; life cycle implications of design decisions, including design for testability effects on production and field service; economic and customer-driven factors.


Topic 14: Analog Integrated Circuit Design.

Topic 15: Computer Performance Evaluation and Benchmarking. Performance metrics, benchmarks, measurement tools and techniques, simulation, trace generation, sampling, analytical modeling, workload characterization, statistical methods to compare alternatives, linear regression, and design of experiments.

Topic 16: Application-Specific Processing.


Topic 18: Java Processing. The Java run-time environment, Java Virtual Machine, processing Java in interpreted and J IT compilation modes, Java processors, Java benchmarks, characterization of Java workloads, performance impact of Java, optimizing microprocessors for Java.


382N. Computer Systems and Networks. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 3: Interconnection Networks. Topologies, routing algorithms, permutations, resource allocations, performance evaluation, fault tolerance, VLSI design, parallel/distributed algorithms, languages for specifying protocols, distributed operating systems.

Topic 4: Advanced Embedded Microcontroller Systems. Hardware and software design of microcontroller systems; applications, including communication systems; object-oriented and operating systems approaches to interfacing and resource management.


Topic 10: Parallel Computer Architecture. Study of parallel computing, including models, algorithms, languages, compilers, interconnection networks, and architectures.

Topic 11: Distributed Systems. Concurrent programming languages, distributed algorithms, distributed operating systems, distributed data, formal models of concurrency, protection and security in computer networks.


Topic 14: High-Speed Computer Arithmetic I. Design of computer arithmetic units: fast adders, fast multipliers, dividers, and floating-point arithmetic units.
Topic 15: High-Speed Computer Arithmetic II. Advanced topics in computer arithmetic, including error correcting coding, residue number systems, CORDIC arithmetic, and VLSI implementation. Additional prerequisite: Electrical Engineering 382N (Topic 14).


Topic 17: Superscalar Microprocessor Architectures. Superscalar processor architectures, comparison with VLIW processors, program parallelism, performance evaluation, trace generation, memory systems, branch prediction.


Topic 20: Computer Architecture: Parallelism and Locality. Hardware and software parallelism and locality mechanisms, and their impact on processor performance, bandwidth, and power requirements; architectures and microarchitectures of throughput-oriented processors that rely on parallelism, locality, and hierarchical control; parallel memory systems; and streaming and bulk execution and programming models. Includes programming and measuring performance on massively parallel processors. Prerequisite: Electrical Engineering 382N (Topic 20) and 382V (Topic: Principles of Computer Architecture) may not both be counted.

382S. Topics in Integrated Circuits and Systems. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

382V. New Topics in Computer Engineering. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

383L. Electromagnetic Field Theory. Vector space, Green’s function; equivalence theorem; vector potentials; plane, cylindrical, and spherical waves; radiation and scattering. Three lecture hours a week for one semester. Prerequisite: Graduate standing in electrical engineering.

383M. Microwave Field Theory. Guided waves in cylindrical waveguides, microstrip lines, dielectric and optical waveguides; integrated circuits; periodic structures. Three lecture hours a week for one semester. Prerequisite: Graduate standing in electrical engineering.

383N. Theory of Electromagnetic Fields: Electrodynamics. Intermediate electromagnetic field theory, with emphasis on the interaction of fields and material media, including anisotropic media. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

383P. Topics in Optical Processing and Laser Communications. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in engineering, mathematics, chemistry, or physics.

Topic 1: Fourier Optics. Fourier transforming properties of lenses, frequency analysis of optical imaging systems, spatial filtering, introduction to optical information processing and holography.


Topic 5: Fiber and Integrated Optics II. Principles and practices of guided-wave optical sensor technology. Nonlinear optical effects in fibers, including amplification and fiber lasers.


Topic 8: Optical Communications.

383V. New Topics in Electromagnetics. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

384N. Acoustics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Acoustics I. Same as Mechanical Engineering 384N (Topic 1: Acoustics). Plane waves in fluids; transient and steady-state reflection and transmission; lumped elements; refraction; strings, membranes, and rooms; horns; ray acoustics; absorption and dispersion.


Topic 3: Electromechanical Transducers. Same as Mechanical Engineering 384N (Topic 3: Electromechanical Transducers). Modeling, analysis, and design of transducers for reception and transmission of acoustic and vibration signals; dynamics of coupled electrical, mechanical, and acoustical systems; and the effects of transducer characteristics on fidelity and efficiency of transduction.


Topic 5: Underwater Acoustics. Same as Mechanical Engineering 384N (Topic 5: Underwater Acoustics). Acoustical properties of the ocean; point sources and Green’s functions; reflection phenomena; ray theory; normal mode theory; guided waves in horizontally stratified fluid media; WKB and parabolic approximations.

Topic 7: Ultrasonics. Same as Mechanical Engineering 384N (Topic 7: Ultrasonics). Acoustic wave propagation in fluids, elastic solids, and tissue; transducers, arrays, and beamforming; nondestructive evaluation; and acoustical imaging.

384V. Current Topics in Acoustics. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

385J. Topics in Biomedical Engineering. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in engineering and consent of instructor.

Topic 3: Bioelectric Phenomena. Same as Biomedical Engineering 384J (Topic 4: Bioelectric Phenomena). Examines the physiological bases of bioelectricity and the techniques required to record bioelectric phenomena both intracellularly and extracellularly; the representation of bioelectric activity by equivalent dipoles and the volume conductor fields produced.


Topic 15: Biosignal Analysis. Same as Biomedical Engineering 384J (Topic 3: Biosignal Analysis). Theory and classification of biological signals such as EEG, EKG, and EMG. Data acquisition and analysis procedures for biological signals, including computer applications.

Topic 16: Laser-Tissue Interaction: Optical. Same as Biomedical Engineering 381J (Topic 2: Laser-Tissue Interaction: Optical). The optical behavior of random media such as tissue in interaction with laser irradiation. Approximate transport equation methods to predict the absorption and scattering parameters of laser light inside tissue. Port-wine stain treatment; cancer treatment by photochemotherapy; and cardiovascular applications.

Topic 17: Biomedical Instrumentation II: Real-Time Computer-Based Systems. Same as Biomedical Engineering 384J (Topic 2: Biomedical Instrumentation II: Real-Time Computer-Based Systems). Design, testing, patient safety, electrical noise, biomedical measurement transducers, therapies; instrumentation electronics, microcomputer interfaces, and embedded systems. Four structured laboratories and an individual project laboratory.

Topic 18: Biomedical Imaging: Signals and Systems. Same as Biomedical Engineering 384J (Topic 5: Biomedical Imaging: Signals and Systems). Physical principles and signal processing techniques used in thermographic, ultrasonic, and radiographic imaging, including image reconstruction from projections such as CT scanning, MRI, and millimeter wave determination of temperature profiles. Additional prerequisite: Electrical Engineering 371R.


Topic 26: Therapeutic Heating. Same as Biomedical Engineering 381J (Topic 5: Therapeutic Heating). Engineering aspects of electromagnetic fields that have therapeutic applications: diathermy (short wave, microwave, and ultrasound), electrotherapy (thermal damage processes), stimulation of excitable tissue, and electrical safety.

Topic 28: Noninvasive Optical Tomography. Same as Biomedical Engineering 381J (Topic 6: Noninvasive Optical Tomography). Basic principles of optical tomographic imaging of biological materials for diagnostic or therapeutic applications. Optical-based tomographic techniques including photothermal, photographic imaging of biological materials for diagnostic or therapeutic applications. Optical-based tomographic imaging techniques including photothermal, photographic, and coherent methodologies.

Topic 31: Biomedical Instrumentation I. Same as Biomedical Engineering 384J (Topic 1: Biomedical Instrumentation I). Application of electrical engineering techniques to analysis and instrumentation in biological sciences: pressure, flow, temperature measurement; bioelectric signals; pacemakers; ultrasonics; electrical safety; electrotherapeutics.

Topic 32: Projects in Biomedical Engineering. Same as Biomedical Engineering 384J (Topic 5: Projects in Biomedical Engineering). An in-depth examination of selected topics, such as optical and thermal properties of laser interaction with tissue; measurement of perfusion in the microvascular system; diagnostic imaging; interaction of living systems with electromagnetic fields; robotic surgical tools; ophthalmic instrumentation; noninvasive cardiovascular measurements. Three lecture hours and six laboratory hours a week for one semester. Additional prerequisite: Electrical Engineering 385J (Topic 31).

385V. New Topics in Biomedical Engineering. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

390C. Statistical Methods in Engineering and Quality Assurance. The interpretation of data from designed experiments and production processes. Topics include probability distributions, confidence intervals, analysis of variance, hypothesis testing, factorial designs, and quality control data. Three lecture hours a week for one semester. Prerequisite: Graduate standing in engineering and a course in probability and statistics.

390V. New Topics in Manufacturing Systems Engineering. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

391C. Technical Entrepreneurship. Introduction to the technology-based company: entrepreneurship, intrapreneurship, strategic planning, finance, marketing, sales, operations, research and development, manufacturing, and management. Student teams form hypothetical companies and simulate their ventures over an extended period; presentations and reports are required. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392K. Antenna Theory and Practice. Modern antenna systems for receiving and transmitting, including driven and parasitic arrays, horns, parabolic and other antennas. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392L. Computational Electromagnetics. Fundamental computational modeling and analysis techniques for applications in antennas, microwave circuits, biomedical engineering, and geophysics. Emphasis on boundary-value problem formulation, numerical methods, computer implementation, and error quantification. Includes differential and integral equation-based methods for solving Maxwell’s equations in frequency and time domains. Three lecture hours a week for one semester. Electrical Engineering 383V (Topic: Computational Electromagnetics) and 392L may not both be counted. Prerequisite: Graduate standing.

392N. Principles of Radar. Fundamentals of radar, with an emphasis on electromagnetics and signal processing. Includes radar range equation, antennas, propagation and target scattering, matched filter, ambiguity function, waveform design, pulse compression, microwave imaging, synthetic aperture radar, and inverse synthetic aperture radar (ISAR). Three lecture hours a week for one semester. Electrical Engineering 383V (Topic: Radar Principles) and 392N may not both be counted. Prerequisite: Graduate standing.

393C. Plasma Dynamics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in engineering, physics, chemistry, or mathematics.

Topic 1: Introduction to Plasma Dynamics. Plasma properties, including collective effects, Debye shielding, quasineutrality, the plasma frequency, collisions. Single particle motions in electric and magnetic fields. Particle drifts, adiabatic invariants, cyclotron resonance.

394. Topics in Power System Engineering. Steady-state and transient analysis; symmetrical components, stability, protection, relaying. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in electrical engineering, or graduate standing and consent of instructor.

Topic 7: Power Electronic Devices and Systems. A study of power electronic components and circuits; HVDC converters; electronic drives for machines; AC/DC converters.

Topic 9: Power Quality. The study of electrical transients, switching surges, lightning, and other phenomena that cause deviations in 60-hertz sinusoidal voltages and currents.


Topic 11: Design of Electrical Machines. Same as Mechanical Engineering 384E (Topic 2: Design of Electrical Machines). Electrical and mechanical design of electrical machines.

Topic 13: Intelligent Motion for Robotics and Control. Electric drives and machines used in computers, robotics, and biomedical applications; and special electric drives and machines used in industry and power systems. Includes magnetic circuits and magnetic materials; electromechanical energy conversion principles; rotating and linear machine concepts, including synchronous, induction, DC, and variable reluctance machines; Park’s equations; vector and tensor control of induction motors; sensors, actuators, and microcontrollers; and electromagnetic levitation.


Topic 16: Restructured Electricity Markets. The locational marginal pricing (LMP) model of electricity markets. Includes market dispatch formulated as an optimization problem, unit commitment issues, and pricing rules and incentives in markets; energy-price and transmission-price risk hedging and energy network models; and revenue adequacy of financial transmission rights, a mixed-integer programming approach to unit commitment, the representation of voltage constraints into market models, and the design of electricity markets to mitigate market power. Electrical Engineering 394 (Topic 16) and 394V (Topic: Restructured Electricity Markets) may not both be counted.
394J. Energy Systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**Topic 1:** Power System Engineering I. Physical features, operational characteristics, and analytical models for major electric power systems and components.

**Topic 2:** Power System Engineering II. Advanced techniques for solving large power networks; load flow, symmetrical components, short circuit analysis.

**Topic 9:** Wind Energy Systems. Wind resource characteristics and assessments; wind turbine technologies (fixed and variable-speed turbines); wind power transmission; integration and interconnection issues; and reliability impacts. Electrical Engineering 394J (Topic 9) and 394V (Topic: Wind Energy Systems) may not both be counted.

394L. Power Systems Apparatus and Laboratory. Fundamentals of power systems emphasized through laboratory experiments. Includes complex power, three-phase circuits, per-unit system, transformers, synchronous machines, transmission line models, steady-state analysis, induction machines, capacitor banks, protective relaying, surge arrestors, and instrumentation. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 394L and 394V (Topic: Power Systems Apparatus and Laboratory) may not both be counted. Prerequisite: Graduate standing.

394V. New Topics in Energy Systems. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

396K. Solid-State Device Theory. Theory of electron, magnetic, and electro-optic devices. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** Metal Oxide Semiconductor Devices: Physics and Technology.

**Topic 2:** Semiconductor Physics. Introduction to the fundamental physics of charge carrier states in semiconductors, charge carrier interactions among themselves and with the environment, and charge transport in semiconductors and their heterostructures. Additional prerequisite: An introductory course in quantum mechanics.

**Topic 4:** Synthesis, Growth, and Analysis of Electronic Materials.

**Topic 5:** Superconducting Electronic Devices.

**Topic 6:** Magnetic Phenomena in Materials.

**Topic 7:** MOS Integrated Circuit Process Integration.

**Topic 8:** VLSI Fabrication Techniques.

**Topic 9:** Localized versus Itinerant Electrons in Solids. Same as Mechanical Engineering 386R (Topic 1: Localized versus Itinerant Electrons in Solids). Description of electrons, from free atoms to crystals; band theory contrasted with crystal-field theory; evolution of electronic properties on passing from magnetic insulators to normal metals, from ionic to covalent solids, from single-valent compounds to mixed-valent systems; electron-lattice interactions and phase transitions; many examples. Additional prerequisite: A semester of quantum mechanics and a semester of solid-state science or technology.

**Topic 10:** Ionic Conductors. Same as Mechanical Engineering 386T (Topic 1: Ionic Conductors).

**Topic 11:** High-Temperature Superconductors. Same as Mechanical Engineering 386T (Topic 2: High-Temperature Superconductors).

**Topic 12:** Catalytic Electrodes. Same as Mechanical Engineering 386T (Topic 3: Catalytic Electrodes).

**Topic 13:** Magnetic Materials. Same as Mechanical Engineering 386T (Topic 4: Magnetic Materials).

**Topic 14:** Optical Interconnects.

**Topic 15:** Optoelectronics Integrated Circuits.

**Topic 16:** Semiconductor Lasers.

**Topic 17:** Localized-Electron Phenomena. Same as Mechanical Engineering 386R (Topic 2: Localized-Electron Phenomena). Analysis of the variation in physical properties versus chemical composition of several groups of isostructural transition-metal compounds. Additional prerequisite: A semester of solid-state science and/or quantum mechanics.

**Topic 19:** Plasma Processing of Semiconductors I. Plasma analysis using Boltzmann and fluid equations; plasma properties, including Debye length, quasineutrality, and sheaths; basic collisional properties, including Coulomb and polarization scattering; analysis of capacitive and wave-heated plasma processing reactors.

**Topic 20:** Plasma Processing of Semiconductors II. Plasma chemistry and equilibrium; analysis of molecular collisions; chemical kinetics and surface processes; plasma discharge particle and energy balance; analysis of inductive and DC plasma processing reactors; plasma etching, deposition, and implantation.

**Topic 21:** Submicron Device Physics and Technologies. Physical principles and operational characteristics of semiconductor devices. Metal oxide semiconductor field effect, transistors, and bipolar junction transistors, with a focus on present and future technologies. Short-channel effects, high-permittivity gate dielectrics, hot-electron effects, poly-depletion and quantum mechanical effects, silicon-on-insulator devices, strained-Si, advanced 3-dimensional devices and bandgap narrowing effect, and Webster effect.

**Topic 22:** Semiconductor Microlithography.

**Topic 23:** Semiconductor Heterostructures.

**Topic 24:** Microwave Devices.
396M. Quantum Electronics. Quantum mechanical principles as applied to electron devices, lasers, and electro-optics; material properties and interaction of radiation and material. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in electrical engineering or physics.

Topic 1: Introductory Quantum Electronics. Basic quantum mechanics and applications to solid-state phenomena and lasers.

396N. Topics in Nanotechnology. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Semiconductor Nanostructures. Electronic properties and electron transport in quantum confined devices; two-dimensional electron systems in semiconductor heterostructures; quantum wires; quantum dots; spintronic devices; growth and fabrication techniques. Electrical Engineering 396V (Topic: Semiconductor Nanostructures) and 396N (Topic 1) may not both be counted. Prerequisite: Graduate standing.

396V. New Topics in Solid-State Electronics. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

197C, 297C, 397C, 697C, 997C. Research Problems. Problem selected by the student with approval of the department. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in electrical engineering and consent of the graduate adviser.

197G, 297G, 397G, 697G. Research Problems. Problem selected by the student with approval of the department. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing in electrical engineering and consent of instructor and the graduate adviser.

397K. Advanced Studies in Electrical Engineering. Selection of topics based on needs of an adequate number of students. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in electrical engineering and consent of instructor.

Topic 1: Conference Course. May be repeated for credit.

397M. Graduate Research Internship. Research associated with enrollment in the Graduate Research Internship Program (GRIP). Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in electrical engineering and consent of instructor.

197S, 297S, 397S. Graduate Seminar in Electrical Engineering. One, two, or three lecture hours a week for one semester. May be repeated for credit. Some sections of Electrical Engineering 197S are offered on the letter-grade basis only; others are offered on the credit/no credit basis only. These sections are identified in the Course Schedule. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in electrical engineering and consent of the graduate adviser; for 698B, Electrical Engineering 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in electrical engineering and consent of the graduate adviser.

398T. Supervised Teaching in Electrical Engineering. Teaching under close supervision for one semester, attending group meetings or individual consultations, and submitting reports as required. Three lecture hours a week, or the equivalent, for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Electrical Engineering 399R, 699R, or 999R.
ENGINEERING MANAGEMENT

Master of Science in Engineering

The engineering management program is offered by the Cockrell School of Engineering and administered by the Center for Lifelong Engineering Education. The mission of the program is to contribute significantly to engineers’ managerial leadership abilities within their technological organizations by allowing students an opportunity to pursue higher education that is innovative and intellectually inspiring. The program fulfills this mission by offering courses that teach engineers how to lead and how to manage projects, processes, personnel, products, and services in real-world situations.

OBJECTIVES

The core objective of the engineering management program is to provide engineers who have chosen to pursue leadership and management career paths with the tools and education that will most directly support their success. The goal of the degree program is to provide engineering professionals with these foundations and to help them continue lifelong learning while employed in industry. Further objectives are to teach students about managing technical, business, and human performance processes in order to achieve corporate goals; to develop and learn core business fundamentals in areas including economics, negotiations, marketing, and decision analysis and risk assessment; and to provide an understanding of marketing risks associated with new products, financing a new venture, and legal issues associated with a new project or product. Additional objectives are to provide a program that is challenging, innovative, and intellectually inspiring; to offer a program for the working professional by offering courses that meet once a month on Friday and Saturday; and to offer an advanced degree in engineering management that meets the needs of technology organizations and industry in the Austin area, the state of Texas, and the world.

The program is designed to give students the knowledge to measure and evaluate technical, business, and human performance processes in engineering environments. In the required courses listed on page 199, students are expected to develop their perspectives on leadership and management of technology in industry and to gain insight into other management issues critical to leading or managing a technological organization.

The curriculum is designed to help students become better engineering leaders who can manage personnel, projects, processes, products, and services. The program’s special scheduling option allows the working professional to earn an advanced degree while maintaining his or her career.

AREAS OF STUDY

The interdisciplinary engineering management faculty includes members of several departments of the Cockrell School of Engineering and the McCombs School of Business, as well as from the School of Law. The current research of this faculty includes such topics as engineering economics; decision and risk analysis; economic management and marketing; management of people and organizations; and the legal issues that affect technology, such as product liability and patent law.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Uttarayan Bagchi
- Richard H. Crawford
- John A. Daly
- Genaro J. Gutierrez
- Kyle Lewis
- Steven P. Nichols

ADMISSION REQUIREMENTS

This two-year program provides graduate education for the working professional who is employed in or planning to move into the field of engineering management. Classes meet all day one Friday and Saturday a month, with an orientation session at the beginning of the program. The program requires a serious commitment on the part of the student and the student’s employer. The coursework is rigorous and demanding and can provide an excellent educational experience.

Students must have at least eighteen months of professional experience.
DEGREE REQUIREMENTS

The program requires thirty semester hours of graduate coursework, including the following core courses:
Engineering Management 380, Topic 1: Managing People and Organizations
Engineering Management 381, Topic 1: Legal Issues for Engineering Managers
Engineering Management 383, Topic 1: Management of Projects and Processes
Engineering Management 383, Topic 2: Strategic Decision and Risk Analysis

FOR MORE INFORMATION

Campus address: Continuing Engineering Education Building (CEE) 2.206, phone (512) 232-5169, fax (512) 471-0831; campus mail code: A2800
Mailing address: The University of Texas at Austin, Engineering Management Program, PO Box H, Austin TX 78713-8908
E-mail: utmasters@engr.utexas.edu
URL: http://lifelong.engr.utexas.edu/degree/index.cfm

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes to the course inventory made after the publication of this catalog.

Classes generally meet once a month, all day on Friday and Saturday.

ENGINEERING MANAGEMENT: ENM

380. Topics in Engineering Management. Engineering management theories of social and psychological behavior, and how these theories are used by administrators and managers. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the engineering management degree program.

Topic 1: Managing People and Organizations.

381. Legal Issues in Engineering Management. Legal considerations in the practice of engineering management. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the engineering management degree program.

Topic 1: Legal Issues for Engineering Managers. Legal considerations in the practice of engineering; specifications and contracts for equipment and engineering services.

382. Management Simulations in Engineering Management. Management simulations in the practice of engineering management. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the engineering management degree program.

383. Decision Making in Engineering Management. Management of engineering decision-making processes and practices. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the engineering management degree program.

Topic 1: Management of Projects and Processes. Methods for organizing, coordinating, and controlling resources to minimize risk and conflict and to maintain budgets and schedules. Topics include evaluation of competing alternatives, organization of a project, scheduling of tasks and resources, and the role of management over time.

Topic 2: Strategic Decision and Risk Analysis. Fundamentals of decision analysis and risk assessment; mathematical and psychological aspects of decision making, especially under uncertain conditions; engineering and project management applications.
Topic 3: System Design Metrics. Analysis of design at chip, board, and system levels; life cycle implications of design decisions; economic and customer-driven factors.

384. Engineering Economics. Introduction to fundamental concepts in finance and their application. Emphasis on how to evaluate investment and financing opportunities in a corporation. Examines investments, capital structure choice, financial models, and issues in corporate control. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the engineering management degree program.

397K. Engineering Management Seminar. Current topics in engineering management. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and admission to the engineering management degree program.

397P. Projects in Engineering Management. Independent project carried out under the supervision of an engineering management faculty member. Offered on the letter-grade basis only. Prerequisite: Graduate standing and admission to the engineering management degree program.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in engineering management and consent of the graduate adviser. For 698B, Engineering Management 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and admission to the engineering management degree program.

ENGINEERING MECHANICS

Master of Science in Engineering
Doctor of Philosophy

OBJECTIVES

The engineering mechanics graduate program is involved in teaching and research in analytical, computational, and experimental methods in mechanics of solids, structures, and materials and fluid mechanics. The objectives of the program are to enable the student to attain a deeper understanding of engineering mechanics fundamentals, a knowledge of recent developments, and the ability as a master’s degree student to participate in research and as a doctoral degree student to conduct individual research. The goals are accomplished through coursework, seminars, and active research programs.

AREAS OF STUDY AND FACILITIES

Graduate study and facilities for research are offered in the areas of theoretical mechanics and applied mathematics, dynamics, computational mechanics, experimental fluid mechanics, computational fluid dynamics, finite element methods, boundary element methods, experimental mechanics, solid and structural mechanics, and structural dynamics. The extensive facilities of Information Technology Services and related hardware for interactive computer graphics and real-time control of experiments are available to graduate students for research use. For experimental research, the Department of Aerospace Engineering and Engineering Mechanics maintains laboratory facilities on the main campus and at the J. J. Pickle Research Campus. These facilities include equipment for studies in high-velocity impact, structural dynamics, and materials science. A well-equipped machine shop is partially supported by the department, and technical assistance is available when required.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Ivo M. Babuska
Jeffrey K. Bennighof
Srinivas V. Betadpur
Robert H. Bishop
Graham F. Carey
Graham F. Carey
Clinton N. Dawson
Leszek F. Demkowicz
Linda J. Hayes
Rui Huang
Thomas J. Hughes
Stelios Kyriakides
Chad M. Landis
Kenneth M. Liechti
Hans M. Mark
Mark E. Mear
J. T. Oden
Krishnaswa Ravi-Chandar
Gregory J. Rodin
Jayant Sirohi
Byron D. Tapley
Mary F. Wheeler


DEGREE REQUIREMENTS

Candidates for a graduate degree in engineering mechanics must meet all the general requirements for advanced degrees. Particular details are given below.

MASTER OF SCIENCE IN ENGINEERING

Before being admitted to candidacy, the student must have a satisfactory proficiency in basic and intermediate material in engineering mechanics and mathematics. Students entering without an undergraduate degree in engineering are usually required to do some remedial work at the undergraduate level. A master’s degree program normally consists of twenty-four semester hours of graduate coursework in engineering mechanics and related fields, and six semester hours in the thesis course. Two optional routes to the master’s degree are available by petition to the Graduate Studies Committee. These are thirty-six hours of coursework with no thesis or report and thirty hours of coursework and a report based on work done in an additional prescribed conference course. Details of the options and requirements pertaining to course selection are given in instructions supplied by the department.

DOCTOR OF PHILOSOPHY

Doctoral candidates must fulfill the basic course requirements prescribed for candidates for the master’s degree. Beyond that, the course program is tailored to each student’s needs.

Before being admitted to candidacy for the degree, the student must pass both a written and an oral qualifying examination on graduate-level material in mechanics and mathematics.

After being admitted to candidacy, the student completes coursework, carries out an acceptable program of original research, and writes a dissertation covering this research. The committee appointed to approve the Program of Work and the dissertation examines the student for both breadth and depth of knowledge. Examinations may be oral or written or both and must include a public defense of the dissertation.

Further information about policy, procedure, and requirements is available from the Department of Aerospace Engineering and Engineering Mechanics.

FOR MORE INFORMATION

Campus address: W. R. Woolrich Laboratories (WRW) 215D, phone (512) 471-7595, fax (512) 471-3788; campus mail code: C0600
Mailing address: The University of Texas at Austin, Graduate Program in Engineering Mechanics, Department of Aerospace Engineering and Engineering Mechanics, 1 University Station C0600, Austin TX 78712
E-mail: ase.grad@mail.ae.utexas.edu
URL: http://www.ae.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ENGINEERING MECHANICS: E M

380. Theory of Plasticity. Physical basis of plastic deformation; mathematical theory of incremental plasticity; total theories; numerical implementation; slip and physical theories of plastic deformation; rate dependent (viscoplastic) models; applications to several engineering problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 388 or the equivalent.

381. Advanced Dynamics. Dynamics of systems of particles and rigid bodies; vibration theory; analytical dynamics, including Lagrangian and Hamiltonian formulations; dynamic stability; continuous systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
382. Nonlinear Analysis. Methods for analyzing various types of nonlinear differential equations of dynamical systems; exact methods, perturbation and averaging techniques, direct method of Liapunov. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

384K. Continuum Mechanics. Foundations of the general nonlinear theories of continuum mechanics; general treatment of motion and deformation of continua, balance laws, constitutive theory; particular application to elastic solids and simple materials. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 386K or consent of instructor.

384L. Structural Dynamics. Same as Aerospace Engineering 384P (Topic 3: Structural Dynamics). Free and forced vibration of single-degree-of-freedom, multiple-degree-of-freedom, and continuous systems. Lagrange’s equations and Hamilton’s principle; discretization of continuous systems; numerical methods for response and algebraic eigenvalue problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

386K. Analytical Methods I. Basic topics in real and complex analysis, ordinary and partial differential equations, and other areas of applied mathematics with application to applied mechanics. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386L. Analytical Methods II. Continuation of Engineering Mechanics 386K. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 386K or consent of instructor.

386M. Functional Analysis in Theoretical Mechanics. Same as Computational Science, Engineering, and Mathematics 386M. An introduction to modern concepts in functional analysis and linear operator theory, with emphasis on their application to problems in theoretical mechanics; topological and metric spaces, norm linear spaces, theory of linear operators on Hilbert spaces, applications to boundary value problems in elasticity and dynamical systems. Three lecture hours a week for one semester. Computational and Applied Mathematics 386M and Engineering Mechanics 386M may not both be counted. Prerequisite: Graduate standing, Engineering Mechanics 386L, and Mathematics 365C.

386N. Qualitative Methods in Nonlinear Mechanics. A study of methods for assessing the qualitative behavior of solutions to equations governing nonlinear continuum mechanics. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Engineering Mechanics 386M.

387. Foundations of Fluid Mechanics. Governing equations in differential and integral forms; applications to both inviscid and viscous flow problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388. Solid Mechanics I. Same as Aerospace Engineering 384P (Topic 1: Solid Mechanics I). Mathematical description of stress, deformation, and constitutive equations of solid mechanics; boundary value problems of elasticity. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

388F. Fracture Mechanics. Griffith theory of brittle crack propagation, other theories, crack toughness testing concepts. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 388 or consent of instructor.

388L. Solid Mechanics II. Same as Aerospace Engineering 384P (Topic 2: Solid Mechanics II). Continuation of Engineering Mechanics 388. Additional topics in elasticity, plasticity, viscoelasticity, variational methods, and other areas of solid mechanics. Three lecture hours a week for one semester. Prerequisite: Graduate standing and a graduate course in solid mechanics.

388M. Micromechanics. Constitutive characterization of materials based on their microstructure. Relationships between internal structure and mechanical properties for composites, polycrystals, and polymers on the basis of linear elasticity, plasticity, and theories that account for rate-dependence. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

388V. Theory of Viscoelasticity. Introduction to linear viscoelasticity; methods of characterizing viscoelastic material behavior; analytical and approximate solution techniques for engineering problems, including contact, wave propagation, and thermostoelastic problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 388 or consent of instructor.

389J. Experimental Mechanics. Principles and techniques of measurement in mechanics; includes discussion of strain gauges, optical interference methods, photoelasticity, and dynamic measurements. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

392R. Random Vibrations. Introduction to probability theory and its application to random excitation of linear and nonlinear systems; a probabilistic discussion of failure and fatigue in structures. Three lecture hours a week for one semester. Prerequisite: Graduate standing.


394. Structural Stability. Fundamental theory of buckling of elastic structural elements such as bars, frames, rings, plates, and shells; also special stability topics including inelastic buckling, creep buckling, and buckling under dynamic loading. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 388 or consent of instructor.
394F. Finite Element Methods. Same as Aerospace Engineering 384P (Topic 4: Finite Element Methods) and Computational Science, Engineering, and Mathematics 393F. Derivation and implementation of the finite element method; basic coding techniques; application to problems of stress and diffusion. Three lecture hours a week for one semester. Computational and Applied Mathematics 394F and Engineering Mechanics 394F may not both be counted. Prerequisite: Graduate standing and consent of instructor.

394G. Computational Techniques in Finite Elements. Organization and data management in finite element codes; element models and calculations; equation solving; preprocessing and postprocessing. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Engineering Mechanics 394F.


394V. Wave Propagation I. Solutions of linear wave equations; waves in elastic media, including plates and cylinders; transient waves, transform methods, asymptotic approximation. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 388 or consent of instructor.

397, 697, 997. Advanced Studies in Engineering Mechanics. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.  

- Topic 1: Advanced Topics in Viscoelasticity  
- Topic 2: Individual Research. Offered on the credit/no credit basis only.  

397R. Individual Research. Must be arranged by mutual agreement between student and faculty member. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

397S. Mechanics Seminar. Current topics in mechanics. Conference course. May be repeated for credit. Offered on the credit/no credit basis only. All engineering mechanics graduate students are required to register for either Engineering Mechanics 397S or 397T each semester. Prerequisite: Graduate standing.

397T. Computational Mechanics Seminar. Current topics in computational mechanics. Conference course. May be repeated for credit. Offered on the credit/no credit basis only. All engineering mechanics graduate students are required to register for either Engineering Mechanics 397S or 397T each semester. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in engineering mechanics and consent of the supervising professor and the graduate adviser; for 698B, Engineering Mechanics 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in engineering mechanics and consent of the graduate adviser.

398T. Supervised Teaching in Engineering Mechanics. Teaching methods and objectives, criteria for evaluating teaching effectiveness, procedures and regulations, laboratory teaching. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Engineering Mechanics 399R, 699R, or 999R.

ENGINEERING STUDIES: ES

197, 297, 397. Special Topics in Engineering. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Some topics may require additional hours. With consent of instructor, may be repeated for credit. Some topics may be offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor. Additional prerequisites vary with the topic.

MANUFACTURING: MFG

197, 397, 597, 697. Research Problems. Problem selected by the student with approval of the graduate adviser. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. Prerequisite: Graduate standing in manufacturing systems engineering and consent of the graduate adviser.

397K. Advanced Studies in Manufacturing Systems Engineering. Selection of topics based on needs of an adequate number of students. The equivalent of three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in manufacturing systems engineering and consent of instructor.  

- Topic 1: Advanced Packaging Materials.  
- Topic 2: Signal Integrity in High-Speed Digital Systems.  
- Topic 3: Thermal Management in Packaging.
397M. Graduate Research Internship. Research associated with enrollment in the Graduate Research Internship Program (GRIP). Prerequisite: Graduate standing and consent of instructor and the dean of the Cockrell School of Engineering.

197S. Graduate Seminar in Technical Communication. The master’s degree program in manufacturing systems engineering includes three semester hours in this course. Practice and application of technical communication skills in engineering. The equivalent of one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

Topic 1: Graduate Seminar in Technical Communication I. Offered in the fall semester only.
Topic 2: Graduate Seminar in Technical Communication II.
Topic 3: Individual Instruction in Technical Communication. Additional prerequisite: Credit or registration for Manufacturing Systems Engineering 197S (Topic 1) and 197S (Topic 2).

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in manufacturing systems engineering and consent of the graduate adviser; for 698B, Manufacturing Systems Engineering 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in manufacturing systems engineering and consent of the graduate adviser.

MATERIALS SCIENCE AND ENGINEERING

Master of Science in Engineering
Doctor of Philosophy

OBJECTIVES

This program is designed to educate materials scientists and engineers, to develop new knowledge, and to solve problems related to the synthesis, processing, characterization, and application of materials.

FACILITIES FOR GRADUATE WORK

Extensive facilities, including laboratories for materials research and instruction and offices for faculty members and students, are located in several buildings on the main campus and at the J. J. Pickle Research Campus. The offices for the Texas Materials Institute (TMI), the materials science and engineering graduate program, and numerous faculty members are located in the Engineering Teaching Center. Core central facilities for research include the Electron Microscopy, X-Ray Scattering, Surface Analysis, Nanofabrication and Testing, Electronic and Vibrational Scattering, Microelectronic Materials Processing, Organic Electronic Fabrication, Scanning Probe, X-ray photoelectron spectroscopy, time-of-flight mass spectrometry, and Polymer Characterization Facilities, each of which employs a manager to assist users. Other laboratories provide mechanical testing, powder processing, corrosion testing, crystal growing, and ultrasonic, laser, magnetic, and microwave facilities for use by students and faculty members. Extensive service installations are available, including those of Information Technology Services, as well as electronics shops, machine shops, and glassblowing services.

AREAS OF STUDY

Graduate study is focused around concentrations in nanomaterials, clean energy materials, and general materials science and engineering. Course requirements are tailored to the specific concentration.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Sanjay K. Banerjee
Michael F. Becker
David L. Bourell
R. Malcolm Brown Jr.
Jonathan Yan Chen
Alejandro L. De Lozanne
Ananth Dodabalapur
John G. Ekerdt
Donglei Fan
Paulo J. Ferreira
John B. Goodenough
Paul S. Ho
Rui Huang
Gyeong S. Hwang
Keith P. Johnston
Maria G. Juenger
John W. Keto
Brian A. Korgel
Desiderio Kovar
Xiaogin E. Li

Kenneth M. Liechti
Arunugam Manthiram
Jeremy P. Meyers
Tessie J. Moon
Charles B. Mullins
Donald R. Paul
Llewellyn K. Rabenberg
Kenneth M. Ralls
Krishnaswa Ravi-Chandar
Rodney S. Ruoff
Isaac C. Sanchez
Juan M. Sanchez
Li Shi
Chih-Kang Shih
Keith J. Stevenson
Eric M. Taleff
Harovel G. Wheat
Bugao Xu
Xiaoyang Zhu

ADMISSION REQUIREMENTS

Students with a bachelor’s degree in engineering or in one of the physical sciences may be admitted to the materials science and engineering degree program upon the recommendation of the Graduate Studies Committee. Students who do not have a background that the committee considers satisfactory for the study of advanced materials science and engineering will be required to take preparatory coursework, some of which may be at the undergraduate level. Completion of some coursework may be required before the student begins the work for the graduate degree.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN ENGINEERING

The student’s program of coursework is selected with the advice of the graduate adviser and must be approved by the Graduate Studies Committee. All students must complete deficiency, core, and advanced-level courses. (Individual deficiency may be waived if the student has equivalent credit on entering the program.) The specific course requirements vary for each concentration.

At least one full year is required to complete the master’s degree program.

Master of Science in Engineering with thesis. For students electing this option, thirty semester hours of credit are required, consisting of twenty-four hours of organized coursework and six hours in the thesis course. Students begin the program by completing deficiency courses, but they may petition to waive these courses if they have equivalent credit. Nine hours in core courses and nine to fifteen additional hours in advanced-level courses must then be taken. A maximum of six hours of upper-division coursework may be counted toward the required thirty hours.

The student should choose a thesis research topic and begin research during the first semester.

Master of Science in Engineering with report. This option requires thirty-three semester hours of credit, consisting of thirty hours of organized coursework and three hours in the report course. The program must be approved by the graduate adviser. At least nine hours in core courses and an additional fifteen to twenty-one hours of advanced-level coursework must be taken. Up to nine hours of upper-division coursework may be counted. Enrollment in this option must be approved by the graduate adviser.

Master of Science in Engineering without thesis or report. For students electing this option, thirty-six semester hours of coursework are required. Nine hours in core courses and an additional eighteen to twenty-four hours in advanced-level courses must be taken. The program must be approved by the graduate adviser. Up to nine hours of upper-division coursework may be included. No research is required, but the level of academic performance is the same as that required for the master’s degree with thesis.

DOCTOR OF PHILOSOPHY

A student may choose to pursue the doctoral degree without first obtaining a master’s degree. Before admission to doctoral candidacy, the student must have a master’s degree in materials science and engineering or an equivalent amount of graduate credit and must have demonstrated satisfactory performance on each part of the doctoral qualifying process. The doctoral candidate must also pass preliminary and final oral examinations covering the research program and the underlying science and engineering upon which the research is based. For a student with a Bachelor of Science degree, at least three years are required to complete the Doctor of Philosophy degree program.
FOR MORE INFORMATION

**Campus address:** Engineering Teaching Center II (ETC) 8.172, phone (512) 471-1504, fax (512) 475-8482; campus mail code: C2201

**Mailing address:** The University of Texas at Austin, Materials Science and Engineering Program, 1 University Station C2201, Austin TX 78712
**E-mail:** mse@tmi.utexas.edu
**URL:** http://www.tmi.utexas.edu

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MATERIALS SCIENCE AND ENGINEERING: MSE

389. **Topics in Materials Science and Engineering.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor; additional prerequisites may vary with the topic.

397. **Graduate Seminar.** Presentation of research topics by invited speakers, faculty, and students. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

197R, 297R, 397R. **Research.** Individual research. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in materials science and engineering and consent of the graduate adviser; for 698B, Materials Science and Engineering 698A.

398R. **Master’s Report.** Report of research leading to the Doctor of Philosophy in materials science and engineering. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in materials science and engineering and consent of the graduate adviser.

399R, 699R, 999R. **Dissertation.** Research leading to the Doctor of Philosophy in materials science and engineering. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Research leading to the Doctor of Philosophy in materials science and engineering. Offered on the credit/no credit basis only. Prerequisite: Materials Science and Engineering 399R, 699R, or 999R.

RELATED COURSES

AEROSPACE ENGINEERING

384P. **Structural and Solid Mechanics.** Three lecture hours or two lecture hours and three laboratory hours a week for one semester, depending on the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 11: Mechanics of Composite Materials.** Constitutive equations; micromechanical and macromechanical behavior of lamina; strength and stiffness in tension and compression, theory of laminated plates; strength of laminates; delamination. Three lecture hours a week for one semester.

CHEMICAL ENGINEERING

384, 684. **Introduction to Research.** The equivalent of three or six class hours a week for one semester. Any number of topics may be taken for credit, and, with consent of instructor, any topic may be repeated for credit. Prerequisite: Graduate standing in chemical engineering, or graduate standing and consent of instructor.

**Topic 21: Kinetic Processes in Materials.** Examination of the connection between structure and various kinetic processes that occur in different classes of materials, metals, ionic crystals, inorganic glasses, and polymers. Discusses the kinetic theory of gases and Brownian dynamics.

386K. **Theory of X-Ray Diffraction.** Application of basic diffraction theory to polycrystalline and single crystal materials. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

386L. **Laboratory Experiments in X-Ray Diffraction.** Application of X-ray diffraction techniques to the examination of polycrystalline and single crystal materials. Two or three lecture hours and three or four laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

387K. **Advanced Thermodynamics.** Applications of thermodynamics to chemical engineering processes. Three lecture hours a week for one semester. Prerequisite: Graduate standing in chemical engineering, or graduate standing and consent of instructor.
392. **Polymer Science.** Details of polymerization mechanisms; structure-property relationships, fundamentals of processing, and characterization of high polymers. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395C. **Chemical Processes for Microelectronics.** Introduction to the chemical processes and the manufacturing operations used in microelectronics device fabrication. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395E. **Polymer Science and Engineering Laboratory.** Training in the preparation and instrumental characterization of polymers, blends, and compounds. Twelve laboratory hours a week for one semester. Prerequisite: Graduate standing.

**CHEMISTRY**

382L. **Advanced Physical Chemistry: Statistical Mechanics.** Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

390K. **Advanced Topics in Inorganic Chemistry.** Topics include magnetic resonance; organometallic, main-group, and transition metal chemistry; nonaqueous solvents; high-temperature superconductors; new developments in synthetic chemistry; and aspects of inorganic chemistry relevant to material science. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in chemistry, Chemistry 380L, and consent of instructor.

390L. **Advanced Topics in Analytical Chemistry.** Topics include electrochemistry, electronics, mathematical methods, mass spectrometry, and optical methods. For most topics, three lecture hours a week for one semester; for topics on electronics and optical methods, two lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in chemistry and consent of instructor.

392N. **Physical Chemistry of Macromolecular Systems.** Theory of macromolecular solutions and methods for characterization of macromolecular systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and undergraduate coursework in physical chemistry or consent of instructor.

393L. **Advanced Topics in Physical Chemistry.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in chemistry and consent of instructor.

**ELECTRICAL ENGINEERING**

396K. **Solid-State Device Theory.** Theory of electron, magnetic, and electro-optic devices. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** **Metal Oxide Semiconductor Devices: Physics and Technology.**

**Topic 2:** **Semiconductor Physics.** Introduction to the fundamental physics of charge carrier states in semiconductors, charge carrier interactions among themselves and with the environment, and charge transport in semiconductors and their heterostructures. Additional prerequisite: Graduate standing.

**Topic 3:** **Synthesis, Growth, and Analysis of Electronic Materials.**

**Topic 4:** **Superconducting Electronic Devices.**

**Topic 5:** **Magnetic Phenomena in Materials.**

**Topic 6:** **VLSI Fabrication Techniques.**

**Topic 7:** **Localized versus Itinerant Electrons in Solids.** Same as Mechanical Engineering 386T (Topic 1: Localized versus Itinerant Electrons in Solids). Description of electrons, from free atoms to crystals; band theory contrasted with crystal-field theory; evolution of electronic properties on passing from magnetic insulators to normal metals, from ionic to covalent solids, from single-valent compounds to mixed-valent systems; electron-lattice interactions and phase transitions; many examples. Additional prerequisite: A semester of quantum mechanics and a semester of solid-state science or technology.

**Topic 8:** **Ionic Conductors.** Same as Mechanical Engineering 386T (Topic 1: Ionic Conductors).

**Topic 9:** **High-Temperature Superconductors.** Same as Mechanical Engineering 386T (Topic 2: High-Temperature Superconductors).

**Topic 10:** **Catalytic Electrodes.** Same as Mechanical Engineering 386T (Topic 3: Catalytic Electrodes).

**Topic 11:** **Magnetic Materials.** Same as Mechanical Engineering 386T (Topic 4: Magnetic Materials).

**Topic 12:** **Optical Interconnects.**

**Topic 13:** **Optoelectronics Integrated Circuits.**

**Topic 14:** **Semiconductor Lasers.**

**Topic 15:** **Localized-Electron Phenomena.** Same as Mechanical Engineering 386R (Topic 2: Localized-Electron Phenomena). Analysis of the variation in physical properties versus chemical composition of several groups of coordination transition-metal compounds. Additional prerequisite: A semester of solid-state science and/or quantum mechanics.

**Topic 16:** **Plasma Processing of Semiconductors I.** Plasma analysis using Boltzmann and fluid equations; plasma properties, including Debye length, quasineutrality, and sheaths; basic collisional properties, including Coulomb and polarization scattering; analysis of capacitive and wave-heated plasma processing reactors.

**Topic 17:** **Plasma Processing of Semiconductors II.** Plasma chemistry and equilibrium; analysis of molecular collisions; chemical kinetics and surface processes; plasma discharge particle and energy balance; analysis of inductive and DC plasma processing reactors; plasma etching, deposition, and implantation.
380. **Theory of Plasticity.** Physical basis of plastic deformation; mathematical theory of incremental plasticity; total theories; numerical implementation; slip and physical theories of plastic deformation; rate dependent (viscoplastic) models; applications to several engineering problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Engineering Mechanics 388 or the equivalent.

384K. **Continuum Mechanics.** Foundations of the general nonlinear theories of continuum mechanics; general treatment of motion and deformation of continua, balance laws, constitutive theory; particular application to elastic solids and simple materials. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 386K or consent of instructor.

388. **Solid Mechanics I.** Same as Aerospace Engineering 384P (Topic 1: Solid Mechanics I). Mathematical description of stress, deformation, and constitutive equations of solid mechanics; boundary value problems of elasticity. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

388F. **Fracture Mechanics.** Griffith theory of brittle crack propagation, other theories, crack toughness testing concepts. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 388 or consent of instructor.

388L. **Solid Mechanics II.** Same as Aerospace Engineering 384P (Topic 2: Solid Mechanics II). Continuation of Engineering Mechanics 388. Additional topics in elasticity, plasticity, viscoelasticity, variational methods, and other areas of solid mechanics. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Engineering Mechanics 388, and consent of instructor.

388M. **Micromechanics.** Constitutive characterization of materials based on their microstructure. Relationships between internal structure and mechanical properties for composites, polycrystals, and polymers on the basis of linear elasticity, plasticity, and theories that account for rate-dependence. Three lecture hours a week for one semester. Prerequisite: Graduate standing and a graduate course in solid mechanics.

388V. **Theory of Viscoelasticity.** Introduction to linear viscoelasticity; methods of characterizing viscoelastic material behavior; analytical and approximate solution techniques for engineering problems, including contact, wave propagation, and thermoelastic problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Engineering Mechanics 388 or consent of instructor.

389J. **Experimental Mechanics.** Principles and techniques of measurement in mechanics; includes discussion of strain gauges, optical interference methods, photoelasticity, and dynamic measurements. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing.
Topic 5: Structure of Materials. Essential crystallography of lattices and structures; symmetry; elements of diffraction and reciprocal lattices; point, line, and surface defects in crystals; crystalline interfaces; non-crystalline materials; polymers; glasses.

Topic 6: Kinetic Processes in Materials. Review of irreversible thermodynamics and rate of entropy production to define the equilibrium state of a system; derivation of mathematical expressions to describe relaxation from a constrained state to equilibrium; diffusional processes in materials; calculation of diffusion coefficients from solid-state properties; dislocations and interfaces; kinetics of phase transformations.

386Q. Materials Science: Structure and Properties. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Theory of Materials. Periodic behavior and the periodic table; historical approach to the principles of crystal structure; complex alloy phases; some aspects of phase stability.

Topic 2: Phase Diagrams. Phase equilibria in materials systems; systematic treatment of unary, binary, and ternary phase diagrams.


Topic 4: Physical Metallurgy of Steels. The iron-carbon system; transformations and structures of steels; properties of pearlite, bainite, and martensite; tempering; hardenability and the effect of alloying elements.

Topic 7: Composite Materials. The theory of structural composite materials, their physical and mechanical properties; processing associated with metal-ceramic-polymer composites. Additional prerequisite: Mechanical Engineering 260K or the equivalent, or Mechanical Engineering 378K or the equivalent, or consent of instructor.

Topic 9: Crystalline and Composite Anisotropy. Mathematical analysis of anisotropic materials, including single crystals, laminate composites, and deformation-hardened metals. Topics include thermal and electrical conductivity, diffusivity, thermal expansion, elasticity, and yielding.

Topic 10: High-Temperature Materials. Theory and practice in use of materials for high-temperature structural applications; case-study considerations of actual problems and requirements; interactive process-microstructure-property relationships in materials development and applications of superalloys, intermetallics, composites, and ceramics; prospective trends.

Topic 11: Electroceramics. Bonding; crystal structures; defects; phase diagrams; glass ceramics; electrical, dielectric, magnetic, and optical ceramics.

Topic 13: Mechanical Behavior of Ceramics. Microstructure-mechanical property relationships in ceramics; principles of fracture mechanics, and static and dynamic fracture; static and cyclic fatigue; high-temperature behavior; strengthening and toughening mechanisms in monolithic ceramics; and particulate and fibrous ceramic composites.

Topic 14: Electrochemical Energy Materials. Electrochemical cells; principles of electrochemical power sources; materials for rechargeable and nonrechargeable batteries, fuel cells, and electrochemical capacitors.

386R. Materials Science: Physical and Electronic Properties. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Localized versus Itinerant Electrons in Solids. Same as Electrical Engineering 396K (Topic 9: Localized versus Itinerant Electrons in Solids). Description of electrons, from free atoms to crystals; band theory contrasted with crystal-field theory; evolution of electronic properties on passing from magnetic insulators to normal metals, from ionic to covalent solids, from single-valent compounds to mixed-valent systems; electron-lattice interactions and phase transitions; many examples. Additional prerequisite: A semester of quantum mechanics and a semester of solid-state science or technology.


Topic 3: Transport Properties of Transition-Metal Oxides. Electronic and ionic transport in transition-metal oxides as they relate to battery cathodes, solid oxide cells, spin electronics, thermistors, and high-temperature superconductors.
386T. Materials Science: The Design of Technical Materials. The process of designing a material for a specific engineering function as illustrated for various materials. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Ionic Conductors. Same as Electrical Engineering 396K (Topic 10: Ionic Conductors).

387Q. Materials Science: Thermodynamics and Kinetics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 2: Kinetics and Phase Transformations. Nucleation and growth, spinodal decomposition, transformations in alloy systems.
Topic 3: Solidification. Liquid to solid transformations in pure materials, alloys and eutectics; applications such as zone refining, composites, and castings.
Topic 4: Corrosion. Electrode kinetics and the theory of polarization, passivity, galvanic coupling, and high temperature oxidation.
Topic 5: Thermodynamics of Materials. First and second laws, fugacity, activity, chemical equilibrium, phase diagrams, and introductory statistical concepts.
Topic 6: Statistical Thermodynamics of Materials. Quantum mechanics applied to partition functions of condensed and gaseous phases; chemical equilibria; phase transitions; and lattice statistics including the Ising model.
Topic 7: Group Theory and Phase Transformations. Symmetry principles and the associated mathematics applied to the description of condensed phases and their transformations.

387R. Materials Science: Experimental Techniques. Three lecture hours a week for one semester. Some topics may require additional laboratory hours; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.


Topic 5: Materials Characterization Techniques. Classification and selection of characterization techniques: principles and applications of diffraction, spectroscopic, quantitative chemical analysis, thermal analysis, and transport and magnetic measurement techniques.
Topic 7: Scanning Electron Microscopy. Theory and practice of scanning electron microscopy; image formation, elemental analysis, sample preparation, and electron-sample interactions. Three lecture hours and two laboratory hours a week for one semester.

387S. Materials Processing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.


PHYSICS

392K. Solid-State Physics. Lattice vibrations and thermal properties of solids; band theory of solids; transport properties of metals and semiconductors; optical properties; magnetic properties; magnetic relaxation; superconductivity. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Physics 389K, and Physics 375S or the equivalent.

392L. Solid-State Physics. Elementary excitations: phonons, electrons, spin waves; interactions: phonon-phonon, electron-electron, electron-phonon; theory of metals and semiconductors; transport theory; optical properties. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 392K.

393T. Special Topics in Relativity. Topics to be announced. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Graduate standing and consent of instructor.
MECHANICAL ENGINEERING

Master of Science in Engineering
Doctor of Philosophy

OBJECTIVES

The graduate program in mechanical engineering is designed to educate engineers who will be in the forefront of the mechanical engineering profession, leading the way to new and improved engineering systems to transform energy, materials, and information to meet the needs of society. To achieve this objective, the program offers a breadth of research and study areas and facilities. The faculty values creativity, the novel application of fundamental engineering science, interdisciplinary activities, the development of future leaders and a community of scholars, professionalism, and excitement in discovery. The program is designed to enhance these values, drawing upon the diverse interests and experience of the faculty. The major areas of emphasis are described below.

AREAS OF STUDY AND FACILITIES

Acoustics. The Departments of Mechanical Engineering and Electrical and Computer Engineering offer an interdisciplinary course of study in this field. Research projects are carried out in physical acoustics, industrial acoustics, electroacoustics, nonlinear acoustics, underwater acoustics, and biomedical acoustics. Major experimental facilities include a general-purpose acoustics laboratory, a transducers laboratory, an anechoic chamber, a reverberation chamber, waveguides for high-intensity sound, a computer-controlled water tank for ultrasonics, and extensive underwater sound facilities at the Applied Research Laboratories.

Biomechanical engineering. This concentration provides studies for application of mechanical engineering principles to biological and medical problems. Areas of study are physiology, bioheat transfer, biomaterials, biochemistry, health physics, biosignal analysis, biomechanics, ultrasonics, and biomedical computing. Supporting courses and facilities are also provided through the Department of Biomedical Engineering.

Dynamic systems and control. This concentration offers intensive study in the analysis, design, and control of engineered and natural systems. Areas of study include applied mechanics, biomedical engineering, constitutive modeling of materials, electromechanics, information and control theory, mechanisms and robotics, mechatronics, modeling of multienergy domain systems, multibody dynamics, simulation and analysis of system dynamics, tribology, and vibrations. Laboratories and facilities are available for research in acoustics, biomechanics, control systems, mechatronics, robotics, system dynamics, and tribology.

Manufacturing and decision systems engineering. Manufacturing and decision systems engineering (MDSE) embraces the broad spectrum of knowledge required by decision makers in the realms of manufacturing and service systems. Courses in MDSE cover topics drawn from mechanical systems and design, thermal and fluid systems, materials science and engineering, operations research and industrial engineering, and leadership and entrepreneurship. Major research facilities are available for graduate students in this field.

Manufacturing and design. The concentration in manufacturing and design offers state-of-the-art programs in innovative manufacturing processes, product design and development, and supporting technologies. Areas of study include product design methods, layer-based manufacturing (solid freeform fabrication), machine design, unit manufacturing processes, robotics, contemporary prototyping, reverse engineering, optimization techniques, computer-aided design and manufacturing (CAD/CAM), computational geometry, machine intelligence, and design for people with disabilities. Well-equipped laboratories are available for research in solid freeform fabrication (including selective laser sintering), product modeling and simulation, unit manufacturing processes, robotics, one-off prototyping (such as CNC processes, woodworking equipment, power tools, and product measurement equipment), scaled manufacturing (from macro to meso to micro), biomedical device fabrication, and laser-based processes. These laboratories are part of the Advanced Manufacturing Center.
An alternatively scheduled master’s degree program in advanced manufacturing engineering, a subarea of manufacturing and design, also exists but is inactive. More information is available from the graduate adviser.

Materials engineering. This concentration encompasses graduate study in the fields of materials development, characterization and processing, and in structure-property-performance relationships. Areas of study include ceramics, physical metallurgy, mechanical behavior, materials processing, fuel cells, high-energy density batteries, new materials development, nanomaterials and nanotechnology, corrosion, and microelectronics packaging. Laboratory facilities include scanning and transmission electron microscopes; X-ray scattering, metallographic, laser processing, thermal analysis, and thin-film characterization facilities; and mechanical, electrical, magnetic, and electrochemical property measurement equipment. The Department of Mechanical Engineering is also a primary participant in the interdisciplinary materials science and engineering graduate degree program.

Nuclear and radiation engineering. This concentration provides graduate study and research in nuclear radiation science, analysis and design of nuclear systems, and experimental techniques in nuclear technology. Emphasis is on radiation transport and measurements, neutron physics, health physics and dosimetry, transport and disposal of nuclear wastes, and nuclear material safeguards and disposition. The Nuclear Engineering Teaching Laboratory is equipped with a 1.1-MW TRIGA pulsing nuclear reactor; a cold neutron source with prompt gamma analysis; neutron radiography equipment; neutron activation analysis equipment, including a pneumatic transfer system; californium-252 neutron sources; a low-level gamma-ray counting system and many radiation detection systems; and extensive computational capabilities.

Thermal/fluid systems. This concentration offers graduate study and research in the areas of thermodynamics, heat and mass transfer, fluid mechanics, combustion, energy conversion, energy conservation, alternative energy, microscale heat transfer, microfluidics, advanced laser-materials processing, and thermoelectrics. Experimental facilities include subsonic wind tunnels, three-dimensional laser-Doppler anemometry, a micro/nano fabrication facility, scanning probe microscopy, a cryogenic measurement facility, instrumentation calibration facilities for semiconductor rapid thermal processing, fundamental combustion research facilities, engine and emission test facilities, solar energy components and systems, and various fluid mechanics and heat transfer equipment. The University’s computational resources for numerical investigations are state-of-the-art and extensive.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Andrea Alu
Chandrijit L. Bajaj
Jonathan P. Bard
John W. Barnes
Ronald E. Barr
Joseph J. Beaman Jr.
Adela Ben-Yakar
Hall Berberoglu
J. Eric Bickel
Steven R. Biegalski
David G. Bogard
David L. Borell
Michael D. Bryant
Matthew I. Campbell
Dongmei Chen
Richard H. Crawford
Alexandre K. Da Silva
Mark Deinert
Kenneth R. Diller
Dragan Djurdjanovic
Janet L. Elizy
Stanislav Emelianov
Ofodike A. Ezekoye
Eric P. Fahrenthold
Donglei Fan
Benito Fernandez
Paulo J. Ferreira
Paul J. Fierros
Omar Ghattas
John B. Goodenough
Matthew J. Hall
Neal A. Hall
Mark F. Hamilton
John J. Hasenbein
Carlos H. Hidrovo Chavez
Paul S. Ho
Andrea Alu
Chandrijit L. Bajaj
Jonathan P. Bard
John W. Barnes
Ronald E. Barr
Joseph J. Beaman Jr.
Adela Ben-Yakar
Hall Berberoglu
J. Eric Bickel
Steven R. Biegalski
David G. Bogard
David L. Borell
Michael D. Bryant
Matthew I. Campbell
Dongmei Chen
Richard H. Crawford
Alexandre K. Da Silva
Mark Deinert
Kenneth R. Diller
Dragan Djurdjanovic
Janet L. Elizy
Stanislav Emelianov
Ofodike A. Ezekoye
Eric P. Fahrenthold
Donglei Fan
Benito Fernandez
Paulo J. Ferreira
Paul J. Fierros
Omar Ghattas
John B. Goodenough
Matthew J. Hall
Neal A. Hall
Mark F. Hamilton
John J. Hasenbein
Carlos H. Hidrovo Chavez
Paul S. Ho
John R. Howell
Dale E. Klein
Desiderio Kovar
Erhan Kutanoglu
Sheldon Landsberger
Wei Li
Raul G. Longoria
Arumugam Manthiram
Glenn Y. Masada
Ronald D. Matthews
Jeremy P. Meyers
Tessie J. Moon
David P. Morton
Robert D. Moser
Richard R. Neptune
Steven P. Nichols
Dr Raymond L. Orbach
Elmira Popova
Llewelyn K. Rabenberg
Kenneth M. Ralls
Rodney S. Ruoff
Juan M. Sanchez
Philip S. Schmidt
Erich A. Schneider
Carolyn C. Seepersad
Luis Sentis
Li Shi
S. V. Sreenivasan
Eric M. Taleff
Delbert Tesar
Charles E. Tinney
Michael Webber
Harovel G. Wheat
Preston S. Wilson
Kristin L. Wood

ADMISSION REQUIREMENTS

To enter the graduate program in mechanical engineering, a student should have an undergraduate degree in engineering or in an equivalent quantitative field of study. Students who do not meet this requirement may have to take additional courses at the discretion of the graduate adviser.
DEGREE REQUIREMENTS

MASTER OF SCIENCE IN ENGINEERING

Students generally follow the thesis option, which requires thirty semester hours of credit, including six hours in the thesis course. Students who are appointed as teaching assistants or research assistants are expected to choose the thesis option. Except for students in manufacturing and decision systems engineering (MDSE), the report option requires thirty-three semester hours, including three in the report course. The option without thesis or report requires thirty-six hours of coursework. At least eighteen hours (including the thesis or report, if any) should be in the major area; at least six hours should be in a supporting area. The supporting courses may be in mechanical engineering but must represent a specialty distinct from the major courses. Some areas of study have required core courses.

DOCTOR OF PHILOSOPHY

The student must pass oral and written qualifying examinations administered by faculty members in the area of specialty. After passing the qualifying examinations, the student applies for candidacy by submitting a Program of Work that includes a proposed dissertation topic and a suggested dissertation committee. The dissertation committee recommends courses to be taken as part of the Program of Work, which should include at least eighteen hours (for students with a master’s degree) or forty-eight hours (for students without a master’s degree) of graduate coursework in the area of specialization. This coursework must be taken on the letter-grade basis. The Program of Work must be approved by the chair of the Graduate Studies Committee. Application for candidacy must be submitted before the student completes fifty hours of credit toward the doctoral degree.

DUAL DEGREE PROGRAM

The Department of Mechanical Engineering offers the following dual degree program in cooperation with the McCombs School of Business. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: Engineering Teaching Center II (ETC) 5.204, phone (512) 232-2701, fax (512) 471-8727; campus mail code: C2200
Mailing address: The University of Texas at Austin, Graduate Program, Department of Mechanical Engineering, 1 University Station C2200, Austin TX 78712
E-mail: go@me.utexas.edu
URL: http://www.me.utexas.edu/graduate/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MECHANICAL ENGINEERING: M E

180M, 280M, 380M, 680M, 980M. Research. Individual research. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in mechanical engineering.
380Q. Mathematical Methods in Engineering. Applications of mathematical analysis and numerical concepts to typical engineering problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Mathematics 427K or the equivalent.
Topic 1: Engineering Analysis: Analytical Methods. Analytical solutions for linear ordinary differential equations; numerical integration of ordinary differential equations; Fourier series and integrals; the Laplace transform; the solution of partial differential equations; vector analysis and linear transformations.

Topic 2: Engineering Analysis: Advanced Analytical Methods. Classification and solution of partial differential equations; includes linear superposition, separation of variables, Fourier and Laplace transform methods, Green’s functions, similarity solution, and spectral methods; introduction to solution of nonlinear partial differential equations, including both exact and approximate techniques, with a strong emphasis on physical systems.

Topic 3: Perturbation Methods. Introduction to perturbation theory; regular expansions and sources of nonuniformities; method of strained coordinates and multiple scales; method of matched asymptotic and composite expansions. Places strong emphasis on the relationship between the physical and the mathematical basis and on the crucial role of nondimensionalization in problem solving.

Topic 4: Numerical Methods for Differential Equations. Numerical solution of ordinary differential equations, both initial and boundary value equations; includes quasilinearization, shooting methods, and method of adjoints; classification and solution of partial differential equations by the finite difference method; stability and convergence criteria for various schemes; special attention to nonlinear equations with a strong emphasis on the Navier-Stokes equations.

381P. Dynamics of Fluids. Detailed study of fluid dynamics, boundary layer phenomena, and incompressible flows. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.


Topic 3: Dynamics of Turbulent Flow. Fundamentals of turbulence, including scaling, transport, and kinetic energy of turbulence; wakes, jets, wall-bounded flows; spectrum of turbulence.

Topic 4: Separated Flow. Laminar and turbulent compressible free shear flow regions; effects of heat and mass transfer.

Topic 5: Applications of Incompressible Flow. Dynamics of vorticity, inviscid flow; boundary layer theory and computational techniques, linear stability theory for parallel flow, flow at moderate Reynolds number.


Topic 7: Hypersonic Flow. Classical solution techniques for compressible laminar and turbulent boundary layers for both constant and nonconstant chemical composition; computational methods for inviscid and viscous flows.

381Q. Thermodynamics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Mechanical Engineering 326 or the equivalent.

Topic 1: Advanced Thermodynamics. Development of macroscopic thermodynamics from basic physical relationships; introduction to the thermodynamics of mixtures.


Topic 3: Nonequilibrium Thermodynamics. Forces, flows, and entropy production, coupled flows, phenomenological relations, Onsager’s reciprocal relations, applications.


Topic 5: Optics and Lasers. Fundamentals of geometric and physical optics, interaction of light with matter, spectroscopy, laser and electro-optics applications.

381R. Heat Transfer and Rate Processes. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Mechanical Engineering 339 or the equivalent.


Topic 2: Convection Heat Transfer. Laminar and turbulent transport in boundary layers and inside tubes, with equal emphasis on momentum and energy transport; compressible and property effects, numerical simulation of convective transport.

Topic 3: Radiation Heat Transfer. Thermal radiation, blackbody properties, surface properties, radiant exchange, absorbing and emitting media, combined modes.


Topic 7: Microelectromechanical and Nanoelectromechanical Systems. Fundamentals of microscale and nanoscale science and engineering; microfabrication and nanofabrication techniques; metrology and packaging for microdevices and nanodevices; applications including thermal MEMS, microfluidics, BioMEMS, and NEMS.

382N. Computational Fluid Dynamics. Numerical analysis applied to fluid flow and heat transfer problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Introduction to Computational Fluid Dynamics. Applied numerical analysis, including solution of linear algebraic equations and ordinary and partial differential equations; modeling of physical processes, including fluid flow and heat and mass transfer; use of general-purpose computer codes, including commercial computational fluid dynamics software. Additional prerequisite: Mechanical Engineering 339 or the equivalent.

Topic 2: Spectral Methods in Fluid Dynamics. Use of spectral approximation theory to solve partial differential equations; introduction to Hilbert space and basic convergence theory; Fourier series and Chebyshev polynomial expansions of functions; use of fast Fourier transforms; applications to problems in fluid dynamics and heat transfer. Additional prerequisite: Mathematics 427K or the equivalent.

382P. Advanced Experimental Methods for Thermal/Fluid Systems. Design of experiments; fundamentals of electronic signal processing and optics; and advanced experimental techniques, including laser-Doppler velocimetry, hot-wire anemometry, and thermocouples. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

382Q. Design of Thermal and Fluid Systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Mechanical Engineering 339 or the equivalent.

Topic 1: HVAC System Design. Heating, air-conditioning, and refrigeration equipment; environmental control system analysis and design.


382R. Topics in Combustion. Fundamentals of combustion science, technology, and engineering. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Fundamentals of Combustion Science. Topics include reaction rates, laminar and turbulent flames, premixed and diffusion flames, mass transfer, and modeling techniques.

Topic 2: Chemical Kinetics. The theory of combustion chemistry. Issues include physics of molecular interactions, the explosion peninsula, elementary reaction schemes, reduced reaction schemes, and global chemistry.

Topic 3: Combustion Sources of Air Pollution. The environmental impact of the pollution emissions of fundamental combustion processes. Topics include policy issues, combustion fundamentals, and analysis of stationary and mobile combustion equipment.

Topic 5: Combustion Theory. Analytical and computational topics in combustion. The theory of laminar flames, examined in a detailed mathematical formulation in which both activation energy asymptotic (AEA) and rate ratio asymptotic (RRA) methods are applied to a variety of flame configurations. Issues in turbulent combustion for both premixed and nonpremixed systems are examined.


382T. Fire Science. Analysis of dynamics and consequences of fire in structures. Topics include combustion thermochemistry, premixed and diffusion flames, fluid mechanics of fire, human tenability in burning structures, computer modeling of fires. Three lecture hours a week for one semester. Mechanical Engineering 382R (Topic: Fire Science) and 382T may not both be counted. Prerequisite: Graduate standing, and Mechanical Engineering 326, 330, and 339, or their equivalents.

383Q. Analysis of Mechanical Systems. Detailed studies in the characteristics of mechanical systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Vibrations. Formulation of discrete and continuous models for mechanical systems in vibration; modal analysis; analytical solution methods for constant property linear systems; numerical solution methods.

Topic 2: Dynamics of Mechanical Systems. Advanced dynamics, including Newton-Euler, Lagrange, and Hamilton’s principles; gyroscopic effects in mechanical systems; analysis of stability of systems; continuous bodies; introduction to Hamilton-Jacobi.

Topic 4: Modeling of Physical Systems. Development of models for mechanical, electrical, fluid, thermal, and chemical systems; circuit techniques; bond graphs; energy and variational methods; hardware examples.

Topic 5: Wave Propagation. Fundamentals of wave propagation; transverse waves on strings and membranes; compressional, torsional, and flexural waves in rods and plates; longitudinal, shear, and surface waves in elastic media; tube waves; and water waves.
Topic 6: Fourier and Spectral Analysis in Dynamic Systems. Fourier transformations (series, integrals, fast Fourier transforms) and their relationships. Sampling, aliasing, convolution, correlation, leakage, windowing, power spectra, frequency response functions, and coherence functions in one-dimensional digital signal processing. Cepstrum analysis, Hilbert transforms. Experimental techniques and applications include modal analysis, mechanical signature analysis, and path identification. Additional prerequisite: Consent of instructor.

Topic 8: Digital Signal Processing. Sampling and quantizing processes; analog/digital and digital/analog conversion; digital Fourier analysis, including fast Fourier transform; z transform; design of finite impulse response and infinite impulse response digital filters.

Topic 9: Applied Intelligence for Engineers. Fundamental concepts of artificial neural systems; architecture, paradigms, topology, and learning algorithms. Introduction to the most popular networks and to their selection for engineering applications.

Topic 10: Modeling and Simulations of Multienergy Systems. Methods for modeling and simulation of multienergy systems. Detailed study of applications in electromechanical systems, fluid power, chemical and biological processes, optimal control, and other areas of interest to the class.

383S. Lubrication, Wear, and Bearing Technology. Theory of friction and wear; design of bearing systems, including hydrodynamic, rheodynamic, and direct contact devices. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.


384E. Electromechanics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.


384N. Acoustics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Acoustics I. Same as Electrical Engineering 384N. Plane waves in fluids; transient and steady-state reflection and transmission; lumped elements; refraction; strings, membranes, and rooms; horns; ray acoustics; absorption and dispersion.
Same as Operations Research and Industrial Engineering 390R (Topic 3: Time-Series Modeling, Analysis, and Control). Methods for analytical modeling, analysis, prediction, and control of linear, stationary time series. Includes examples of advanced research in nonstationary time-series modeling and applications in manufacturing, financial engineering, geosciences, and other areas. Students complete a project on a topic of their choice. Additional prerequisite: An undergraduate calculus-based course in probability and statistics or consent of instructor.

384R. Robotics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.


Topic 2: Design of Smart Mechanisms. Design of reprogrammable multiple-degree-of-freedom architectures. The course addresses various mechanical configurations and stresses the integrated design approach to sensing/actuation/control architecture and control software. Includes design project.

Topic 3: Advanced Dynamics of Robotic Systems. Treatment in depth of the dynamics of robotic systems. Discussion of modeling, analysis, and control of conventional serial robots, in-parallel manipulators, dual arms, and legged locomotion systems.

Topic 4: Geometry of Mechanisms and Robots. Advanced topics in theoretical kinematics geometry: applications of screw system theory to the study of motion and force fields in spatial mechanisms and robotic systems; analytical and numerical schemes associated with kinematics geometry.


385J. Topics in Biomedical Engineering. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in engineering and consent of instructor.

Topic 1: Cell and Tissue Anatomy and Physiology for Engineers. An overview of cellular biology, including functional cellular anatomy, DNA replication and the cell cycle, protein synthesis, membrane structure and function, energy metabolism, cellular homeostasis, and cell repair and death; and functional anatomy and physiology of the basic tissues. Normally offered in the fall semester only.

Topic 2: Organ System Anatomy, Physiology, and Pathology for Engineers. The functional anatomy and physiology of the major human organ systems; representative pathologic disorders associated with these organs. An overview of general pathologic processes, with emphasis on the influences of normal and abnormal organ anatomy, physiology, and disease on the definition and solution of biomedical engineering problems. Two lecture hours and one three-hour laboratory a week for one semester. Normally offered in the spring semester only. Additional prerequisite: Mechanical Engineering 385J (Topic 1) or the equivalent.

Topic 3: Bioelectric Phenomena. Examines the physical bases of bioelectricity and the techniques required to record bioelectric phenomena both intracellularly and extracellularly; the representation of bioelectric activity by equivalent dipoles and the volume conductor fields produced. Normally offered in the fall semester only.

Topic 5: Cardiovascular Dynamics. Anatomy, physiology, pathophysiology, and dynamics of the cardiovascular system, with emphasis on the design and application of electrical and mechanical devices for cardiac intervention. Normally offered in the fall semester only.


Topic 10: Biomedical Application of Transport Phenomena. Investigates radioisotopic methods for biological transport, including theory and experiments. Investigates artificial organ systems with clinical laboratory experiments to augment theory presented in lectures.

Topic 11: Biomedical Engineering Hospital Interfaces. Students gain firsthand knowledge of the instrumentation, procedures, and organization of a modern hospital. Class sessions are held in the different clinical services and laboratories of the hospital. Normally offered in the spring semester only.

Topic 12: Biomedical Heat Transfer. Heat transfer in biological tissue; determination of thermodynamic and transport properties of tissue; thermal effects of blood perfusion; cryobiology; numerical modeling methods; clinical applications. Normally offered in the fall semester only. Additional prerequisite: Mechanical Engineering 339, Chemical Engineering 353, or the equivalent.

Topic 13: Molecular Recognition in Biology and Biotechnology.

Topic 15: Biosignal Analysis. Theory and classification of biological signals such as EEG, EKG, and EMG. Data acquisition and analysis procedures for biological signals, including computer applications. Normally offered in the spring semester only.
Topic 16: Laser-Tissue Interaction: Optical. The optical behavior of random media such as tissue in interaction with laser irradiation. Approximate transport equation methods to predict the absorption and scattering parameters of laser light inside tissue. Port-wine stain treatment; cancer treatment by photochemotherapy; and cardiovascular applications. Normally offered in the fall semester only.

Topic 17: Biomedical Instrumentation II: Real-Time Computer-Based Systems. Design, testing, patient safety, electrical noise, biomedical measurement transducers, therapeutics, instrumentation electronics, and microcomputer interfaces. Several case studies are presented. Four structured laboratories and an individual project laboratory. Normally offered in the fall semester only.

Topic 18: Biomedical Image Processing. Physical principles and signal processing techniques used in thermographic, ultrasonic, and radiographic imaging, including image reconstruction from projections such as CT scanning, MRI, and millimeter wave determination of temperature profiles. Normally offered in the spring semester only. Additional prerequisite: Electrical Engineering 371R.

Topic 19: Network Thermodynamics in Biophysics. Modeling and simulation methods for nonlinear biological processes, including coupling across multienergy domains; practical implementation by bond graph techniques. Normally offered in the spring semester only. Additional prerequisite: Mechanical Engineering 344 or consent of instructor.


Topic 22: Therapeutic Heating. Engineering aspects of electromagnetic fields that have therapeutic applications: diathermy (short wave, microwave, and ultrasound), electrosurgery (thermal damage processes), stimulation of excitable tissue, and electrical safety. Normally offered in the spring semester only.

Topic 23: The Biotechnology Revolution and Engineering Ethics. The history and status of genetic engineering; potential applications in medicine, agriculture, and industry; ethical and social issues surrounding the engineering of biological organisms; ethics in engineering practice in physical and biological realms. Normally offered in the spring semester only.

Topic 24: Noninvasive Optical Tomography. Basic principles of optical tomographic imaging of biological materials for diagnostic or therapeutic applications. Optical-based tomographic imaging techniques including photothermal, photoacoustic, and coherent methodologies.


Topic 26: Introduction to Biomechanics. Modeling and simulation of human movement; neuromuscular control; computer applications; introduction to experimental techniques. Three lecture hours and one laboratory hour a week for one semester.

Topic 27: Biomedical Instrumentation I. Application of electrical engineering techniques to analysis and instrumentation in biological sciences: pressure, flow, temperature measurement; bioelectrical signals; pacemakers; ultrasonics; electrical safety; electrotherapeutics.

Topic 28: Projects in Biomedical Engineering. An in-depth examination of selected topics, such as optical and thermal properties of laser interaction with tissue; measurement of perfusion in the microvascular system; diagnostic imaging; interaction of living systems with electromagnetic fields; robotic surgical tools; ophthalmic instrumentation; noninvasive cardiovascular measurements. Three lecture hours and six laboratory hours a week for one semester. Additional prerequisite: Mechanical Engineering 385 (Topic 31).

Topic 29: Neurophysiology/Prosthesis Design. The structure and function of the human brain. Discussion of selected neurological diseases in conjunction with normal neurophysiology. Study of neuroprosthesis treatments and design philosophy, functional neural stimulation, and functional muscular stimulation. Normally offered in the fall semester only.


Topic 31: Materials Science: Fundamentals. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 32: Introduction to Phase Transformations. Basics of crystal structures and phase diagrams; diffusion; solidification; solid-state phase transformations.
Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Theory of Materials. Periodic behavior and the periodic table; historical approach to the principles of crystal structure; complex alloy phases; some aspects of phase stability.

Topic 2: Phase Diagrams. Phase equilibria in materials systems; systematic treatment of unary, binary, and ternary phase diagrams.


Topic 4: Physical Metallurgy of Steels. The iron-carbon system; transformations and structures of steels; properties of pearlite, bainite, and martensite; tempering; hardenability and the effect of alloying elements.

Topic 7: Composite Materials. The theory of structural composite materials, their physical and mechanical properties; processing associated with metal-ceramic-polymer composites. Additional prerequisite: Mechanical Engineering 260K (or 360K) or the equivalent, Mechanical Engineering 378K or the equivalent, or consent of instructor.

Topic 9: Crystalline and Composite Anisotropy. Mathematical analysis of anisotropic materials, including single crystals, laminate composites, and deformation-hardened metals. Topics include thermal and electrical conductivity, diffusivity, thermal expansion, elasticity, and yielding.

Topic 10: High-Temperature Materials. Theory and practice in use of materials for high-temperature structural applications; case-study considerations of actual problems and requirements; interactive process-microstructure-property relationships in materials development and applications of superalloys, intermetallics, composites, and ceramics; prospective trends.

Topic 11: Electroceramics. Bonding; crystal structures; defects; phase diagrams; glass ceramics; electrical, dielectric, magnetic, and optical ceramics.

Topic 12: Mechanical Behavior of Ceramics. Microstructure–mechanical property relationships in ceramics; principles of fracture mechanics, and static and dynamic fracture; static and cyclic fatigue; high-temperature behavior; strengthening and toughening mechanisms in monolithic ceramics; and particulate and fibrous ceramic composites.

Topic 14: Electrochemical Energy Materials. Electrochemical cells; principles of electrochemical power sources; materials for rechargeable and nonrechargeable batteries, fuel cells, and electrochemical capacitors.

386R. Materials Science: Physical and Electronic Properties. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Localized versus Itinerant Electrons in Solids. Same as Electrical Engineering 396K (Topic 9: Localized versus Itinerant Electrons in Solids). Description of electrons, from free atoms to crystals; band theory contrasted with crystal-field theory; evolution of electronic properties on passing from magnetic insulators to normal metals, from ionic to covalent solids, from single-valent compounds to mixed-valent systems; electron-lattice interactions and phase transitions; many examples. Additional prerequisite: A semester of quantum mechanics and a semester of solid-state science or technology.


Topic 3: Transport Properties of Transition-Metal Oxides. Electronic and ionic transport in transition-metal oxides as they relate to battery cathodes, solid oxide cells, spin electronics, thermistors, and high-temperature superconductors.
386S. **Materials Science: Microelectronics and Thin Films.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** Thin Films and Interfaces. Application of thin films and interfaces in microelectronics; basic properties, deposition techniques, microstructures and defects, diffusion characteristics; materials reaction in thin films and at interfaces.

**Topic 2:** Metallization and Packaging. Technology requirements and trends, impact of device scaling, multilayered interconnected structures, Schottky and ohmic contacts, contact reactions, silicide properties and applications, electromigration, thermal/mechanical properties, reliability. Additional prerequisite: Mechanical Engineering 385S (Topic 1).

386T. **Materials Science: The Design of Technical Materials.** The process of designing a material for a specific engineering function as illustrated for various materials. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** Ionic Conductors. Same as Electrical Engineering 396K (Topic 10: Ionic Conductors).

**Topic 2:** High-Temperature Superconductors. Same as Electrical Engineering 396K (Topic 11: High-Temperature Superconductors).

**Topic 3:** Catalytic Electrodes. Same as Electrical Engineering 396K (Topic 12: Catalytic Electrodes).

**Topic 4:** Magnetic Materials. Same as Electrical Engineering 396K (Topic 13: Magnetic Materials).

387Q. **Materials Science: Thermodynamics and Kinetics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** Diffusion in Solids. Atomic mechanisms and phenomenological basis for transport by diffusion.

**Topic 2:** Kinetics and Phase Transformations. Nucleation and growth, spinodal decomposition, transformations in alloy systems.

**Topic 3:** Solidification. Liquid to solid transformations in pure materials, alloys and eutectics; applications such as zone refining, composites, and castings.

**Topic 4:** Corrosion. Electrode kinetics and the theory of polarization, passivity, galvanic coupling, and high temperature oxidation.

**Topic 5:** Thermodynamics of Materials. First and second laws, fugacity, activity, chemical equilibrium, phase diagrams, and introductory statistical concepts.

**Topic 6:** Statistical Thermodynamics of Materials. Quantum mechanics applied to partition functions of condensed and gaseous phases; chemical equilibria; phase transitions; and lattice statistics including the Ising model.

**Topic 7:** Group Theory and Phase Transformations. Symmetry principles and the associated mathematics applied to the description of condensed phases and their transformations.

387R. **Materials Science: Experimental Techniques.** Three lecture hours a week for one semester. Some topics may require additional laboratory hours; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** Nondestructive Testing. Acoustic emission, ultrasonic, eddy current, dye penetrant, and magnetic methods.

**Topic 3:** Electron Diffraction and Microscopy. Transmission electron microscopy, kinematic electron diffraction theory, reciprocal lattice, defect analyses, scanning electron microscopy.

**Topic 4:** Advanced Electron Microscopy Theory and Techniques. Scanning transmission electron microscopy, microanalysis techniques, dynamical diffraction theory, convergent beam diffraction.

**Topic 5:** Materials Characterization Techniques. Classification and selection of characterization techniques: principles and applications of diffraction, spectroscopic, quantitative chemical analysis, thermal analysis, and transport and magnetic measurement techniques.


**Topic 7:** Scanning Electron Microscopy. Theory and practice of scanning electron microscopy; image formation, elemental analysis, sample preparation, and electron-sample interactions. Three lecture hours and two laboratory hours a week for one semester.

**Topic 8:** Practical Electron Microscopy. Principles, operation, and techniques of transmission electron microscopy; acquiring and interpreting imaging, diffraction, and spectroscopy information; and hands-on experience with a transmission electron microscope. Three lecture hours and three laboratory hours a week for one semester.

387S. **Materials Processing.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 2:** Processing of Materials. Principles, advantages, and problems of solid, liquid, and vapor materials processes; considerations of structural alloys, ceramics, engineering polymers, and composites.

**Topic 3:** Processing of Ceramics. Synthesis of powders, powder characterization, powder stabilization, consolidation of powders, sintering, densification, and grain growth.

388C. **Nuclear Power Engineering.** Fundamental principles of the design and analysis of nuclear systems; introduction to the physics of nuclear reactions, chain reactions, and nuclear energy generation; heat generation and conductivemenet within nuclear systems; heat transfer and fluid flow in nuclear systems; the thermodynamics of nuclear power; the nuclear fuel cycle; and issues related to the materials aspect of reactor engineering. Three lecture hours a week for one semester. Mechanical Engineering 388C and 388R (Topic 2: Nuclear Power Engineering) may not both be counted. Prerequisite: Graduate standing.
388D. Nuclear Reactor Theory I. Principle concepts in the physics of nuclear systems, including radiation, radioactive decay, and the build-up and depletion of isotopes in nuclear systems; neutron-nucleus interactions and nuclear cross sections; transport or radiation using one-group and two-group diffusion theory; and concepts of criticality and time dependent reactors. Three lecture hours a week for one semester. Mechanical Engineering 388D and 388Q (Topic 1: Nuclear Reactor Theory I) may not both be counted. Prerequisite: Graduate standing, and Mechanical Engineering 361E or the equivalent.

388E. Nuclear Reactor Theory II. Neutron-nucleus interactions and nuclear cross section calculations; transport of radiation using neutron transport theory and multigroup diffusion theory; heterogeneous reactor calculations; the kinetics of nuclear systems; perturbation theory; and the nuclear fuel cycle. Three lecture hours a week for one semester. Mechanical Engineering 388E and 388Q (Topic 2: Nuclear Reactor Theory II) may not both be counted. Prerequisite: Graduate standing, and Mechanical Engineering 361E or the equivalent.

388F. Computational Methods in Radiation Transport. Transport equation, method, energy and time discretization, discrete ordinates, integral methods, and even-parity methods. Three lecture hours a week for one semester. Mechanical Engineering 388F and 388Q (Topic 3: Computational Methods in Radiation Transport) may not both be counted. Prerequisite: Graduate standing.

388G. Nuclear Radiation Shielding. Radiation fields/sources; techniques in neutron and photon attenuation; transport description of radiation penetration. Three lecture hours a week for one semester. Mechanical Engineering 388G and 388R (Topic 4: Nuclear Radiation Shielding) may not both be counted. Prerequisite: Graduate standing.

388H. Nuclear Safety and Security. Same as Operations Research and Industrial Engineering 390R (Topic 15: Nuclear Safety and Security). Probabilistic risk assessment models and nuclear arms non-proliferation, including failure classifications; failure mode, effects, and criticality analysis (FMECA); fault and event trees; and reliability block diagrams. Discussion of specific areas from the Code of Federal Regulations. Three lecture hours a week for one semester. Mechanical Engineering 388H and 388R may not both be counted. Prerequisite: Graduate standing, and an undergraduate calculus-based course in probability and statistics or consent of instructor.

388J. Neutron Interactions and Their Applications in Nuclear Science and Engineering. The fundamental principles of neutron interactions with matter and how these interactions are used in a variety of science and engineering research areas. Includes the history of neutron research, fundamental principles, dosimetry, depth profile, radiography, activation analysis, detection, homeland security, and scattering, with a significant emphasis placed on experimental design of these neutron techniques. Three lecture hours a week for one semester. Mechanical Engineering 388J and 397 (Topic: Neutron Interactions and Their Applications in Nuclear Science and Engineering) may not both be counted. Prerequisite: Graduate standing.

388M. Mathematical Methods for Nuclear and Radiation Engineering. Fundamental mathematics used in graduate studies in nuclear and radiation engineering. Topics include statistics, experimental data, propagation of error, detection limits, and differential and partial differential equations. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 388M, 388Q (Topic 5: Mathematical Methods for Nuclear and Radiation Engineering), 397 (Topic: Mathematical Methods for Nuclear and Radiation Engineering). Prerequisite: Graduate standing.

388N. Design of Nuclear Systems. Integration of fluid mechanics, heat transfer, thermomechanics, and thermodynamics with reactor theory for core design. Three lecture hours a week for one semester. Mechanical Engineering 388N and 389Q (Topic 1: Design of Nuclear Systems) may not both be counted. Prerequisite: Graduate standing, and Mechanical Engineering 361E or the equivalent.

388P. Applied Nuclear Physics. Properties of the nucleus and its structure; binding energy and nuclear stability, and the liquid drop model of the nucleus; the shell model of the nucleus; deuteron bound-state wave function and energy, n-p scattering cross section, transition probability per unit time, and barrier transmission probability; nuclear conservation laws; the energetics and general cross section behavior in nuclear reactions; interactions of charged particles, neutrons, and gamma rays with matter; and alpha, beta, and gamma decay. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389C. Nuclear Environmental Protection. Ionizing radiation and its interactions with matter and living tissues; radioactive decay kinetics; external and internal dose measurement; transportation through the environment; managing radioactive waste streams; and safeguards. Three lecture hours a week for one semester. May not be counted by students with credit for Mechanical Engineering 389D and 389E. Mechanical Engineering 337F and 389C may not both be counted. Prerequisite: Graduate standing.

389F. The Nuclear Fuel Cycle. A survey of the nuclear fuel cycle, including resource acquisition, fuel enrichment and fabrication, spent fuel reprocessing and repository disposal. Nuclear fuel management and reactor physics are addressed in the context of fuel burn-up calculations. Uses cross-disciplinary tools such as cost-benefit and environmental impact analyses. Includes fuel cycles currently in use, advanced fuel cycle concepts currently being presented in the technical literature, and a group project designed to research, analyze, and document the technical, economic, and/or environmental ramifications of one of these advanced fuel cycles. Three lecture hours a week for one semester. Mechanical Engineering 389F and 397 (Topic: The Nuclear Fuel Cycle) may not both be counted. Prerequisite: Graduate standing.
389Q. Nuclear and Radiation Engineering: Design of Systems. Synthesis of engineering concepts, materials specifications, and economics in the design of nuclear systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Mechanical Engineering 361E or the equivalent.

390. Vehicle System Dynamics and Controls. Fundamentals of ground vehicle dynamics, tire-road mechanics, vehicle control systems, vehicle stability, and simulation of vehicle systems. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 360, 397M (Topic: Vehicle System Dynamics and Controls), 390, 397 (Topic: Vehicle System Dynamics and Controls). Prerequisite: Graduate standing.

390F. Nuclear Analysis Techniques. Thermal and fast neutron activation, scintillation and solid-state detectors, beta and gamma spectrometry, coincidence techniques. Two lecture hours and one and one-half laboratory hours a week for one semester. Mechanical Engineering 389R (Topic 2: Nuclear Analysis Techniques) and 390F may not both be counted. Prerequisite: Graduate standing.

390G. Nuclear Engineering Laboratory. Experiments using the TRIGA reactor and a subcritical assembly; measurement of reactor characteristics and operational parameters. Two lecture hours and one and one-half laboratory hours a week for one semester. Mechanical Engineering 389R (Topic 1: Nuclear Engineering Laboratory) and 390G may not both be counted. Prerequisite: Graduate standing.

390N. Health Physics Laboratory. The application of radiation and radiation protection instrumentation. Includes personnel monitoring; radiation detection systems; gamma-ray spectroscopy; determination of environmental radiation; counting statistics; and gamma and neutron shielding. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

390T. Nuclear and Radiochemistry. Theory and application of nuclear and radiochemistry, including alpha, beta, and gamma ray processes; fission products; statistics; solvent extraction; absorbion and teaching techniques; various counting methods; and radiation protection. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

391R. Artificial Intelligence Programming for Engineers. Provides a working knowledge of LISP and compares it with PROLOG; use of the Texas Instruments Explorer, and artificial intelligence techniques applied to engineering problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

392C. Design Optimization and Automation. Optimization in mechanical design, including monotonicity analysis, gradient-based constrained optimization, tree-searching, and stochastic approaches. Three lecture hours a week for one semester. Prerequisite: Graduate standing and proficiency in C or MATLAB.

392G. Computer Graphics and Computer-Aided Design. Studies in computer graphics and its application to design. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.


Topic 2: Computer-Aided Geometric Design. Introduction to techniques for representing geometry for computer-aided engineering design. Two- and three-dimensional curve formulations, techniques from algebraic and vector geometry, implicit versus parametric definitions; and free-form surface formulation and solid modeling. Additional prerequisite: Proficiency in C or C++.


Topic 4: Advanced Topics in Computer-Aided Design. Detailed execution of an independent computer-aided design project. Projects require significant development and emphasize application of techniques from computer-aided engineering and interactive computer graphics. Lectures deal with the subject matter of the projects. Additional prerequisite: Mechanical Engineering 352K, 392G (Topic 1), or 392G (Topic 2); and consent of instructor.

392M. Advanced Mechanical Design. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Analytical Techniques in Mechanical Design. Analytical techniques and some computational techniques for the advanced stress and strength analysis of machine components and mechanical structures.

Topic 3: Advanced Design of Machine Elements. Review of basic machine elements, properties, and stresses; fluid couplings and torque converters; thermal stresses, relaxation, and beneficial residual stressing; shells and rotors; plasticity.


392Q. Manufacturing. Topics that cut across departmental concentrations (mechanical systems and design, metallurgy and materials engineering, operations research and industrial engineering), including design for manufacturing, manufacturing machines and manufacturing processing, and production systems. Three lecture hours a week for one semester; additional laboratory hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.


Topic 4: Automation and Integration of Manufacturing Systems. Integration of automated manufacturing components into a cohesive manufacturing system. Selection of automation strategy, communication and interaction between system components, economics and reliability of the resulting systems.


Topic 6: Mechatronics I. Integrated use of mechanical, electrical, and computer systems for information processing and control of machines and devices. System modeling, electromechanics, sensors and actuators, basic electronics design, signal processing and conditioning, noise and its abatement, grounding and shielding, filters, and system interfacing techniques. Three lecture hours and two laboratory hours a week for one semester.

Topic 7: Microcomputer Programming and Interfacing. Microcomputer architecture and programming; microcomputer system analysis; interfacing and digital control.

Topic 9: Mechatronics II. Interfacing microcomputers with sensors and actuators; hybrid (analog/digital) design; digital logic and analog circuitry; data acquisition and control; microcomputer architecture, assembly language programming; signal conditioning, filters, analog-to-digital and digital-to-analog conversion. Three lecture hours and two laboratory hours a week for one semester.

Topic 10: Statistical Methods in Manufacturing. Same as Operations Research and Industrial Engineering 390Q (Topic 7: Statistical Methods in Manufacturing). Statistical monitoring of manufacturing processes; methods and applications of various control charts; formal design of experiments (DOE), including the statistical evaluation of main and interaction effects, as well as intelligent experimentation through reduced factorial experimental design; Taguchi's design philosophy as applied to response surface methods and gradient-based search techniques; and advanced issues in quality control and design of manufacturing systems. Additional prerequisite: Knowledge of basic probability and statistics and consent of instructor.

395. The Enterprise of Technology. Studies the basis for assessing emerging technologies. Describes the process of technology commercialization, including identifying marketable technologies, defining products, and marketing products to markets. Also studies intellectual property protection and strategy, and the steps and processes necessary to the successful design and manufacture of a product or service. Three lecture hours a week for one semester. Mechanical Engineering 395 and 397 (Topic: Enterprise of Technology: Laboratory to Market) may not both be counted. Prerequisite: Graduate standing.

397. Current Studies in Engineering. The equivalent of three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.


197K, 297K, 397K. Graduate Seminar. Normally required of all mechanical engineering graduate students. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

Topic 1: Acoustics.

Topic 2: Advanced Thermal/Fluid Seminar.

Topic 3: Materials Engineering.

Topic 4: Mechanical Systems and Design.

Topic 5: Nuclear Engineering.

Topic 6: Introductory Thermal/Fluid Seminar.

397M. Graduate Research Internship. Research associated with enrollment in the Graduate Research Internship Program (GRIP). Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor and the dean of the Cockrell School of Engineering.

197P, 297P, 397P. Projects in Mechanical Engineering. Independent project carried out under the supervision of a mechanical engineering faculty member. Three, six, or nine laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in mechanical engineering and consent of the graduate adviser; for 698B, Mechanical Engineering 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in mechanical engineering and consent of the graduate adviser.
398T. Supervised Teaching in Mechanical Engineering. Teaching under close supervision, group meetings or individual consultations, and reports as required. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Mechanical Engineering 399R, 699R, or 999R.

OPERATIONS RESEARCH AND INDUSTRIAL ENGINEERING

Master of Science in Engineering
Doctor of Philosophy

Operations research is a mathematical science concerned with optimal decision making and the modeling of deterministic and probabilistic systems. Its focus and field of application are interdisciplinary, embracing a broad range of quantitative techniques. Industrial engineering is concerned with the design, improvement, and installation of integrated systems of personnel, material, and equipment. Together, operations research and industrial engineering provide a rational approach to engineering and managerial problem solving through the deliberate application of scientific methods.

In practice, operations research and industrial engineering address both the performance objectives and the resource constraints of an organization, working toward the establishment of policies that are most beneficial to the organization as a whole. The function of the operations research analyst or the industrial engineer is to guide decision making by identifying underlying cause-and-effect relationships, developing and proposing courses of action, establishing criteria by which to judge their effectiveness, and evaluating their probable effects. The program in operations research and industrial engineering is designed to allow students to develop the technical, analytic, and managerial skills necessary to perform these tasks successfully.

OBJECTIVES

The principal goals of the program are to provide the student with the educational basis for continued learning and to impart the fundamental skills necessary to be a successful analyst. Students are expected to develop proficiency in one or more programming languages, expertise in mathematical modeling, and an understanding of the uses and limitations of commercial optimization and statistical software. The master’s degree program balances theory and applications. At the doctoral level, the program’s emphasis on research is intended to enable students to extend their field of knowledge and to develop the analytic techniques that will serve them in academic, industrial, or governmental careers.

AREAS OF STUDY

The program in operations research and industrial engineering is designed to educate engineers who will solve complex industrial-socioeconomic problems by applying fundamental principles from engineering, mathematics, economics, computer science, and systems theory. In support of this end, a wide variety of research and study areas are offered by a faculty whose expertise covers such fields as optimization, simulation, statistics, stochastic processes, decision analysis, and manufacturing systems. The program is rigorous but sufficiently flexible to accommodate the needs and interests of most students.

Once a student chooses a study area, he or she works closely with one or more faculty members pursuing research in that area. Because of the interdisciplinary nature of the program, many projects involve teamwork and collaboration with departments in the Cockrell School of Engineering and the McCombs School of Business. Each student’s program includes a balanced combination of coursework, seminars,
computational analysis, and research. State-of-the-art computer facilities, specialized laboratories, and the latest versions of applications software are available to all graduate students.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Jonathan F. Bard
John W. Barnes
J. Eric Bickel
Dragan Djurdjanovic

John J. Hasenbein
Erhan Kutanoglu
David P. Morton
Elmira Popova

ADMISSION REQUIREMENTS

The Admission Committee uses the following policies in considering applicants for admission. Each application is reviewed on its merits.

1. Applicants must provide a Graduate Record Examinations General Test score no more than five years old. The applicant should have a grade point average in upper-division undergraduate coursework of at least 3.20 on a 4-point scale, or the equivalent. Students who feel that their GRE scores and grades do not reflect their ability to do high-quality graduate work should submit a statement explaining this belief.

2. Both the master’s and the doctoral degree program are designed for full-time study, but part-time students are accepted. From the time of entry until completion, students are expected to show evidence of commitment to the program and of progress toward the degree.

3. As a general rule, students should enter the program in the fall semester, because of the way basic graduate courses are scheduled.

4. Students who do not have undergraduate degrees in engineering, mathematics, or the sciences may be required to remove deficiencies before beginning graduate coursework.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN ENGINEERING

To enter the MSE program, a student should have an undergraduate degree in engineering or an equivalent quantitative field such as mathematics, economics, or one of the physical sciences. The graduate adviser may require those with degrees in other fields to take additional courses. In general, an adequate background includes coursework in probability, statistics, computer programming, linear algebra, calculus, engineering economics, and optimization. These courses may be taken after enrollment, but they usually will not be counted toward fulfillment of degree requirements.

The operations research component of the program emphasizes the application of mathematics to a variety of economic and operational problems. Students take advanced coursework in optimization, probability and statistics, and stochastic processes. Those interested primarily in industrial engineering may concentrate on forecasting, project management, production planning and control, scheduling, or reliability. Each student must complete either twenty-four semester hours of coursework, plus a thesis; twenty-seven semester hours of coursework, plus a report; or thirty hours of coursework. (Students must have the approval of the graduate adviser to follow the thirty hour, coursework-only option.) More coursework may be required, depending on the student’s background and goals. All options require at least two courses in a minor area, which usually comprises work in mathematics, business, computer science, or other branches of engineering.

DOCTOR OF PHILOSOPHY

The chief components of this program are scholastic excellence and original research. Although there is no specific number of semester hours required for the doctoral program, the student must meet the requirements of the Graduate Studies Committee. He or she usually completes twenty-four to thirty-six semester hours of graduate coursework beyond the master’s degree. Formal admission to candidacy is considered by the Graduate Studies Committee after a thorough review of the student’s overall academic record and performance on the doctoral qualifying examination.

FOR MORE INFORMATION

Campus address: Engineering Teaching Center II (ETC) 5.128, phone (512) 471-1336, fax (512) 471-8727; campus mail code: C2200
Mailing address: The University of Texas at Austin, Operations Research and Industrial Engineering Program, Department of Mechanical Engineering, 1 University Station C2200, Austin TX 78712
E-mail: orie@me.utexas.edu
URL: http://www.me.utexas.edu/areas/orie/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

OPERATIONS RESEARCH AND INDUSTRIAL ENGINEERING: ORI

180M, 280M, 380M, 680M, 980M. Research. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in operations research and industrial engineering.

381. Deterministic Methods for Operations Research. Theory and algorithms for deterministic operations research methods. Algorithms for solving linear, integer, and nonlinear optimization models. Three lecture hours a week for one semester. May not be counted toward a degree in operations research and industrial engineering. Prerequisite: Graduate standing.

382. Stochastic Methods for Operations Research. Theory and algorithms for stochastic operations research methods. Algorithms related to stochastic processes: Markov chain analysis; queuing theory; stochastic inventory theory and decision analysis. Three lecture hours a week for one semester. May not be counted toward a degree in operations research and industrial engineering. Prerequisite: Graduate standing and Mechanical Engineering 335 or the equivalent.

390Q. Industrial Engineering. Industrial engineering techniques for quantitative solution of contemporary systems and management problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Project Management. Methods for organizing, coordinating, and controlling resources to minimize risk and conflict and to maintain budgets and schedules. Topics include evaluation of competing alternatives, organization of a project, scheduling of tasks and resources, and the role of management over time.

Topic 2: Production and Inventory Control. Issues in inventory control with known and unknown demand, materials requirement planning, just-in-time, pull control systems, operations scheduling, dispatching and aggregate planning, and the basic dynamics of production and inventory control.

390R. Statistics and Probability. Concepts of probability and mathematical statistics; application of these analytical methods to planning and evaluation of research and industrial experimentation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and an undergraduate calculus-based course in probability and statistics or consent of instructor.

Topic 2: Mathematical Statistics. Sampling distributions, properties of estimators, point and interval estimation, hypothesis testing, introduction to multivariate and nonparametric statistics.


Topic 6: Regression and Analysis of Variance. Fitting equations to data; joint confidence regions; partial correlation analysis; general linear hypotheses; dummy variables; diagnostics and remedial measures; design of experiments; fixed, random, and mixed models; factorial and nested designs. Additional prerequisite: Operations Research and Industrial Engineering 390R (Topic 2) or consent of instructor.


Topic 8: Queueing Theory. Introduction to the classical and modern theories of queueing systems. Simple Markovian queues; the M/G/1 and G/G/1 queues; Jackson and Kelly networks; multiserver networks; stability, scheduling, and routing in queueing networks; fluid and diffusion approximations. Additional prerequisite: Operations Research and Industrial Engineering 390R (Topic 2) or consent of instructor.


Topic 10: Statistical Design of Experiments. Introduction to statistical design of experiments based on both classical analysis of variance and modern heuristic techniques. Additional prerequisite: Operations Research and Industrial Engineering 390R (Topic 2) or the equivalent, 390R (Topic 2) or the equivalent, and 390R (Topic 6) or the equivalent.


Topic 13: Special Topics in Probability, Stochastic Processes, and Statistics. Study of specialized topics, such as advanced stochastic processes, Bayesian statistics, simulation, and stochastic optimization, intended to introduce and stimulate further research. Additional prerequisite: Consent of instructor.

Topic 14: Nuclear Safety and Security. Same as Mechanical Engineering 388H. Probabilistic risk assessment models and nuclear arms nonproliferation, including failure classifications; failure mode, effects, and criticality analysis (FMECA); fault and event trees; and reliability block diagrams. Discussion of specific areas from the Code of Federal Regulations. Mechanical Engineering 337G and Operations Research and Industrial Engineering 390R (Topic 15) may not both be counted.

Topic 15: Markov Decision Processes. The theory of Markov decision processes, also known as stochastic dynamic programming. Includes finite horizon, total discounted cost, and average cost problems; continuous-time and semi-Markov models; and applications in finance, queueing, and control theory. Additional prerequisite: A course in stochastic processes or consent of instructor.

Topic 16: Decision Analysis. Principles and application of techniques for the logical illumination of complex decision problems within any context. Subjects may include utility theory, probability as a statement of belief, risk preference, value of information and control, probability assessment, influence diagrams, risk sharing and scaling, and life-and-death decision making.

Topic 17: Optimization. Mathematical optimization techniques with applications to engineering and industrial problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and a course in operations research methods.


Topic 19: Dynamic Programming. Systems that require sequential decisions. Problem modeling and solution algorithms for deterministic and stochastic systems.


**Topic 5: Linear Programming.** Models, algorithms, and theory of linear programming. Linear programming geometry, primal, dual and revised simplex algorithms, duality theory, optimality conditions, sensitivity analyses, interior point methods, and computer implementations.


**Topic 8: Combinatorial Optimization.** Optimization of combinatorial structures; computational complexity; stable marriages, shortest paths, maximum flows, minimum-cost flows, matching problems; approximation algorithms for NP-hard problems.

**Topic 9: Large-Scale Systems Optimization.** Mathematical programs with special structure, Dantzig-Wolfe decomposition, partitioning and relaxation procedures, duality and decomposition, compact inverse methods, applications in engineering and management.

**Topic 10: Stochastic Optimization.** Optimization of mathematical programming models under uncertainty; model formulations; exact, bounding-and-approximation, and Monte Carlo sampling–based solution techniques that exploit special structures; applications; use of algebraic modeling language.


**Topic 12: Metaheuristics.** Reactive and adaptive tabu search methods, simulated annealing, genetic algorithms, and greedy randomized adaptive search methods. Emphasis on theoretical context of methods and on similarities and distinguishing characteristics.

**397. Current Studies in Operations Research and Industrial Engineering.** The equivalent of three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

**197K, 297K, 397K. Graduate Seminar.** One, two, or three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Normally required of all students in operations research and industrial engineering. Prerequisite: Graduate standing.

**397M. Graduate Research Internship.** Students conduct research in an industrial setting to gain practical experience in their area of interest. Twenty to forty hours of fieldwork a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser and supervising faculty member.

**197P, 297P, 397P. Projects in Operations Research and Industrial Engineering.** Independent project carried out under the supervision of a faculty member in operations research and industrial engineering. Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of the graduate adviser and supervising faculty member.

**698. Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in operations research and industrial engineering and consent of the graduate adviser; for 698B, Operations Research and Industrial Engineering 698A.

**398R. Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in operations research and industrial engineering and consent of the graduate adviser.

**399R, 699R, 999R. Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

**399W, 699W, 999W. Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Operations Research and Industrial Engineering 399R, 699R, or 999R.
OBJECTIVES

This program is designed to educate engineers to solve problems related to exploring and recovering subsurface resources such as oil and gas. The program allows students to take courses in a broad range of areas, including computational geosystems engineering, drilling engineering, environmental and geosystems engineering, formulation evaluation, petroleum economics, production engineering, and reservoir engineering.

Once students have chosen a degree option, they may choose to work closely with a faculty member conducting research in their area of interest. The program offers a doctoral degree based on a combination of coursework and research, and a master’s degree based on either a thesis or a report, or on coursework alone.

FACILITIES FOR GRADUATE WORK

Excellent facilities for graduate research in petroleum and geosystems engineering are available in the Chemical and Petroleum Engineering Building. In addition to departmental offices and classrooms, the building houses over forty thousand square feet of laboratory space, providing unique capabilities for studies in production logging, vertical and inclined flow in wells, artificial lift, core flooding for enhanced oil recovery, subsurface environmental remediation, drilling, stimulation, rock mechanics, well log digitizing and interpretation, and PVT analysis. Additional laboratory space at the J.J. Pickle Research Campus is used for research. A machine shop is maintained to fabricate and support research equipment.

In addition to the facilities of Information Technology Services, students have access to a host of computers housed in the Department of Petroleum and Geosystems Engineering, including numerous microcomputers and workstations. Excellent library facilities include the Mallet Chemistry Library, the McKinney Engineering Library, the Walter Geology Library, and the Kuehne Physics Mathematics Astronomy Library.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Matthew T. Balhoff
Steven L. Bryant
Mojdeh Delshad
David DiCarlo
Kenneth E. Gray
Christopher J. Jablonowski
Larry W. Lake
Kishore Mohanty
Quoc P. Nguyen
Jon E. Olson

Tadeusz W. Patzek
Ekwere J. Peters
Augusto L. Podio
Gary A. Pope
Masa Prodanovic
Kamy Sepehrnoori
Mukul M. Sharma
Sanjay Srinivasan
Carlos Torres-Verdin
Mary F. Wheeler

ADMISSION REQUIREMENTS

All prospective degree candidates must have a background satisfactory for study of advanced petroleum engineering as determined by the Graduate Studies Committee. For students without this background, such as those without degrees in engineering or in the petroleum field, the Graduate Studies Committee will recommend a program of coursework designed to prepare the student for graduate study. Complete requirements for admission are available at http://www.pge.utexas.edu/prospective/howto.cfm.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN ENGINEERING

With the approval of the Graduate Studies Committee, the student elects one of three options:

1. Thesis option. Thirty semester hours (including six hours in the thesis course) are required to complete the program. In addition to the thesis, eighteen semester hours of work must be completed in the Department of Petroleum and Geosystems Engineering; six semester hours of supporting work must be completed outside the department.

2. Report option. Thirty-three semester hours (including three hours in the report course) are required to complete the program. In addition to
the report, twenty-four semester hours of work must be completed in the Department of Petroleum and Geosystems Engineering; six semester hours of supporting work must be completed outside the department.

For students who plan to continue their studies and enter the doctoral degree program, the report may be a PhD proposal.

3. **Option without thesis or report.** Thirty-six semester hours are required to complete the program. Twenty-seven to thirty semester hours of work must be completed in the Department of Petroleum and Geosystems Engineering; six to nine semester hours of supporting work must be completed outside the department.

All options must include at least eighteen semester hours of engineering courses. The program of coursework must be approved by the graduate adviser and the graduate dean. More detailed information is available at http://www.pge.utexas.edu/current/grad.cfm.

**DOCTOR OF PHILOSOPHY**

To qualify as a doctoral candidate, the student must fulfill the following requirements:

1. Hold a Master of Science degree in science or engineering. Upon formal petition by the student, the Graduate Studies Committee may waive this requirement in exceptional cases.
2. Perform satisfactorily on the qualifying procedures conducted by the Graduate Studies Committee.
3. Maintain a grade point average of at least 3.50 on all graduate coursework at the University of Texas at Austin.

In general, two to four years beyond the master’s degree are required to complete the Doctor of Philosophy degree program. More detailed information is available at http://www.pge.utexas.edu/current/grad.cfm.

**FOR MORE INFORMATION**

- **Campus address:** Chemical and Petroleum Engineering Building (CPE) 2.502, phone (512) 471-3161, fax (512) 471-9605; campus mail code: C0300
- **Mailing address:** The University of Texas at Austin, Graduate Program, Department of Petroleum and Geosystems Engineering, 1 University Station C0300, Austin TX 78712
- **E-mail:** pgegradoffice@mail.utexas.edu
- **URL:** http://www.pge.utexas.edu/

---

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**PETROLEUM AND GEOSYSTEMS ENGINEERING: PGE**

380, 680. **Advanced Petroleum Laboratory for Master’s Degree Candidates.** For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in petroleum and geosystems engineering.

381. **Drilling Engineering.** Not open to students who have a degree in petroleum engineering. Basic drilling terminology and advanced drilling engineering topics. Three lecture hours a week for one semester. Required for students pursuing the doctoral degree in petroleum engineering. Prerequisite: Graduate standing in petroleum engineering.

381K. **Engineering Analysis.** Application of classical methods of mathematical analysis to problems frequently encountered in engineering applications. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381L. **Advanced Petrophysics.** Measurement, interpretation, and analysis of petrophysical properties of petroleum reservoir rocks. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381M. **Transport Phenomena.** Three lecture hours a week for one semester. Prerequisite: Graduate standing in computational and applied mathematics, engineering, or geological sciences.

382. **Basic Geological Concepts for Engineers.** Basic geological principles for students with little or no geological background. Three lecture hours a week for one semester. Prerequisite: Graduate standing in petroleum or civil engineering.
382K. **Theory and Application of Reservoir Transients.** Mathematical development and application of multiple pressure transients in well and reservoir systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382L. **Numerical Methods in Petroleum and Geosystems Engineering.** The use of numerical methods and computers in the solution of petroleum and geosystems engineering problems. Three lecture hours a week for one semester. Computational and Applied Mathematics 382L and Petroleum and Geosystems Engineering 382L may not both be counted. Prerequisite: Graduate standing.

383. **Special Topics in Petroleum and Geosystems Engineering.** Recent literature on petroleum production practice and petroleum and geosystems engineering problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in computational and applied mathematics, engineering, or geological sciences. Students seeking to enroll in any seminar must present technical prerequisites satisfactory to the instructor.

**Topics:**
- **Topic 2:** Advanced Drilling Fluids.
- **Topic 5:** Thermal Recovery.
- **Topic 10:** Numerical Solution of Time-Dependent Problems. Computational and Applied Mathematics 383 (Topic 1: Numerical Solution of Time-Dependent Problems) and Petroleum and Geosystems Engineering 383 (Topic 10) may not both be counted.
- **Topic 12:** Near Wellbore Problems.
- **Topic 16:** Topics in Computational Methods. Computational and Applied Mathematics 383 (Topic 2: Topics in Computational Methods) and Petroleum and Geosystems Engineering 383 (Topic 16) may not both be counted.
- **Topic 17:** Naturally Fractured Reservoirs.
- **Topic 20:** Geostatistics.
- **Topic 24:** Natural Gas Engineering.
- **Topic 27:** Rock Mechanics: Drilling, Completing, and Producing Applications.
- **Topic 28:** Macroeconomics of Petroleum.
- **Topic 30:** Fundamentals of Subsurface Environmental Engineering.
- **Topic 32:** Hydraulic Fracture Design and Evaluation.
- **Topic 33:** Advanced Drilling and Well Completion.
- **Topic 35:** Advanced Production Engineering.
- **Topic 36:** Advanced Numerical Methods.
- **Topic 38:** Chromatographic Transport and Geochemical Modeling.
- **Topic 39:** Design and Analysis of Pumping Systems.
- **Topic 41:** Energy Finance.
- **Topic 46:** International Petroleum Concessions and Agreements.
- **Topic 50:** Reservoir Applications of Foam.
- **Topic 51:** Special Problems in Well-Logging.

**Topic 55:** Pore-Level Petrophysics. Geological and mathematical investigation of pore-scale basis for transport phenomena and petrophysical properties of sedimentary rocks. Additional prerequisite: Petroleum and Geosystems Engineering 381L or consent of instructor.

**Topic 56:** Stochastic Methods for Reservoir Modeling. Spatial interpolation and stochastic simulation techniques for reservoir characterization.

**Topic 57:** Deepwater Operations. Overview of various technical, logistical, and managerial elements that are functionally integrated in deepwater operations, with emphasis on applications in the Gulf of Mexico.

**Topic 58:** Applied Reservoir Characterization. Reservoir modeling using software tools for statistical analysis of reservoir data; variogram analysis and modeling; spatial interpolation (kriging); tools for data integration in kriging; stochastic simulation of rock types (lithology), pay thickness/porosity, and permeability; inputting geological models into flow simulation; uncertainty assessment.

**Topic 59:** Oil and Gas Production Facilities Design. Applied theory relating to field processing of hydrocarbons and water, including hydrocarbon and gas separation, gas sweetening and dehydration, gas compression, fluid metering, process control, corrosion, and safety systems. Additional prerequisite: Petroleum and Geosystems Engineering 381M and 384, or consent of instructor.

**Topic 60:** Energy and Earth Resource Economics. Same as Energy and Earth Resources 396 (Topic 1: Energy and Earth Resource Economics). Theoretical and applied topics in natural resource economics, including project analysis, production theory, industrial organization, markets and regulation, and environmental economics.

**Topic 61:** Project Management. Overview of project management theory and practice in the natural resource sector, with a focus on exploration and production of energy resources.

**Topic 62:** Energy and the Environment. A survey course covering current and potential energy sources, what the energy supply mix will be in the future, and how this might impact the environment.

**384. Advanced Thermodynamics and Phase Behavior.** Thermodynamic study of pressure/volume/temperature/composition relationships in oil and gas mixtures. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing in petroleum engineering and twelve semester hours of upper-division coursework in petroleum and geosystems engineering.

**385M. Advanced Well-Logging and Correlation.** Advanced well-logging for the geologist and engineer, involving working problems with suites of well logs to cover advanced mapping and logging techniques. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Petroleum and Geosystems Engineering 368, and Geological Sciences 383.
386K. Advanced Fluid Flow in Porous Media. The hydrodynamic equations governing the steady state flow of homogeneous fluids in porous media and their application to petroleum and geosystems engineering problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

387. Secondary Recovery of Petroleum. Recovery by gas injection and water flooding. Three lecture hours a week for one semester. Prerequisite: Graduate standing in petroleum engineering and twelve semester hours of upper-division coursework in petroleum and geosystems engineering.

387K. Fundamentals of Enhanced Oil Recovery I. Recent innovations in the recovery of petroleum by injecting fluids miscible with the oil or by application of heat to the reservoir. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

387L. Fundamentals of Enhanced Oil Recovery II. Selection of candidate reservoirs; design and performance prediction of miscible and thermal processes. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Petroleum and Geosystems Engineering 387K.

388. Advanced Reservoir Engineering. Basic concepts of reservoir engineering, with applications to the production of hydrocarbons from both gas and oil reservoirs. Examines the governing equations for flow in permeable media, as well as concepts such as streamline flow, pseudo-steady-state flow, fractional flow, and both immiscible and miscible flow. Uses black oil and compositional reservoir simulators. Three lecture hours a week for one semester. Petroleum and Geosystems Engineering 383 (Topic 6: Advanced Reservoir Engineering) and 388 may not both be counted. Prerequisite: Graduate standing in computational and applied mathematics, engineering, or geological sciences. Students must present technical prerequisites satisfactory to the instructor.

389. Economic Analysis in the Petroleum Industry. Engineering justification for capital outlay in the petroleum industry. Three lecture hours a week for one semester. Prerequisite: Graduate standing in engineering or geological sciences.

290, 390, 690, 990. Advanced Laboratory for Doctoral Candidates. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in petroleum engineering.

392K. Numerical Simulation of Reservoirs. Development and application of reservoir simulator models to primary and secondary recovery processes in reservoir engineering. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

393. Research Seminar. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

397M. Graduate Research Internship. For students holding Master of Science degrees from other institutions who wish to pursue Doctor of Philosophy degrees at the University of Texas at Austin. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser and the dean of the Cockrell School of Engineering.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in petroleum engineering and consent of the graduate adviser; for 698B, Petroleum and Geosystems Engineering 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in petroleum engineering and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Petroleum and Geosystems Engineering 399R, 699R, or 999R.
College of Fine Arts

FINE ARTS

Master of Arts
Master of Fine Arts
Master of Music
Doctor of Musical Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

In addition to the academic departments, the College of Fine Arts includes the Performing Arts Center and the Blanton Museum of Art. These components provide University students and the Austin community with opportunities to attend art exhibitions, plays, operas, ballets, recitals, and concerts by internationally renowned artists and companies. The proximity of Austin to Houston, San Antonio, Dallas, and Fort Worth places the major art collections and dramatic and musical events of those cities within a few hours’ drive.

Performing Arts Center. Created in 1981, the Performing Arts Center complex includes six venues to accommodate diverse performances: Nancy Lee and Perry R. Bass Concert Hall (three thousand seats), the Ralph and Ruth McCullough Theatre (four hundred seats), Hogg Memorial Auditorium (twelve hundred seats), the B. Iden Payne Theatre (five hundred seats), the Oscar G. Brockett Theatre (two hundred seats), and Bates Recital Hall (seven hundred seats), with its three-story Visser-Rowland tracker pipe organ. Support facilities include rehearsal rooms, paint shops, scene shops, costume shops, metal shop, prop shop, and administrative offices.

The Performing Arts Center’s season program includes artists from around the world, reflecting a multitude of cultures and art forms. In addition, the Performing Arts Center maintains the Lifelong Learning program, which helps the Austin community to become more involved with the performing arts through lectures, master classes, residencies, youth performances, and workshops. The Performing Arts Center also serves as a learning laboratory for University students, giving them the opportunity to work alongside professionals in a variety of fields.

Fine Arts Library. Located in the E. William Doty Fine Arts Building, the Fine Arts Library contains materials on art, theatre, dance, and music.

The art collection supports instruction and research for the four divisions of the Department of Art and Art History: art history, design, studio art, and visual arts studies/art education. The collection includes materials on most art and design movements and schools, photography, and art education. Artists of most periods and nationalities and studies of their works are represented, as are most media and techniques.

The theatre and dance collection supports the Department of Theatre and Dance, which concentrates on performance, especially play production, theatrical design, playwriting, theatre education, and dance. Materials on other types of theatrical presentations, such as magic, circuses, and pantomime, are included. The Fine Arts Library holds texts of major plays written in English or translated into English, with contemporary plays collected most heavily. The Perry-Castañeda Library also holds texts of plays in English and other languages, with emphasis on plays as a literary form and on literary criticism.

The music collection supports instruction and research in the Sarah and Ernest Butler School of Music, which includes music performance, composition, ethnomusicology, music and human learning, music
theory, and musicology. Most historical periods and geographical areas are covered in both classical and popular idioms, though the emphasis is on the Western classical tradition. Music is represented in a wide variety of printed and recorded formats.

The special collections of the Fine Arts Library include the Historical Music Recordings Collection, the papers of the Paramount and State Theatres, and papers of Sam Shepard. The Historical Music Recordings Collection is an archive of audio recordings in all formats. Holding more than two hundred thousand items, it is one of the largest collections of audio recordings in the United States. The Paramount and State Theatre archive is an archival collection of about three thousand items, including posters, fliers, documents, and ephemera from Austin’s historic Paramount and State Theatres. The Sam Shepard Collection is an archival collection of materials by Pulitzer Prize–winning playwright, actor, and author Sam Shepard. The archive contains materials from the latter part of Shepard’s career, roughly from the late 1970s to the present, and includes manuscripts, film scripts, correspondence, volumes from his personal library, and awards.

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

**FINE ARTS: FA**

381. **The Arts.** Topics within the fine arts, or including the fine arts and other areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

382. **Independent Studies: Art, Drama, or Music.** Study or research in art, drama, or music, or among these areas, or between these areas and other disciplines. Individual instruction. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor and of the dean of the College of Fine Arts.

Graduate study is available in the following areas: in the Department of Art and Art History: art history, studio art, design, and art education; in the Butler School of Music: performance (including conducting and opera), music and human learning, musicology, ethnomusicology, composition, conducting, and theory; a jazz emphasis is available in approved areas; and in the Department of Theatre and Dance: acting, dance, directing, drama and theatre for youth, performance as public practice, playwriting, stage technology, teacher training, and theatrical design. Information about these programs follows; further information is available from the graduate adviser of each program.
FACILITIES FOR GRADUATE WORK

Students have access to a range of high-quality facilities for study on the University campus, as well as in the greater Austin community. There are many dynamic museums and active community-based art sites and programs that students can use for research and internships. Of particular note are the University’s Blanton Museum of Art and Harry Ransom Humanities Research Center. Public school districts in Austin and the surrounding area also provide research and internship opportunities for students. Students have access to the University’s comprehensive library system, including the Perry-Castañeda Library, with more than 2.5 million volumes, and the Fine Arts Library, which contains a substantial visual and sound collection. Both the Department of Art and Art History and the College of Fine Arts offer access to state-of-the-art computer facilities.

AREAS OF STUDY

Art education occurs within a variety of locations, which may include public and private schools, museums, community centers, after-school programs, prisons, rehabilitation facilities, and assisted living centers. These settings provide on-site learning and research opportunities for students in the Master of Arts program. Students choose coursework and a guided internship in one of three emphases in art education: school focus, museum education focus, and community-based arts focus. The school focus emphasis is designed for students who want to enhance their knowledge of art education at the elementary and secondary school level; the museum education focus emphasis is designed for students interested in learning about and working in the field of art museum education; and the community-based arts focus emphasis is designed for students who want to investigate and conduct professional activities in art education in community-based sites or organizations. All three emphases can lead to early childhood through grade twelve state of Texas art teacher certification, but additional coursework in areas such as studio art, art history, visual art studies, human development, and education is required. Some of this additional coursework may also be used to fulfill master’s degree requirements.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Christopher O. Adejumo
Paul E. Bolin
Lee R. Chesney III
Janice Leoshko
Melinda M. Mayer

ADMISSION AND DEGREE REQUIREMENTS

A bachelor’s degree in art education, studio art, or art history is recommended for admission to any of the three emphases within the art education master’s program. However, special consideration may be given to the applicant with a related bachelor’s degree and prior experience in art teaching, museum education, or art education work in a community-based setting.

All emphases require thirty-six semester hours of coursework consisting of thirty hours in art education (including twelve hours in core art education courses, six hours in the student’s chosen emphasis, three hours of internship or on-site experience, three hours in art education electives, and six hours in the thesis course); and six hours of studio art and/or art history. Students must present an approved thesis proposal to his or her thesis committee upon completion of eighteen semester hours of approved coursework and before beginning the thesis.

Students interested in early childhood through grade twelve art teacher certification should have a bachelor’s degree in studio art or have completed, prior to applying to the master’s program, at least forty-five semester hours in specific undergraduate studio art and art history courses. More information on art teacher certification requirements is available from the graduate adviser.

FOR MORE INFORMATION

Campus address: Art Building (ART) 3.330, phone (512) 471-3377; campus mail code: D1300
Mailing address: The University of Texas at Austin, Graduate Program in Art Education, Department of Art and Art History, 1 University Station D1300, Austin TX 78712
URL: http://www.finearts.utexas.edu/aah/visual_art_studies/graduate_program/index.cfm
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ART EDUCATION: AED

381G. Foundations of Art Education. Explores foundational writings and beliefs, past and present literature, and perspectives within art education. Three lecture hours a week for one semester. Prerequisite: Graduate standing in art education and consent of the graduate adviser.

381K. Contemporary Issues in Art Education. The role of art education in education and society, including technology, multiculturalism, gender studies, contemporary art, visual and material culture, interdisciplinary connections, media studies, and community-based art education. Three lecture hours a week for one semester. Prerequisite: Graduate standing in art education, Art Education 381G, and consent of the graduate adviser.

382G. Introduction to Research in Art Education. Explores diverse approaches and methodologies for conducting research in art education. Three lecture hours a week for one semester. Prerequisite: Graduate standing in art education and consent of the graduate adviser.

382H. Thesis Proposal and Preparation. Focuses on the preparation of a graduate thesis proposal, with emphasis on the student’s identification of a central research question. Three lecture hours a week for one semester. Prerequisite: For art education majors, graduate standing, Art Education 382G, and consent of the graduate adviser; for others, graduate standing and consent of instructor.

383J. Museum Education: History and Theory. Historical and philosophical development of American art museum education. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

383K. Museum Education: Practice and Application. The practice and application of museum education within the context of art museums. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

384. Special Topics in Art Education. Readings, discussion, and research relevant to major current trends in art education. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

385. Independent Study in Art Education. Student-initiated study with an art education faculty member covering the topic of student’s research focus. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing in art education, written approval of the designated faculty member, and consent of the graduate adviser.

386. Internship and Field Study. Supervised observation and research in art education related to the candidate’s area of emphasis. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, written approval of designated faculty member, and consent of the graduate adviser.

387C. Case Studies in Community-Based Art Education. Students review examples of community-based art programs to understand their histories, philosophies, purposes, organization, funding, operation, evaluation, and redevelopment; and discuss issues affecting the successful creation, preservation, and development of such programs. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

387D. Program Development in Community-Based Art Education. Students examine the process of establishing an exemplary community-based art program; conduct ethnographic research and write grant proposals toward the creation of an ideal community-based art program or the improvement of an existing program; and develop operational activities and explore various approaches to art production to prepare for implementing a program. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

388C. Art Instruction through Arts-Based Research. Students observe teaching and learning styles in early childhood through grade twelve art classrooms and review and evaluate their observations using class discussions, journals, creative reports, and other arts-based research techniques. Three lecture hours and three hours of fieldwork a week for one semester. Prerequisite: Graduating Standing and consent of instructor.

388D. Art and the Creation of Meaning. Discussion, analysis, and hands-on use of the materials, techniques, and processes used to create artwork in early childhood through grade twelve classrooms. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

388E. Art and Critical Discourse. Focuses on personal and professional critiques of artifacts and artistic products. Students explore and justify their responses to artwork in written and verbal discussion. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.
ART HISTORY

Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Facilities for study and research include an open-shelf fine arts library containing more than 125,000 volumes and periodicals; extensive digital-image databases; and the Blanton Museum of Art, which has an active exhibition program and can provide training in the various aspects of museum work.

The Fine Arts Library is supplemented by the Perry-Castañeda Library, with holdings of more than 2.5 million volumes; by the rare books and manuscripts of the Harry Ransom Humanities Research Center; and by the specialized libraries of the School of Architecture, the Department of Classics, and the Teresa Lozano Long Institute of Latin American Studies.

Visual resources on campus include the Mari and James A. Michener Collection of American Painting; the Duncan Collection of Latin American Art; the Suida-Manning Collection of Renaissance and Baroque Art; an encyclopedic print collection; the Battle Collection of casts after ancient sculpture; and additional drawings, paintings, prints, sculptures, silver, and furniture. Visual resources in the Harry Ransom Humanities Research Center include rare books, manuscripts, photographs, film, and art.

AREAS OF STUDY

Graduate study in art history is offered in traditional areas of Western art and in African and African American, Asian, Islamic, Latin American, Chicano/a, US Latino/a, and pre-Columbian art. The student may pursue the degree of Master of Arts or that of Doctor of Philosophy.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Steve Bourget
Edward Chambers
Michael J. Charlesworth
John R. Clarke
Penelope J. Davies
Andrea Giunta
Julia E. Guernsey
Linda D. Henderson
Joan A. Holladay
Janice Leoshko
Stephennie Mulder
Moyosore Benjamin Okediji
Athanasio Papalexandrou
Glenn A. Peers
Susan W. Rather
Ann M. Reynolds
YunChiahn C. Sena
Richard A. Shiff
Cherise Smith
Jeffrey C. Smith
David S. Stuart
Louis A. Waldman

ADMISSION AND DEGREE REQUIREMENTS

MASTER OF ARTS

Students seeking admission to the Master of Arts degree program are expected to have an undergraduate degree in art history or to have completed substantial coursework in art history. Students must also demonstrate the capacity for advanced academic work.

The program requires thirty semester hours of coursework, including six hours in the thesis course and six hours in supporting work. (Supporting work
consists of upper-division or graduate courses in such related areas as history, literature, anthropology, archaeology, classical civilization, philosophy, archi-
tecture, music, museum education, and area studies.) In addition to Art History 395 (Art Historical Methods), the student must complete four seminars selected according to his or her chosen degree track (general, ancient, medieval to early modern, or modern). The student takes an additional three semester hours of art history, preferably as a seminar but, in certain cases, as a reading tutorial (Art History 396) or a lecture tutorial (Art History 396K). The student must show evidence of the ability to read one foreign language by the end of three long-session semesters in the program.

**DOCTOR OF PHILOSOPHY**

For admission to the Doctor of Philosophy degree pro-
gram, the student must have a master’s degree in art history or have completed substantial coursework in art history on both the undergraduate and graduate levels. Students with special backgrounds in other disciplines are judged on an individual basis.

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; howev-
er, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**ART HISTORY: ARH**

381. **Topics in Latino and Chicano Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

381L. **Topics in Ancient Near Eastern Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

382. **Topics in Greek and Roman Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

Degree requirements are (1) completion of five seminar courses, including coursework in at least two of the following chronological areas of Western and non-Western art: ancient, medieval to early modern, and modern; (2) reading competence in two foreign languages; (3) successful participation in the dissertation colloquium; (4) a written and oral qualifying exami-

Nation that admits the student to candidacy; (5) the dissertation; and (6) the oral defense of the dissertation.

**FOR MORE INFORMATION**

**Campus address:** E. William Doty Fine Arts Building (DFA) 2.502, phone (512) 471-7757; campus mail code: D1300

**Mailing address:** The University of Texas at Austin, Graduate Program in Art History, Department of Art and Art History, 1 University Station D1300, Austin TX 78712

**URL:** http://www.finearts.utexas.edu/aah/art_history/graduate_program/index.cfm
386P. **Topics in Modernism.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

387. **Topics in the Art of North America.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

390. **Topics in Pre-Columbian Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

392. **Topics in the Art of East Asia.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

394. **Special Topics in the History of Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

395. **Art Historical Methods.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

396. **Advanced Reading Tutorial.** Individual instruction arranged by the student. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing in art history and consent of instructor.

396C. **Reading Tutorial.** Individual instruction arranged by the student. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

396K. **Advanced Lecture Tutorial.** Individual instruction arranged by the student. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

396L. **Advanced Studies in the History of Latin American Art: Reading Tutorial.** Conference course. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in art history and consent of the graduate adviser.

396P. **Qualifying Examination Preparation.** Individual instruction arranged by the student. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

397. **Doctoral Colloquium.** Conference course for students preparing for dissertation colloquium. Individual instruction arranged by the student. Offered on the letter-grade basis only. May not be repeated for credit. Prerequisite: Graduate standing, admission to the doctoral program in art history, and consent of instructor.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in art history and consent of the graduate adviser; for 698B, Art History 698A.

398T. **Supervised Teaching in Art History.** Teaching under the close supervision of the course instructor for one semester; weekly group meetings with the instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing in art history, or graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Art History 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

In addition to the extensive library and computer resources available on campus, the design program supports a computer laboratory dedicated to addressing students' specific needs, including typography, two-dimensional and three-dimensional imaging, sound animation, and video. Many items, including digital video and digital still cameras, can be borrowed by students. The laboratory is staffed sixty hours a week during the long semesters; graduate students have twenty-four-hour access to the laboratory. In addition to a fully equipped black-and-white darkroom, a photo studio supports the image-capturing requirements of photographic, digital, and video technologies. Letterpress facilities are complemented by an extensive collection of wood and metal type for printing and book projects, and the Department of Art and Art History wood shop addresses many three-dimensional prototyping needs. Studio space is provided specifically for graduate students.

AREAS OF STUDY

The focus of the program is on the creation of a multidisciplinary environment within which students are encouraged to use critical skills to investigate the social, political, and economic contexts in which design is created and used. This emphasis on critical and contextual investigation applies to all forms of learning in the program, including the making of artifacts and more abstract exploration of design issues through discussion, reading, and writing.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Kate Catterall
Gloria J. Lee
Daniel M. Olsen
David Shields

ADMISSION AND DEGREE REQUIREMENTS

Applicants for admission to the program are expected to be students or practitioners who are independent and self-motivated and who demonstrate an advanced interest in exploring alternative concepts of design. Applicants must submit documentation of their work as part of the admission application; information about this requirement is available from the Department of Art and Art History. Applicants are not required to submit Graduate Record Examinations scores.

Candidates for the degree must complete at least sixty semester hours of coursework, chosen with the advice of the graduate adviser. At least thirty hours of graduate coursework must be in design (the major), and at least six hours must be outside design (the minor). The remaining hours may be selected from courses in any area; only nine hours of upper-division undergraduate coursework may be included.

FOR MORE INFORMATION

Campus address: Art Building (ART) 3.330, phone (512) 471-3377; campus mail code: D1300
Mailing address: The University of Texas at Austin, Graduate Program in Design, Department of Art and Art History, 1 University Station D1300, Austin TX 78712
E-mail: katecat@mail.utexas.edu
URL: http://www.finearts.utexas.edu/aah/design/graduate_program/index.cfm
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

DESIGN: DES

380. Core Course in Design. Introduction to design process, research, and methodologies. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

381. Core Laboratory 1. Practice laboratory for a variety of design methodologies. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

382. Critique Studio 1. Context and structured dialogue regarding areas of, and the student’s own direction in, graduate research. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

383. Graduate Projects. Independent study. May be repeated for credit. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

384. Core Laboratory 2. Designed to provide students with the opportunity to test and expand their design research through writing and various methods of dissemination. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

385. Fieldwork in Design. A structured course based upon current design issues. Students work in a collaborative environment using design as an effective method of change or research. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

389. Master’s Report. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in design and consent of instructor or the graduate adviser.

389S. Master’s Exhibition. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in design and consent of instructor or the graduate adviser.

398T. Supervised Teaching in Design. Training and teaching under the close supervision of the course instructor for one semester; group meetings with the instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing in design, or graduate standing and appointment as a teaching assistant.

392. Critique Studio 2. Structured dialogue regarding areas of, and the student’s own direction in, graduate research. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

393. Issues in Design Theory and Research. Investigates current discourse within design studies. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

394. Advanced Issues in Design. Examination of design practice in all areas, and its relationship to research. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.
FACILITIES FOR GRADUATE WORK

The Fine Arts Library has excellent facilities for research in its collection of books, scores, periodicals, microforms, and sound recordings. In addition, the Harry Ransom Humanities Research Center houses many special collections of importance, including the Kraus Libretti Collection, the Bachmann Collection, the Carlton Lake Collection, and the Theodore Finney Collection. The Butler School of Music also maintains a collection of authentic early instruments, non-Western instruments, and folk instruments that are available for performance.

AREAS OF STUDY

Performance. Degrees in this area are awarded for performance on various instruments, in voice, opera, conducting, collaborative piano, and chamber music. In addition to demonstrating the technical achievements of the artist-performer, the student is expected to exhibit a thorough knowledge of the theoretical, pedagogical, and historical aspects of the major, as well as a knowledge of the literature of the performance area.

Music and human learning. Students in this major study the fundamental principles of human learning and behavior as applied in all aspects of music activity, including performance, perception, composition, analysis, pedagogy, and the role of music in elementary and secondary schools and in higher education. Individual courses of study are uniquely designed to broaden and refine the knowledge and skills of experienced educators, preparing them for advanced careers as teachers and scholars in the various dimensions of research and professional education.

Musicology/ethnomusicology. Students in this major have the opportunity to acquire the appropriate tools and methods of research in both historical musicology and ethnomusicology, and to study the history of music from the remote past to the present as well as the nature and function of music in the cultures of the world. The student also has the opportunity to do research in any historical aspect of music and to undertake field research in any cultural area. This major provides preparation for positions in college teaching, in research, in music criticism, and, with additional training, in library work. A broad background in the humanities and social sciences is one of the essentials for this degree. Languages, history, philosophy (aesthetics), psychology, anthropology, cultural studies, and sociology are supporting, related fields.

Composition. Students in this major have the opportunity to acquire the tools to create music and convey their musical ideas through a variety of performance media. Students are expected to exhibit a thorough knowledge of the theoretical and historical basis of music and to develop strong pedagogical skills. A comprehensive general curriculum and optional concentrations in various areas of specialization help to prepare students for advanced careers as composers and teachers.

Conducting. Students in this major study the artistic, technical, physical, and leadership principles and skills required of successful conductors at the professional and postsecondary levels. Intensive coursework in conducting, score study, analysis, musicology, and theory is combined with opportunities to conduct University ensembles. Individual courses of study are tailored to prepare students for advanced careers as artists and teachers.

Theory. Students in this major study the principles of music, develop skills in music analysis and scholarly research, and prepare themselves to become college teachers in music theory. Competence in keyboard performance, proficiency in aural skills, a thorough knowledge of the pedagogy of music theory, and a broad background in the humanities are essential for this area of study.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Gregory D. Allen  
Byron P. Almen  
Elliott M. Antokoletz  
Nathaniel O. Brickens  
Steven L. Bryant  
James W. Buhrer  
Thomas A. Burritt  
Lorenzo F. Candelaria  
Robert M. Carnochan  
B. G. Chandler  
Eugenia Costa-Giomi  
Andrew F. Dell’Antonio  
Robert A. Desimone  
Eric A. Drott  
Robert A. Duke  
Anne E. Epperson  
Veit F. Erllmann  
Robert Freeman  
John M. Fremgen  
Nancy B. Garrett  
Marianne Gedigan  
Sophia Gilson  
Donald J. Grantham  
Eugene A. Gratovich  
Gerre E. Hancock  
Jeffrey L. Hellmer  
Rebecca Henderson  
Jacqueline C. Henninger  
Martha F. Hilley  
Adam Holzman  
Patrick Hughes  
Judith A. Jellison  
Kristin Wolfe Jensen  
Jerry F. Junkin  
K. M. Knittel  
Brian D. Lewis  
William L. Lewis  
James R. Lowe  
Richard L. Macdowell  
Betty P. Mallard  
Hunter C. March  
Anne A. Meyers  
John R. Mills  
Robin D. Moore  
James M. Morrow Jr.  
Roger E. Myers  
Luisa Nardini  
Anton Nel  
B. David Neubert  
David P. Neumeyer  
Caroline P. O’meara  
Edward R. Pearsall  
Suzanne M. Pence  
Bruce W. Pennycook  
Russell F. Pinkston  
Harvey C. Pittel  
A. D. Renner  
Glenn A. Richter  
Ray K. Sasaki  
Sonia T. Seeman  
Yegeyni Sharlat  
Stephen M. Slawek  
David A. Small  
Nikita Storojev  
Rose A. Taylor  
Bion Tsang  
Christopher J. Tucker  
Michael C. Tusa  
Dan E. Welcher  
Marianne Wheeldon  
Darlene C. Wiley  
Nathan L. Williams  
Laurie S. Young  
Daxun Zhang  
Gerhardt Zimmermann

ADMISSION AND DEGREE REQUIREMENTS

All applicants are required to furnish a statement of intent in graduate study and three letters of reference pertaining to their potential for graduate work in music. Graduate Record Examinations scores are not required for performance and composition applicants, except for applicants to the Doctor of Musical Arts performance major with a voice pedagogy emphasis. Applicants seeking admission to performance degree programs must perform a live audition; exceptions are described on the Butler School of Music Web site. Off-campus auditions can be arranged in Chicago, Los Angeles, and New York City. Detailed instructions can be found on the Butler School of Music’s Web site. Those seeking admission to conducting and certain other areas must submit a recorded audition or performance before arranging for a live audition on campus; those planning to major in musicology, music theory, and performance with a voice pedagogy emphasis must submit samples of their written work. Those applying for admission to doctoral degree programs in music and human learning must submit samples of written work and a videotape or DVD of their teaching.

Diagnostic examinations in music theory and in music history and literature are required of all students before registration for the first semester of graduate work; musicology students must also take proficiency examinations in foreign languages. Passage of these examinations or removal of deficiencies by the means prescribed is necessary for completion of the degree, and, in the case of doctoral students, is a prerequisite to doctoral comprehensive examinations.

Entering graduate students in voice should have had the equivalent of the language and diction courses required at the University for the Bachelor of Music with a voice performance major: one semester each of Italian, French, and German; and two semesters of diction. All entering graduate students in voice are given a diagnostic examination, consisting of reading in these three languages. The examination stresses proficiency in pronunciation and is used to help the student plan a program of study.

MASTER OF MUSIC

The Master of Music is offered in performance (including conducting, opera, and chamber music), composition, theory, music and human learning, literature and pedagogy, and musicology (including ethnomusicology).

Entering students should have a bachelor’s degree (or the equivalent) with a major in music from an accredited institution. Students are expected to have had from six to twelve semester hours of upper-division coursework in their major field at the undergraduate level (the exact number of hours required varies with the major) and to have completed the equivalent of course 260 in their principal instrument.

Most programs of study leading to the Master of Music require a total of thirty semester hours of coursework, consisting of a major of eighteen to twenty-four semester hours and a minor of six to twelve semester hours. A program with a report in lieu of the thesis,
requiring thirty-three semester hours, is used for musicology (ethnomusicology), music theory, and literature/pedagogy.

A comprehensive examination is required of all master’s degree candidates, usually in the final semester of study.

Further information about master’s degrees is given in chapter 3 of this catalog. Details of departmental requirements in the various areas of concentration are available from the graduate adviser.

DOCTOR OF PHILOSOPHY

The Doctor of Philosophy degree in music is offered with major emphasis in music and human learning, musicology (including ethnomusicology), or music theory. Candidates for this degree are required to pass a comprehensive examination and to write a dissertation based on original research. Information about requirements in the various areas of concentration is available from the graduate adviser.

DOCTOR OF MUSICAL ARTS

The Doctor of Musical Arts degree allows for four majors: performance (including opera, collaborative piano, and voice pedagogy emphases), conducting, composition, and music and human learning (including jazz and piano pedagogy emphases). Candidates for this degree must pass a comprehensive examination. They must demonstrate outstanding professional competence, artistic maturity, and exceptional knowledge of the historical and practical aspects of their major field. Each candidate must prepare a scholarly treatise in a field appropriate to the major or complete the alternative requirements of the nontreatise degree option. For composition majors, a musical work replaces the treatise. A jazz emphasis is also available in the performance and the composition majors.

Further information about requirements in various areas of concentration is available from the graduate adviser.

ARTIST DIPLOMA IN MUSIC PERFORMANCE

The Artist Diploma is a highly specialized and performance-oriented non-degree graduate certificate program for exceptional musicians who have great potential for a professional career in music performance at the international level. Applicants to the program must meet the admission requirements for performance majors that are under “Admission and Degree Requirements” above. The program requires completion of at least twenty-seven semester hours of graduate coursework, including but not limited to courses in performance, performance practice, and advanced music literature, as well as an artist recital course taken for each of three required recitals. Additional information is available from the graduate adviser.

FOR MORE INFORMATION

Campus address: Music Recital Hall (MRH) 3.702, phone (512) 232-2066, fax (512) 232-6289; campus mail code: E3100
Mailing address: The University of Texas at Austin, Graduate Program, Butler School of Music, 1 University Station E3100, Austin TX 78712
E-mail: mga@mail.music.utexas.edu
URL: http://www.music.utexas.edu/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MUSIC: MUS

380. Advanced Studies in the History of Music. Historical studies of various periods. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music.
   Topic 1: Medieval.
   Topic 2: Renaissance.
   Topic 3: Baroque.
   Topic 4: Eighteenth Century.
   Topic 5: Nineteenth Century.
   Topic 6: Twentieth Century.

280D. Topics in Diction and Translation. Advanced study in English, Italian, French, and German diction and translation. The equivalent of two lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music.

380J. Seminars in the History of Music. Intensive studies of special problems in various historical periods. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music, and the appropriate topic of Music 380 or consent of instructor.
   Topic 1: Medieval.
   Topic 2: Renaissance.
   Topic 3: Baroque.
   Topic 4: Eighteenth Century.
   Topic 5: Nineteenth Century.
   Topic 6: Twentieth Century.

180K, 280K, 480K. Problems in Performance Practice. For 180K, one lecture hour and three laboratory hours a week for one semester; for 280K, one lecture hour and six laboratory hours a week for one semester; for 480K, two lecture hours and ten laboratory hours a week for one semester. With consent of the graduate adviser, may be repeated for credit. Prerequisite: Graduate standing in music, consent of the graduate adviser, and consent of instructor.
   Topic 1: Large Instrumental Ensembles.
   Topic 2: Small Instrumental Ensembles.
   Topic 3: Large Vocal Ensembles.
   Topic 4: Small Vocal Ensembles.
   Topic 5: Opera Theatre.
   Topic 6: Accompanying.
   Topic 7: Miscellaneous Chamber Ensembles.

Topic 8: Vocal Repertoire Coaching. The study of performance practices in recital repertoire for voice and piano.

Topic 9: Collegium Musicum. The integration of computer technology and audiovisual equipment into applied voice instruction. One lecture hour and one and one-half laboratory hours a week for one semester. May be repeated for credit, but only two semester hours may be counted toward the Doctor of Musical Arts degree. Prerequisite: Graduate standing in music.

480P. Graduate Course in Pedagogy. Intensive study of the principles and methods of teaching various instruments at the college level. Two lecture hours a week for two semesters. Prerequisite: For 480PA, graduate standing in music, Music 460P or the equivalent, and consent of instructor; for 480PB, graduate standing in music, Music 480PA, and consent of instructor.

381. Reference and Research Materials in Music. Three lecture hours a week for one semester. Prerequisite: Graduate standing in music.

381J. Introduction to Musicology and Ethnomusicology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music.
   Topic 1: Foundations of Musicology.
   Topic 2: Foundations of Ethnomusicology.
   Topic 3: Proseminar in Musicological Research.

383L. Seminar in Music Education. Individual and group studies of advanced topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music, and Music 391 or consent of instructor.

384J. Advanced Studies in Music Education. Review and criticism of research, acoustics, and psychology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
   Topic 1: History and Philosophy.
   Topic 3: Current Trends in Music Education.
   Topic 4: Research in Music Education I.
   Topic 5: Tests and Measurements in Music.
   Topic 8: Research in Music Education II.
   Topic 9: Music Learning and Behavior.

385. Special Topics in Musicology. Research in depth on various topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music.
Topic 1: History of Music Theory to 1750.
Topic 2: History of Music Theory since 1750.
Topic 3: Notational Systems before 1400.
Topic 4: Notational Systems since 1400.
Topic 5: History of Musical Instruments.
385J. Special Problems in Musicology and Ethnomusicology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music.
386J. Topics in the History of Sacred Music. Introduction to a significant body of choral works, from the thirteenth century to the present age, composed especially for religious occasions and venues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music.
286S. Music in Worship: Service Planning and Service Playing. The art and practice of preparing, rehearsing, and performing specific works of sacred music for religious occasions. Two lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in music.
387L. Advanced Studies in Music Literature. Analytical and historical studies of a particular repertoire. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
Topic 1: Topics in the Solo Song.
Topic 2: Topics in Music for Keyboard Instruments.
Topic 4: Topics in Music for String Instruments.
Topic 5: Topics in Music for Wind Instruments.
Topic 6: Topics in Choral Music.
Topic 7: Topics in Orchestral Music.
Topic 8: Topics in Band Music.
Topic 9: Topics in Opera.
Topic 10: Topics in Jazz. Additional prerequisite: Music 343J or consent of instructor.
Topic 11: Topics in Music Literature.
Topic 12: Topics in Collaborative Piano Literature.
Topic 13: Topics in Chamber Music.
688. Seminar in Theory and Composition. Three class hours a week for two semesters. May be repeated for credit when the topics vary. Prerequisite: For 688A, graduate standing in music and consent of instructor; for 688B, Music 688A.
Topic 1: Pedagogy of Music Theory.
Topic 5: Analytical Techniques.
Topic 6: Composition in Larger Forms.
Topic 8: Score Reading.
Topic 9: Contemporary Styles and Techniques.
Topic 12: Special Topics in Analysis.
Topic 14: Directed Research in Music Theory.
Topic 15: Atonal Theory.
Topic 16: Improvisational Styles and Techniques. Additional prerequisite: Music 228G, 228J, and 343J; or consent of instructor.
Topic 17: Projects in Jazz Composition.
Topic 18: Electronic Composition.
388P. Jazz Pedagogy. Research and study of the methods and materials essential to teaching and planning a comprehensive curriculum in jazz studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing in music and consent of instructor.
391. Foundations of Music Education. Introduction to graduate study, history, philosophy, and basic concepts in music education. Three lecture hours a week for one semester. Required of all music and human learning majors. Prerequisite: Graduate standing.
392. Psychology of Music. Psychological aspects of music, emphasizing perception, experimental aesthetics, music function, and the nature of musical ability. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
393. Special Problems in Music Education. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
Topic 1: General Music.
Topic 2: Elementary School Music.
Topic 3: Choral Technique.
Topic 5: Directed Research.
Topic 7: Music in Higher Education.
Topic 8: Music and Exceptional Children.
Topic 10: Computer Applications in Music Education.
Topic 11: Group Teaching: Materials and Methods.
194, 394, 694. Directed Reading. Readings in the literature of music. The equivalent of one, three, or six lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in music and consent of the graduate adviser.
395W. Writing about Music. Designed to develop and improve writing skills through required readings and through writing concert reviews, opinion pieces, essays, and articles about music. Three lecture hours a week for one semester. May be repeated for credit, but only three semester hours may be counted toward the Doctor of Musical Arts degree. Prerequisite: Graduate standing in music.
397W. Introduction to Treatise Writing. Study of the techniques used to identify and develop a DMA treatise proposal. Three lecture hours a week for one semester. May be repeated for credit, but only three semester hours may be counted toward the Doctor of Musical Arts degree. Prerequisite: Graduate standing, Music 381, and consent of instructor.
698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in music and consent of the graduate adviser; for 698B, Music 698A.
398D. Artist Recital. Preparation for and performance of a recital. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing. Performance 480 with a grade of at least B, and consent of the graduate adviser.
PERFORMANCE: CONDUCTING: CON

The abbreviations used for these courses are included in the appendix.

280, 380, 480. Graduate Course in Performance: Advanced Conducting. One lesson and two laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing; and Music 262 (for instrumental conductors) or 263K (for choral conductors), or conducting experience and consent of the graduate adviser.

   Topic 1: Orchestra.
   Topic 2: Band.
   Topic 3: Chorus.
   Topic 4: Opera.

290, 490. Advanced Graduate Course in Performance: Advanced Conducting. Two half-hour lessons or one one-hour lesson and at least twelve practice hours a week for one semester. May be repeated for credit. Prerequisite: Admission to a Doctor of Musical Arts degree program in performance and consent of the graduate adviser.

PERFORMANCE: OPERA, VOICE, INSTRUMENTS

280, 380, 480. Graduate Course in Performance. Offered in opera (280, 480) and in the following instruments: bassoon (280, 480), clarinet (280, 480), double bass (280, 380, 480), euphonium (280, 480), flute (280, 480), French horn (280, 480), guitar (280, 380, 480), harp (280, 380, 480), oboe (280, 480), organ (280, 480), percussion (280, 480), piano (280, 380, 480), saxophone (280, 480), trombone (280, 480), trumpet (280, 480), tuba (280, 480), viola (280, 380, 480), violin (280, 380, 480), violoncello (280, 380, 480), and voice (280, 380, 480). May be repeated for credit. Prerequisite: For Opera 280, 480, graduate standing in music and consent of the graduate adviser; for other fields, graduate standing in music, course 462 in the same instrument, and consent of the graduate adviser.

280J, 480J. Graduate Course in Performance: Jazz Improvisation. Individual instruction in jazz improvisation in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone. May be repeated for credit. Prerequisite: Graduate standing in music and consent of the graduate adviser.

480V. Graduate Course in Performance: Collaborative Piano. Individual instruction in collaborative piano (accompanying). May be repeated for credit. Prerequisite: Admission to a graduate program in music and consent of the graduate adviser.

290, 490. Advanced Graduate Course in Performance. Offered in opera and in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. May be repeated for credit. Prerequisite: Admission to a doctoral degree program in music and consent of the graduate adviser.

290J, 490J. Advanced Graduate Course in Performance: Jazz Improvisation. Individual instruction in jazz improvisation in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone. May be repeated for credit. Prerequisite: Admission to a doctoral degree program in music and consent of the graduate adviser.

290V, 490V. Advanced Graduate Course in Performance: Collaborative Piano. Individual instruction in collaborative piano (accompanying). May be repeated for credit. Prerequisite: Admission to a doctoral program in music and consent of the graduate adviser.
STUDIO ART

Master of Fine Arts

FACILITIES FOR GRADUATE WORK

The program comprises seven areas: ceramics (sculptural), metals, painting, photography, printmaking, sculpture, and transmedia. Studios for all of these areas are housed in the Art Building, and graduate students generally have access to these facilities twenty-four hours a day, seven days a week. Many graduate students are assigned an individual studio workspace; all students have access to a fully furnished wood shop that is also open evenings and weekends. The studio art computer lab (ARTL) features fully equipped Macintosh graphics workstations and auxiliary hardware and software. Students also have access to the holdings of the Fine Arts Library, which is housed in the E. William Doty Fine Arts Building.

The studios contain equipment for all of the areas as follows: for ceramics (sculptural), twenty-six powered potter’s wheels, eighteen high- and low-fire kilns, clay-making equipment, and a complete glaze laboratory; for metals, enameling kilns and equipment for fabrication, smithing, blacksmithing, and vacuum and centrifugal casting, as well as a large inventory of specialized hand tools; for painting, well-ventilated, well-lit, large individual studios within a communal suite; for photography, wet black-and-white and digital darkrooms; for printmaking, four large lithographic presses, 130 stones of various sizes, equipment for aluminum plate lithography, including photolithography, four large intaglio printing presses and a vented acid room, well-ventilated vacuum serigraphy screen tables for works as large as 3’ × 5’, and a fully equipped photomechanical reproduction facility for works up to 20” × 24”; for sculpture, foundry and fabrication facilities, welding equipment, saws, sanders, drill presses, and other hand and power tools; and for transmedia, computer image processors, video cameras, video mixers with chroma-key functions, 16-mm film and digital multimedia equipment, audio equipment, and a performance facility with green screen.

AREAS OF STUDY

The studio art graduate program comprises the following seven studio areas and specializations: ceramics (sculptural), metals (nonferrous), painting, photography (wet black-and-white and digital), printmaking (intaglio, relief, monotype, lithography, serigraphy, papercutting, and bookmaking), sculpture (object making and installation), and transmedia (performance, video, digital multimedia, sound, installation, Web, interactive, and hypertext). The MFA program emphasizes studio practice while students develop their mastery of visual and verbal forms of expression. The course of study includes studio and art history seminars, individual and group critiques, and discussions with visiting artists and critics. Students are encouraged to describe their maturing art orally and in writing to their peers and accomplished professionals.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Troy D. Brauntuch
Sarah A. Canright
Michael Ray Charles
Lee R. Chesney III
Thelma R. Coles
Sandra Fernandez
Mark K. Goodman
Kenneth J. Hale
Donald D. Herron
Timothy G. High
Teresa Hubbard
Richard M. Jordan
Beili Liu
William A. Lundberg
Vincent A. Mariani

Lawrence D. McFarland
Melissa W. Miller
Michael J. Mogavero
Leslie A. Mutchler
Bogdan P. Perzynski
Bradley R. Petersen
Margo L. Sawyer
Michael Smith
John S. Stoney
Daniel D. Sutherland
Susan D. Whyne
Jeff Williams
John A. Yancey

ADMISSION REQUIREMENTS

The applicant must be an early-career artist with a bachelor’s degree in studio art. Applicants with bachelor’s degrees in other fields are considered if they have completed substantial coursework in studio art and art history or have a demonstrated interest and accomplishment in studio art. Students must apply to one of the seven specializations and submit online a
fifteen-image portfolio representing a coherent body of work in that medium made within the previous two years. Transmedia applicants must submit work online and on DVD. Full application instructions are available on the program’s Web site.

**DEGREE REQUIREMENTS**

The student must begin coursework in the fall semester. The program requires the completion of the following sixty semester hours over a period of at least three years in residence: twenty-seven hours of studio coursework in the area of specialization, six hours in contemporary art history and/or criticism, nine hours in studio seminars, three hours in a master’s report, three hours in a master’s exhibition, and twelve hours in approved elective courses. In addition, students must pass oral examinations at the midpoint (thirty hours) and conclusion (sixty hours) of their coursework.

**FOR MORE INFORMATION**

**Campus address:** Art Building (ART) 3.330, phone (512) 471-3377; campus mail code: D1300

**Mailing address:** The University of Texas at Austin, Graduate Program in Studio Art, Department of Art and Art History, 1 University Station D1300, Austin TX 78712

**URL:** http://www.finearts.utexas.edu/aah/studio_art/graduate_program/index.cfm

---

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

**STUDIO ART: ART**

380. Critique in Studio Art. Critiques of student artwork, organized under the leadership of the instructor. Students also produce artwork in their area of concentration. Three lecture hours a week for one semester. Additional laboratory hours are also required. May be repeated for credit. Students must take this course when it is offered in their area of concentration, for a total of nine semester hours of credit. When Studio Art 380 is not offered in the student’s concentration, he or she may take Studio Art 380 in another concentration; these courses may be counted toward the required total of nine semester hours. Prerequisite: Graduate standing in studio art and consent of the graduate adviser.

381, 681. Graduate Independent Study in Student’s Concentration. Studio hours to be arranged. May be repeated for credit. Prerequisite: Graduate standing in studio art and consent of instructor and the graduate adviser.

382. Seminar in Studio Art. Addresses topics and issues in contemporary art. Uses lectures, readings, guest presentations, discussions, and writings to articulate and define contemporary art practices. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing in studio art and consent of the graduate adviser.

383. Graduate Independent Study outside Student’s Concentration. Studio hours to be arranged. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

384F. Master of Fine Arts Forum. Restricted to first-semester graduate students in studio art. Designed to help students develop and practice skills of art theory and criticism and to encourage and define effective and consistent habits for working in the studio. Three lecture hours a week for one semester. Prerequisite: Graduate standing in studio art and consent of the graduate adviser.

384S. Master of Fine Arts Assembly. Restricted to second-semester graduate students in studio art. Continuation of Studio Art 384F. Focuses on critiquing skills, talking and writing about artwork, and defining effective studio practices. Students work with peers and faculty from across the studio disciplines. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and Studio Art 384F with a grade of at least B.

398R. Master’s Report. Written discussion of the work undertaken in the graduate program, addressing concepts of and influences on the work, and including a digital portfolio of major works. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in studio art, passage of the required thirty-hour oral diagnostic examination, concurrent enrollment in Studio Art 398S, and consent of the graduate adviser.
FACILITIES FOR GRADUATE WORK

The rare and unique materials in the Performing Arts Collection of the Harry Ransom Humanities Research Center, along with the collections in the Fine Arts Library and other units of the University Libraries, constitute one of the most extensive research facilities in the country. The Department of Theatre and Dance also maintains a collection of historical clothing for research purposes. The theatrical production facilities of the Performing Arts Center, described on page 233, are unsurpassed.

AREAS OF STUDY

Master of Arts. The Master of Arts with a major in theatre is offered in performance as public practice. This degree is appropriate preparation for doctoral study.

Master of Fine Arts. The Master of Fine Arts is offered in theatre and in dance. The major in theatre includes seven areas: acting, drama and theatre for youth and communities, directing, performance as public practice, playwriting, theatre technology, and theatrical design. The MFA provides advanced training for those specializing in one of the performing arts. It is an appropriate terminal degree in these areas.

Doctor of Philosophy. The doctoral degree in theatre is offered in performance as public practice. The program requires competence in research and allows the student to develop both a broad understanding of the field, including practical skills, and knowledge in depth of a specialized area.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Lee E. Abraham
Megan Alrutz
Paul A. Bonin
Charlotte Canning
Pamela D. Christian
Douglas J. Dempster
Steven Dietz
Franchelle Dorn
Lucien Douglas
Stephen T. Gerald
James J. Glavan
Michelle Habeck
Barney Hammond
Richard M. Isackes
Coleman A. Jennings
Omi Osun Joni L. Jones

David Justin
Amarante L. Lucero
Susan E. Mickey
Francie Ostrower
Ray Charles Otte
Deborah A. Paredez
Brant Pope
Rebecca Rossen
Robert N. Schmidt
Roxanne L. Schroeder-Arce
Yacov Sharir
Holly A. Williams
Lyn C. Wiltshire
Suzan L. Zeder

ADMISSION REQUIREMENTS

Master's degrees. The applicant must have a bachelor's degree and must have demonstrated interest and experience in theatre, drama, and/or dance. The Graduate Record Examinations General Test (GRE) is required for admission to these areas: drama and theatre for
youth, playwriting, and performance as public practice. The GRE is not required for admission to acting, dance, directing, theatre technology, and theatrical design.

**Doctoral degree.** Students admitted to the doctoral program must hold a master’s degree from an accredited institution. All applicants must submit GRE scores.

**DEGREE REQUIREMENTS**

**Master of Arts.** Of the thirty semester hours required for the degree, no more than nine hours may be in upper-division courses. At least fifteen hours must be in the major; at least six must be outside the major. A written thesis is required, for which the student earns six hours of credit in Theatre and Dance 698. Other coursework is determined following an evaluation of the student’s background and preparation.

**Master of Fine Arts.** Of the sixty semester hours required for the degree, no more than nine may be in upper-division courses. A minor of at least six hours in a supporting subject or subjects outside the major field is required. A thesis is required, for which the student earns six hours of credit in Theatre and Dance 698. Other coursework is determined following an evaluation of the student’s background and preparation.

The requirements of the Master of Fine Arts are based on the assumption that the entering student has a Bachelor of Arts degree in theatre or dance. Students with degrees in other disciplines may not have the necessary training or proficiency for some areas of the MFA program. They may be required to take additional upper-division coursework in those areas.

Students with a Bachelor of Fine Arts degree may have training and proficiency beyond those of Bachelor of Arts graduates. These students may be granted waivers of some credit hours. Waivers are awarded only after careful evaluation by the faculty of the student’s previous training and experience. No more than twenty semester hours of credit may be waived.

**Doctoral of Philosophy.** The student’s program of study, including coursework and other requirements to be met, must be approved by a committee appointed by the chair of the Graduate Studies Committee. Each student must have a reading knowledge of two foreign languages or knowledge in depth of one language. The student must pass qualifying examinations, write an acceptable dissertation, and pass an oral examination related to the dissertation. Detailed information about the requirements is available from the graduate adviser.

**FOR MORE INFORMATION**

**Campus address:** F. Loren Winship Drama Building (WIN) 1.142, phone (512) 471-5793, fax (512) 471-0824; campus mail code: D3900

**Mailing address:** The University of Texas at Austin, Graduate Program, Department of Theatre and Dance, 1 University Station D3900, Austin TX 78712

**URL:** http://www.finearts.utexas.edu/tad/

---

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

**THEATRE AND DANCE: T D**

**280G. Production Skills for Actors.** Laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, a major in acting, and consent of instructor.

**680M. Performance Studio.** Exploration and practice in the skills and craft of acting, voice, dance, directing, and playwriting. Twenty laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit when the projects vary. Prerequisite: Graduate standing and consent of instructor.

**380N. Topics in Acting.** Topics, restricted or broad in scope, related to the theory of acting, stage combat, movement, and voice. Laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**180P, 280P, 380P. Advanced Projects in Performance.** Projects inappropriate to organized courses but pertinent to students’ training and development in acting, directing, dance, and playwriting. For each semester hour of credit earned, the equivalent of one class hour a week for one semester, with laboratory hours as required. May be repeated for credit when the projects vary. Prerequisite: Graduate standing and consent of instructor.
381D. Seminar in Directing Theory. Application of aesthetic and creative principles to directing theory; application of directing theory to textual analysis and production concept. Three lecture hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

381E. Topics in Directing Theory. Topics, restricted or broad in scope, related to the theory of directing. Three lecture hours a week for one semester, with additional laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

381F. Advanced Acting and Directing. Problems in the theory and practice of acting and directing for the theatre. Three lecture hours a week for one semester, with additional laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, a major in acting, and consent of instructor.

   Topic 1: Advanced Acting. Full exploration of the sources of dramatic action that reside in the self.
   Topic 2: Classical Acting. Training in the acting skills needed for the performance of Shakespeare and other verse dramatists.
   Topic 3: Voice Studies I. Training the actor in vocal coaching, voice anatomy, muscularity of speech, and vocal health.

481G. Advanced Acting and Directing Laboratory. Practical application of acting and directing techniques for the theatre. Twelve laboratory hours a week for one semester. May be repeated for credit when the topics vary. May be repeated for credit when the topics vary; any topic may also be repeated for credit. Prerequisite: Graduate standing, a major in acting, and consent of instructor.

   Topic 1: Voice, Speech, and Movement I. The basics of speech, phonetics, and mind and body awareness for the actor.
   Topic 2: Voice, Speech, and Movement II. The physical side of acting, and articulation as it is applied to various types of text. Additional prerequisite: Theatre and Dance 481G (Topic 1).
   Topic 6: Acting Showcase. Scenes and monologues to be used in the New York and Los Angeles evaluation showcases.
   Topic 7: Directing. Practical application of directing techniques for the theatre.

381J. Directing: Modern Drama. Theory, analysis, and practice in directing plays from the modern period. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

381L. Directing: Period Drama I. Theory, analysis, and practice in directing plays from historical periods of drama. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

381M. Directing: Period Drama II. Continuation of Theatre and Dance 381L. Theory, analysis, and practice in directing plays from historical periods of drama. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

382K. Seminar in Secondary School Theatre Curriculum. Theory and design of secondary school theatre curriculum. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, secondary school teacher certification, and consent of instructor.

383M. Topics in Theatre Outreach. Topics, restricted or broad in scope, related to the theory and practice of theatrical outreach. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

   Topic 1: Theatre Outreach Methods. Theory and design of a variety of outreach offerings.

183N, 283N, 383N. Theatre Outreach Practicum. Practical application of theatre outreach methods in communities. For each semester hour of credit earned, the equivalent of one class hour a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

383P. Topics in Drama and Theatre for Youth. Topics pertinent to students' training and development in drama and theatre for youth. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

   Topic 5: Creative Drama. Advanced theory and practice of creative drama in field and educational settings.
   Topic 6: Practicum in Drama and Theatre for Youth. Practical applications of approaches to drama and theatre for youth.

Topic 9: Special Problems: Directing for Young Audiences. Challenges in staging plays for young audiences.

Topic 10: Myth, Legend, and Tale.

Topic 11: Creative Drama in the Museum. The application of creative drama methods in museum settings.

184, 284, 384. Special Problems in Theatre and Dance. For each semester hour of credit earned, the equivalent of one class hour a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

385C. Topics in Theatre History. Topics, restricted or broad in scope, chosen from the history of theatre, both Western and non-Western. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Theatre History, 1660–1900.

Topic 2: Medieval and Renaissance Theatre History. European theatrical history from the medieval and Renaissance periods.

Topic 3: Classical and Asian Theatre History. Survey of ancient Greek, Roman, and Asian theatrical history.

Topic 4: 20th-Century Theatre History.


Topic 6: Contemporary Theatre History.

385D. Topics in Dramaturgy. Topics pertinent to students’ training and development in dramaturgical theory and practice. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Dramaturgy.

Topic 2: New Play Dramaturgy.

Topic 3: Production Dramaturgy.

386. Topics in Dance. Topics pertinent to students’ training and development in dance and choreography. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Dance in Academia.

386C. Topics in the History, Theory, and Criticism of Dance. Topics pertinent to students’ training and development in the history and theory of dance and choreography. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

186D, 286D, 386D, 486D. Dance Technique. Training in ballet, modern, and other forms of dance. For each semester hour of credit earned, the equivalent of one class hour a week for one semester, with laboratory hours as required. May be repeated for credit when the projects vary. Prerequisite: Graduate standing and consent of instructor.

387D. Topics in Performance Studies. Topics, restricted or broad in scope, related to performance studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Applied Drama and Theatre. Survey of various applications of drama and theatre for communitarian and educational purposes.

Topic 2: Performance Analysis.

Topic 3: Performance Ethnography.

Topic 4: Performing Autobiography. The overlapping territory between performing the self and performing the biographical other.

Topic 5: Seminar in Theatre History and Performance Studies.

Topic 6: Historical Case Studies.

Topic 8: Women and American Performance.

Topic 9: Adaptation for Stage and Screen.


Topic 11: Performative Criticism.

Topic 12: Performing Black Feminisms.

Topic 13: Theatre of the Oppressed. Overview of the movement inspired by Augusto Boal’s Theatre of the Oppressed.


Topic 15: Body, Culture, and Performance.

Topic 16: Dance, Women, and Narrative.


Topic 18: Performance and Activism.

Topic 19: Performance and Cultural Studies.

Topic 20: Performance Theory Analysis.

Topic 21: Performative Writing.

Topic 22: Performing America, 1840–1940.


387M. Topics in Dramatic Theory and Criticism. Topics, restricted or broad in scope, concerning theory and criticism as they relate to drama or theatre. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Dramatic Theory and Criticism, Ancient Greece to the Eighteenth Century.

Topic 2: Dramatic Theory and Criticism, the Eighteenth Century to 1960.


387N. Topics in Dramatic Form and Structure. Practical application of dramaturgical case study for the actor.

387P. Playwriting Workshop. Theory and practice of dramatic writing. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

387R. Playwriting For Youth. Advanced study and practice of writing plays for children and youth. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

388. Research Methods and Resources. Theory and practice of academic research for theatre artists. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.
388J. Advanced Design and Technology Studio. Problems in the theory of scenic design, costume design, lighting design, and theatre technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
   Topic 1: Costume Design.
   Topic 2: Costume Technology.
   Topic 3: Lighting Design.
   Topic 4: Scenic Design. Designed primarily for students studying scenic design. Fundamentals of scenic design.

488K. Advanced Design and Technology Laboratory. Practical applications of production theory for theatrical designers and technicians. Laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
   Topic 1: Lighting Laboratory. Practical and individual design experience in lighting.
   Topic 2: Technology Laboratory. Practical and individual design experience in theatrical technology.
   Topic 3: Scenery Laboratory. Practical and individual design experience in scenery.
   Topic 4: Costuming Laboratory. Practical and individual design experience in costuming.

388L. Advanced Topics in Design and Technology. Topics that are related to and support the study of theatrical design and technology. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
   Topic 7: Fabric Painting and Dyeing I. Fundamentals of textile surface design.
   Topic 9: Draping I. Basic clothing construction for theatrical productions.
   Topic 10: Draping II. Advanced clothing construction for theatrical productions.
   Topic 11: Mask Making II. Mask theory, design, construction for theatrical and live productions.
   Topic 12: Automated Lighting II. Advanced automated and computer-aided lighting theory and techniques.
   Topic 13: Scenic Rendering.

Topic 14: Millinery I. Fundamentals of hat design, fitting, and construction techniques.
Topic 15: Rigging for the Theatre. Historical and modern practices of theatrical rigging systems.
Topic 16: Tailoring I. Fundamental theory and techniques in tailoring for the live performer.
Topic 17: Tailoring II. Advanced theory and techniques in tailoring for the live performer.
Topic 19: Fabric Painting and Dyeing II. Advanced textile surface design.
Topic 20: Millinery II. Advanced hat design, fitting, and construction techniques.
Topic 22: Costume Design Skills. Fundamentals of research, drawing, rendering, and script and character analysis and critique for costume design.

188M, 288M, 388M. Advanced Projects in Design and Technology. Advanced independent study projects in scenic design, costume design, lighting design, and theatre technology. For each semester hour of credit earned, the equivalent of one class hour a week for one semester, with laboratory hours as required. May be repeated for credit when the projects vary. Prerequisite: Graduate standing and consent of instructor.

188R. Research and History for the Visual Theatre. Study of the development of dress and decor, as seen in a general historical context, with an introduction to research methods appropriate for theatrical designers and technicians. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

390. Advanced Playwriting Workshop. Advanced study and practice of dramatic writing. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, Theatre and Dance 387P, and consent of the instructor.

190K. Play Readings. Weekly readings of plays in various stages of development. One lecture hour a week for one semester, with laboratory hours as required. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

390L. New Playwriting Studio. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

190M, 290M, 390M. New Works Projects. Independent study projects in the production of new work. For each semester hour of credit earned, the equivalent of one class hour a week for one semester, with additional laboratory hours as required. May be repeated for credit when the projects vary. Prerequisite: Graduate standing and consent of instructor.
391. **Topics in Performance as Public Practice.** Topics, restricted or broad in scope, related to performance as public practice. Three meeting hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

   **Topic 1: Historiography.** The history of history, in practice, as a discipline, and in writing.

   **Topic 2: Proseminar: Performance as Public Practice.**

   **Topic 3: Public Intellectuals and the Arts.**

   **Topic 4: Community-Based Theatre.** The practice of theatre as a tool for community and social change.

   **Topic 5: Cultural Policy and the Arts.**

392, 692, 992. **Graduate Internship in Theatre.** Participation and observation as a working member of a theatre or theatre-related organization. Laboratory hours as required by the sponsor. The amount of credit awarded is commensurate with the duties of the internship. Offered on the credit/no credit basis only. Prerequisite: Completion of one year of a graduate degree program in the Department of Theatre and Dance, consent of instructor, approval of the faculty of the student's area of study, and approval of the Internship Committee of the Graduate Studies Committee.

393. **Seminar in Theory, Criticism, and Analysis.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

395. **Readings in History, Theory, Criticism, and Performance Studies.** In-depth exploration of literature in specialized areas of interest, primarily as preparation for doctoral examinations and dissertation proposals. Conference course equivalent to three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

195P, 295P, 395P. **Advanced Projects in Performance Studies.** Advanced independent study projects in performance studies, theatre history, theory, criticism, performance as public practice, drama and theatre for youth, theatre outreach, and dramaturgy. For each semester hour of credit earned, the equivalent of one class hour a week for one semester, with laboratory hours as required. May be repeated for credit when the projects vary. Prerequisite: Graduate standing and consent of instructor.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For Theatre and Dance 698A, graduate standing and consent of the graduate adviser; for 698B, Theatre and Dance 698A (or Drama 698A).

398T. **Supervised Teaching in Theatre and Dance.** Theory and practice of pedagogy in theatre and dance. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Theatre and Dance 399R, 699R, or 999R.
ENGLISH AND EARTH RESOURCES

Master of Arts

FACILITIES FOR GRADUATE WORK

The program in energy and earth resources is interdisciplinary. The facilities of the Departments of Geological Sciences, Petroleum and Geosystems Engineering, Economics, Government, and Geography and the Environment, the Lyndon B. Johnson School of Public Affairs, and the McCombs School of Business are available. Materials located in the Walter Geology Library, the McKinney Engineering Library, and the Perry-Castañeda Library include an array of specialized publications, such as the contract research of the United States Department of Energy and its predecessors, a selective collection of United States and Texas government documents, conference proceedings, and society and association publications. In addition, a wide range of electronic information resources in science, business, and the social sciences is accessible through the University Libraries Web site, http://www.lib.utexas.edu/.

AREAS OF STUDY

Graduate study in energy and earth resources includes study in geological sciences, petroleum and geosystems engineering, economics, resource management, government, law, and policy studies. The student’s program should represent as broad a spectrum as possible of energy and earth resources courses.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Ross Baldick
J. Eric Bickel
James S. Dyer
John S. Dzienkowski
William L. Fisher
Charles G. Groat
Genaro J. Gutierrez
J. Richard Kyle
Larry W. Lake
Stephen E. Laubach

Krishan A. Malik
James T. O’Connor
Jon E. Olson
Suzanne A. Pierce
Varun Rai
Kamy Sepehrnoori
John M. Sharp Jr.
David B. Spence
Carlos Torres-Verdin
Michael Webber

ADMISSION REQUIREMENTS

The entering student who wishes to pursue an advanced degree in energy and earth resources should have a bachelor’s degree in one of the participating disciplines. The specific goal of the degree is a broad acquaintance with energy and earth resources problems, both from a technological and from a business, economic, law, or policy perspective.

DEGREE REQUIREMENTS

Candidates for the Master of Arts degree must complete thirty semester hours of coursework and must submit a thesis based on individual research. The thesis counts for six of the thirty semester hours required for the degree.
DUAL DEGREE PROGRAMS

The program in energy and earth resources offers the following dual degree programs in cooperation with the Lyndon B. Johnson School of Public Affairs. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global policy studies</td>
<td>Master of Global Policy Studies</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: E. P. Schoch Building (EPS) 1.130A, phone (512) 471-9875, fax (512) 471-5585; campus mail code: C1100
Mailing address: The University of Texas at Austin, Energy and Earth Resources, 1 University Station C1100, Austin TX 78712
URL: http://www.jsg.utexas.edu/eer/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ENERGY AND EARTH RESOURCES: EER

396. Seminar in Energy and Earth Resources. Graduate seminar covering a wide range of issues in energy and earth resources. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Energy and Earth Resources 396 and Energy and Mineral Resources 396 may not both be counted unless the topics vary. Prerequisite: Graduate standing.

Topic 1: Energy and Earth Resource Economics. Same as Petroleum and Geosystems Engineering 383 (Topic 60: Energy and Earth Resource Economics). Theoretical and applied topics in natural resource economics, including project analysis, production theory, industrial organization, markets and regulation, and environmental economics. Additional prerequisite: Graduate standing in computational and applied mathematics, engineering, or geological sciences. Students seeking to enroll in this course must present technical prerequisites satisfactory to the instructor.


Topic 3: Policy and Law.


Topic 5: Resource Science and Engineering.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in energy and earth resources, at least nine semester hours of coursework in the energy and earth resources program, and consent of the graduate adviser; for 698B, Energy and Earth Resources 698A.
GEOLOGICAL SCIENCES

Master of Arts
Master of Science in Geological Sciences
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Austin provides an ideal base from which to conduct research projects in all aspects of geological science. The University’s central Texas location gives students ready access to exposures of Phanerozoic siliciclastic and carbonate strata and Precambrian igneous and metamorphic basement rocks. The presence of a karst aquifer beneath the city of Austin allows students to study issues related to urbanization, the demand for water, and contamination. Field-intensive studies for master’s and doctoral degrees are continually in progress, in Texas and in many other states. Field research is currently being conducted on every continent and ocean basin.

Analytical facilities are comprehensive and up-to-date. The electron-microbeam laboratory houses a JEOL JXA-8200 electron microprobe with five wavelength-dispersive spectrometers and an energy-dispersive spectrometer, as well as a Philips/FEI XL30 environmental scanning electron microscope and a JEOL T30A scanning electron microscope, both of which are equipped for energy-dispersive chemical analysis, cathodoluminescence imaging and spectroscopy, and orientational analysis using electron backscatter diffraction. Two inductively coupled plasma mass spectrometers are available for elemental and isotopic analysis of diverse geologic materials: a Micromass magnetic-sector multicollection device with nine Faraday cups, a Daly ion-counting channel, and three ion-counting channeltron; and an Agilent quadrupole device. Both instruments can be interfaced with a Merchantek 213-nm-wavelength laser-ablation unit for spatially resolved analysis. These instruments are complemented by a Finnigan-MAT 261 thermal ionization mass spectrometer with seven Faraday cups and one ion-counting channel. Ultraclean laboratories support preparation of samples for rubidium-strontium, uranium-lead, U-series disequilibrium dating, samarium-neodymium, and other isotopic analysis. Additional geochemical instrumentation includes two VG gas-source mass spectrometers for hydrogen, oxygen, nitrogen, and carbon stable-isotope analysis, and a Micromass Multiprep automated preparation system for water and carbonate analyses.

The Department of Geological Sciences houses a dual high-resolution X-ray computed tomographic scanner used for nondestructive three-dimensional visualization and analysis of the internal structure of geologic samples; a Siemens D500 X-ray diffractometer with Datascan automation software and JADE pattern analysis; and a paleomagnetic laboratory with a shielded room, 2G cryogenic magnetometer, Bartington susceptibility meter, and ASC impulse magnetizer. Special microscopy facilities incorporate an Edge R.400 real-time high-resolution three-dimensional light microscope; a USGS-type gas-flow fluid inclusion stage; and a Tecnosyn luminoscope. Among additional facilities are a 1-m x 1.5-m x 10-m flume for sediment transport studies and an experimental petrology laboratory containing hydrothermal pressure apparatus and one-atmosphere gas-mixing furnaces.

Geophysical research employs portable multichannel seismographs with vertical and three-component geophones; a ground-penetrating radar system; a LaCoste-Romberg gravimeter; an airborne Optech LIDAR system for fine-scale topographic mapping; an Optech ILRIS tripod-mounted laser scanning system for very-high-resolution outcrop topography; five portable broadband Guralp seismographs for teleseismic studies; two Vibroseis seismic sources, for both low- and high-frequency three-axis shaking; ten dual-frequency geodetic-quality GPS receivers with choke-ring antennas; portable field magnetometers; and an aerogeophysical instrument package (radar, gravity, LIDAR, magnetometers) most often used in Antarctica. A field site south of San Antonio is available for calibration and testing of seismic instruments and techniques. Graduate students are frequent members of scientific crews on vessels of the University-National Oceanographic Laboratory System and of other nations, and students regularly conduct fieldwork in Antarctica using National Science Foundation Polar Programs facilities.

Facilities for data processing, data interpretation, and numerical simulation are extensive. There are multiple workstation clusters with Sun and SGI hardware, as well as Windows and Macintosh systems. Most major commercial software packages for seismic data
processing and interpretation are available, along with software for GIS, potential field, synthetic aperture radar, and other applications.

The two research components of the Jackson School—the Bureau of Economic Geology and the Institute for Geophysics—are housed in adjoining buildings on the J. J. Pickle Research Campus. The two units contribute the expertise of more than fifty research scientists to the Jackson School. The bureau functions as the state geological survey for Texas and sells many different types of publications to the public. The institute includes the Hockley Seismic Station, located in Hockley, Texas, just north of Houston. The station, part of the IRIS Global Seismic Network, houses a broad-band seismometer that collects information on global as well as Texas seismic events.

Reference materials include the 165,000-item Joseph C. and Elizabeth C. Walter Geology Library and Tobin International Map Collection, both located in the John A. and Katherine G. Jackson Geological Sciences Building. Research collections of about one million vertebrate paleontology specimens and about four million nonvertebrate specimens, including a type collection of about five thousand specimens, are housed at the J. J. Pickle Research Campus. The Bureau of Economic Geology maintains three major core storage facilities, containing nearly two million boxes of core and cuttings, mostly from North American sedimentary basins. The bureau also maintains a collection of nearly one million electric logs from Texas oil and gas wells.

Research support is provided by a well-equipped petrographic laboratory with a separate thin-section laboratory for student use, a machine shop, and an electronics shop. The department's staff includes analytical chemists, computer support specialists, a petrographic section technician, a computer graphics specialist, a photographer, and a machinist.

Areas of active research in the Department of Geological Sciences include studies in sedimentary depositional systems; hydrogeology; climate systems science; structural geology; marine geology and geophysics; regional tectonics; seismology; paleomagnetism; seismic reflection and refraction; isotope and aqueous geochemistry; sedimentary geochemistry; geomicrobiology; igneous, sedimentary, and metamorphic petrology; high-temperature geochemistry; ore deposits and industrial mineral resources; and vertebrate and invertebrate paleontology. Cooperative research projects are under way with the Center for Space Research, the Institute for Geophysics, and the Bureau of Economic Geology.

GRADUATE STUDIES COMMITTEE

The following faculty members and research scientists served on the Graduate Studies Committee in the spring semester 2011.

Mead A. Allison
James A. Austin Jr.
Nathan L. Bangs
Jay L. Banner
Jaime D. Barnes
Christopher J. Bell
Philip C. Bennett
Donald D. Blankenship
Daniel O. Breecker
Meinhard B. Cardenas
William D. Carlson
Ginny A. Catania
Elizabeth J. Catlos
Julia A. Clarke
Mark P. Cloos
Kerry H. Cook
Ian W. Dalziel
Robert E. Dickinson
Peter Eichhubl
William L. Fisher
Peter B. Flemings
Seergey B. Fomel
Clifford A. Frohlich
Rong Fu
Craig S. Fulthorpe
James E. Gardner
Omar Ghattas
John A. Goff
Stephen P. Grand
Charles G. Groat
Sean S. Gulick
Bob A. Hardage
Marc A. Hesse
John W. Holt
Brian K. Horton
Martin P. Jackson

Xavier Janson
Joel Peterson Johnson
Charles Kerans
Richard A. Ketcham
Wonsuck Kim
Gary A. Kocurek
J. Richard Kyle
John C. Lassiter
Stephen E. Laubach
Luc L. Lavier
Jung-Fu Lin
Leon E. Long
Robert G. Loucks
William P. Mann
Randall A. Marrett
Kitty L. Milliken
David Mohrig
Sharon Mosher
Terrence M. Quinn
Timothy B. Rowe
Bridget R. Scanlon
Mrinal K. Sen
Timothy M. Shanahan
John M. Sharp Jr.
Kyle Thomas Spikes
James T. Sprinkle
Ronald J. Steel
Paul L. Stoffa
Robert H. Tatham
Scott W. Tinker
Harm J. Van Avendonk
Clark R. Wilson
Lesli J. Wood
Zong-Liang Yang
Michael Howard Young

ADMISSION AND DEGREE REQUIREMENTS

The preliminary education of students who intend to become candidates for a graduate degree in geological sciences usually includes coursework in general geology, paleontology, mineralogy, petrology, structural geology, and field geology, as well as physics, chemistry, and calculus. Geophysicists and climatologists are expected to have a sound foundation in both mathematics and physics; paleontologists should include suitable preparation in the comparative morphology and genetics of living organisms. Students without the necessary foundation for advanced study and research may be required to take additional coursework.
The department offers both the Master of Science in Geological Sciences and the Master of Arts. The Master of Science in Geological Sciences requires twenty-four semester hours of coursework and a thesis; it is designed for those planning doctoral study or seeking employment in which research and problem-solving skills are essential.

The Master of Arts degree program requires thirty hours of coursework and a report; it is designed for students who wish to enhance their technical education. The MA programs in hydrogeology and petroleum geology require the student to take courses chosen from a list available from the graduate adviser. In other disciplines, Master of Arts degree programs are designed by petition to the graduate adviser.

Degree programs for the Master of Science in Geological Sciences and the Doctor of Philosophy are designed for each student by his or her committee. Additional requirements, policies, and procedures are described in a brochure available from the graduate adviser’s office.

FOR MORE INFORMATION

Campus address: John A. and Katherine G. Jackson Geological Sciences Building (JGB) 2.120, phone (512) 471-6098, fax (512) 471-9425; campus mail code: C1100
Mailing address: The University of Texas at Austin, Graduate Program, Department of Geological Sciences, 1 University Station C1100, Austin TX 78712
E-mail: geograd@maestro.geo.utexas.edu
URL: http://www.jsg.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

GEOLOGICAL SCIENCES: GEO

380C. Advanced Structural Geology. Origin of earth structures, solution of advanced structural problems, newest techniques, field techniques, and field problems. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing and consent of instructor.

380F. Seismology II. Basic seismology theory and its application to the study of the interior of the Earth (crust, mantle, and core), earthquakes, and plate tectonics. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing, and Mathematics 408C or the equivalent.

380G. Construction and Interpretation of 3-D Stratigraphy. Uses three-dimensional volumes of basin-filling stratigraphy to explore how depositional landscapes are preserved in the sedimentary record and how sedimentary deposits can be analyzed to produce quantitative reconstructions of past environmental states. Four lecture hours a week for one semester. Prerequisite: Graduate standing.

380J. Mathematical Methods in Geophysics. Vectors and matrices, linear algebra, complex variables and contour integration, integral transforms, partial differential equations of geophysics (Laplace, Poisson, and acoustic wave equations), and simple solutions. Three lecture hours a week for one semester. Normally offered in the fall semester only. Geological Sciences 366M and 380J may not both be counted. Prerequisite: Graduate standing.

380N. Sequence Stratigraphy. Use of seismic reflection systems for quantitative stratigraphic characterization of the subsurface. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Graduate standing, and Geological Sciences 416M and 465K or their equivalents.

380P. Advanced Reservoir Characterization: Carbonates. Advanced instruction in the integration of geologic and engineering methods for building 3-D reservoir models of carbonate reservoirs. Four lecture hours a week for one semester. Offered in alternate years. Geological Sciences 380P and 391 (Topic: Advanced Reservoir Characterizations: Carbonates) may not both be counted. Prerequisite: Graduate standing.

380R. Dynamics of Sedimentary Systems I. Explores the fundamental concepts of transport systems at the Earth’s surface, focusing on principles and quantitative aspects of fluid flow, sediment transport, and bedforms, as well as atmospheric and oceanic circulation, complex systems, and the integration of small-scale processes in developing quantitative stratigraphic models. Four lecture hours a week for one semester. Geological Sciences 380E and 380R may not both be counted. Prerequisite: Graduate standing.
380S. Dynamics of Sedimentary Systems II. Explores the fundamental concepts of transport systems at the Earth’s surface, focusing on principles and quantitative aspects of fluid flow, sediment transport, and bedforms, as well as atmospheric and oceanic circulation, complex systems, and the integration of small-scale processes in developing quantitative stratigraphic models. Four lecture hours a week for one semester. Geological Sciences 380E and 380S may not both be counted. Prerequisite: Graduate standing and Geological Sciences 380R.

380T. Geoclimatology. Examines climate records encoded in sedimentary archives through geologic time. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing and consent of instructor.

381C. Structural Petrology. Deformation processes from atomic to macroscopic level, resultant textures and fabrics, and conditions required to produce such deformation. Three lecture hours and three laboratory hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing and an undergraduate course in structural geology and petrology.

381E. Brittle Structure. Quantitative analysis of folding, faulting, and fracturing at all scales in the upper crust, with emphasis on cross-section construction, subsurface mapping, and fracture analysis. Three lecture hours a week for one semester, and several field trips. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing and an undergraduate course in structural geology and petrology.

381G. Geomicrobiology. Geologic and hydrologic controls on subsurface microbial growth, metabolism, and community structure; the geochemical consequences of microbial processes in subsurface settings; and the influence of geology on microbial ecology. Three lecture hours a week for one semester. Normally offered in the fall semester only, in alternate years. May not be substituted for any required geological sciences course. Geological Sciences 341G and 381G may not both be counted. Prerequisite: Graduate standing in geological sciences, or graduate standing and consent of instructor.

381K. Tectonic Problems. Origin of regional structural features, complex and controversial structures; tectonic control of ore deposits. Three lecture hours a week for one semester. Offered irregularly. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in geological sciences and consent of instructor.

381P. Plate Margins. Study of the tectonics of the earth. Topics include history of early concepts, ocean spreading ridges and ophiolites, rifting, core complexes, passive margins, subduction zones, trenches, volcanic arcs, collisional orogenesis, and transform margins. Three lecture hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 381P and 391 (Topic: Plate Margins) may not both be counted. Prerequisite: Graduate standing in geological sciences.

381R. Regional Studies in Mineral Resources Geology. Geologic evolution of a region, with emphasis on factors that control the origin of selected mineral resources. Study area varies according to the interests of participants and other factors. Three lecture hours a week for one semester. Normally offered in the spring semester only. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

381T. Marine Tectonics. Tectonic processes within the dynamic Earth, with a focus on oceanic structures. Subjects may include fundamentals of plate tectonics; plate motion, driving forces, and mantle convection; evolution of triple junction and plate margins; plate reconstructions; earthquakes and focal mechanisms; structure and geochemistry of the Earth’s interior; mantle structure and tomography; rheology and deformation mechanisms in mantle and crust; heat flow, gravity, the geoid, and paleomagnetism; hotspots and mantle plumes; seafloor spreading and oceanic spreading ridges; oceanic transform faults and fracture zones; and subduction zones, volcanic island arcs, and marginal seas. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following may be counted: Geological Sciences 338T, 371C (Topic: Tectonics I), 381T, 391 (Topic: Tectonics I). May not be substituted for any required geological sciences course. Prerequisite: Graduate standing in geological sciences, or graduate standing and consent of instructor.

382C. Groundwater Field Methods. Basic field methods used in evaluation of groundwater conditions, with emphasis on field interpretation and on hands-on experience with geophysical, geochemical, stream-gauging, and pump test methods. Forty-five hours of field and laboratory work in a three-week period. Normally offered in the summer session only. Prerequisite: Graduate standing, and Geological Sciences 391C or consent of instructor.

382D. Crustal Geofluids. Designed to provide a technical foundation for exploring how fluids drive fundamental geologic processes in sedimentary basins. Includes characterizing pressure and stress in sedimentary basins, exploring the origin of overpressure through theory and characterization, and examining how pressure and stress couple. Problems include how sedimentation generates overpressure, how hydrocarbons are trapped in the subsurface, how mud volcanoes form, how submarine landslides are generated, and the origin of methane hydrates. Three lecture hours per week for one semester, with a four-day field trip to be arranged during spring break. Normally offered during the spring semester. Geological Sciences 382D and 391 (Topic: Crustal Fluids) may not both be counted. Prerequisite: Graduate standing.
382F. Fractured Rock Hydrology and Mechanics. Introduction to the physics of flow in fractured rocks and soils; fracture mechanics; fracture skins; analysis of solute transport; and methods of characterizing and modeling fractured systems. Class field trips are an integral part of the class. Three lecture hours a week for one semester, with field trips to be arranged. Offered irregularly. Prerequisite: Graduate standing in geological sciences and consent of instructor. Previous coursework in hydrogeology (such as Geological Sciences 476K or the equivalent) and mathematics (such as Mathematics 427K or the equivalent) is recommended.

382G. Fluid Physics for Geologists. Flow and transport phenomena within an earth science context. Includes extensive use of Maple, MATLAB, and COMSOL Multiphysics. Three lecture hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing in geological sciences or graduate standing and consent of instructor; and Geological Sciences 346C or 391C, 383D or 383E, and Mathematics 408D, 408L, or 427K.

382S. Physical Hydrology. Comprehensive treatment of modern conceptual and methodological approaches to hydrological science. Combines qualitative understanding of hydrological processes with quantitative representation, approaches to measurement, and treatment of uncertainty. Major components of the hydrological cycle. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing in geological sciences, or graduate standing and consent of instructor.

382T. Continental Tectonics. Tectonic processes, with a focus on continental lithospheric structures. Subjects may include convergent margins, subduction zones, magmatic arcs, and foreland structures; collisional orogenesis, arc-continent collisions, continent-continent collision, and mountain building; formation of supercontinents; uplift and exhumation; orogenic collapse and extensional tectonics; continental rifting and passive margins; transform margins; and the effect of tectonics on climate and oceanic circulation. Three lecture hours a week for one semester. Normally offered in the fall semester only. Only one of the following may be counted: Geological Sciences 335T, 371C (Topic: Tectonics II), 382T, 391 (Topic: Tectonics II). May not be substituted for any required geological sciences course. Prerequisite: Graduate standing in geological sciences, or graduate standing and consent of instructor.

383. Clastic Depositional Systems. The sedimentary processes, facies characteristics, and depositional models for alluvial, deltaic, estuarine, strandplain, barrier-lagoon, shelf, deepwater slope, and basin-floor systems. Considers allogenic and autogenic drivers of these systems, as well as source-to-sink relationships for basin analysis and the ways in which these systems construct shelves and shelf margins. Reading and presentation of original benchmark papers is an important component of the course. Four lecture/exercise hours a week for one semester, and a three- to five-day class field project to be arranged early in the semester. Normally offered in the fall semester only. Prerequisite: Graduate standing in geological sciences.

383C. Geology and Hydrology. Study of the interaction of fluids with the rock matrix, with emphasis on the role of hydrology in geologic processes and the role of geology in affecting hydrologic processes. Three lecture hours a week for one semester, and several field trips. Offered irregularly. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and a course in hydrogeology or hydrology.

383D. Numerical Methods I: Computational Methods in Geological Sciences. A survey of geophysical data analysis methods, with a focus on time series, including sampling and aliasing, convolution and correlation, statistics, linear digital filters, properties and applications of the discrete Fourier transform, and least squares. Instruction in MATLAB and Fortran and solution of data analysis problems using these two languages. Two lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing.

383E. Digital Methods in Hydrogeology. Applications of mathematical software to earth science problems, with emphasis on hydrogeologic problems. Includes a brief introduction to numerical methods. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing, Geological Sciences 391C or the equivalent, and Mathematics 408D, 408L, or 427K.

383G. Geochemistry of Sedimentary Rocks. The hydrologic cycle, the early diagenesis, carbonate sediments, chemical sediments, and burial processes. Three lecture hours a week for one semester, with laboratory hours to be arranged. Offered irregularly. May be repeated for credit. Prerequisite: Graduate standing.

383K. Paleoenecology. Relationships of fossil animals and plants to their environments and to the sedimentary deposits in which they occur. Three lecture hours a week for one semester, with one optional field trip. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing.

383L. Petrography of Sandstones. Interpretation of microscale features of sandstones to decipher the paleogeographic, tectonic, and postdepositional controls on sandstone composition and texture. Examines the effects of chemical and mechanical processes in the subsurface on sandstone properties, including porosity. Two lecture hours and three laboratory hours a week for one semester. Offered irregularly. Prerequisite: Graduate standing in geological sciences.

383M. Petrology of Carbonates and Evaporites. Description and interpretation of carbonate and evaporite rock deposition and paragenesis. Essentials of petrology; petrography, including identification of grain types, cement types, recrystallization, and dolomitization; and porosity evolution. Global geochemical signals in carbonate sediments, and geochemical processes of early and late diagenesis. Three lecture hours and two laboratory hours a week for one semester. Offered irregularly. Prerequisite: Graduate standing.
383N. Depositional Systems: Carbonates and Evaporites. Analysis of carbonate and evaporite depositional systems from sedimentary structures, faunal and ichnofaunal associations, grain types, vertical and lateral facies successions within time-significant packages, and sediment body geometries. Three lecture hours and three laboratory hours a week for one semester. Offered irregularly. Prerequisite: Graduate standing and consent of instructor.

383P. Potential Field Applications in Geophysics. Introduction to the theory, measurement, and application of gravity and magnetic and electric fields to exploration and global-scale problems. Three lecture hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 385P and 385P may not both be counted. Prerequisite: Graduate standing.

383R. Reservoir Geology and Advanced Recovery. Analysis of geologic controls on composition and architecture of oil and gas reservoirs, with emphasis on reservoir heterogeneity resulting from depositional and diagenetic processes. Geological and petrophysical determinants of fluid flows and behavior. Three lecture hours a week for one semester. Normally offered in the fall semester only. May be repeated for credit. Prerequisite: Graduate standing; and credit or registration for Geological Sciences 380N, 383, and 383N, or consent of instructor.

383S. Sedimentary Basin Analysis. Quantitative and applied study of basin subsidence and sediment accumulation. The first half of the course considers theoretical basin evolution due to flexural, thermal, dynamic, and fault-related subsidence. The second half of the course involves in-depth analysis of selected basin systems and includes student research projects and presentations on assigned topics. Specific topics vary from year to year. Three lecture hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Graduate standing, and Geological Sciences 383 or the equivalent.

383T. Tectonic and Climatic Interactions in Foreland Basins. Integration of recent advances in the understanding of modern and ancient foreland basin sedimentation, quantitative basin modeling, regional and global climate change, and the geometry and kinematics of fold-thrust belts. Four lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor.

384C. Seismology I. Seismic, gravity, magnetic, electrical, and electromagnetic methods of exploration for petroleum and minerals. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing.

384D. Physics of Earth. Geophysics of the whole Earth: seismic methods of inferring Earth structure, chemical makeup of Earth, tides and rotational variations, geomagnetism, heat flow, earthquakes, and seismicity. Three lecture hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 354 and 384D may not both be counted. Prerequisite: Graduate standing.

384E. Seismic Migration and Inversion. Use of the acoustic or elastic wave equation to construct subsurface images in seismic processing. Different methods of solution and data domains employed in routine applications. Investigates integral, implicit, and explicit finite differences and Fourier methods for the imaging and inversion of seismic reflection data. Three lecture hours a week for one semester. Offered irregularly. Prerequisite: Graduate standing in geological sciences.


384G. Subsurface Mapping and Petroleum Workstations. Introduction to basin analysis, subsurface mapping, and petroleum exploration using a workstation. Subjects may include common tectonic settings of petroleum basins, seismic stratigraphy, structural styles, and petroleum systems. Workstation techniques include well log editing, lithology interpretation, correlation of tectonic events, integration of seismic and subsurface well data, interpretation of two- and three-dimensional seismic reflection data and structure, and isopach and seismic attribute mapping. Four lecture hours a week for one semester. Geological Sciences 384G and 391 (Topic: Introduction to Petroleum Workstations) may not both be counted. Prerequisite: Graduate standing and consent of instructor.

384M. Inverse Theory. Vector spaces; model parameter estimation methods from inaccurate, insufficient, and inadequate measurements; linear, quasi-linear, and highly non-linear problems; local and global optimization methods. Emphasis on practical problem solving. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing and knowledge of linear algebra, basic calculus, and statistics.

384R. Geophysical Time Series Analysis. Surveys the following topics in time series analysis with geophysical applications: Fourier transforms, linear digital filters and their design, frequency domain analysis methods (power and coherence spectrum estimation), least squares and related methods with time series applications. MATLAB is used extensively. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Geological Sciences 325K or 383D or the equivalent.

384S. Seismic Reflection Processing. Reduction of seismic and other geophysical data from field data to final geologic cross sections, using real data sets and commercial seismic processing software. Three lecture hours and two laboratory hours a week for one semester. Offered irregularly. Prerequisite: Graduate standing, and Geological Sciences 384R or the equivalent.
384T. Seismic Lithology. How seismic waves propagating through earth materials respond to relevant rock, reservoir, and fluid properties in the subsurface, and how seismic data recorded on the surface are used to describe, discriminate, and estimate these rock, reservoir, and fluid properties in the subsurface. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the spring semester. Geological Sciences 384T and 391 (Topic: Seismic Lithology and Exploration Geophysics) may not both be counted. Prerequisite: Graduate standing.

384U. Quantitative Seismic Interpretation. Seismic inversion, a tool for reservoir characterization, post- and pre-stack modeling, rock physics and fluid replacement modeling, wavelet estimation and post-stack inversion, AVO and pre-stack inversion, multiattribute regression and neural network, and net pay estimation. Extensive hands-on training with three-dimensional seismic and well-log data. Three lecture hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing.

384W. Seismic Imaging. Seismic reflection imaging for visualizing the interior of Earth’s upper crust. Study of fundamental imaging concepts from a unified geometrical point of view. Hands-on practical experience with imaging seismic data in an open-source software environment. Three lecture hours and one laboratory hour a week for one semester. Normally offered in the fall semester only, in alternate years. Geological Sciences 384W and 391 (Topic: Wavefield Imaging) may not both be counted. Prerequisite: Graduate standing; programming experience and familiarity with seismology are helpful.

185G. Geophysics Colloquium. Open to non–geological sciences majors, but registration priority is given to geological sciences majors. Exploration of a variety of problems in modern geophysics. Two lecture hours a week for one semester, and at least one weekend field trip. May be repeated for credit. Offered on the credit/no credit basis only. Geological Sciences 185G and 194 (Topic: Geophysics Colloquium) may not both be counted. Prerequisite: Graduate standing.

385Q. Geomorphology Process and Form. Explores how Earth surface processes combine to shape landscapes through erosion and deposition. Emphasis on open channel flow, sediment transport, fluvial and hillslope processes, and tectonic controls on landscape evolution. Three lecture hours a week for one semester, with several field trips to be arranged. Normally offered in the fall semester. Only one of the following may be counted: Geological Sciences 385Q, 371C (Topic: Geomorphology: Landscape Process, Form, and Evolution), 385Q, GEO 391 (Topic: Geomorphology: Landscape Process, Form, and Evolution). May not be substituted for any required geological sciences course. Prerequisite: Graduate standing in geological sciences.

386. Metamorphic Petrology. Metamorphism as a record of processes in the Earth’s deep crust; phase equilibria among minerals and fluids at elevated temperatures and pressures; tectonometamorphic regimes; petrographic interpretation of metamorphic mineral assemblages and textures; and secular evolution of metamorphic patterns during Earth’s history. Three lecture hours and three laboratory hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing and consent of instructor.

386E. Economic Geology. Origin of economic mineral concentrations within the context of their overall geologic settings; geologic aspects of economic evaluation, mining, and mineral processing; and mineral exploration. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

386G. Geographic Information System and Global Positioning System Applications in Earth Sciences. Theory and practice of geographic information system (GIS) and Global Positioning System (GPS) technologies, and their applications to problems in earth sciences. Laboratories and field trips provide hands-on experience with the collection, mapping, and analysis of geologic and other field data using GPS equipment and GIS software. Topics include map projections; datums and reference frames; cartographic principles; remotely sensed data (satellite and aerial photos, image radar); vector- and raster-based data structure; differential GPS; data logging schemes; GPS postprocessing software; integration of GPS and GIS in mapmaking; extant GIS applications in geology and hydrogeology. Three lecture hours and two laboratory hours a week for one semester, and two weekend field trips. Offered in the fall semester only. Geological Sciences 386G and 391 (Topic: Geographic Information System and Global Positioning System Applications in Earth Sciences) may not both be counted. Prerequisite: Graduate standing in geological sciences and consent of instructor.

386K. Igneous Petrology. Origin, differentiation, and crystallization of igneous rocks. Three lecture hours and three laboratory hours a week for one semester. Offered in alternate years. May be repeated for credit. Prerequisite: Graduate standing, and Geological Sciences 390M or the equivalent.

386R. Geology of Earth Resources. Study of the geologic framework for the formation, distribution, and extraction of energy, mineral, and water resources. Emphasizes the structural, rock-type, and process controls on the formation and distribution of these resources. Three lecture hours and one laboratory hour a week for one semester. Offered on the letter-grade basis only. May be taken for credit only once. Geological Sciences 386R and 391 (Topic: Geology of Earth Resources) may not both be counted. May not be counted toward a graduate degree in geological sciences or petroleum engineering. Prerequisite: Graduate standing.
386T. **Topics in Volcanology.** Explores the physical and chemical processes involved in the eruption, transport, and deposition of volcanic material through the use and study of field measurements, fluid dynamics, petrology, and geophysical observations. Three lecture hours a week for one semester. Normally offered in the spring semester, in alternate years. Geological Sciences 386T and 391 (Topic: Volcanology) may not both be counted. Prerequisite: Graduate standing.

387C. **Chemical Hydrogeology.** Introduction to the chemistry of water in the subsurface. Topics include basic thermodynamics and kinetics of rock-water interaction, acid-base theory, redox, and coordination chemistry. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. May be repeated for credit. Prerequisite: Graduate standing, a graduate course in hydrogeology, and two semesters of college chemistry.

387D. **Climate Dynamics.** Studies features of the climate system and the basics of climate system dynamics. Subjects may include climate variability, radiation and heat budgets, atmospheric and ocean circulation systems, and the physics of climate change. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following maybe counted: Geological Sciences 371C (Topic: Climate System Science), 387D, 391 (Topic: Climate System Science). May not be substituted for any required geological sciences course. Prerequisite: Graduate standing and three semester hours of upper-division coursework in physics and multivariate calculus.

387E. **Environmental Organic Geochemistry.** Environmental and organic chemistry of organic contaminants in groundwater and soils. Three lecture hours and one laboratory hour a week for one semester. Offered irregularly. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

387F. **Dynamics of Atmospheres and Oceans.** Study of fluid dynamics as applied to the atmosphere and oceans, with an emphasis on large-scale processes. Subjects may include vorticity, instability, Ekman dynamics, thermohaline circulation, and waves in the atmosphere and oceans. Three lecture hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 387F and 391 (Topic: Dynamics of Atmospheres and Oceans) may not both be counted. May not be substituted for any required geological sciences course. Prerequisite: Graduate standing; and Geological Sciences 387D or prior coursework in atmospheric dynamics, physical oceanography, or fluid dynamics.

387G. **Climate System Modeling.** Studies the basic theory of climate system modeling using state-of-the-art regional climate models in a variety of applications. Subjects may include paleoclimate study and future climate prediction based on greenhouse gas increases. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following maybe counted: Geological Sciences 347G, 371C (Topic: Climate System Modeling), 387G, 391 (Topic: Climate System Modeling). May not be substituted for any required geological sciences course. Prerequisite: Graduate standing, basic knowledge of Unix, and programming experience in Fortran.

387H. **Physical Climatology.** Investigates the nature of Earth’s climate and examines the physical processes that maintain the climate system. Topics include the energy balance, the hydrological cycle, general atmosphere circulation, and how they all interact and vary at various spatial and temporal scales. Discusses human-induced modifications to the climate system, such as urbanization, anthropogenic global warming, desertification, and tropical deforestation. Focuses on descriptive, analytical, programming, and modeling skills. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Computer Science 303E, Geography 301K, Mathematics 408D, and Physics 303K.

387P. **Climate System Physics.** Discussion of first-order principles and processes that govern the thermodynamical structure and energy distribution of the atmosphere, ocean, land, and cryosphere and their interaction with the dynamic aspect of the climate system. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following may be counted: Geological Sciences 347P, 371C (Topic: Climate System Physics), 387P, 391 (Topic: Climate System Physics). May not be substituted for any required geological sciences course. Prerequisite: Graduate standing.

388G. **Global Biogeochemical Cycles.** Examination of the major reservoirs, fluxes, and processes controlling the distribution of biologically active chemical constituents of the earth. The importance of these biogeochemical cycles in the geologic past and the effects of human perturbation of these cycles. Three lecture hours a week for one semester. Normally offered in the fall semester only. Geological Sciences 388G and 391 (Topic: Global Biogeochemical Cycles) may not both be counted. Prerequisite: Graduate standing in geological sciences, or graduate standing and consent of instructor.

388H. **Environmental Isotope Geochemistry.** The application of the isotope and trace element geochemistry of natural waters and sediments to studies of the hydrologic cycle. Stable, radiogenic, and cosmogenic isotopes are used as tracers of the evolution of groundwater, surface water, and ocean water. Three lecture hours a week for one semester, with laboratory hours to be arranged. Normally offered in the spring semester only. May be repeated for credit. Prerequisite: Graduate standing.
388L. **Isotope Geology.** Relation of isotope fractionation to earth processes; age determinations from ratios of unstable isotopes to daughter products; techniques of mass spectrometry. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing and consent of instructor.

388P. **Paleontological Laboratory Techniques.** Overview and application of laboratory techniques used for in-depth investigation of the systematics of vertebrates. Three lecture hours a week for one semester. Geological Sciences 388P and 391 (Topic: Paleontological Laboratory Techniques) may not both be counted. Prerequisite: Graduate standing in geological sciences.

388R. **Radiogenic Isotopes and Tectonic Processes.** Three lecture hours a week for one semester. Offered in alternate years. Prerequisite: Graduate standing.

388T. **High-Temperature Geochemistry.** An introduction to the application of isotope and trace element geochemistry in the modern geological sciences, with emphasis on problems related to the origin and evolution of the Earth's interior. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389K. **Paleontologic Nomenclature and Techniques.** Rules of nomenclature: preparation, illustration, and description of Paleozoic invertebrate fossils. Three lecture hours a week for one semester. Normally offered in the fall semester only, in alternate years. Prerequisite: Graduate standing in geological sciences and consent of instructor.

389M. **Vertebrate Paleontology: Mammals.** Comparative osteology and phylogenetic history of the living and extinct mammals. Two lecture hours and four laboratory hours a week for one semester. Offered in alternate years. Prerequisite: Graduate standing in geological sciences and Geological Sciences 389V.

389P. **Digital Methods in Morphology.** The use of digital multimedia for analysis of paleontological problems, with emphasis on three-dimensional high-resolution CT data. One lecture hour and three laboratory hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing in geological sciences.

389R. **Morphology of the Vertebrate Skeleton.** Identification of skeletal elements from the major vertebrate taxa, and aspects of skeletal functional morphology, with emphasis on extant taxa. Topics include the skeletal systems of fishes, amphibians, reptiles, birds, and mammals. Three lecture hours and four laboratory hours a week for one semester. Normally offered in the fall semester only, in alternate years. Geological Sciences 322V and 389R may not both be counted. Prerequisite: Graduate standing in geological sciences; and Geological Sciences 404C, 405, or the equivalent, or consent of instructor.

389S. **Systematics and Paleontology.** Seminar course focusing on current issues in digital/instructional technologies. Provides students with an opportunity to explore, discuss, and demonstrate issues designing, acquiring, manipulating, authoring, and publishing digital content. Students work toward completing a specific project. Three lecture hours a week for one semester. Offered in alternate years. Geological Sciences 389S and 391 (Topic: Systematics and Paleontology) may not both be counted. Prerequisite: Graduate standing in geological sciences and consent of instructor.

389V. **Vertebrate Paleontology.** Comparative osteology and phylogenetic history of the living and extinct fishes, amphibians, and reptiles. Two lecture hours and four laboratory hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing in geological sciences, and Biology 349 or the equivalent.

390D. **Seismology III.** Advanced treatment of elastic wave propagation in heterogeneous anisotropic media, vectors and tensors, Christoffel equation, group and phase velocities, invariant embedding (reflectivity), finite difference, finite elements, and spectral elements. Three lecture hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Graduate standing, and Geological Sciences 380F or the equivalent.

390M. **Thermodynamics of Geologic Processes.** Applications of physical chemistry to natural systems; interactions of minerals, solutions, and the atmosphere. Three lecture hours a week for one semester. Offered in alternate years. Prerequisite: Graduate standing and consent of instructor.

390R. **Analytical Methods: Electron-Microbeam Techniques.** An introduction to electron-microbeam instruments and their applications in the earth sciences. Lectures on relevant theory and concepts are supplemented by hands-on experience. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing in geological sciences or graduate standing and consent of instructor.

390S. **Analytical Methods: Mass Spectrometry.** An introduction to mass spectrometers and their applications in the earth sciences. Lectures on relevant theory and concepts are supplemented by hands-on experience. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing in geological sciences or graduate standing and consent of instructor.

191, 291, 391, 491, 591, 791, 891, 991. **Seminar in Geological Sciences.** For each semester hour of credit earned, the equivalent of one class hour a week for one semester; additional hours may be required for some topics. Offered irregularly. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in geological sciences. Some topics require additional prerequisites; these are identified in the Course Schedule.
391C. **Physical Hydrogeology.** Geological controls on groundwater resources; evaluation of aquifers, geothermal systems, and contamination problems; natural hazards caused by human use of groundwater. Three lecture hours a week for one semester, with discussion hours to be arranged. Normally offered in the fall semester only. Prerequisite: Graduate standing and concurrent enrollment in Geological Sciences 191W.

391D. **Regional Tectonics.** Development of tectonic theory culminating in the new global tectonics, and application of theory to selected orogenic areas. Three lecture hours a week for one semester. Offered irregularly. Prerequisite: Graduate standing in geological sciences.

391Q. **Topics in Quaternary Geology.** Interdisciplinary analysis of Quaternary chronology, environments, climatic changes, and erosional-depositional processes. Three lecture hours a week for one semester. Offered irregularly. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

191W. **Aquifer Testing.** Techniques of aquifer evaluation, including pumping tests, laboratory techniques, field mapping, and numerical analysis. Two laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Graduate standing. Geological Sciences 191 (Topic: Aquifer Testing) and 191W may not both be counted.

392M. **Modern Geological Sciences.** General discussion of the entire spectrum of geological sciences. Three lecture hours a week for one semester. Offered in the fall semester only. Prerequisite: Graduate standing in geological sciences, or graduate standing and consent of instructor.

193. **Technical Sessions.** Attendance required of all graduate students in geological sciences. Two lecture hours a week for one semester. Additional hours may be required. Normally offered in the fall and spring semesters only. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

194, 294, 394, 594, 694, 794, 894, 994. **Research in Geological Sciences.** Restricted to graduate students in geological sciences. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. Offered every semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in geological sciences.

397F. **Marine Geology and Geophysics Field Course.** Hands-on, team-based instruction in the collection and processing of marine geological and geophysical data along the Gulf of Mexico coast. Includes classroom, laboratory, and field components in Austin and at sea. Offered between the spring semester and the summer session; limited class meetings may begin in the spring semester. Only one of the following may be counted: Geological Sciences 348K, 397F, Marine Science 348 (Topic: Marine Geology and Geophysics Field Course). Prerequisite: Graduate standing.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in geological sciences and consent of the graduate adviser; for 698B, Geological Sciences 698A.

398R. **Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in geological sciences and consent of the graduate adviser.

298T. **Supervised Teaching in Geological Sciences.** Open to graduate students engaged in laboratory instruction under close supervision of the course instructors. Two lecture hours a week for one semester. Normally offered in the fall semester only. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Geological Sciences 399R, 699R, or 999R.
School of Information

INFORMATION STUDIES

Master of Science in Information Studies
Doctor of Philosophy

ACCREDITATION

The University’s program for the degree of Master of Science in Information Studies is accredited by the American Library Association. (The ALA does not concern itself with accrediting programs at levels other than the master’s degree.) The programs for the certification of learning resources personnel are accredited by the National Council for Accreditation of Teacher Education and approved by the State Board for Educator Certification.

FACILITIES FOR GRADUATE WORK

Facilities for students in the School of Information include an Information Technology Laboratory, a computer classroom, conservation and preservation laboratories, a video-editing suite, multimedia teaching stations in all classrooms, and access to a usability and accessibility laboratory. Students have access to advanced computer equipment and software for instructional and research use, supplementing the school’s physical and wireless network and computer facilities. Students receive a full-service Internet account and have access to various computer operating systems, such as Macintosh, Windows, and Linux.

The school has developed ongoing, competitive student positions with the University Libraries, the Tarlton Law Library, the Dolph Briscoe Center for American History, and the Harry Ransom Humanities Research Center to provide students with work and study opportunities.

AREAS OF STUDY

The School of Information offers education in the human and social aspects of information across its full life cycle, from creation through use and preservation. Students may select coursework from any area to best suit their career plans. The following three key areas are emphasized:

Organization. To have value for humans and organizations, the vast array of information resources must be organized and managed. From the creation of organizational schema and catalogs to the analysis of structures in language and data, information specialists have developed techniques and tools to support the location, management, and use of information. This area is designed so that students may learn the intellectual foundations of information organization and the technical skills required to analyze collections of both textual and nontextual materials for human use.

Interaction. People interact with information resources through a variety of technologies and through other people. Creating meaningful and effective interaction requires an understanding of how people think and reason, how they behave in specific contexts, and how the interfaces between people and information can best be designed. This area is designed so that students may learn to understand human needs and dispositions in information contexts and develop the methodological skills needed to help develop information interfaces that work well for all people.

Curation. Information resources require careful stewardship to ensure their long-term preservation. This process involves assessing the value of information to
future users and ensuring appropriate interventions for quality control and the migration of collections across technological platforms and over time. This area is designed so that students may learn how to appraise records, how archives are created and managed, and how best to preserve physical and digital records.

Graduates in this area generally have many career options and may find employment in libraries (both public and academic), archives, information technology firms, government agencies, museums, and large companies that have significant records and data to manage. Increasing employment options in the information design and user experience domains are also anticipated.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

William F. Aspray Jr.  David B. Gracy II
Diane E. Bailey  E. Glynn Harmon
Lecia J. Barker  Barbara F. Immoth
Randolph G. Bias  Matthew A. Lease
Andrew P. Dillon  Loriane Roy
Philip Doty  Ciaran Trace
Melanie Diane Feinberg  Jo Lynn Westbrook
Luis Francisco-Revilla  Megan A. Winget
Patricia K. Galloway  Yan Zhang
Gary Geisler

ADMISSION AND DEGREE REQUIREMENTS

MASTER OF SCIENCE IN INFORMATION STUDIES

A student seeking to enter the program must submit an application for admission to the Graduate School. He or she must also supply the School of Information with satisfactory letters of reference from three persons attesting to the applicant's character, scholarly ability, and professional promise. For more information on admission procedures, visit http://www.ischool.utexas.edu/admissions/.

Facility in the use of computers and networked communication is essential in professional work in information studies. This facility may be acquired through coursework in the school, but prior knowledge of computer applications is important to success in the program. Computer and Internet application tutorials are available online. A working knowledge of statistics and applied psychology is a practical necessity for positions involving administrative responsibilities in information service organizations.

The master's degree program entails forty semester hours of graduate and upper-division coursework (not more than nine hours of the latter). At least twenty-eight hours must be in information studies courses, including certain required courses. Up to twelve hours, depending on the student's background and objectives, may be in closely related courses in other subject areas. These courses must augment professional preparation; they do not ordinarily constitute a minor field in the degree program. A student's choice of courses must have the approval of the student's adviser.

Students conclude their studies with a capstone experience designed to enable them to integrate their professional education with the intellectual and institutional vocations toward which they are striving. Students fulfill this requirement by engaging in experiences that result in completion of one of four options: the professional experience and project, Information Studies 388L; a master's report, Information Studies 398R; the practicum in school libraries, Information Studies 388R; or a thesis, Information Studies 698.

Applicants for degree candidacy are required to have an overall grade point average of at least 3.00 in their MSInfoStds coursework. Within the overall grade point average, applicants must have an average of at least 3.00 in all information studies courses, including those not listed on the Application for Degree Candidacy. High grades in courses outside information studies do not serve to offset an average of less than 3.00 in information studies. However, high grades in information studies may raise the overall average. Information studies courses that are to be listed on the Application for Degree Candidacy may not be taken on the credit/no credit basis. Exceptions to this rule are Information Studies 388L, 388R, 698, and 398R.

DOCTOR OF PHILOSOPHY

Incoming students are expected to have an educational background that prepares them for their doctoral study. The elements of that background may vary depending on the area of research to be pursued and its associated methodology. Applicants who are admitted without this background may be asked to take additional coursework as part of their doctoral studies.

The objective of the doctoral program is to prepare graduates to contribute to the discipline through research and creative leadership. Emphasizing research, the program allows students to pursue advanced stud-
ies in the information discipline and in related subject areas, to study appropriate method and theory, and to learn to engage in advanced research by carrying out a guided and supervised dissertation project. The program is interdisciplinary; students may take courses from a variety of University offerings to supplement those in the School of Information.

Students must complete at least thirty-nine semester hours of coursework, consisting of six hours of required theory seminars, twelve hours of methods courses, twelve hours of required electives in the student’s major area within the school, and nine hours of elective courses from outside the school.

Students must also pass a qualifying examination before being admitted to candidacy. Finally, students must complete and defend a dissertation representing an original contribution to knowledge in the discipline.

Detailed information is available at http://www.ischool.utexas.edu/programs/phd.php.

CERTIFICATE PROGRAMS

The school offers a general certificate of advanced study (CAS) and endorsement of specialization (EOS) that can be tailored to meet the individual needs of experienced information professionals.

The CAS is designed for students who want either (i) to extend their study beyond the required forty semester credit hours, or (2) already hold a master’s degree in library and information studies or cognate fields and want to update and expand their education and skills, and/or develop proficiencies in preparation for specialized positions and activities. The CAS requires a minimum of twelve semester hours of coursework; more hours may be necessary depending on the student’s academic background and professional goals.

The EOS formally recognizes students who create programs of study concentration within the basic forty semester credit hours required for the Master of Science in Information Studies. The endorsement attests that students have successfully completed twelve semester credit hours of planned, cohesive study.

Certificates may also be completed while studying for the Master of Science in Information Studies. Students interested in pursuing a certificate program must have their plan of study approved by the graduate adviser. Specific course requirements for both certificates are available from the School of Information.

DUAL DEGREE PROGRAMS

The School of Information offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin American studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Law</td>
<td>Doctor of Jurisprudence</td>
</tr>
<tr>
<td>Middle Eastern studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Women’s and gender studies</td>
<td>Master of Arts</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: UT Administration Building (UTA) 5.202, phone (512) 471-3821, fax (512) 471-3971; campus mail code: D8600
Mailing address: The University of Texas at Austin, School of Information, 1616 Guadalupe, Room 5.202, D8600, Austin TX 78701
E-mail: info@ischool.utexas.edu
URL: http://www.ischool.utexas.edu/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

INFORMATION STUDIES: INF

380C. Information in Social and Cultural Context. Examines the role of information in human activities, particularly in relation to particular social and cultural contexts. Examines how individuals, groups, organizations, institutions, and society at large create, find, use, understand, share, transform, and curate information. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380D. Designing Dynamic Web Pages. Principles and practices for designing, developing, and evaluating interactive desktop and mobile Web pages. Theories and models for color, styles, and interactive page elements, such as forms. Students create and evaluate Web pages using current technologies, such as XHTML/HTML5, CSS, JavaScript, AJAX, and Adobe Flash. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380E. Perspectives on Information. Multidisciplinary and historical examination of concepts of information. Contrasts key literature from information studies with perspectives from other fields. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380K. Internet Applications. Introduction to Internet concepts, protocols, applications, and services. Examines the impact of policy and management decisions on current and future developments, and studies the design and implementation of Internet applications, including HTML, CSS, and related tools. Three lecture hours a week for one semester. Information Studies 380K and 380W may not both be counted. Prerequisite: Graduate standing.

380P. Introduction to Programming. Introduction to problem solving and structured thinking, with an emphasis on design and implementation. Concepts and constructs underlying modern programming languages, such as data types, variables, operators, procedures, functions, classes, and objects. Includes significant hands-on programming opportunities in designing Web, mobile, or desktop applications. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

181, 281, 381. Individual Studies. In-depth study of a problem or topic related to information studies, usually culminating in an examination or a scholarly written report. Individual instruction. With consent of the graduate adviser, may be repeated for credit. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

181E. Electronic Portfolio. Creation of a Web site that displays the student's professional aims, interests, and pursuits, including resume and work samples. Designed to be taken during the final semester of the Master of Science in Information Studies degree program. Individual instruction. Prerequisite: Graduate standing and concurrent enrollment in one of the following: Information Studies 388L, 388R, 698B, 398R.

381W. Advanced Problems in Information Studies. Study of a problem or topic related to information studies. Web-based instruction; no class meetings. With consent of the graduate adviser, may be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

382C. Understanding and Serving Users. Overview of human-computer interaction, understanding client groups, information filters, information literacy and information-seeking behavior, as well as user studies and usability testing. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382D. Introduction to Information Resources and Services. Major reference resources and strategies useful in providing information services in libraries and other information agencies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382E. Materials for Children. A survey of children’s literature; materials in various formats suitable for use by and with children. Evaluation tools, application of selection and evaluation criteria, and planning for the use of materials. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382F. Materials for Young Adults. Evaluation, selection, and use of books and other media to meet the needs of young adults of middle-school and high-school age. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382G. Information Resources and Services for Children and Young Adults. Examines the evaluation, selection, and use of books and other media for young adults of junior and senior high school age. Briefly surveys the reading experience, psychology of adolescence, and reading interests of young adults. Includes extensive reading and viewing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

382H. Legal Information Resources. Identification of relevant legal information resources, efficient retrieval of legal information, and the role of technology in legal information access. Three lecture hours a week for one semester. Information Studies 382H and 382L (Topic: Legal Information Resources) may not both be counted. Prerequisite: Graduate standing.
382K. **Information Resources in the Health Sciences.** Evaluation of conventional and online health information resources used by consumers and health care professionals for health promotion and disease and disorder prevention, diagnosis, treatment, and management. Includes traditional and alternative approaches, genetic clinical information approaches, and evidence-based approaches to the use of resources. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382L. **Information Resources and Services.** Evaluation and use of printed online information resources and services in specialized areas, with emphasis on new information technologies. Information-seeking behavior of users, document delivery, new roles of the information specialist in user support, and information needs of a variety of clients. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

382N. **Information Resources in Business.** Communication patterns, bibliographic organization, and information resources in business and industry. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382P. **Competitive Intelligence Resources and Strategies.** Resources and strategies for market and competitive analysis. Research and analysis of market trends and financial, technical, and cultural strengths and weaknesses of companies. Online, print, and primary research and analytical techniques. Ethics, process, and presentation are emphasized. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382R. **Introduction to Scientific and Technical Data Collections.** Communication patterns, data collection, and access for scientific and technical data. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382S. **Library Instruction and Information Literacy.** History of instruction in information service settings; learning theory, including learning styles; professional organizations involved in supporting instruction; instructional delivery modes and materials; and evaluation. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382T. **Information Services: Theory, Techniques, and Subject Areas.** Exploration of reference services; and evaluation and use of printed and online information resources and services, with emphasis on interpersonal communication and new information technologies. Information needs and information-seeking behavior of users; and new roles of the information specialist in user services. Includes information resources and services in the humanities and social sciences. Three lecture hours a week for one semester. Information Studies 382D is strongly recommended.

382U. **Electronic Resources for Children and Youth Seminar.** Exploration of digital information resources available for children and youth, including the range of content and availability, how information resources are conceived and created, and the implications of these resources for school and public libraries. The equivalent of three lecture hours a week for one semester. Information Studies 382G (Topic 2: *Electronic Resources for Children and Youth*) and 382U may not both be counted. Prerequisite: Graduate standing.

382V. **Visual Resources for Youth Seminar.** The history and selection criteria of the Caldecott Award; the history of picture books and publishing; academic and professional literature about children's materials; and selection criteria for picture books, including evaluating children's literature and developing the tools to analyze picture books for narrative, artistic, and compositional elements. Illustrative techniques and their effectiveness in relation to particular texts. The equivalent of three lecture hours a week for one semester. Information Studies 382G (Topic 1: *Visual Resources for Youth*) and 382V may not both be counted. Prerequisite: Graduate standing.

383D. **Mathematical Foundations of Information Studies.** Introduction to traditional finite mathematical concepts, including probability distributions and models, linear equations, matrix algebra, linear statistical models, basic information theory, and the use of mathematical and statistical software for modeling and data analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

383E. **Interpreting Implicit Information on the Web.** Theories and methods of Internet language and image interpretation. Examines persuasion, group and individual identity projection, and group-value demonstration. Focuses on how discourse is shaped by ideology, social forces, and the knowledge and beliefs of its producers within several information contexts, such as online communities, education, science, and healthcare. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

383S. **Library Information Science, Espionage, and Intelligence Gathering.** Examines the historical and conceptual linkages between the field of library information science and the practices of intelligence gathering and espionage. Explores the role and structure of the intelligence community, the similarities and contrasts between intelligence practitioners and other information professionals, and historical case studies that illuminate areas of overlap and cooperation between the disciplines. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

384C. **Organizing Information.** Introduction to the concepts of information organization, representation, and classification. Consideration of different traditions of practice and user concerns. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

384D. **Collection Management.** Philosophical and social context, objectives, and methodology of evaluating, selecting, and managing library materials. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
Descriptive Cataloging and Metadata. Standards, rules, and metadata formats for representing information entities in library catalogs and other bibliographic systems. Emphasis on the Anglo-American Cataloguing Rules and the MARC metadata format. Three lecture hours a week for one semester. Information Studies 384E and 384W may not both be counted. Prerequisite: Graduate standing.

Seminar in Information Organization. Critical, in-depth examination of significant concepts in information organization. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Concepts of Information Retrieval. Foundations and emerging areas of research in information retrieval and filtering, including system evaluation, major underlying models in the field, empirical methods of document classification, and applications of data mining techniques (such as clustering and dimensionality reduction) for information management. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Digital Repositories. Introduction to issues in selecting, managing, and using digital repositories in diverse institutional settings. Covers repository models, collections, metadata, interoperability, preservation, policies, work flows, interfaces, visualization, applications, and services. Includes working with different repository software. Examines the impact of repositories on institutional culture, work practices, and publication models. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Descriptive Cataloging and Metadata. Standards, rules, and metadata formats for representing information entities in library catalogs and other bibliographic systems. Emphasis on the Anglo-American Cataloguing Rules and the MARC metadata format. Web-based instruction; no class meetings. Information Studies 384E and 384W may not both be counted. Prerequisite: Graduate standing.

Human-Computer Interaction. The history and importance of human-computer interaction (HCI), theories of HCI design, modeling of computer users and interfaces, empirical techniques for analyzing systems and interfaces, interface design, and styles of interaction. Emphasis on reviewing research papers, current works, and future directions in HCI research. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Information Architecture and Design. The theory and design of information architecture: models that provide structure and context for information to shape meaning, purpose, and utility toward understanding. Students present theoretical reviews; map and design; and develop novel information architectures using a variety of methods and software applications. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Advanced Usability. Designed to build upon the skills covered in Information Studies 385P. Individual project evaluating a Web site or other software user interface. Students devise a plan for testing, secure IRB approval to test human subjects, conduct study, analyze data, write a report, and present the results and conclusions. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Information Studies 385P.

Digital Media Design. Design and production of graphic, audio, video, and multimedia materials, with emphasis on aesthetics and usability. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Projects in Human-Computer Interaction. Projects based on theories of human-computer interaction design, modeling of computer users and interfaces, empirical techniques for analyzing systems and interfaces, interface design, and styles of interaction. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Information Networks. History, design, and use of digital information networks. Emphasis on origins of the Internet in the United States, varied technical models for networked information services, and social analysis of networked communication from multiple disciplinary perspectives. Includes close review of classic papers in networked communication as well as current works. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Database Management. Principles and practices of database management and database design. Discussion and implementation of a database. Application life cycle, data dictionaries, relational database design, SQL queries, reports and other interfaces to database data, and documentation. Students work on individual and group projects. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Informatics. Investigation of informatics movements around the world and in various disciplines and professions, such as biomedicine, nursing, public health, education, business, law, and public affairs. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Usability. The basics of user-centered design through the lifecycle of a software product. Includes perceptual, psychological, and other scientific underpinnings of usability and the justification for the application of usability engineering in software development. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Knowledge Management Systems. Survey of knowledge management systems that enable the access and coordination of knowledge assets, including intranets, groupware, Weblogs, instant messaging, content management systems, and e-mail in both individual and organizational contexts. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

Survey of Digitization. Introduction to the issues and trends in digitization initiatives and management, including project planning and management, asset delivery and management systems, interoperability and the importance of standards, copyright and other legal issues, metadata basics, digital preservation, and specific digitization processes for documents, images, video, and sound. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
385S. Digital Libraries. Research, development, and evaluation
issues in digital libraries, including collection development
and digitization; provision of access to multimedia
materials; access strategies and interfaces; metadata and
interoperability; and the implications of digital libraries
with respect to policy and social issues. Three lecture
hours a week for one semester. Prerequisite: Graduate
standing.

385T. Special Topics in Information Science. Study of the
properties and behavior of information. Technology for
information processing and management. Three lecture
hours a week for one semester. May be repeated for credit
when the topics vary. Prerequisite: Graduate standing.

385U. Digital Media Collections. Collection design, resource
selection, description and organization, development
of user access mechanisms. May include collection
considerations in regards to various media, workflow and
project management, audience analysis, and notions of
authorship in the collection context. Three lecture hours
a week for one semester. Information Studies 385T (Topic:
Creating and Using Digital Media Collections) and 385U may
not both be counted. Prerequisite: Graduate standing.

385V. Health Informatics. Introduction to health informatics;
includes fundamentals of information in biomedicine,
nursing, public health, bioinformatics and genomics,
electronic records, and integrated systems. Three lecture
hours a week for one semester. Prerequisite: Graduate
standing.

385W. Security Informatics. Explores information, computer,
and network security in several contexts. Examines busi-
ness impacts of security, societal implications of the pro-
tection of information resources, and technical aspects
of securing information technology systems and data.
Three lecture hours a week for one semester. Prerequisite:
Graduate standing.

386. History of Information and Society. Topics on the histories
of information; libraries; archives; information science,
technology, and businesses; conservation; and muse-
ums. Three lecture hours a week for one semester. May
be repeated for credit when the topics vary. Prerequisite:
Graduate standing.

386C. Archives, Records, and Preservation in the Modern
World. Progress of archival enterprise, records manage-
ment, and preservation administration from the Renais-
sance to the present. Three lecture hours a week for one
semester. Prerequisite: Graduate standing.

386E. Information and Culture. Examines information as a
cultural phenomenon; may include e-commerce, privacy
and secrecy, censorship, information as a commodity,
Internet culture, access to cultural heritage, and control
of the cultural record. Three lecture hours a week for one
semester. May be repeated for credit when the topics vary.
Prerequisite: Graduate standing.

386G. Gender, Technology, and Information. Definitions of and
metaphors for technologies; in-depth analysis of femi-
nism and science and technologies studies, masculinities
and technologies, women's underrepresentation in tech-
nology, reproductive and sexual technologies, domestic
technologies, design and architecture, book clubs and
reading, and gender and (information) articulation work.
Three lecture hours a week for one semester. Only one
of the following may be counted: Graduate School 390J
(Topic: Gender, Technology, and Information), Information
Studies 386G, Women’s and Gender Studies 393 (Topic:
Gender, Technology, and Information). Prerequisite: Gradu-
ate standing.

386H. Theory and Methods of Oral History. Theories of oral
history; practical methods for producing, recording, an-
notating, and searching oral and video histories; archival
issues related to documentation of oral histories; use of
oral histories in various scholarly fields. Three lecture
hours a week for one semester. Prerequisite: Graduate
standing.

387. Administration. Theory and practice in the design, be-
havior, evaluation, and administration of libraries and
other information agencies and systems. Marketing of
information organizations and resources. Administrative
applications of technology. Three lecture hours a week
for one semester. May be repeated for credit when the topics
vary. Prerequisite: Graduate standing.

387C. Managing Information Organizations. Management
theory, concepts, processes, and practices as applied to
information agencies and systems. Three lecture hours
a week for one semester. Information Studies 387C
and 387W may not both be counted. Prerequisite: Graduate
standing.

387E. Evaluating Information Programs. Use of evaluation in
support of decision making, setting priorities, allocating
scarce resources, and improving programs. Students
study how to conceptualize, design, implement, and
report on evaluation in the context of working with a lo-
cal client. Three lecture hours a week for one semester.
Prerequisite: Graduate standing.

387M. Information Marketing. Examines the marketing of in-
formation agencies, systems, services, publications, and
software and hardware products to consumers. Includes
marketing research, planning, user studies, product de-
velopment, communication, pricing and distribution for
profit and nonprofit organizations. Three lecture hours
a week for one semester. Prerequisite: Graduate standing.

387T. Information Technology and Work. Examines the role
information technology plays in modern work. Case
studies of historical and modern examples of technology
implementation and work transformation. Includes qual-
itative techniques, such as interviewing and observing, for
data collection; data analysis; and presentation of data.
Three lecture hours a week for one semester. Prerequisite:
Graduate standing.
388C. School Library Management. Philosophy, objectives, and management of the school library; emphasis on facilities, staff resources, administrative procedures, and programs and services. Three lecture hours a week for one semester. Information Studies 388C and 388W may not both be counted. Prerequisite: Graduate standing.

388D. Planning and Management of Programs for Children and Young Adults. Designing and planning effective services and programs for children and young adults: technologies, information need analysis, and trends. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388E. Historical Museums: Context and Practice. The process of exhibit creation in historical museums, from planning through development to opening and maintenance, as a negotiation among stakeholders for influence on the story that is told. Students visit local historical museums and examine how presentations are influenced by the institutional position of the museum, including its history and resources; the concerns of museum employees; the influence of the audience and of those who are directly affected or represented by an exhibit; and the role of contractual professionals. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

388K. Organizational Environments. Mission, goals, and objectives of specific information settings. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 2: Academic Libraries. The relationship of academic library management to trends in postsecondary education, to the institution the library serves, and to the research community at large.

Topic 3: Special Libraries. Development and management of special libraries and information centers. Information Studies 388F and 388K (Topic 3) may not both be counted.

Topic 5: Rare Book and Special Collections. Administration of rare book and manuscript collections. Introduction to analytical bibliography.

Topic 6: Law Libraries. Overview of law librarianship, the discipline of law, and the culture of the legal environment, including the context in which law librarians, legal publishers, and other legal information professionals work.

388L. Professional Experience and Project. Study of a practical problem, current phenomenon, or professional issue in an institutional setting. Students prepare a final project intended for publication. Conference course. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, concurrent enrollment in Information Studies 181E, and completion of at least thirty-two semester hours of coursework in the graduate program in information studies.

388R. Practicum in School Libraries. Fieldwork in a school library under the supervision of qualified personnel. At least 125 hours of supervised fieldwork for one semester. Offered on the credit/no credit basis only. Only one of the following may be counted: Information Studies 388Q, 388R, 388S. Prerequisite: Graduate standing; credit or registration for Information Studies 382D, 382E or 382F, 384E, and 388C; concurrent enrollment in Information Studies 181E; and consent of the school library practicum coordinator. Participants will not receive monetary compensation.

388T. Internship in Libraries and Other Information Agencies. At least 125 hours of supervised fieldwork for one semester. Offered on the credit/no credit basis only. May not be counted toward any degree in the School of Information. Prerequisite: Graduate standing and consent of the student's adviser. Participants must receive monetary compensation.

389C. Archival and Records Enterprise. Theory and practice of archival administration and records management. Problems in acquiring, organizing, and providing for use of archives and office records; issues in deterioration and care of paper, books, photographic material, magnetic records, and other media through preservation programs for libraries and archives. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

389E. Introduction to Records Management. Systems for controlling recorded information in an organizational setting. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389G. Introduction to Electronic and Digital Records. Examines personal recordkeeping and information management to explore the creation, management, and preservation of digital information. Includes current developments in digital technology that affect recordkeeping. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389H. Appraisal and Selection of Records. Investigates the history, theory, and practice of selecting and appraising records information for permanent or quasi-permanent retention in an archival environment. Explores influences of other stakeholders on the selection and appraising process. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389K. Life Cycle Metadata for Digital Objects. Constructing the “metadata continuum” in order to understand how metadata may function as an authenticating wrapper for an electronic record. Analysis of the elements of the continuum, including records surveys and inventories, creation metadata, active management metadata, records schedules, accession records, cataloging and description metadata, maintenance records, and usage records. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

389M. Introduction to Issues in Records Information. Exploration of the fundamentals of records information and their role in society. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
389N. Seminar in Archival Enterprise. Theory and practice of archival administration and records management. Problems in acquiring, organizing, preserving, and providing for use of administrative and collected archives. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

389R. Introduction to Archival Enterprise I. Introduction to the records aspect of archival enterprise, from acquisition to use, with emphasis on arrangement and description. Three lecture hours a week for one semester. Information Studies 389D and 389R may not both be counted. Prerequisite: Graduate standing.

389S. Introduction to Archival Enterprise II. Administrative and professional issues, including organizing the work of a repository, management issues, marketing, space, law, and ethics. Three lecture hours a week for one semester. Information Studies 389D and 389S may not both be counted. Prerequisite: Graduate standing.

390C. Copyright: Legal and Cultural Perspectives. Digital and other important communication technologies; how copyright in the United States developed and has evolved; and copyright seen from a number of disciplinary points of view, such as legal studies, cultural history, and public policy. Other subjects may include the cultural commons; natural rights arguments for copyright versus social bargain and statutory arguments; identifying and protecting the public interest in information; the law of copyright and cultural categories such as the author, the work, intellectual property, and creation; and important federal court cases. Three lecture hours a week for one semester. Information Studies 390C and 390N (Topic: Copyright: Legal and Cultural Perspectives) may not both be counted. Prerequisite: Graduate standing.

390N. Information Policy. Critical examination of conflicts and trends in information policy in private organizations and in federal, state, and international public-sector organizations. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Federal Information Policy. Exploration of major information-policy conflicts around topics such as privacy, surveillance, and freedom of information; in-depth analysis of the implications of digital technologies in the post-9/11 United States. Designed to help students develop skill in policy analysis as a research method and familiarity with many kinds of sources of information about federal information policy.

Topic 2: Seminar in Information Policy. Analysis of issues and trends in information policy in various environments.

390P. Topics in Privacy. Policy, value systems, and critical theory regarding privacy, studied from historical, sociological, feminist, or other perspectives. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

391D. Doctoral Inquiry in Information Studies. Topics in the theoretical, methodological, and practical aspects of information studies. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to the doctoral program in information studies.

Topic 6: Directed Readings. Offered on the credit/no credit basis only.

Topic 7: Directed Research. Offered on the credit/no credit basis only.

Topic 8: Introduction to Doctoral Research and Theory I. Foundations of inquiry in the humanities, social sciences, and natural sciences, and a review of theories and methods of inquiry in information studies in particular.

Topic 9: Doctoral Research and Theory II. Epistemological concepts and processes of theory generation and testing in information studies, with special attention to research methods and specific problems of interest to the student.

392C. Preservation Administration and Services. Theory and practice of preservation administration and services. Problems in planning, organizing, and implementing preservation work in libraries, archives, and museums. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

392D. Preservation Basics. Fundamental issues and problem solving in the preservation of cultural heritage collections in libraries and archives. Topics include the development and ethics of preservation and conservation, types and causes of deterioration, preventive care and stabilization, monitoring and controlling interior environments, reformatting, and performing preservation-needs assessments. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392E. Materials in Libraries, Archives, and Museums. Underlying factors in the physical nature of materials; concepts of permanence, durability, and deterioration; challenges of both traditional and modern collections; emphasis on print and photographic collections. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392F. Risk Assessment and Collections Management. Agents of deterioration, including physical forces, security, disaster, and environmental conditions; risk assessment, strategies to reduce risk, and personal safety. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392G. Management of Preservation Programs. Management of specific preservation strategies for cultural record; preservation policy; the selection process for preservation; minor mending and repair operations; library binding and conservation treatment; preservation assessments; emergency preparedness; contracting for services; and budgeting, grant writing, and fund-raising for preservation. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
392H. Creating Sustainable Digital Collections. Hands-on activities that focus on building sustainable collections of digitized resources. Designed to help students gain curatorial understanding of the media to be digitized and knowledge of and experience with the technical and managerial aspects of the digitization process. Includes creation of metadata and digital preservation strategies for long-term access. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392K. Digital Archiving and Preservation. Examines the permanent archiving of digital information. Covers media refreshment, emulation, migration, and electronic records repository construction and administration. Case study projects involving campus repositories and off-campus institutions. Students use legacy hardware and software and digital forensics tools to preprocess digital collections for repository storage. Also explores issues in long-term electronic records preservation. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

392L. Introduction to Audio Preservation and Reformatting. Study of audio recording through a chronological examination of the development of recording; basic care and preservation of recordings; economics of audio preservation; and stability concerns of modern media. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392M. Advanced Audio Preservation and Reformatting. Exploration of changing concepts in the nature of audio information in different formats, issues of access within the context of preservation, criteria for prioritization of materials to be reformatted, considerations in invasive versus minimal restoration, and study of rare formats. Three lecture hours a week for one semester. Prerequisite: Graduate standing and credit or registration for Information Studies 392L.

392P. The Politics of Preservation. Introduction to the components of the media industries, using the available literature as well as the University’s film and video resources. The course employs both a theoretical and a practical approach to the archival media product. Debate over defining historical media material as artifact complements discussion of the realities of digitization and physical deterioration. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392C. Conservation Laboratory Techniques. Analysis, housing, and treatment of physical objects. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; Information Studies 392E is strongly recommended.

Topic 1: Book Laboratory I. Introduction to the ethics and methods of conservation of art and historic artifacts. Includes fundamentals of conservation treatment of simple bound library and archives materials through hands-on work in a laboratory setting. Additional prerequisite: Consent of instructor.

Topic 2: Book Laboratory II. Advanced hands-on conservation treatments for circulating book collections. Introduction to the conservation of publisher’s bindings and leather bindings in both circulating and special collections. Introduction to advanced examination and documentation for bound materials in special collections.

Topic 3: Book Laboratory III. Conservation treatment of special-collections bound materials. Includes developing curatorial relationships for special collection conservation and explores typical European book structures used from 1400 to 1800.

Topic 4: Advanced Book Conservation Treatment. Completion of advanced hands-on book conservation treatment projects, or other types of advanced collections conservation projects as arranged with the instructor.

Topic 6: Paper Laboratory I. Documentation of condition; identification of media; treatment; and mending and reinforcement of weakened supports.

Topic 7: Paper Laboratory II. Technical and aesthetic considerations of various methods in the conservation of paper objects. Treatment options; vellum and parchment manuscripts; and consolidation of flaking media. Examines and emphasizes the similarities and differences between works of art on paper and library and archival objects.

Topic 8: Conservation Science I. Introduction to the physical and chemical properties of materials used in fabrication; and identification and repair of books, photographs, manuscripts, and related objects.

Topic 9: Conservation Science II. Advanced exploration of the physical and chemical properties of materials used in fabrication; and identification and repair of books, photographs, manuscripts, and related objects. Includes a research investigation of a typical conservation problem. Offered on the letter-grade basis only.

397. Research in Information Studies. Methods and subjects of research in information studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Bibliography and Methods in Historical Research. Sources of information for, and techniques of conducting, investigations in history.

Topic 2: Practicum in Research. Offered on the credit/no credit basis only. Additional prerequisite: Consent of instructor and the graduate adviser.


Topic 4: Seeking Funding for Information Studies. Designed to help students gain an understanding of and hands-on experience with the pursuit of funding for information studies. Students investigate possible funding sources, and develop at least one grant or contract application.
397C. **Understanding Research.** Survey of the goals, methods, processes, and products of systematic inquiry. Designed to prepare students to critically evaluate information studies research. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

397D. **Bibliography and Methods in Historical Research.** Sources of information for and techniques of conducting investigations in history. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in information studies, Information Studies 397C, and written consent of the graduate adviser; for 698B, Information Studies 698A and concurrent enrollment in Information Studies 181E.

398R. **Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in information studies, Information Studies 397C, concurrent enrollment in Information Studies 181E, and written consent of the graduate adviser.

398T. **Supervised Teaching in Information Studies.** History and present status of education for librarianship and information studies. Curriculum design, systematic course design and management, teaching methodologies, and evaluation of learning. Three lecture hours a week for one semester. May be repeated for credit as a teaching practicum. Prerequisite: Graduate standing and consent of instructor.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Information Studies 399R, 699R, or 999R.
Graduate students in African and African diaspora studies have access to significant collections related to the field. The University Libraries collections contain over 50,000 books whose primary subjects relate to black history in various parts of the world. New books arrive daily as part of the library's approval plans. Each year the library automatically receives several thousand new academic books published in related disciplines from English-, Spanish-, French-, and Portuguese-language publishers. The same subjects are also covered by the University's patron-driven e-book plans in which 20,000 new e-books are loaded into the library catalog each year and instantaneously purchased and permanently added to the library collections whenever a user clicks on the e-book's link. The library currently has over 600,000 e-books.

The library subscribes to relevant research journals covering the African diaspora. Additional titles are available through the library's Inter-Library Loan department, which has access to materials from numerous academic libraries in Texas and the American West.

All candidates for the graduate degree are expected to develop competence in the field through interdisciplinary study in the humanities, social sciences, and fine arts. The program offers five areas of concentration: race and political economy; history and theory of black studies; race and urban life; economics, health, and education; migration and diaspora; and black expressive culture.

Two degree plans are available. The first requires students to complete thirty-three semester hours of coursework, including twelve hours in African and African diaspora studies, nine hours in a minor, and six hours in the thesis course.

The second degree plan requires students to complete thirty-three semester hours of coursework, including twelve hours in African and African diaspora studies; nine hours in a minor; and two reports, one in the major field and a second in another discipline.

All students must achieve demonstrated reading competence in an African diasporic language, such as English, Yoruba, Spanish, French, or Portuguese, of which the student is not a native speaker. All students must complete African and African Diaspora Studies 390.

Information about this degree was not available at the time of printing.
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

AFRICAN AND AFRICAN DIASPORA STUDIES: AFR

381. Topics in Theorizing Diaspora. Topics focusing on the academic literature in the humanities, social sciences, and fine arts relating to various theories of the African diaspora. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

382. Race and the Urban Crisis. Examines the roots of the urban crisis, or the decline of U.S. and global cities in the post–World War II era, and begins with the premise that the story of the urban crisis is simultaneously the story of racial crisis. Explores how the origins of themes such as urban unrest, concentrated poverty, the housing crisis, the drug epidemic, and welfare dependency are rooted in race, class, and spatial inequities. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

383. Africans in Latin America. Topics examine the history, expressive cultures, politics, religion, and music of the racially and culturally diverse region of Latin America; explore the intellectual history and political cultures of Africans in colonial and independence eras; and discuss the influence, survival, and the resilience of African traditions in modern Afro-Latin American culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

384. Studies in Yoruba Diaspora Cultures. Topics explore the various world views, literature, music, ritual performance, and cultural productions of Yoruba descendants in Brazil, Cuba, Trinidad, Haiti, the United States, and other New World locations. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

387D. Topics in the Performing Arts in the African Diaspora. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

388K. Anthropology of Education. Applies the tools of sociocultural anthropology to the exploration of issues facing students of African descent in different learning settings. Covers the basic methods of educational anthropology and readings that illuminate the learning circumstances, opportunities, challenges, and responses of black people in the United States and elsewhere. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390. Introduction to African and African Diaspora Studies. Explores the innovative, complex, and distinctively African Diaspora social structures and cultural traditions, as well as the historical, cultural, political, economic, and social development of people of African descent. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

397R. Secondary Report. Preparation of a report to be counted toward the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in African and African Diaspora studies; for 698B, African and African American Studies 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in African and African Diaspora studies and consent of the supervising professor and the graduate adviser.

YORUBA: YOR

382. Yoruba Language Studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
The University offers several unique resources for research on America. The Harry Ransom Humanities Research Center includes celebrated rare book and manuscript collections in American and modern literature; the Gernsheim Collection, one of the world’s largest archives of photographs, negatives, and books related to the history of photography; the Performing Arts Collection, with material related to the theatre, movies, vaudeville, the circus, and the history of magic; and the New York Journal-American photographic archive. Recent major acquisitions include the papers of Norman Mailer, Woody Allen, David Foster Wallace, Woodward and Bernstein’s records of the Watergate investigation, and the Magnum Archive Collection. The Nettie Lee Benson Latin American Collection is one of the world’s great archives of materials about and from Latin America. The Dolph Briscoe Center for American History contains the early archives of Texas, the largest collection now extant of historical manuscripts dealing with Texas, an extensive collection of rare and scarce books, pamphlets, and broadsides related to Texas and Southwestern history, as well as major national collections related to journalists, political figures, and activists from the 1960s and 1970s. The holdings of the Blanton Museum of Art include the Mari and James A. Michener Collection of American Painting and the C. R. Smith Collection of Art of the American West. Winedale, an outdoor museum of restored nineteenth-century Texas buildings, is a center for research in historic preservation and material culture.

The University Libraries provide some of the best research facilities in the United States. Convenient to the University are other research facilities, including the Lyndon Baines Johnson Library and Museum, the Texas State Library and Archives, the United Daughters of the Confederacy Library, the Catholic Archives of Texas, the Archives of the Episcopal Church, and the Republic of Texas Museum.

The University has one of the oldest and most highly regarded programs in American studies, which focuses on the cultural, social, and intellectual life of the United States, as well as the place of the United States and US citizens in the world. Students in the department analyze the American past and present from the perspectives of several disciplines, learn to synthesize their knowledge, and acquire the habits of mind needed for cultural analysis.

The program offers courses in areas such as American intellectual, cultural, and artistic life; race, ethnicity, and gender; cultural geography and material culture; and the public arts and popular culture. Specific courses are offered on topics such as immigration, transnationalism, and diaspora; American political theory; property, race, and critical legal studies; religion and psychology; childhood studies; food and foodways; animals; technology and design; social movements and radical political cultures; feminism, fashion, and beauty; the experiences of Latin American and Caribbean descendants in the United States; space and place; and public memory. The program also invites students to take advantage of the resources of the John L. Warfield Center for African and African American Studies, the Center for Asian American Studies, the Center for Mexican American Studies, the Schusterman Center for Jewish Studies, the Center for Women’s and Gender Studies, and the Américo Paredes Center for Cultural Studies. American studies courses are sometimes cross-listed with other courses throughout the University; in addition to the department’s core faculty, students may work with faculty members from departments such as anthropology, art and art history, English, geography and the environment, government, history, radio-television-film, religious studies, and from the School of Architecture, School of Law, and College of Education.

The courses that American studies students take outside the program train them in areas of expertise relevant to their central interests. With the approval of the graduate adviser in American studies, these courses may be in any of the liberal arts or in architecture, business, communication, education, fine arts, law, the sciences, or public affairs.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Robert H. Abzug
Ricardo C. Ainslie
Walter D. Burnham
Evan B. Carton
Cary Cordova
Janet M. Davis
Elizabeth Engelhardt
Douglas E. Foley
Neil F. Foley
William E. Forbath
Don B. Graham
Linda D. Henderson
Steven D. Hoelscher
Randolph R. Lewis
Nhi T. Lieu
Jose E. Limon
Stephen H. Marshall

Jeffrey L. Meikle
Julia L. Mickenberg
Angela N. Paik
Deborah A. Paredes
Richard H. Pells
Thomas G. Schatz
Mark C. Smith
Denise A. Spellberg
Janet Staiger
Thomas F. Staley
William M. Stott
Pauline T. Strong
Sharon L. Strover
Shirley E. Thompson
Janice S. Todd
Thomas A. Tweed
Seth L. Wolitz

DOCTOR OF PHILOSOPHY

To obtain the doctoral degree, a student must demonstrate reading competence in a foreign language, pass the American studies oral qualifying examination, prepare and defend a dissertation prospectus, and write and defend a dissertation that is an original contribution to knowledge about American culture and that involves interdisciplinary research.

A student prepares for the qualifying examination by taking courses in American studies and other disciplines of interest; these courses must have the approval of the graduate adviser. Through such coursework and independent reading under the direction of faculty members, the student masters four fields of specialization; these fields, one of which must be American studies, are those on which the student is questioned in the oral qualifying examination.

While preparing for the oral examination, a student with a master’s degree in American studies from UT Austin must take courses that include at least twelve semester hours of American studies beyond the work done for the master’s degree. Six of these hours must be in the research course (American Studies 390); the other six must be in an area approved by the graduate adviser. The graduate adviser may require additional courses beyond the twelve-hour minimum, depending on the student’s preparation.

A doctoral student without a master’s degree in American studies from UT Austin must complete six hours in the research course (American Studies 390); American Studies 385, 386, and 393; and six hours of additional coursework. The graduate adviser may require additional courses, depending on the student’s preparation.

FOR MORE INFORMATION

Campus address: Burdine Hall (BUR) 437, phone (512) 471-7277, fax (512) 471-3540; campus mail code: B7100
Mailing address: The University of Texas at Austin, Graduate Program, Department of American Studies, 1 University Station B7100, Austin TX 78712
E-mail: ellams@mail.utexas.edu
URL: http://www.utexas.edu/cola/depts/ams/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

AMERICAN STUDIES: AMS

385. Cultural History of the United States to 1865. An interdisciplinary cultural history survey of the United States. Three lecture hours a week for one semester, with additional hours to be arranged. Prerequisite: Graduate standing and consent of the graduate adviser.

386. Cultural History of the United States since 1865. An interdisciplinary cultural history survey of the United States. Three lecture hours a week for one semester, with additional hours to be arranged. Prerequisite: Graduate standing and consent of the graduate adviser.

390. Research Seminar in American Studies. Research on selected topics in American studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

391. Reading or Research Seminar in American Studies. Reading or research seminar on topics relevant to American studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

392. Conference Course in American Studies. Individual directed readings and conferences on selected problems or topics in American studies. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

393. Introductory Readings in American Studies. Seminar designed to acquaint the graduate student with the nature and extent of materials for interdisciplinary research on American culture. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

394. Sources and Methods in American Studies. Seminar designed to acquaint the graduate student with key sources and methodologies for interdisciplinary research on American culture. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in American studies and consent of the graduate adviser; for 698B, American Studies 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in American studies and consent of the graduate adviser.

398T. Supervised Teaching in American Studies. Seminar in the methods of interdisciplinary teaching and professional work in American studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing in American studies and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: American Studies 399R, 699R, or 999R.
Facilities available to graduate students in anthropology include the Dolph Briscoe Center for American History, the John L. Warfield Center for African and African American Studies, the Benson Latin American Collection, the Américo Paredes Center for Cultural Studies, and the Texas Archaeological Research Laboratory. The J. J. Pickle Research Campus and the Department of Anthropology offer facilities for research in antiquities conservation; geophysical survey; physical anthropology; paleontology; archaeomagnetic research; and primate anatomy and behavior. The department also maintains research facilities in archaeology, social anthropology, and linguistic anthropology.

 Areas of Study

Graduate study in anthropology is offered in the areas of physical anthropology, archaeology, cultural forms, linguistic anthropology, and social anthropology, with emphasis on North, Central, and South America, Micronesia, Central, South, and Southeast Asia, Madagascar, the Middle East, and Africa.

 Graduate Studies Committees

The following faculty members served on the Graduate Studies Committees in the spring semester 2011.

Anthropology

Kamran Ali
Deborah A. Bolnick
James B. Brow
Karl W. Butzer
Craig A. Campbell
Darrell G. Creel
James R. Denbow
Nora C. England
Patience L. Epps
Veit F. Erlmann
Richard R. Flores
Douglas E. Foley
Maria Franklin
Kaushik Ghosh
Edmund T. Gordon
Charles R. Hale
John Hartigan

Thomson R. Hester
John W. Kappelman Jr.
Elizabeth L. Keating
Ward W. Keeler
Edward C. Kirk
Rebecca J. Lewis
Jose E. Limon
Martha Menchaca
Sofian Merabet
James A. Neely
Angela M. Nonaka
Deborah J. Overtorff
Jemima Pierre
Denne N. Reed
Enrique R. Rodriguez
Liza J. Shapiro
Joel F. Sherzer

Lok C. Siu
Christen Smith
Shannon Speed
Kathleen C. Stewart
Pauline T. Strong
Brian M. Stross
Circe D. Sturm

John W. Traphagan
Fred Valdez Jr.
Joao H. Vargas
Kamala Visweswaran
Maria D. Wade
Samuel M. Wilson
Anthony C. Woodbury

Cultural Forms

Kamran Ali
Craig A. Campbell
Veit F. Erlmann
Richard R. Flores
Maria Franklin
Kaushik Ghosh
John Hartigan
Elizabeth L. Keating
Ward W. Keeler

Jose E. Limon
Martha Menchaca
Robin D. Moore
Sonia T. Seeman
Stephen M. Slawek
Christen Smith
Kathleen C. Stewart
Pauline T. Strong
Brian M. Stross

Degree Requirements

Master of Arts

The degree program is available only to students who are enrolled in the doctoral program in anthropology, and is offered in two options: with thesis or with report. The thesis option requires thirty semester hours of coursework; the report option requires thirty-three. Both options require students to complete the following: six semester hours of core coursework in anthropology, including the core course in the student’s subdiscipline; a minimum of twelve semester hours of coursework in anthropology; a minimum of six semester hours of coursework in a minor outside the Department of Anthropology; and either the report or thesis course. Recommended minors include Asian studies, art history, biology, communication, comparative literature, computer science, economics, English, geography, geological sciences, government, history, Latin American studies, linguistics, philosophy, psychology, sociology, statistics, Middle Eastern studies, American studies, women’s and gender studies, cultural studies, and ethnomusicology.

Doctor of Philosophy

A Master of Arts or an equivalent degree in anthropology or a closely related field is required for admission to the doctoral program. The student must complete
three of the following core courses: Anthropology 392K, 392L, 392M, 392N, and 392P, including the core course in his or her subdiscipline of archaeology, cultural forms, linguistic anthropology, social anthropology, or physical anthropology; students with an extensive background in a subfield may petition the Graduate Studies Committee for exemption from core courses in that area.

Students in the cultural forms subdiscipline must include Anthropology 392M and 392P among their core courses and must complete the graduate portfolio in cultural studies. Graduate portfolio programs are described on page 6. Additional information about the graduate portfolio in cultural studies is published by the Américo Paredes Center for Cultural Studies at http://www.utexas.edu/cola/centers/culturalstudies/.

All students must fulfill a foreign language requirement; information about this requirement is available from the graduate adviser. A comprehensive examination is given in three areas of specialization. The topics are selected by the student in consultation with an examination committee. The student must also write and defend a detailed prospectus on his or her dissertation research. After completing the comprehensive examination(s), the student files an application for candidacy and writes and defends the dissertation.

FOR MORE INFORMATION

Campus address: Student Activity Center (SAC) 4.102, phone (512) 471-4206, fax (512) 471-6535; campus mail code: C3200
Mailing address: The University of Texas at Austin, Graduate Program, Department of Anthropology, 1 University Station C3200, Austin TX 78712
URL: http://www.utexas.edu/cola/depts/anthropology/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ANTHROPOLOGY: ANT

380J. Conference Course in Archaeology. Individual instruction in specialized problems of advanced research in archaeology. Individual instruction. May be repeated for credit. Prerequisite: Graduate standing, and consent of instructor and the department prior to registering.

380K. Topics in Archaeological Method and Theory. A major category of archaeological topics in which the emphasis is on anthropological theory pertinent to archaeological data and its interpretation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 6: Ethnohistory and Archaeology.

381C. Quechua Language and Society in the Andes I. Same as Latin American Studies 381C. Beginning spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 324L (Topic: Quechua Language and Society in the Andes), 351C, 381C, 389 (Topic: Quechua Language and Society in the Andes), Latin American Studies 324L (Topic: Quechua Language and Society in the Andes), 391 (Topic: Quechua Language and Society in the Andes). Prerequisite: Graduate standing and consent of instructor.

381D. Quechua Language and Society in the Andes II. Same as Latin American Studies 381D. Intermediate spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 324L (Topic: Advanced Quechua Language and Society in the Andes), 351D, 381D, 389 (Topic: Advanced Quechua Language and Society in the Andes), Latin American Studies 324L (Topic: Advanced Quechua Language and Society in the Andes), 391 (Topic: Advanced Quechua Language and Society in the Andes). Prerequisite: Graduate standing and consent of instructor.

382N. Geo-Archeology and Environmental History. Same as Geography 382N. Long-term ecology as reconstructed from settlement and land-use histories. Empirical case studies in environmental history from the Mediterranean region, the Near East, and Mesoamerica. Applications to degradation, desertification, sustainability, and global change. Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 382N, Geography 356 (Topic: Geo-Archeology), 355C. Prerequisite: Graduate standing.
383M. Topics in Archaeological Techniques and Procedures. A major category of archaeological topics in which the emphasis is on techniques and procedures pertinent to the analysis of prehistoric data. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. 
   Topic 1: Conference Course. 
   Topic 2: Technological Analysis: Lithics. 
   Topic 4: Technological Analysis: Ceramics. 
   Topic 6: Field Projects.

683N. Field Archaeology. Two hundred forty hours of fieldwork. Prerequisite: Graduate standing and consent of instructor.

384M. Topics in Regional Archaeology. Prehistoric cultural developments of a major geographical area; comparative cultural developments in ecologically similar areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
   Topic 1: Conference Course.
   Topic 2: Technological Analysis: Lithics.
   Topic 4: Technological Analysis: Ceramics.
   Topic 6: Field Projects.

386J. Conference Course in Social Anthropology. Individual instruction in specialized problems of advanced research in social anthropology. Individual instruction. May be repeated for credit. Prerequisite: Graduate standing, and consent of instructor and the department prior to registering.

388. Topics in Physical Anthropology. Constitutes one of two principal categories of courses in physical anthropology covering substantive studies in primate behavior, primate anatomy and evolution, human evolution, and growth and development. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
   Topic 5: Primate Evolution.
   Topic 7: Human Evolution.
   Topic 8: Primate Anatomy.
   Topic 9: Primate Behavior.
   Topic 11: Hominid Paleocoeology.

388J. Conference Course in Physical Anthropology. Individual instruction in specialized problems of advanced research in physical anthropology. May be repeated for credit. Prerequisite: Graduate standing, and consent of instructor and the department prior to registering.

388K. Topics in General Anthropology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
   Topic 2: Anthropology of Education. Same as Curriculum and Instruction 380G. A study of social life in contemporary American schools from an anthropological perspective. Additional prerequisite: Twelve semester hours of upper-division coursework in education or consent of instructor.
   Topic 5: Ethnographic and Qualitative Research Methods.

389. Topics in Unwritten Languages. Intensive instruction in selected unwritten, usually aboriginal, languages. Three lecture hours and five laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

389J. Conference Course in Unwritten Languages. Individual instruction in specialized problems in selected unwritten, usually aboriginal, languages. May be repeated for credit. Prerequisite: Graduate standing, and consent of instructor and the department prior to registering.

389K. Topics in Regional Ethnography. Anthropological surveys and analyses of societies and cultures of distinctive world areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. 
   Topic 1: Conference Course.
   Topic 10: Indo-European Culture and Religion. 
   Topic 17: Mexican America.
   Topic 20: South Asia: History and Ethnography. Issues in the history and ethnography of the Indian subcontinent. Topics may include class, caste, and ethnicity; communalism and secularism; colonialism and postcolonialism; the state and ethnic violence; anthropology, indology, and history.

391. Topics in Social Anthropology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
   Topic 4: Cultural Construction of Masculinity.
   Topic 7: Researching Women in Institutions.
   Topic 15: History and Anthropology.
   Topic 22: Representation and Signification.
   Topic 27: Consciousness and Resistance.
   Topic 32: Gender, Ethnicity, and Nationalism. Same as Asian Studies 391 (Topic 4: Gender, Ethnicity, and Nationalism).

391L. Topics in Research Methods in Physical Anthropology. In this second major category of courses in physical anthropology are listed those that have research techniques as their principal focus. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
   Topic 6: Analysis of Primate Anatomy.

392K. Introduction to Graduate Archaeology. Core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392L. Introduction to Graduate Physical Anthropology. Core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392M. Introduction to Graduate Social Anthropology. Core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
392N. Introduction to Graduate Linguistic Anthropology. Same as Linguistics 396 (Topic 2: Introduction to Graduate Linguistic Anthropology). Core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

392P. Introduction to Cultural Forms. Core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392Q. Introduction to Graduate Anthropology. Core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392R. African Diaspora Anthropology. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392S. Women's and Gender Studies. Core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392T. Mesoamerica and Borderlands. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

393. Topics in Linguistic Anthropology. Training and individual research in subjects concerning the relations between language and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.


  Topic 7: Discourse Analysis. Additional prerequisite: Consent of instructor.

  Topic 8: Ethnography of Speaking. Same as Linguistics 396 (Topic 3: Ethnography of Speaking). Additional prerequisite: Consent of instructor.

  Topic 14: Language and Power. Additional prerequisite: Consent of instructor.

  Topic 16: Introduction to Diachronic Linguistics: Germanic. Same as Classical Civilization 383 (Topic 2: Introduction to Diachronic Linguistics: Germanic), German 381 (Topic 3: Introduction to Diachronic Linguistics: Germanic), and Linguistics 383 (Topic 8: Introduction to Diachronic Linguistics: Germanic). Additional prerequisite: Twelve semester hours of upper-division coursework in German or consent of instructor.


  Topic 20: Field Methods in Ethnomusicology.

  Topic 26: Marxism and Expressive Culture.

  Topic 29: Object, Matter, and Desire. Examines various questions regarding matter and meaning.

  Topic 30: Affect. A survey of theories of affect, including those of Freud, Foucault, and Deleuze, feminist theory, phenomenology, globalization theory, and ethnography.

  Topic 31: Public Culture. Introduction to the theory and ethnography of public culture.

  Topic 32: Deleuze. The major works of Gilles Deleuze, including the study of the ontology of differences and flow, resonance, affect, vitality, lines of flight, and assemblage.

  Topic 33: Cultural Critique. Various forms of cultural critique, including culture jamming, speed theory, experimental ethnographic writing, posthumanism, postpositivism, and the memoir.

  Topic 34: New Ethnographic Writing. Reading and writing new forms of ethnography, including experimental writing, performative writing, new journalism, and the memoir.


  Topic 36: Representational Practices. Theories of representation and representational practices, including the representation of collective selves and others in colonial and ethnographic narratives, collections, and displays.

  Topic 37: Cultural Analysis: The Case of Class. The development of class analysis in history, sociology, and anthropology, including innovative approaches to the reproduction and performance of class identities.

  Topic 38: Cultural Analysis: The Case of Race. Current uses of cultural analysis across a range of disciplines, focusing on how race is accounted for in a variety of invocations of culture.

  Topic 39: Cities in Time and Space. The difficulties associated with making cities intelligible in terms of their distinctive historical and cultural dynamics.

  Topic 40: Anthropology and Mass Media. Anthropology and mass media both inside and outside the West. Includes television, film, and popular music.

  Topic 41: Anthropology of Science. Anthropological perspective on the position of scientific disciplines within their broader social contexts and the transformations of social orders based on developments of scientific knowledge.

  Topic 42: Foucault and Cultural Studies. Examination of Foucault’s major works, including an assessment of his theoretical and methodological contributions to scholarly research and political activism.

  Topic 43: Black Queer Studies.
Topic 44: Advanced Topics in Black Feminisms. Theory and practice of black and Third-World feminisms, including as political space, activist methodology, artistic inspiration, and scholarly choice.

Topic 45: Contemporary Cuban Public Culture(s). The major preoccupations and tensions of public culture in the state of Cuba and the nation of individual Cubans.

Topic 46: Black Public Culture: Diasporic Texts and Contexts. Survey of cultural expressions and political moments of African-descended people since the social, cultural, and political upheavals of the 1970s.

395K. Cultural Adaptation and Change. Same as Geography 395. A graduate-level introduction to cultural behavior, adaptation, evolution and transformation, with emphasis on demography, diffusion, migration, ethnicity, and institutions. Three lecture hours a week for one semester. Prerequisite: Graduate standing in anthropology or a related field, and consent of instructor.

397. Conference Course in Anthropology. Individual instruction for graduate students on specialized problems of advanced research. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

ASIAN STUDIES

Master of Arts (in Asian Studies)
Master of Arts (in Asian Cultures and Languages)
Doctor of Philosophy (in Asian Cultures and Languages)

FACILITIES FOR GRADUATE WORK

The Perry-Castañeda Library contains more than three hundred thousand volumes of South Asian and East Asian material, related chiefly to the history, cultures, languages, literatures, politics, governments, and social and economic conditions of South and East Asia. The Benson Latin American Collection contains significant holdings on diasporic communities of East and South Asians, and the Fine Arts Library acquires material on the arts, music, and theatre throughout Asia, including video and sound recordings. The Lyndon Baines Johnson Library and Museum includes material related to Asian history and international relations, while the Harry Ransom Humanities Research Center holds photographs and rare manuscripts from or about Asia.

AREAS OF STUDY

The Master of Arts with a major in Asian studies is an interdisciplinary professional degree with a regional concentration on East Asia (China, Japan, Korea), South Asia, or both. The degree is intended primarily for those preparing for careers in fields such as business, communication, government, information studies, law, the military, and community college teaching, or to prepare for further study in another discipline or area studies program.

The Master of Arts and Doctor of Philosophy degrees with a major in Asian cultures and languages are intended for students whose career objective is college or university teaching. For these degrees, students concentrate in Chinese, Hindi, Japanese, Malayalam, Sanskrit, Tamil, Telugu, or Urdu.
There is considerable flexibility in meeting degree requirements. Each student, in consultation with the
graduate adviser, designs an individual program within the framework of the requirements given on page 290.

With the approval of the graduate adviser and the graduate dean, students may design special programs
that include courses outside the Department of Asian Studies that are related to the major area of study.

Graduate courses are offered regularly in the histories, cultures, religions, languages, and literatures of
Asia. The study of these languages and cultures may also be included in programs leading to master’s or
doctoral degrees in other disciplines.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011:

Itty Abraham
Kamran Ali
Zoltan D. Barany
Joel P. Breton
Sung-Sheng Yvonne Chang
David J. Eaton
Toni L. Falbo
Kirsten C. Fischer
Oliver Freiberger
Kaushik Ghosh
Kate Gillespie
Lalitha Gopalan
Ian F. Hancock
Kathryn G. Hansen
Roger Hart
Geraldine Heng
Heather Hindman
Madeline Y. Hsu
Syed A. Hyder
John W. Kappelman Jr.
Ward W. Keeler
Robert D. King
Shanti Kumar
Janice Leoshko
Huaiyin Li
William R. Louis
Patricia Maclachlan
Madhavi Mallapragada
Mark Metzler
Gail Minault
J. P. Olivelle
Robert M. Oppenheim
Stephen H. Phillips
Thomas W. Pullum
Martha A. Selby
David M. Sena
Thomas K. Seung
Janet Staiger
Nancy K. Stalker
James B. Steinberg
George Sudarshan
Cynthia M. Telbot
John W. Traphagan
Chien-Hsin Tsai
Kamala Visweswaran

ADMISSION REQUIREMENTS

MASTER OF ARTS WITH A MAJOR IN ASIAN STUDIES

This program is intended for students who wish to acquire deeper knowledge in Asian studies and related
language skills in order to pursue a career in business, government, nongovernmental organizations,
or the like, or to prepare for further study in another discipline or area studies program. Successful applicants hold a bachelor's degree, often in a related field, and have a strong interest in China, Japan, Korea, South Asia, or some combination of these. Since they will specialize in one of these geographic areas and study at least one language of that area to an advanced level, previous language training is useful. Those who apply without language training may complete first- and second-year college level language coursework after they are admitted, but these courses may not count toward the credit hours required for the master's degree.

MASTER OF ARTS / DOCTOR OF PHILOSOPHY WITH A MAJOR IN ASIAN CULTURES AND LANGUAGES

This program is intended for students who wish to obtain a doctorate in order to pursue an academic career in the study of China, Japan, or South Asia. They may apply to enter the program with a bachelor's degree in area studies or a related field. Most applicants will have knowledge of an Asian language before applying for admission. Students without this knowledge but whose applications are otherwise outstanding may also be accepted into the program. Students may complete first- and second-year college level language coursework after they are admitted, but these courses may not count toward the credit hours required for their master's and doctoral degrees. Successful applicants holding only a bachelor's degree will initially be enrolled in the master of arts program, with the expectation that after obtaining the master's degree they will continue their study in the doctoral phase of the program. Applicants who already hold a master's degree in a related field may be admitted directly to the doctoral phase of the program. Such applicants normally have an advanced level of proficiency in the language and graduate-level coursework in the area of their specialization.
DEGREE REQUIREMENTS

MASTER OF ARTS WITH A MAJOR IN ASIAN STUDIES

All students in the program are required to take six semester hours of coursework in historical studies relating to their field of specialization. Furthermore, to complete the degree program, students are expected to show proficiency in a language appropriate to their interests, as determined by their adviser, either by completing six hours of advanced language study with a grade of at least B in each course or by passing a proficiency examination.

Students may choose either the report option or the thesis option to conclude their master’s program. The report option consists of at least thirty semester hours of coursework, including the report course, which is a three-hour, one-semester project in which the student conducts research and writes a report on a given topic. The thesis option consists of at least thirty semester hours of coursework, including the thesis course, which is a six-hour, two-semester project in which the student does in-depth research on a given topic.

Students who choose the thesis option must take at least twelve hours of courses in their area of specialization, with no more than six hours in any one discipline (such as literature, religion, visual culture, etc.). Students who choose the report option must take at least fifteen semester hours of such electives, with no more than nine hours in any one discipline.

Up to six hours of undergraduate upper-division coursework, including language coursework, may be counted toward the degree.

MASTER OF ARTS/DOCTOR OF PHILOSOPHY WITH A MAJOR IN ASIAN CULTURES AND LANGUAGES

This program requires a minimum of sixty semester hours of coursework and consists of two phases. The first phase (master of arts) requires thirty semester hours of coursework, including the report course. Students must take at least three courses in their area of specialization—for example, in Japanese culture, Indian religion, or Chinese literature. They must also take one graduate course that introduces them to research methods of the appropriate discipline—for example, in historiography or literary theory or criticism—and another course on the general historical or cultural background of Asia. To complete the master’s degree phase, students are expected to show proficiency in a language offered by the Department of Asian Studies, either by completing six semester hours of advanced language study with a grade of at least B in each course or by passing a proficiency examination. To complete the master’s degree program, students must submit, in the last semester of their coursework (normally the fourth semester), a report which shows their ability to conduct independent research. Successful completion of this report is required for admission to the PhD phase.

The PhD phase of the program requires at least thirty semester hours of coursework beyond the master’s degree, in addition to dissertation courses. Within their field of expertise (China, Japan, or South Asia), students must complete fifteen semester hours in the major area of specialization, nine hours in the minor area of specialization, and six hours in theory and methodology related to the major and/or minor area(s). Areas of specialization must be approved by the graduate adviser. PhD students are expected to continue advanced language study until the completion of their coursework. Up to six hours of upper-division undergraduate advanced language courses may be counted toward the degree.

Competency in at least one modern foreign language that will be used in research is required. The research language may be a European language, such as French or German, or a modern Asian language offered by the Department of Asian Studies. If the student chooses to study an Asian language as his or her research language, the language should be one that is pertinent to the student’s professional development, such as Chinese for students whose primary language of study is Japanese, or Hindi for students whose primary language of study is Sanskrit. The choice of language(s) and the required level of proficiency are determined by the graduate adviser in consultation with the faculty.

To be admitted to candidacy for the doctoral degree, the student must take comprehensive examinations in his or her area of specialization and demonstrate research-level proficiency in the language(s) of their field. Normally, students take their comprehensive examination, including an oral defense, in the third or fourth semester of the PhD phase.

After passing the comprehensive examination, the student, in consultation with the graduate adviser, selects five faculty members to form a dissertation committee: the chair of the committee is the student’s dissertation supervisor. Published guidelines regarding the comprehensive examination, admission to candidacy, and completion of the dissertation are available from the Department of Asian Studies.
DUAL DEGREE PROGRAMS

The Department of Asian Studies offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Global Policy Studies</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address:  Will C. Hogg Building (WCH) 4.134, phone (512) 471-5811, fax (512) 471-4469; campus mail code: G9300
Mailing address:  The University of Texas at Austin, Graduate Program, Department of Asian Studies, 1 University Station G9300, Austin TX 78712
URL:  http://www.utexas.edu/cola/depts/asianstudies/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ASIAN STUDIES: ANS

180C, 280C, 380C. Conference Course in Asian Studies. Supervised individual study of selected problems in Asian studies. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor on form obtained from the graduate coordinator.

381. Topics in Chinese Culture and Society. Study of various aspects and periods of Chinese culture and society. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.


383. Topics in Japanese Culture and Society. Study of various aspects and periods of Japanese culture and society. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 2: Japan since 1945. A survey of political, social, and cultural change from 1945 to 1980.

383W. War and Defeat in Japanese History and Memory. Interdisciplinary exploration of the Japanese experience and memory of the Pacific War, including topics such as Hiroshima, comfort women, the US occupation, and contemporary controversies surrounding textbooks and the Yasukuni Shrine. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

384. Topics in South Asian Culture and Society. Study of various aspects and periods of South Asian culture and society. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 2: Communalism in Colonial India. Same as History 382N (Topic 4: Communalism in Colonial India). Asian Studies 384 (Topic 2) and History 381 (Topic: Communalism in Colonial India) may not both be counted.


Topic 5: Social and Religious Reform in Modern India. Same as History 382N (Topic 1: Social and Religious Reform in Modern India). Asian Studies 384 (Topic 5) and History 388K (Topic: Social and Religious Reform in Modern India) may not both be counted.

Topic 6: South Asian Diaspora.
384C. Core Studies in South Asia. An introduction to research methods used in South Asian studies. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Asian Studies 384 (Topic: Core Studies in South Asia) and 384C may not both be counted. Prerequisite: Graduate standing.

384E. Asceticism. Examines ascetic contexts of various religious traditions, definitions of asceticism, the relationship between ascetic beliefs and ascetic practices, and the benefits and risks of using a comparative approach to study asceticism. Three lecture hours a week for one semester. Asian Studies 384 (Topic: Asceticism) and 384E may not both be counted. Prerequisite: Graduate standing.

384G. Gender and the Body in South Asian Text and Practice. An introduction to how gender is used as a category of analysis across the humanities and social science disciplines; and how the body is used as an object for analysis. Three lecture hours a week for one semester. Asian Studies 384 (Topic: Folklore and Oral Performance in South Asia) and 384G may not both be counted. Prerequisite: Graduate standing.

384P. Theatre, Gender, and Performance in South Asia. Examines the interlinked phenomena of female performance and female impersonation in South Asia. Includes historical, ethnographic, and theoretical approaches to gender in music, dance, and theatre. Three lecture hours a week for one semester. Asian Studies 384 (Topic: Theatre, Gender, and Performance in South Asia) and 384P may not both be counted. Prerequisite: Graduate standing.

385M. Modern and Postmodern Chinese Literary Culture. Examines the complex phenomena of modernism and post-modernism in literature and the arts in China, Taiwan, and Hong Kong. Three lecture hours a week for one semester. Asian Studies 385 (Topic: Modern and Postmodern Chinese Literary Culture) and 385M may not both be counted. Prerequisite: Graduate standing.

385S. Critical Scholarship on Modern Chinese Literature. Survey of English-language critical scholarship on modern Chinese literature. Three lecture hours a week for one semester. Asian Studies 385 (Topic: Critical Scholarship on Modern Chinese Literature) and 385S may not both be counted. Prerequisite: Graduate standing.

386. Topics in Japanese Language and Literature. Study of various aspects and periods of Japanese language and literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

387. Topics in Chinese Language and Literature. Study of various aspects and periods of Chinese language and literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

388C. Critical Approaches to the Study of South Asian Texts. Introduction to analyzing South Asian literature through the exploration of Indian “classics” on connoisseurship, reader response, style, and suggestion, as well as modern and contemporary works on literary theory from the West. Three lecture hours a week for one semester. Asian Studies 388 (Topic: Critical Approaches to the Study of South Asian Texts) and 388C may not both be counted. Prerequisite: Graduate standing.

388M. Translating India. Introduction to literary translation from a wide range of Euro-American and South Asian stances and viewpoints, focusing on the political nature of the act and the art of translation in colonial and post-colonial contexts. Three lecture hours a week for one semester. Asian Studies 384 (Topic: Translating India) and 388M may not both be counted. Prerequisite: Graduate standing.

190, 290, 390. Topics in Asian Studies. Study of various Asian studies–related topics that do not focus on any single geographic region. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.
Topic 2: Authoritarian Political Systems. Asian Studies 390 (Topic 2) is same as Government 390L (Topic 7: Authoritarian Political Systems). Comparative study of authoritarian and totalitarian patterns of government, past and present, Western and non-Western; special emphasis on Communist and Fascist systems. Additional prerequisite: Twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.


390C. Core Readings in Modern East Asia. Various aspects of East Asian history, culture, and society. Designed for new graduate students in the Department of Asian Studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390M. Aesthetic Modernism in East Asia. Examines modernist trends in literature and the arts since the early twentieth century in places such as China, Japan, Taiwan, South Korea, Hong Kong, and Vietnam. Three lecture hours a week for one semester. Asian Studies 390 (Topic: Aesthetic Modernism in East Asia) and 390M may not both be counted. Prerequisite: Graduate standing.

391. Asia and the World. Study of various subjects with Asian studies-related content. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the letter-grade basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.


Topic 3: European Imperialism: British Empire. Same as History 380L (Topic 1: European Imperialism: British Empire) and Middle Eastern Studies 381 (Topic 12: European Imperialism: British Empire). Study of the British empire in the Middle East, Asia, and Africa. Additional prerequisite: Consent of the graduate adviser.

Topic 4: Gender, Ethnicity, and Nationalism. Same as Anthropology 391 (Topic 32: Gender, Ethnicity, and Nationalism).

Topic 6: International Business Fellows Seminar. Same as Latin American Studies 381 (Topic 8: International Business Fellows Seminar); Middle Eastern Studies 380; and Russian, East European, and Eurasian Studies 380. Multidisciplinary seminar for students in area studies, business administration, law, and public policy. The faculty includes both academics and business leaders. Offered on the letter-grade basis only. Asian Studies 391 (Topic 6) and International Business 395 (Topic: International Business Fellows Seminar) may not both be counted.

Topic 7: Women in Islamic Societies. Same as History 382N (Topic 2: Women in Islamic Societies) and Middle Eastern Studies 385 (Topic 7: Women in Islamic Societies). Only one of the following may be counted: Asian Studies 391 (Topic 7), History 388K (Topic: Women in Islamic Societies), Middle Eastern Studies 381 (Topic 35: Women in Islamic Societies), 390 (Topic 2: Women in Islamic Studies).

394. Tools and Methods in Asian Research. Study of the major research tools and methods used in current Asian scholarship. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.


397C, 697C, 997C. Comprehensive Examination Preparation. Restricted to doctoral students in the Department of Asian Studies. Individual instruction. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor on a form obtained from the graduate coordinator.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Asian studies and consent of the graduate adviser; for 698B, Asian Studies 698A.

198P, 298P, 398P. Pedagogy for Language Instruction. Individual instruction in language pedagogy. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, appointment as a teaching assistant in a language course in the Department of Asian Studies, and consent of the graduate adviser.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Asian studies and consent of the graduate adviser.
384. **Topics in Hindi Language and Culture.** Study of various aspects and periods of Hindi language and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and six semester hours of upper-division coursework in Hindi or consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

**Topic 1:** Advanced Reading, Composition, and Conversation I.

**Topic 2:** Advanced Reading, Composition, and Conversation II. Additional prerequisite: Hindi 384 (Topic 1).

**Topic 3:** Readings in Hindi.

**Topic 4:** Contemporary Hindi Narratives. Designed to enhance all four language skills: reading, writing, speaking, and listening. Hindi 330 (Topic 1: Contemporary Hindi Narratives) and 384 (Topic 4) may not both be counted.

**Topic 5:** Hindi Drama and Film. Contemporary Hindi plays and film scripts in Devanagari script. Hindi 330 (Topic 2: Hindi Drama and Film) and 384 (Topic 5) may not both be counted.

**Topic 6:** Hindi Literature in the Nationalist Era. Examines the poetry and prose of a diverse group of writers who shaped Hindi literature during the nationalist era. Also includes critical studies in English. Hindi 330 (Topic 3: Hindi Literature in the Nationalist Era) and 384 (Topic 6) may not both be counted.

**Topic 7:** Language and Identity at the Margins of Hindi Fiction. Focuses on the stories and novels of a diverse group of writers, including Muslims, women, Biharis, and Marwaris, who have broadened the landscape of Hindi writing. Hindi 330 (Topic 4: Language and Identity at the Margins of Hindi Fiction) and 384 (Topic 7) may not both be counted.

**JAPANESE: JPN**

381. **Conference Course in Japanese Language and Culture.** Supervised individual study in Japanese language or culture. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor on form obtained from the graduate coordinator.

384. **Topics in Japanese Language and Culture.** Study of various aspects and periods of Japanese language and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and six semester hours of upper-division coursework in Japanese with a grade of at least C or consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

**Topic 3:** Modern Japanese Literature. Only one of the following may be counted: Asian Studies 361 (Topic 9: Modern Japanese Literature in Translation), 386 (Topic 2: Modern Japanese Literature), 384 (Topic 3).
KOREAN: KOR

381. Conference Course in Korean Language and Culture. Supervised individual study in Korean language or culture. May be repeated for credit. Prerequisite: Graduate standing, six semester hours of upper-division coursework in Korean, and written consent of instructor on form obtained from the graduate coordinator.

384. Topics in Korean Language and Culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and six semester hours of upper-division coursework in Korean or consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

MALAYALAM: MAL

381. Conference Course in Malayalam Language and Culture. Supervised individual study in Malayalam language or culture. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor on form obtained from the graduate coordinator.

384. Topics in Malayalam Language and Culture. Study of various aspects and periods of Malayalam language and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and six semester hours of upper-division coursework in Malayalam or consent of instructor.

SANSKRIT: SAN

381. Conference Course in Sanskrit Language and Culture. Supervised individual study in Sanskrit language or culture. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor on form obtained from the graduate coordinator.

384. Topics in Sanskrit Language and Culture. Study of various aspects and periods of Sanskrit language and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; and Sanskrit 325L, 330, or the equivalent, or consent of instructor.

Topic 1: Advanced Readings in Sanskrit.
Topic 2: Readings in Classical Sanskrit Prose and Literature.

TAMIL: TAM

381. Conference Course in Tamil Language and Culture. Supervised individual study in Tamil language or culture. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor on form obtained from the graduate coordinator.

384. Topics in Tamil Language and Culture. Study of various aspects and periods of Tamil language and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and Tamil 312L with a grade of at least C.

TELUGU: TEL

381. Conference Course in Telugu Language and Literature. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor on forms obtained from the graduate coordinator.

384. Topics in Telugu Language and Culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and Telugu 312L with a grade of at least C.

URDU: URD

381. Conference Course in Urdu Language and Culture. Supervised individual study in selected problems in Urdu language and culture. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor on form obtained from the graduate coordinator.

384. Topics in Urdu Language and Culture. Study of various aspects and periods of Urdu language and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and six semester hours of upper-division coursework in Urdu with a grade of at least C. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Advanced Reading, Composition, and Conversation I.
Topic 2: Advanced Reading, Composition, and Conversation II.
Topic 3: Readings in Urdu.
Facilities for Graduate Work

The Classics Library, located within the department in Waggener Hall and managed by its own staff, houses more than thirty thousand volumes spanning all areas of classical studies. Supporting collections and staff members are located in the Perry-Castañeda Library, the Architecture and Planning Library, the Fine Arts Library, and other University Libraries units. Holdings of the Harry Ransom Humanities Research Center include a collection of Greek papyri from Egypt and numerous Renaissance editions of classical texts. The Battle Collection of Plaster Casts and a collection of ancient pottery are housed in the Blanton Museum of Art. Graduate students also have access to the Swenson Coin Collection; the Meritt and Reinmuth squeeze collections; a collection of drawings, photographs, and notes on ancient architecture by Lucy Shoe Meritt; and a substantial study collection of material objects from around the ancient Mediterranean, including Egypt and the Near East. Additional resources within the department include a comprehensive photographic archive of prehistoric Aegean and Cypriot inscriptions and related research materials maintained by the Program in Aegean Scripts and Prehistory; visual media that include more than fifteen thousand digital images and more than seventy thousand slides; a well-equipped computer laboratory linked to major classical databases; and a full-time instructional technology and media staff.

Areas of Study

Classics is an interdisciplinary field embracing all areas of classical antiquity: language, history, literature, material culture, philosophy, religion, and so on. Within this broad area, the only limitation on programs of study is the availability of specialists to direct a student’s work. The department offers a special concentration in classical archaeology, and the Departments of Classics and Philosophy offer a cooperative doctoral program in ancient philosophy. The faculty also maintains close links with the Departments of Art and Art History, English, French and Italian, History, and Religious Studies, and with the comparative literature program. A cooperative arrangement with the Institute of Nautical Archaeology at Texas A&M University makes courses in nautical archaeology and ancient seafaring available for UT Austin credit.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Deborah Beck
Joseph C. Carter
Lesley A. Dean-Jones
Jennifer V. Ebbeler
Steven J. Friesen
Karl Galinsky
Jennifer E. Gates-Foster
Robert J. Hankinson
Thomas K. Hubbard
Ayelet H. Lushkov
Timothy J. Moore

Alexander Mourelatos
William R. Nethercut
Thomas G. Palaima
Paula J. Perlman
Adam T. Rabinowitz
Andrew M. Riggsby
Rabun M. Taylor
L. M. White
Stephen A. White
Paul B. Woodruff

DEGREE REQUIREMENTS

MASTER OF ARTS

Course requirements are thirty-three semester hours of coursework, including the report course, which is a one-semester course of supervised research. No more than nine hours of upper-division coursework may be included in the program. The program of coursework is planned individually by the student in consultation with the graduate adviser. At least eighteen semester hours must be in Greek, Latin, or both. At least six semester hours of supporting work is required, either in classics or in related fields such as anthropology, art history, comparative literature, geography, history, linguistics, and philosophy. The master’s degree student has no formal qualifying examinations before beginning the report.

DOCTOR OF PHILOSOPHY

Admission to the doctoral program is subject to the approval of the Graduate Studies Committee and normally requires a Master of Arts degree with a major in classics or a closely related field. The department awards the PhD in classics, and all students must demonstrate competence in both Greek and Latin. Students with a special interest in classical archaeology or ancient philosophy may pursue a concentration in either area.

Course requirements. There are no universal course requirements. A broad and changing menu of seminars provides training in many areas of study and methods of research. Students who concentrate in classical archaeology or ancient philosophy have special course requirements, which are described on the department’s Web site, http://www.utexas.edu/cola/depts/classics/.

Examination requirements. To be admitted to candidacy for the doctoral degree, students must pass the following written examinations: translation in Greek; translation in Latin; Greek history; Roman history; Greek literature (followed by an oral examination); Latin literature (followed by an oral examination); translation in German; and translation in a second modern language. Students must pass the translation examination in either Greek or Latin by the end of their fourth semester of study and the examination in the other classical language by the end of their sixth semester of study.

Students who concentrate in ancient philosophy must pass the same written and oral examinations as above; however, instead of the Greek history or Roman history examination, students must pass an examination in ancient philosophy.

Students who concentrate in classical archaeology must pass the following written examinations: translation in Greek or in Latin; Greek archaeology; Roman archaeology; Greek history; Roman history; translation in German; and translation in a second modern language.

FOR MORE INFORMATION

Campus address: Waggener Hall (WAG) 123, phone (512) 471-5742, fax (512) 471-4111; campus mail code: C3400
Mailing address: The University of Texas at Austin, Graduate Program, Department of Classics, 1 University Station C3400, Austin TX 78712
E-mail: classics@mail.utexas.edu
URL: http://www.utexas.edu/cola/depts/classics/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

CLASSICAL CIVILIZATION: CC

380. Seminar in Classical Archaeology. Topics given in recent years include methods and theory, Greek and Roman Naples, landscape archaeology, and Hellenistic and Roman Egypt. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

380J. Proseminar in Classical Literature. Brief survey of the history of classical literature; orientation to the major periods and genres. Three hours a week for one semester. Designed for first-year graduate students. Prerequisite: Graduate standing.

381. Conference Course in Classical Civilization. Studies in classical antiquity. A knowledge of the ancient languages is not required. Three hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

382. Field Archaeology. Involves the participation of the student in an archaeological excavation; the study of field techniques includes excavation procedure, documentation, conservation, and interpretation. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

383. Studies in Classical Civilization. Studies in various aspects of Greek and Roman literature, history, and culture. Three hours a week for one semester. May be repeated for credit when the topics vary. Topics other than those listed below may also be taught. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

383K. Current Concepts and Research in Classics. Overview of important theories, issues, and research in classics. Three hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

186K, 386K. Conference Course in Classical Literature. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

GREEK: GK

380J. Proseminar in Classical Literature. Brief survey of the history of classical literature; orientation to the major periods and genres. Three hours a week for one semester. Designed for first-year graduate students. Prerequisite: Graduate standing.

180K. Proseminar. An introduction to the research methodology and the ancillary disciplines used in current classical studies, or to certain disciplines such as meter, textual criticism. One hour a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Topics other than those listed below may also be taught. Prerequisite: Graduate standing.


383. Studies in Classical Greek Literature. Topics given in recent years include Greek oratory, Aristophanes, and Homer. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Topics other than those listed below may also be taught. Prerequisite: Graduate standing.

Topic 1: Aeschylus.
Topic 2: Sophocles.
Topic 3: Thucydides.
Topic 4: Aristophanes.

383K. Current Concepts and Research in Greek. An overview of important theories, issues, and research in classics. Three hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

385. Graduate Reading Course. Topics given in recent years include Plato and Greek prose, Sophocles, and Sophists. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

186K, 386K. Conference Course in Greek Literature. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

386L. Conference Course in Greek Language. Restricted to students pursuing degrees other than in classics. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

390. Seminar in Classical Studies. Selected topics in Greek studies. Topics given in recent years include Mycenaean documents, Aristotle’s ethics, Archaic poetry, and Plato’s Symposium. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

398R. Master’s Report. Preparation of a research report to fulfill the requirement for the master’s degree. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Greek and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.
399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Greek 399R, 699R, or 999R.

**LATIN: LAT**

380J. Proseminar in Classical Literature. Brief survey of the history of classical literature; orientation to the major periods and genres. Three hours a week for one semester. Designed for first-year graduate students. Prerequisite: Graduate standing.

180K. Proseminar. An introduction to the research methodology and the ancillary disciplines used in current classical studies, or to certain disciplines such as meter, textual criticism. One hour a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Topics other than those listed below may also be taught. Prerequisite: Graduate standing.  

383. Graduate Reading. Topics given in recent years include Latin prose, Seneca, and Augustine’s *Confessions*. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

383K. Current Concepts and Research in Latin. An overview of important theories, issues, and research in classics. Three hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

385. Studies in Classical Latin Literature. Three hours a week for one semester. May be repeated for credit when the topics vary. Topics other than those listed below may also be taught. Prerequisite: Graduate standing.  
   Topic 1: Caesar.  
   Topic 2: Lucretius.

**COGNITIVE SCIENCE**

**COGNITIVE SCIENCE: CGS**

380. Advanced Topics in Cognitive Science. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.  
Comparative literature offers a core of courses in the discipline and draws on the teaching and scholarly resources of faculty members in more than twenty programs in language, literature, and area studies. In addition to the University Libraries facilities, special collections in the Harry Ransom Humanities Research Center and the Benson Latin American Collection, for example, offer opportunities for research.

Areas of Study

Students seeking the Master of Arts degree are expected to develop a broad knowledge of the theory and practice of comparative literature, both through coursework and through the completion of a report or thesis. In addition, they expand their acquaintance with a single national literature by studying it at the graduate level.

Students seeking the doctoral degree are expected to develop extensive knowledge of one national literature and broad knowledge of a second. They are required to complete, in effect, the equivalent of a master’s degree in one national literature, while demonstrating proficiency in either two additional foreign languages or in one additional foreign language and a third area of relevant study. The program also prepares students in literary theory and criticism and in the scholarly and critical methods of studying the relationships among various literatures. Interdisciplinary study is also encouraged, as students explore the interrelationships between literature and other fields (such as art history, anthropology, film, philosophy, and psychology) as part of their programs of work. After fulfilling all requirements in the areas of literature, theory, and language and passing both qualifying and comprehensive examinations, students choose a period, genre, or historical, cultural, intellectual, or critical problem on which to write a dissertation.

Work toward the Master of Arts and Doctor of Philosophy is offered in collaboration with the Departments of Asian Studies, Classics, English, French and Italian, Germanic Studies, Middle Eastern Studies, Slavic and Eurasian Studies, and Spanish and Portuguese. Courses in support of the student’s area of specialization are offered in various units, including the many interdisciplinary area studies centers within the College of Liberal Arts; the Departments of Anthropology, Art and Art History, History, Linguistics, and Philosophy; the Butler School of Music; the College of Communication; and other units approved by the graduate adviser in comparative literature.

Graduate Studies Committee

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Omoniyi Afolabi
Kamran Ali
Samer M. Ali
Katherine M. Arens
Aaron Bar-Adon
Daniela Bini
Douglas G. Biow
Marc Bizer
Pascale R. Bos
Philip M. Broadbent
Thomas M. Cable
Sung-Sheng Yvonne Chang
Matthew Cohen
Ann Cvetkovich
Tarek Adnan El-Ariss
Alison K. Frazier
Alan W. Friedman
Michael Gagarin
Thomas J. Garza
Mohammad Ghanoonparvar
John M. Gonzalez
Karen Grumberg
Sabine Hake
Barbara J. Harlow
Michael P. Harney
Geraldine Heng
Neville Hoad
Syed A. Hyder
Michael Johnson

Ernest N. Kaulbach
David D. Kornhaber
Tatiana Kuzmic
Wayne Lesser
Naomi E. Lindstrom
Keith A. Livers
Carol H. MacKay
Lisa L. Moore
Timothy J. Moore
Fehintola A. Mosadomi
Karen A. Pagani
Michael A. Pesenson
Guy P. Raffa
Wayne A. Rebhorn Jr.
Cory A. Reed
Elizabeth Richmond-Garza
Sonia Roncador
Cesar A. Salgado
Martha A. Selby
Janet K. Swaffar
Helene Tissieres
Chien-Hsin Tsai
Jeffrey Walker
Alexandra K. Wettlaufer
Lynn R. Wilkinson
Jennifer M. Wilks
Hannah C. Wojciechowski
Helena Woodard
Marjorie C. Woods
DEGREE REQUIREMENTS

MASTER OF ARTS

To earn the Master of Arts degree with a major in comparative literature, the student must complete either thirty-one semester hours of coursework, including the six-hour thesis course, or thirty-four hours of coursework, including the three-hour report course. The student must also demonstrate a high degree of competence in one foreign language and sufficient competence in a second language. Additional information about these requirements is available from the graduate adviser.

DOCTOR OF PHILOSOPHY

To be admitted to candidacy for the doctoral degree, the student must have earned a master’s degree in comparative literature, in a single national language and literature, or in a related discipline such as art history, folklore, or philosophy. In addition, he or she must have passed the qualifying examination, which tests the student’s knowledge of literary theory and critical methodology and of the first foreign language and literature.

The student is expected to take at least thirty semester hours of coursework beyond the Master of Arts level, including six semester hours for the dissertation. Each student must also pass a comprehensive examination, which is normally taken upon completion of coursework, and a prospectus examination, which must be taken by the end of the long-session semester after the semester in which the student passes the comprehensive examination. The student must then write a dissertation, which may involve, for example, the comparison of works, traditions, themes, writers, or periods from two or more different literatures. The dissertation may involve the study of literature and some other discipline. It may be a substantial translation, equipped with a general introduction analyzing the work chosen and/or discussing the problems and theory of translation and provided with detailed, explanatory notes. It may be some other project that the student designs under the supervision of the dissertation committee and that satisfies the aims and interests of the program. Each student should develop a thorough command of two foreign languages, and proficiency in either a third foreign language or a relevant area of study. For the purposes of the comprehensive examination, a student may designate as the third area of study either the third foreign language or another discipline related to the program—for example, an interdisciplinary field, a set of courses linked by a critical or theoretical question, or a topic in cultural studies.

Complete information about the foreign language requirement, course requirements, and the qualifying and comprehensive examinations is available from the graduate adviser.

FOR MORE INFORMATION

Campus address: Calhoun Hall (CAL) 217, phone (512) 471-1925; campus mail code: B5003
Mailing address: The University of Texas at Austin, Graduate Program in Comparative Literature, 1 University Station B5003, Austin TX 78712
E-mail: complit@austin.utexas.edu
URL: http://www.utexas.edu/cola/progs/complit/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011-2012 and 2012-2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

COMPARATIVE LITERATURE: C L

180K. Introduction to Comparative Literature. One-credit-hour proseminar in methods of study and research in comparative literature. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Required of first-semester graduate students in comparative literature. Prerequisite: Graduate standing in comparative literature and consent of the graduate adviser in comparative literature.
380M. Problems in Translation. Detailed study of literary translations and of the translation process, and completion of one substantial translation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser in comparative literature.

381. The Comparative Study of Literary Periods and Movements. The study of literary periods, aspects of periods, or movements from a comparative point of view; topics include mystical literature of the Middle Ages and Renaissance humanism. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

382. Topics in Comparative Literature. Study of genres, literary forms, the relationships of literature and other disciplines from a comparative point of view; topics include comedy, sensibility, and the East and the West. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

385. Theories of Literary Criticism. Comparative study of theories of literary criticism in a broad historical perspective, including representative classic texts in critical theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

386. Literature in a Comparative Context. A study of topics with a single primary language focus, using a strongly comparative approach. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics may be offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of the graduate adviser and instructor.

390. Comparative Literary Theory and Poetics. Comparative study of major modern critical schools and figures in literary and cultural theory and criticism. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

391L. Conference Course in Comparative Literature. Tutorial courses on individually designed basis available through the home departments of members of the comparative literature faculty. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser in comparative literature.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in comparative literature and consent of the graduate adviser; for 698B, Comparative Literature 698A and consent of the graduate adviser.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in comparative literature and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the graduate adviser in comparative literature.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Comparative Literature 399R, 699R, or 999R, and consent of the graduate adviser in comparative literature.
ECONOMICS

Master of Arts
Master of Science in Economics
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

In addition to the department resources described below, graduate students in economics may use the research facilities of the Teresa Lozano Long Institute of Latin American Studies, the Bureau of Business Research, the Population Research Center, and the Lyndon Baines Johnson Library and Museum, as well as those of the University Libraries and Information Technology Services. Also available in Austin are state government offices; regional offices of federal agencies, including the Internal Revenue Service; and the offices of several research institutions.

Computer facilities. The information technology environment within the department provides many different applications, hosts, software libraries, and access methods through two computer laboratories. The main laboratory has twenty-five computers, and the secondary laboratory has six computers. Primary research computing is done on servers that offer applications such as MATLAB, Mathematica, SAS, SSH, GAMS, Stata, and Gauss. Most storage, memory, and processing functions for these workstations occur across a private LAN on a server, but users have their own desktops and processing environments.

Students may access all the applications that the servers provide, as well as typical office applications in the Windows environment. The department has wireless access to UTnet as well.

AREAS OF STUDY

The Department of Economics offers graduate study and research in the core areas of microeconomics, macroeconomics, and econometrics and in a broad selection of applied areas. Current area offerings are listed in the department’s graduate program brochure, available on request.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Jason Abrevaya
Marina Azzimonti Renzo
Sandra Black
Swetlana Boyarchenko
Richard C. Chiburis
Harry M. Cleaver Jr.
Russell W. Cooper
Philip D. Corbae
Douglas C. Dacy
Stephen Donald
Richard Dusansky
Kripa M. Freitas
Daniel S. Hamermesh
Takashi Hayashi
David A. Kendrick

Stephen P. Magee
Laurent Alexandre Mathevet
Eugenio J. Miravete
Alfred L. Norman
Gerald S. Oettinger
Marcin Peski
David S. Sibley
Daniel T. Slesnick
Dale O. Stahl II
Maxwell B. Stinchcombe
Sheridan Titman
Stephen J. Trejo
Andrew B. Whinston
Thomas E. Wiseman

ADMISSION REQUIREMENTS

Applicants should have completed at least twelve semester hours of upper-division coursework in economics, including three hours each in intermediate-level microeconomic and macroeconomic theory. The applicant should also have a firm grounding in differential and integral calculus, with an emphasis on proofs; matrix algebra; and probability theory. Exposure to advanced calculus, analysis, and topology is also desirable.

Students are admitted only into the Doctor of Philosophy program; the department does not admit students seeking a terminal Master of Arts or Master of Science in Economics. However, students who have taken the prescribed coursework for the doctoral degree normally qualify for a Master of Science in Economics by the end of their fourth semester in the program or for the Master of Arts after their third semester.

DEGREE REQUIREMENTS

MASTER OF ARTS

The Master of Arts degree program requires completion of thirty semester hours of coursework, including Economics 387L (Topic 1: Microeconomics I), 387L
(Topic 2: Macroeconomics I), and 698. At least eighteen semester hours, including the thesis, must be in the major area, and at least six hours must be in supporting work. The program may include no more than nine hours of upper-division undergraduate work, no more than six hours of which may be in either the major or the supporting work. The student must take at least twenty-one semester hours in economics and either six or nine hours of approved coursework outside economics. He or she must earn separate grade point averages in economics and in the supporting work of at least 3.00.

**MASTER OF SCIENCE IN ECONOMICS**

This degree program requires completion of at least thirty-six semester hours of coursework, including Economics 387L (Topic 1: Microeconomics I), 387L (Topic 2: Macroeconomics I), and 392M (Topic 2: Econometrics I). At least eighteen semester hours must be in the major area, and at least six hours must be in supporting work. The program may include no more than nine hours of upper-division undergraduate work, no more than six hours of which may be in either the major or the supporting work. In addition to the required courses listed above, the student must complete two courses in one of the areas of study offered by the department; he or she must also take either two courses in a second area or Economics 392M (Topic 3: Econometrics II). No more than six hours of work may be taken on the credit/no credit basis; neither the required courses nor the courses in the two areas may be taken on this basis. The student must earn separate grade point averages in economics and in the supporting work of at least 3.00.

**DOCTOR OF PHILOSOPHY**

The doctoral degree is based on satisfactory performance in courses, examinations, writing requirements, and completion of a dissertation. The student seeking admission to candidacy for the doctoral degree is required to take nine core courses: Economics 387L (Topic 1: Microeconomics I), 387L (Topic 2: Macroeconomics I), 387L (Topic 3: Microeconomics II), 387L (Topic 4: Macroeconomics II), 387L (Topic 24: Mathematical Economics), 392M (Topic 2: Econometrics I), 392M (Topic 3: Econometrics II), 392M (Topic 18: Econometrics III), and 392M (Topic 19: Probability and Statistics). Comprehensive examinations in microeconomics and macroeconomics are administered in June and August. In order to continue in the doctoral program, students must pass at least one comprehensive examination by the summer following their first year and both by the June examination date following their second year.

The student’s program must include at least twenty-four semester hours of approved coursework taken in residence. In addition to the core courses, the student must complete two graduate courses in each of two elective fields of specialization. The elective fields are designed to prepare students to write a single-authored second-year paper to be submitted at the June examination date. A departmental graduate research committee evaluates the second-year paper, provides the student with written feedback for revision, and makes a final pass/fail decision by the August examination date. Students must receive a passing grade on the second-year paper to continue in the doctoral program. In the third year, students are required to take a writing seminar, Economics 387M, each semester in one of their fields, as well as two elective courses. All students must present their research papers in the writing workshop of their area of specialization by the end of the fall semester of their fourth year. The paper and presentation must be deemed acceptable by the workshop faculty coordinator and one other faculty member of the student’s choosing. By the beginning of the fourth year, the student is strongly advised to have formed a committee and planned chapters of his or her dissertation in order to declare candidacy. In the fourth year, students are required to take Economics 387M each semester to guide them through writing research papers for their dissertation. In general, three papers comprise a dissertation. A final oral defense completes the doctoral degree program.

**FOR MORE INFORMATION**

**Campus address:** Bernard and Audre Rapoport Building (BRB) 1.116, phone (512) 471-3211, fax (512) 471-3510; campus mail code: C3100

**Mailing address:** The University of Texas at Austin, Graduate Program, Department of Economics, 1 University Station C3100, Austin TX 78712

**URL:** http://www.utexas.edu/cola/depts/economics/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ECONOMICS: ECO

380. Research Course. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser in economics.

380K. Economic Development. Topics include theories of economic development; planning. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, six semester hours of upper-division coursework in economics, and six additional semester hours of upper-division coursework in social science or business.

Topic 1: Economic Development Theory.
Topic 2: Economic Development Topics.
Topic 3: Political Economy of Southeast Asia.

380L. Seminar in Economic Systems. Analyses of various types of economic systems, including comparative studies. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, six semester hours of upper-division coursework in economics, and six additional semester hours of upper-division coursework in social science or business.

380M. Regional Economics. Survey of theoretical and empirical literature related to location theory, regional development, regional disparities, growth and function of cities, and political economy of spatial planning. Three lecture hours a week for one semester. Prerequisite: Graduate standing, six semester hours of upper-division coursework in economics, and six additional semester hours of upper-division coursework in social science or business.

380N. Urban Economics. Provides an economic analysis of pressing urban problems such as poverty, housing, transportation, environment, and finance. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, six semester hours of upper-division coursework in economics, and six additional semester hours of upper-division coursework in social science or business.

381K. Seminar in Money and Banking. Topics include monetary policy and problems, theory of central banking, and money and banking history. The equivalent of three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing.

382L. Theories of Public Finance. Topics include public expenditure analysis and taxation. The equivalent of three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Economics 387L (Topic 1: Microeconomics I) or consent of instructor.

Topic 3: Local Public Finance.

383K. Seminar in General Economic History. Same as History 383K. A historical study of economic development and economic policy. The equivalent of three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, six semester hours of upper-division coursework in economics or related history or government, and six additional semester hours of upper-division coursework in social science or business.

384K. Industrial Organization. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Introduction to Industrial Organization.
Topic 2: Industrial Organization and Regulation.

384N. Resource Economics. Definition, measurement, production, and conservation of renewable and exhaustible resources; models of economic growth and resources; world distribution and consumption; United States resource policy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Natural Resource Economics.
Topic 2: Environmental Economics.

385K. Labor Economics. Analysis of the empirical and theoretical factors that influence labor markets. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Introduction to Labor Economics.
Topic 2: Topics in Labor Economics.

387K. Monetary Theory. Theories, based on microeconomic foundations, covering such topics as the usefulness of monetary exchange, optimal central bank policy, the interaction of monetary and fiscal policy, and the role of financial intermediation in the macroeconomy. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

387L. Studies in Contemporary Economic Theory. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Microeconomics I.
Topic 2: Macroeconomics I.
Topic 3: Microeconomics II.
387M. Writing Seminar in Economics. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

187N. Survey of Fields in Economics. Introduction to the questions, methods, and scope of research in different fields in economics. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

390L. Seminar in the History of Economic Thought. Survey and analysis of principal contributions and historical influences in the evolution of contemporary economic thought from the late eighteenth through the early twentieth century. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, and completion of core courses in economic theory or consent of instructor.

391K. Seminar in Latin American Economics. Selected economic problems in Latin America, with particular reference to current developmental policy in specific national economies. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, six semester hours of upper-division coursework in economics, and six additional semester hours of upper-division coursework in social science or business.


392M. Seminar in Quantitative Economics. The equivalent of three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 2: Econometrics I.

Topic 3: Econometrics II.

Topic 4: Applied Microeconometrics.

Topic 5: Time-Series Analysis.

Topic 6: Advanced Econometric Theory I.

Topic 7: Advanced Econometric Theory II.

Topic 8: Mathematics for Economists I.

Topic 9: Mathematics for Economists II.

Topic 10: Economics of Control Theory.


Topic 12: Computational Economics I.

Topic 13: Mathematical Programming.

Topic 14: Stochastic Control Theory.

Topic 15: Applied Macroeconometrics.

Topic 18: Econometrics III.


Topic 20: Computational Economics II.

393. Seminar in Industrial Organization. The equivalent of three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing.

396. Studies in Economic History. The equivalent of three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, six semester hours of upper-division coursework in economics, and six additional semester hours of upper-division coursework in social science or business.

397. Seminar in International Economic Problems. The equivalent of three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in economics, twelve semester hours of upper-division or graduate coursework in economics, and consent of the graduate adviser; for 698B, Economics 698A.

398T. Supervised Teaching in Economics. Teaching under the close supervision of the course instructor; weekly group meetings, individual consultations, and reports. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant.
399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the graduate adviser.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Economics 399R, 699R, or 999R.

ENGLISH

Master of Arts
Master of Fine Arts (in Creative Writing)
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Facilities for graduate work include an excellent library system and a world-renowned research library, the Harry Ransom Humanities Research Center. The Ransom Center provides materials for critical, textual, and bibliographical studies, with its extensive holdings in earlier British literature (including the Pforzheimer Library), modern British and American literature, theatre arts, photography, and other significant subjects for literary and cultural research. The Benson Latin American Collection is one of many campus resources for advanced work in non-European literature and language. The Department of Rhetoric and Writing offers rich opportunities for teaching and study; and the Digital Writing and Research Laboratory enjoys a national reputation for investigating the intersections among technology, language, and literature.

AREAS OF STUDY

Courses are offered in the following areas of study: American literature; bibliography and textual studies; digital literacies and literatures; drama; eighteenth-century British literature; ethnic and Third-World literatures; language and linguistics; medieval literary studies; modern British literature; nineteenth-century British literature; Renaissance literature; poetry and poetics; popular culture and cultural studies; rhetoric; and women, gender, and literature.

The department also offers courses that count toward the English MFA and the PhD degree programs, in addition to courses that count toward the MFA program offered by the Michener Center for Writers.

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Michael W. Adams
Samuel Baker
Janine Barchas
Jennifer-Kate Barret
Phillip J. Barrish
Lance Bertelsen
Daniel J. Birkholz
Mary E. Blockley
Brian A. Bremen
Douglas S. Bruster
Jerome F. Bump
Thomas M. Cable
Mia E. Carter
Evon B. Carton
Larry D. Carver
Oscar H. Casares
David H. Charney
Matthew Cohen
Andrew M. Cooper
James H. Cox
Elizabeth Cullingford
Ann Cvetkovich
D. D. Davis
Rasha Diab
Lester L. Faigley
Linda Ferreira-Buckley
Alan W. Friedman
James D. Garrison
John M. Gonzalez
Don B. Graham
Ian F. Hancock
Barbara J. Harlow
Elizabeth A. Hedrick
Kurt O. Heinzelman
Susan S. Heinzelman
Geraldine Heng
Jacqueline M. Henkel
R. Roland Hinojosasmith
Lars Hinrichs
Neville Hoad
Justin D. Hodgson
Coleman Hutchison
Meta D. Jones
Ernest N. Kaulbach
Martin W. Kevorkian
Sara E. Kimball
David D. Kornhaber
Judith Kroll
Peter N. Lasalle
Julia Lee
Wayne Lesser
James N. Loehlin
Mark G. Longaker
Edward A. Macduffie III
Carol H. Mackay
James L. Magnuson
Eric S. Mallin
Elizabeth McCracken
Lisa L. Moore
Gretchen Murphy
Neil R. Nehring
Domino R. Perez
Eric Darnell Pritchard
Wayne A. Rebhorn Jr.
Matt U. Richardson
Elizabeth Richmond-Garza
Patricia Roberts-Miller
John P. Rumrich
John J. Ruszkiewicz
Elizabeth D. Scala
Snehal A. Shingavi
Clay Spinuzzi
Thomas F. Staley
Margaret A. Syverson
Jeffrey Walker
Frank F. Whigham Jr.
Thomas B. Whitbread
Jennifer M. Wilks
Michael B. Winship
Hannah C. Wojciechowski
Helena Woodard
Marjorie C. Woods
Dean H. Young
DEGREE REQUIREMENTS

MASTER OF ARTS

A total of thirty-three semester hours of coursework is required, of which six may be in a related field outside the Department of English. The department does not admit literature and rhetoric students for a terminal Master of Arts degree. Students are required to complete a master’s report. Details are available from the graduate adviser.

As preparation for the English graduate program, a strong undergraduate background in British and American literature and language is desirable, as well as advanced coursework in related fields.

MASTER OF FINE ARTS (IN WRITING)

The Master of Fine Arts degree is offered in creative writing. Students choose to write either fiction or poetry. A total of thirty-six semester hours of coursework is required during the two-year program of study. As a part of the program of study, students work as teaching assistants for undergraduate literature and creative writing courses. Students complete the MFA degree program with a successful master’s project displaying their talent and craft as fiction writers or poets.

DOCTOR OF PHILOSOPHY

To enter the doctoral degree program, all master’s-level students must pass a qualifying review which focuses on their graduate coursework, their master’s report, and their performance as teachers. With the consent of the graduate adviser, students who enter the program with a Master of Arts degree from another university may be eligible for exemption from the review. Students who began their graduate work at the University must pass the review at the end of the spring semester of the second year of graduate study.

After passing the qualifying review, the student completes from twenty-four to thirty-three semester hours of additional coursework; specific requirements are available from the graduate adviser. Students who began graduate study at another institution may petition the graduate adviser to transfer applicable credit to the Program of Work. Students advance to candidacy for the doctoral degree after completing their coursework, certifying their foreign language competency, and passing both the field examination and the prospectus examination.

FOR MORE INFORMATION

Campus address: Calhoun Hall (CAL) 210, phone (512) 471-5132 or (512) 475-6356; campus mail code: B5000
Mailing address: The University of Texas at Austin, Graduate Program, Department of English, 1 University Station B5000, Austin TX 78712
E-mail: gradeng@uts.cc.utexas.edu
URL: http://www.utexas.edu/cola/depts/english/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ENGLISH: E

380E. Practicum in Editing. A practicum for editing a literary journal. Three lecture hours a week for one semester. May be repeated for credit when the topics or instructors vary. Prerequisite: Graduate standing, admission to the creative writing concentration in English, and consent of the English graduate adviser.

380F. Literature for Writers. Readings in fiction, poetry, drama, literary criticism, biography, and autobiography from the point of view of a creative writer rather than that of a scholar. Three lecture hours a week for one semester. May be repeated for credit when the instructors vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

382J. Studies in Linguistic Analysis. Lectures, textual analysis, outside readings. Three lecture hours a week for one semester. May count as linguistics. Prerequisite: Graduate standing and consent of the English graduate adviser.

382L. Studies in Linguistics and Literature. Intensive study of specialized subjects. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May count as linguistics. Prerequisite: Graduate standing and consent of the English graduate adviser.

383L. The Teaching of English Composition and Literature. A study of the major components of the English program in secondary school or college. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

384K. Methods of Literary Research. Topics include bibliography, textual studies, history of the book, and materials of literary research. Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

384K. Topic 1: Introduction to Research Methods. Only one of the following may be counted: English 384K (Topic 1), 384K (Topic: Methods of Literary Research), 384K (Topic: Research in Literary Methods).

385N. Creative Writing: Workshop in Fiction. Three lecture hours a week for one semester. May be repeated for credit when the instructors vary. Prerequisite: Graduate standing and consent of instructor and the English graduate adviser.

385P. Creative Writing: Advanced Workshop in Fiction. Three lecture hours a week for one semester. May be repeated for credit when the instructors vary. Prerequisite: Graduate standing and consent of instructor and the English graduate adviser.

386L. Creative Writing: Workshop in Poetry. Three lecture hours a week for one semester. May be repeated for credit when the instructors vary. Prerequisite: Graduate standing and consent of instructor and the English graduate adviser.

386M. Creative Writing: Advanced Workshop in Poetry. Three lecture hours a week for one semester. May be repeated for credit when the instructors vary. Prerequisite: Graduate standing and consent of instructor and the English graduate adviser.

387M. Studies in Rhetoric. Advanced study of topics in rhetorical theory and in ancillary disciplines. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

387N. Methods of Research in Rhetoric and Composition. A study of the theory, practice, and history of research in rhetoric and composition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

387P. Productions in Rhetoric. Applications of rhetoric to professional writing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

387R. Rhetorical History. Topics include classical rhetoric, medieval and Renaissance rhetoric, eighteenth- and nineteenth-century rhetoric, and twentieth-century rhetoric. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

388M. Studies in English and Computers. Seminar on research in English literature, language, and rhetoric. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

389M. Studies in British and American Literature. Selected British and American writers and issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

389P. Studies in Women, Gender, and Literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

390J. Humanities Seminar. Interdisciplinary seminar taught by Humanities Institute Fellows on topics selected annually. Designed for advanced graduate students with relevant research projects or interests. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.
390M. Studies in European Literature. A study of the impact of European writers on British or American literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

391L, 691L. Conference Course on Special Topics. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

392M. Studies in English Literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

393M. Studies in Criticism, English and American. Historical and methodological approaches to literary criticism. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

395M. Studies in American Literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

395N. Studies in the History of Language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

Topic 1: Old English. English 364P and 395N (Topic 1) may not both be counted.

Topic 2: Middle English.
Topic 3: Renaissance English.

396L. Studies in the English Language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

397M. Studies in the Literatures and Cultures of the English-Speaking World. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

397N. Studies in Ethnic and Third-World Literatures. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the English graduate adviser.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in English and consent of the graduate adviser.

398T. Supervised Teaching in English. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. May be repeated once for credit. Prerequisite: Graduate standing, consent of the English graduate adviser, and appointment as a teaching assistant or assistant instructor in a lower-division English course in literature or writing.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: English 399R, 699R, or 999R.

EUROPEAN STUDIES

EUROPEAN STUDIES: EUS

381. Advanced Topics in European Studies. Examination of recent developments in Europe, with emphasis on the role of the European Union in political, cultural, economic, and security matters. Three lecture hours a week for one semester or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Additional prerequisites may vary with the topic and are given in the Course Schedule.
FRENCH AND ITALIAN

Master of Arts (in French)
Master of Arts (in Italian Studies)
Doctor of Philosophy (in French)
Doctor of Philosophy (in Italian Studies)

FACILITIES FOR GRADUATE WORK

The University offers excellent resources to serve the needs of graduate students in French and Italian. Among the outstanding collections are the Carlton Lake collection of manuscripts and rare editions of modern French writers from Baudelaire to Beckett, the papers of the Princess Bibesco, the Artinian collection of Guy de Maupassant material, and the Surrealist archive of reviews and original documents. The Italian collections (Ranuzzi, Aldine, Medici, Bodoni, Parsons, and Weinreb) in the Harry Ransom Humanities Research Center offer medieval and Renaissance manuscripts and incunabula, as well as thousands of manuscripts from modern and contemporary writers such as Luigi Pirandello, Paolo Volponi, and Carlo Levi. The Suida-Manning Collection, in the Blanton Museum of Art, is one of the finest collections of Renaissance and Baroque art in the United States and constitutes another world-class resource for graduate study.

Several multimedia language laboratories, equipped with the latest digital aids, furnish excellent opportunities for technical and professional preparation for teaching and research in Romance languages and linguistics. A large collection of recordings of dialect materials in the Romance languages is also available.

AREAS OF STUDY

Graduate programs in French include concentrations in French literature, culture, and linguistics, and Romance linguistics. The program in Italian studies addresses Italian literature, cinema, and culture.

GRADUATE STUDIES COMMITTEES

The following faculty members served on the Graduate Studies Committees in the spring semester 2011.

French
Daniela Bini
Douglas G. Biow
David P. Birdsong
Marc Bizer
Carl S. Blyth
Paola Bonifazio
Barbara E. Bullock
Jean-Pierre B. Cauvin

Italian Studies
Miroslava M. Benes
Daniela Bini
Douglas G. Biow
Paola Bonifazio
Joseph C. Carter
John R. Clarke
Penelope J. Davies
Andrew F. Dell’Antonio
Robert A. Desimone

Guy P. Raffa
Cinzia Russi
Helene Tissieres
Alexandra K. Wettlaufer

Alison K. Frazier
Timothy J. Moore
Luisa Nardini
Guy P. Raffa
Wayne A. Rehborn Jr.
Cinzia Russi
Rabun M. Taylor
Louis A. Waldman

DEGREE REQUIREMENTS

MASTER OF ARTS

French. The master’s degree program in French requires that the candidate have a bachelor’s degree with a major in French or demonstrate equivalent knowledge. Students who lack adequate preparation may be admitted to the program on the condition that they complete additional preparatory coursework designated by the graduate adviser in French. These courses are in addition to the semester hours required for the master’s degree.

Master of Arts degree plans are available with a concentration in French studies, culture, linguistics, or Romance linguistics.

The program in French studies requires thirty-four semester hours of coursework, including two courses outside the department. French studies majors are required to take French 381M and at least one course in seven literary periods. All incoming students are required to take the proseminar, French 180P, in their first semester of graduate study.

Completion of the program in linguistics requires four semesters or thirty-seven semester hours of coursework with a minimum of twenty-four semester hours of coursework in French linguistics. All incoming students are required to take the proseminar, French 180P, in their first semester of graduate study.
Italian studies. The master’s degree program in Italian studies requires that the candidate have a bachelor’s degree with a major in Italian or demonstrate equivalent knowledge. Students who lack adequate preparation may be admitted to the program on the condition that they complete additional preparatory coursework designated by the graduate adviser in Italian studies. These courses are in addition to the semester hours required for the master’s degree.

The program requires thirty-four semester hours of coursework, which may include one three-hour upper-division undergraduate course approved by the graduate adviser. Students must take at least eighteen semester hours of graduate coursework in Italian literature, cinema, and culture offered by the Italian faculty of the Department of French and Italian, and six to nine graduate-level semester hours in a supporting subject or subjects in another program, department, or college. Italian studies students must take Comparative Literature 385, French 381M, or another graduate course on critical or literary theory approved by the graduate adviser. Students must also demonstrate reading competence in one foreign language other than Italian by earning a grade of at least B in a reading course approved by the graduate adviser, in a second-year college language course, or on an examination approved by the graduate adviser. All incoming students are required to take the proseminal, Italian 180P, in their first semester of graduate study.

DOCTOR OF PHILOSOPHY

French. The doctoral program is offered in French studies and linguistics. The departmental proseminal is required of all incoming graduate students. Information about required courses in each of these areas is available from the department. An examination committee is formed for each candidate; with the graduate adviser, the committee oversees the student’s progress and eventually administers a comprehensive examination based on coursework and reading lists. Thirty-six semester hours of coursework are normally required for the degree. An approved dissertation prospectus is required for all doctoral candidates before they may begin to write the dissertation. A final oral defense of the dissertation is required of all candidates.

In French studies, the candidate must take coursework in seven areas (medieval, Renaissance, seventeenth, eighteenth, nineteenth, and twentieth centuries, and Francophone) as well as courses in critical approaches to literature and teaching methodology. Each candidate is also expected to take courses outside of the department in related areas of interest, such as French history, art history, comparative literature, and anthropology. Coursework completed for the master’s degree may be counted toward this requirement. Candidates must pass a qualifying exam before beginning doctoral coursework and a comprehensive exam on three areas of expertise before beginning work on the dissertation. For the concentration in French studies, students are required to have an adequate knowledge of a modern language in addition to French and English or a basic knowledge of Latin.

In French linguistics, the candidate must take coursework in each of the five areas of specialization: historical linguistics and dialectology; sociolinguistics; syntax and semantics; phonology and morphology; and language acquisition and applied linguistics. Each candidate is expected to complete at least two courses in areas outside French linguistics, such as English, history, linguistics, philosophy, psychology, or other languages. Coursework completed for the master’s degree may be counted toward this requirement. Candidates must be examined on three of the five areas of specialization of their choice. For the concentration in French linguistics, students are required to have an adequate knowledge of a modern language in addition to French and English or a basic knowledge of Latin.

Italian studies. Several courses are required of all doctoral candidates; information about them is available from the department. An examination committee is formed for each candidate; with the graduate adviser, the committee oversees the student’s progress and eventually administers a comprehensive examination based on coursework and reading lists.

Although the doctoral degree is not awarded on the basis of a specific number of courses or semester hours of credit, twelve courses (or thirty-six semester hours) beyond the master’s degree are usually required. With the approval of the graduate adviser, one of these courses may be an undergraduate course that satisfies the requirement for proficiency in a foreign language other than Italian. With the help of the graduate adviser, each student is expected to design an individual course of study and define a primary subject and supporting subject(s) of study. The graduate adviser must approve the student’s selection of courses; at least nine hours of coursework must be in one supporting subject. Students must also demonstrate reading competence in two foreign languages other than Italian by earning a grade of at least B in a reading course approved by the graduate adviser, in a fourth-semester college course, or on an examination approved by the graduate adviser.
FOR MORE INFORMATION

Campus address: Rainey Hall (HRH) 2.110A, phone (512) 471-5531, fax (512) 471-8492; campus mail code: B7600

Mailing address: The University of Texas at Austin, Graduate Program, Department of French and Italian, 1 University Station B7600, Austin TX 78712
E-mail: c.nailor@austin.utexas.edu
URL: http://www.utexas.edu/cola/depts/frenchitalian/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

FRENCH: FR

380C. French for Graduate Students in Other Departments. No auditors permitted. Intensive reading course, emphasizing basic grammar and vocabulary with translation practice. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. The symbol CR fulfills the foreign language requirement for the Doctor of Philosophy degree in some departments. Prerequisite: Graduate standing.

380L. History of the French Language. An analysis of the evolution of the French language since its origin. Three lecture hours a week for one semester. Prerequisite: Graduate standing in French, or graduate standing and six semester hours of upper-division coursework in French.

180P. Introduction to Studies in Literature and Culture. Proseminar in methods of study and research in French studies. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

380R. Reference Works and Research Methodologies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381. Old French Language. Three lecture hours a week for one semester. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in French.

381J. Topics in French Studies. Designed for students in other departments; taught in English with optional reading in French. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May be repeated for credit when the topics vary; graduate students in French may count only one topic toward the degree. Prerequisite: Graduate standing.

381M. Critical Approaches to Literature. Introduction to various modern approaches to literary criticism, stressing both theory and practical application. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381N. Studies in Language and Style. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Rhetoric, Composition, and Stylistics.

Topic 2: Translation.

381P. Old Provençal. An introduction to Old Provençal through analysis of literary texts. Three lecture hours a week for one semester. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in French.

382L. Studies in the Civilization of the French-Speaking World. Studies in various aspects of the cultures of France, Quebec, Francophone Africa, the French Caribbean, and other areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

383K. Structure of French: Phonology and Morphology. Three lecture hours a week for one semester. Prerequisite: Graduate standing in French, or graduate standing in linguistics and six semester hours of upper-division coursework in French.

383M. Structure of French: Syntax and Semantics. Three lecture hours a week for one semester. Prerequisite: Graduate standing in French, or graduate standing in linguistics and six semester hours of upper-division coursework in French.

383N. Introduction to French Linguistics. An introductory survey of the main fields of French linguistics: phonology, syntax, sociolinguistics, historical linguistics, and applied linguistics. Three lecture hours a week for one semester. Fulfills linguistics requirement for doctoral candidates in French literature. May not be counted toward a graduate degree in French linguistics or Romance linguistics. Prerequisite: Graduate standing.

385L. Conference Course in French Language and Literature. For students needing specialized courses not normally or not often included in the regular course offerings. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of the graduate adviser.

390K. Studies in French Literature through the Renaissance. Intensive study of particular writers or literary movements. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in French.
390L. Studies in French Literature of the Seventeenth and Eighteenth Centuries. Intensive study of particular writers or literary movements. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in French.

390M. Studies in French Literature of the Nineteenth and Twentieth Centuries. Intensive study of particular writers or literary movements. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in French.

390N. Studies in Francophone Literature. Studies in the literatures of Quebec, Francophone Africa, the French Caribbean, and other areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

391K. Studies in Criticism and Literary Genres. Intensive study of critical theory or of the evolution of a genre. Topics: Le Voyage: themes, genres, structure; French short fiction since 1650; the theatre of the absurd; and others. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in French.

392K. Studies in French Linguistics. Examination of specific issues in theoretical, applied, descriptive, or historical linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in French.

396K. Comparative Romance Linguistics. General survey of the development of spoken Latin in Italy, Spain, Portugal, and France; main traits of phonology, morphology, and syntax in each modern derivative language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in languages and consent of instructor and the graduate adviser.

Topic 1: Introduction to Romance Linguistics. Same as Italian 396K (Topic 1: Introduction to Romance Linguistics), Linguistics 383 (Topic 3: Introduction to Romance Linguistics), Portuguese 396K (Topic 2: Introduction to Romance Linguistics), and Spanish 396K (Topic 2: Introduction to Romance Linguistics).

197T. Practicum in Teaching College French. Designed to train first-year teaching assistants to observe, describe, and evaluate foreign language instruction and testing. Practical aspects of teaching to be studied include organization of class time; treatment of vocabulary and grammar; speaking and pronunciation; listening and reading comprehension; evaluating and creating tests; testing language content and language skills. One lecture hour a week for one semester. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in French and consent of the graduate adviser; for 698B, French 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in French and consent of the graduate adviser.

398T. Supervised Teaching in French. Teaching under the close supervision of the course instructor for two semesters; weekly group meetings with the instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: French 399R, 699R, or 999R.

ITALIAN: ITL

380C. Italian for Graduate Students in Other Departments. No auditors permitted. Intensive reading course, emphasizing basic grammar and vocabulary with translation practice. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. The symbol CR fulfills the foreign language requirement for the Doctor of Philosophy degree in some departments. Prerequisite: Graduate standing.

380L. History of the Italian Language. Survey of the development of Italian from spoken Latin to the present day. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

180P. Introduction to Studies in Literature and Culture. Proseminar in methods of study and research in Italian Studies. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

381. Readings in Italian Literature. Intensive study of a period or a major writer. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and six semester hours of upper-division coursework in Italian.

382. Topics in Italian Studies. Study of various aspects and periods of Italian culture and society. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

383K. Studies in Italian Language. Synchronic approach to the modern Italian language: phonology, morphology, syntax, lexicology, stylistics. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385L. Conference Course in Italian Language and Literature. For students needing specialized courses not normally or not often included in the regular course offerings. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of the graduate adviser.
390K. Studies in Italian Literature through the Renaissance. Intensive study of a particular writer, school, or literary movement. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

390L. Studies in Italian Literature since the Renaissance. Intensive study of a particular writer, school, or literary movement. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

396K. Comparative Romance Linguistics. General survey of the development of spoken Latin in Italy, Spain, Portugal, and France; main traits of phonology, morphology, and syntax in each modern derivative language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in languages and consent of instructor and the graduate adviser.


698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Italian and consent of the graduate adviser; for 698B, Italian 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Italian and consent of the graduate adviser.

398T. Supervised Teaching in Italian. Practical exercises in second-language instruction and closely supervised classroom teaching, supported by theoretical studies of second-language learning. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral program.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Italian 399R, 699R, or 999R.

---

GEOGRAPHY
Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The teaching and research facilities of the Department of Geography and the Environment are housed in the Geography Building, centrally located on campus.

Environmental Information Systems Laboratory. This laboratory provides comprehensive resources for learning and research in cartography, geographic information systems, remote sensing, and spatial statistics. It contains twenty-five microcomputers connected by Ethernet to the campus network and the Internet. The laboratory is also equipped with scanners, digitizers, plotters, GPS receivers, a station for field mapping, and audiovisual equipment for hypermedia production. The computers run a variety of software for microcomputer mapping and GIS, remote sensing, computer-assisted drafting, and statistical analysis.

Digital Landscape Laboratory. The Digital Landscape Laboratory is a GIS and remote sensing facility designed to support research in the modeling and characterizing of Earth's varied processes through geomorphology, biogeography, and landscape ecology. The laboratory includes a server, high-speed Ethernet connections, Windows-based workstations, scanners, and a large-format plotter.

Robert K. Holz Remote Sensing Laboratory. The Holz laboratory is a PC-based facility for remote sensing and GISc, designed primarily for teaching and laboratory work.

Environmental Analysis Laboratories. The Soils Laboratory, the Applied Geomorphology and Geo-Archaeology Laboratory, and the Quaternary Palynology Laboratory are equipped for field study and laboratory analysis of soils, sediments, pollen, fluvial and lake systems, and
archaeological materials. Used as both teaching and research facilities, these laboratories are integral to graduate study in geomorphology, paleoecology, cultural ecology, morphodynamics, and geoarchaeology. High technology equipment includes a laser granulometer, an X-ray fluorescence analyzer, a magnetic susceptibility meter, 210Pb dating by alpha spectrometry, an Acoustic Doppler Current Profiler (ADCP), a digital echosounder coupled to a DGPS system, a dual frequency Stratabox for geophysics surveys, a mechanical auger, samplers, and water quality multi-analyzers, among other equipment. Two small boats and two outboard engines are available for research in rivers, lakes, and dams.

**University Libraries.** The University Libraries are noted for their collections on Latin America, the Middle East, South Asia, and the American West.

Special research, training, and financial aid opportunities are available through area studies centers and research institutes in African and African American studies; Australian studies; East Asian studies; Latin American studies; Middle Eastern studies; Russian, East European, and Eurasian studies; and South Asian studies. Language training is available in Arabic, Bengali, Chinese, Hebrew, Hindi, Japanese, Korean, Malayalam, Persian, Sanskrit, Serbian/Croatian, Tamil, Telugu, Turkish, Urdu, Yoruba, and all major European languages. Additional University research facilities used by graduate students in the Department of Geography and the Environment include the Bureau of Economic Geology, the Center for Energy and Environmental Resources, the Center for Research in Water Resources, the Center for Transportation Research, the Marine Science Institute, the Center for Space Research, and the Population Research Center.

**Areas of Study**

The graduate curriculum in geography enables students to obtain an understanding of the heritage and philosophical foundations of the discipline, of contemporary thought and practice in its various subfields, and of the theories, analytical tools, and techniques currently used in geographic research.

Faculty and graduate students have contributed in many ways to understanding and managing the earth’s diverse cultural and physical environments, ranging from local to global scales across the full range of human history. Current clusters of faculty research include *space, place, and social worlds; environmental changes and surface processes; and digital landscapes.*

Faculty associated with the *space, place, and social worlds* cluster investigate how socio-cultural and political-economic processes such as urbanization, agricultural transformation, industrialization, poverty, health care, migration, and mediated communication interact to produce diverse socio-spatial realities across urban, regional, national, and global scales.

Faculty associated with the *environmental changes and surface processes* cluster study biotic, climatic, geomorphic, and anthropogenic factors and processes. Faculty associated with the *digital landscapes* cluster explore the theoretical and applied issues associated with the acquisition, measurement, representation, analysis, simulation, and visualization of digital geographic information.

The faculty has a strong international orientation and is well prepared to guide students in research in Latin America, South Asia, Southern Africa, and Europe, as well as in the Southwestern and Western regions of the United States. The department encourages interdisciplinary and collaborative work that takes advantage of the University’s extensive scholarly resources.

**Graduate Studies Committee**

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Paul C. Adams
- Adina K. Batnitzky
- Karl W. Butzer
- Ipsita Chatterjee
- Kelley A. Crews
- William Doolittle
- Robin W. Doughty
- Robert A. Dull
- David J. Eaton
- Steven D. Hoelscher
- Paul F. Hudson
- Gregory W. Knapp
- Edgardo M. Latrubesse
- Jennifer A. Miller
- Francisco L. Perez
- Dick Richardson
- Bjorn I. Sletto
- Frederick R. Steiner
- Rebeca M. Torres
- Peter Ward
- Kenneth R. Young
- Leo E. Zonn

**Degree Requirements**

**Master of Arts**

To obtain a master’s degree in geography, students must complete either thirty semester hours of coursework, including eighteen hours of geography, six hours in a minor subject, and six hours in the thesis course; or thirty-six semester hours of coursework, including
twenty-seven hours of geography, six hours in a minor subject, and three hours in the report course. A student who wishes to substitute courses in another field for geography courses must demonstrate that these substitutions are appropriate to his or her program of study and must have the consent of the graduate adviser and the supervising professor for the courses substituted. First-year master’s degree students must complete Geography 390K in the fall semester and Geography 390L in the spring semester, with a grade of at least B- in each course. All students must also demonstrate proficiency in a foreign language or in a quantitative or qualitative method. The student’s supervising committee and the graduate adviser oversee fulfillment of this requirement.

Each student must also enroll in at least one organized course in geography during both the first and the second semester in the graduate program. These courses must be taught by different full-time faculty members within the department, as approved by the graduate adviser. Geography 390K, 390L, and 398T may not be counted toward this requirement. Geography 397, Research in Geography, may be counted only once toward the degree. By the middle of the second semester, the student should have chosen a supervising committee.

When all course requirements and the language or methods requirement have been fulfilled, the student completes the degree by presenting independent research in the form of a thesis or report.

DOCTOR OF PHILOSOPHY

All students entering the doctoral program must hold a Master of Arts degree or the equivalent.

To qualify for advancement to candidacy, a student must do the following:

1. Complete, with a grade of at least B-, two required seminars, Geography 390K and 390L, in the first year of study. All doctoral students must also take three courses taught by different full-time faculty members within the department, as approved by the graduate adviser. Geography 390K, 390L, and 398T may not be counted toward this requirement. Doctoral students may repeat Geography 397, Research in Geography, but this course may be counted only twice toward the degree.

2. Fulfill the language requirement by demonstrating proficiency in one language other than English. Nonnative English speakers may fulfill the requirement by demonstrating proficiency in English. Proficiency must be approved by the student’s dissertation supervisor and the graduate adviser. In exceptional cases, the requirement may be waived with the approval of the graduate adviser.

3. Fulfill the methods requirement by demonstrating proficiency in either a quantitative or a qualitative method, as approved by the student’s dissertation supervisor and the graduate adviser.

4. Select a faculty supervisor and dissertation committee by the end of the second semester; the student may later change supervisors and alter the committee if appropriate.

5. Present a Program of Work that meets with the approval of the dissertation supervisor.

6. Demonstrate comprehensive knowledge in depth in two areas of specialization in geography.

7. Pass a qualifying examination.

After admission to candidacy, a student has completed the formal program of coursework and engages in the research and writing of the dissertation, culminating in an oral defense of the dissertation.

DUAL DEGREE PROGRAM

The Department of Geography and the Environment offers the following dual degree program in cooperation with another division of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community and regional planning</td>
<td>Master of Science</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: Geography Building (GRG) 334, phone (512) 471-5116, fax (512) 471-5049; campus mail code: A3100

Mailing address: The University of Texas at Austin, Graduate Program, Department of Geography and the Environment, 1 University Station A3100, Austin TX 78712

URL: http://www.utexas.edu/cola/depts/geography/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

GEOGRAPHY: GRG

380. Field Course in Geography. Collection of data, formulation of meaningful categories of regions, development of hypotheses of cause-and-effect relations through direct contact with the phenomena and processes in the area where a problem is located. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

380C. Myth, Ritual, Place, and Environment. Impact of local religious lore and practice on cultural landscapes, conservation, and sense of place; cultural and environmental consequences of the spatial expansion of world religions; other themes in the geography of religion, including civil religion and environmental theology. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380D. Environment and Health in Latin America. Same as Latin American Studies 388 (Topic 4: Environment and Health in Latin America). Issues related to health, health care, and development in Latin America and the Caribbean, considered with the recognition that health depends on the interactions of social, economic, and political factors as well as on health care services. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380E. Geomorphology of the Southwest. Geography of West Texas and New Mexico; late Cenozoic basalt flows, volcanic ashes, sand sheets, alluvium, paleolake deposits, glacial moraines, colluvium, and soils; integration of landforms and landscape ecology. Includes a ten-day field trip. The equivalent of three lecture hours a week for one semester, with additional field hours to be arranged. Prerequisite: Graduate standing and consent of instructor.

380F. Field Techniques in Sediments and Soils. Designed to provide experience in field description of sediments and soils in Central Texas; second half of course focuses on field interpretation of geomorphology and landscape evolution using sedimentary deposits and soils. The equivalent of three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

381. Seminar in Historical Geography. Topics include Latin America, Anglo-America, Texas, boundaries, settlement origins and patterns, origins of agriculture. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in geography or a related social science, and consent of instructor.

381C. Mapping the Middle East. Same as Middle Eastern Studies 381 (Topic 31: Mapping the Middle East). Ways in which the Middle East is and has been represented cartographically. Cartographic representations of the region during the fifteenth and sixteenth centuries; the nature and evolution of a distinctive Islamic cartographic tradition; the role and use of maps during the nineteenth and twentieth centuries both in the extension of colonialism and in the creation of modern states; and the contemporary use, applications, and implications of geographic information systems in organizing and representing data spatially. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

382K. Geo-Archaeology and Environmental History. Same as Anthropology 382N. Long-term ecology as reconstructed from settlement and land-use histories. Empirical case studies in environmental history from the Mediterranean region, the Near East, and Mesoamerica. Applications to degradation, desertification, sustainability, and global change. Three lecture hours a week for one semester. Only one of the following may be counted: Geography 356 (Topic: Geo-Archaeology), 356C, 382K. Prerequisite: Graduate standing.

383C. Seminar in Environment and Development. A third- and fourth-world perspective on the geographic implications of international development; emphasis on local and global environmental effects. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in geography or a related social science.

Topic 2: Environment and Development in the Middle East. Same as Middle Eastern Studies 381 (Topic 29: Environment and Development in the Middle East).

384C. Watershed Systems and Environmental Management. The effect of landcover change on drainage basin processes, considered from a geomorphological perspective over varying temporal and spatial scales. Topics may include watershed management, stream channel restoration, fluvial geomorphic processes, and Geographic Information Systems applications to drainage basin processes. Three lecture hours a week for one semester, with additional field hours to be arranged. Prerequisite: Graduate standing and consent of instructor.

385. Seminar in Regional Geography. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in geography or a related social science, and consent of instructor.

Topic 1: Latin America. Same as Latin American Studies 388 (Topic 1: Regional Geography of Latin America). Topics include land and life in Central America; culture, environment, and development in Latin America; recent trends in Latin American geography.

Topic 2: Europe. Topics include various aspects of the economic and political geography of individual nations or regions, such as regional differences in Southeast Europe, agricultural developments in European Community countries, trade, viability of individual countries, the changing resources picture in Western and Eastern Europe.
387D. Globalization, Conflict, and resistance. Topics include agricultural patterns of the United States, comparative regional studies, measurement and delimitation of regions, analysis of population shifts.

387C. Political ecology. Focuses on a theoretical and empirical understanding of the economic, cultural, political, and policy dimensions of globalization; study of the impact of globalization on people and places; understanding of class and identity conflicts using case studies from Latin America, the United States, Europe, Africa, the Middle East, and Asia; and exploration of theories of social movement with examples from the global North and South. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

387C. Political Ecology. An introduction to the history of development theory, economic globalization, studies in the history of science, issues of social justice, and critical studies of environmental history. Three lecture hours a week for one semester. Geography 387C and 386T (Topic: Political Ecology) may not both be counted. Prerequisite: Graduate standing.

387D. Globalization, Conflict, and Resistance. Focuses on a theoretical and empirical understanding of the economic, cultural, political, and policy dimensions of globalization; study of the impact of globalization on people and places; understanding of class and identity conflicts using case studies from Latin America, the United States, Europe, Africa, the Middle East, and Asia; and exploration of theories of social movement with examples from the global North and South. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388. Seminar in Resources and Conservation. Development of the conservation movement, problems of resource misuse, conservation practices, state and national conservation policies, nature and distribution of natural resources. Three lecture hours a week for one semester. Prerequisite: Graduate standing in geography or a related social science, and consent of instructor.

388C. Indigenous Maps, Architecture, and Enculturation of Colonial Mexico. Same as Latin American Studies 388 (Topic 2: Indigenous Maps, Architecture, and Enculturation of Colonial Mexico). The encounter of Spanish and indigenous cultures and ecologies; regional diversity of agricultural, urban, and economic development from 1521 to 1810; ethnic transformation and new socioeconomic configurations. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389C. Quaternary Landscapes. Changing physical and biotic landscapes on Ice Age earth during the past two million years. Reconstruction of Quaternary geomorphic landscapes based on principles and applications of geochronology and paleoclimatology. Three lecture hours a week for one semester. Geography 335C and 385C may not both be counted. Prerequisite: Graduate standing.

389C. Seminar in Quaternary Studies. Issues and new developments in regional and global aspects of Quaternary climates, biota, prehistory, and landscape evolution. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

390K. Issues in Geography. Examines the history, philosophy, and ontology of geography, including its various subfields. Three lecture hours a week for one semester. Required of all first-year graduate students in geography. Prerequisite: Graduate standing in geography or graduate standing and consent of the graduate adviser.

390L. Research in Geography. Builds on topics explored in Geography 390K by focusing on epistemology and research in the field of geography. Students develop plans for research and write a research proposal. Three lecture hours a week for one semester. Required of all first-year graduate students in geography. Prerequisite: Graduate standing in Geography 390K.

390S. Environment, Development, and Food Production. Assessment of various types of nonmechanized agriculture with regard to environmental factors and management techniques. Three lecture hours a week for one semester. Geography 335K and 390S may not both be counted. Prerequisite: Graduate standing and consent of instructor.

391C. Dynamics of Earth Systems. An overview of climate, vegetation, soil, and landform processes. Principles and methodology of physical geography. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391M. Multivariate Techniques in Spatial Analysis. The application of multivariate data analytic techniques including regression, factor, canonical, and discriminatory analysis of spatial problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Geography 360L or a basic course in inferential statistics.

392D. Grant Writing in Geography. Designed to train students to write competitive and successful applications for extramural grants and fellowships. One lecture hour a week for one semester. Prerequisite: Graduate standing.

392M. Seminar in Biodiversity Conservation. Examines issues that involve the conservation and sustainable use of plants, animals, and ecosystems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

393C. Seminar in Digital Landscapes. Explores the theoretical and applied issues associated with the acquisition, analysis, simulation, and visualization of digital geographic information, with an emphasis on current trends in landscape characterization, landscape ecology, biodiversity, global change, environmental remote sensing, and socio-ecological systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
393D. Geographical Information Systems and Ecological Modeling. Covers the steps involved in conceptualizing and formulating predictive models in a raster geographical information systems environment. Although many of the topics covered are fairly generic and can be applied to any application area in which raster data are used, species distribution models will be used as the example application area. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

493K. Research in Remote Sensing of the Environment. Imagery generated by remote sensors applied to research and problem solving in the physical and cultural environment. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Graduate standing.

493M. Advanced Remote Sensing and Quantitative Landscape Ecology. Advanced digital image processing of optical satellite imagery for landscape composition and pattern analysis. Three lecture hours and one and one-half discussion hours a week for one semester. Prerequisite: Graduate standing, and Geography 493K or the equivalent or consent of instructor.

394. Seminar in Urban Analysis. Research seminar in urban issues: demographic, environmental, and transportation modeling; metropolitan finance; and urban social pathologies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

394C. Market Area Analysis. Same as Marketing 382 (Topic 1: Market Area Analysis). Conceptual and methodological aspects of analyzing the geographical dimensions of demand. Students complete a field project in which they apply concepts and techniques to the analysis of a problem. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

394K. Geographic Information Systems. An introduction to the design and use of geographic information systems and to computer-based tools used to store, manage, analyze, and display spatially referenced data. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

394L. Advanced Applications of Information Technology. Advanced issues in computer cartography, geographic information systems, three-dimensional environmental reconstruction and rendering, terrain modeling, animation of environmental processes, and hypertext and multimedia authoring. Interdisciplinary subjects, such as the application of geographic information systems to archaeological research, historical demography, and habitat mapping and analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

395. Cultural Adaptation and Change. Same as Anthropology 395K. A graduate-level introduction to cultural behavior, adaptation, evolution and transformation, with emphasis on demography, diffusion, migration, ethnicity, and institutions. Three lecture hours a week for one semester. Prerequisite: Graduate standing in geography or a related field, and consent of instructor.

395D. Latin American Cultures, Environment, and Development. Same as Latin American Studies 388 (Topic 3: Latin American Cultures, Environment, and Development). Exploration through Latin American examples of issues of cultural identity and territory, adaptive strategies, environmental impact, conservation, cultural survival, parks and people, and sustainable development. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

396. Techniques in Pollen Analysis. Field sampling, laboratory processing, microscopy, pollen grain morphology, pollen counting, and data-handling techniques. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

396C. Seminar in Current Geographic Research. Review and discussion of recent research projects across the field of geography; includes analysis of theories and methodologies, and various methods for presenting results. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in geography or a related field, and consent of instructor.

396K. Quaternary Palynology. Methods, principles, and applications of pollen analysis to vegetational, paleoenvironmental, and ethnobotanical reconstructions. Three lecture hours a week for one semester. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

397. Research in Geography. Supervised study and research. May be repeated for credit. Prerequisite: Graduate standing and consent of supervising professor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in geography and consent of the graduate adviser; for 698B, Geography 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in geography and consent of the graduate adviser.

398T. Supervised Teaching in Geography. Teaching under the close supervision of the course instructor; group meetings with the instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the graduate adviser.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Geography 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

The Department of Germanic Studies is committed to scholarship and teaching that foster the highest in professional achievement and standards. The faculty focuses on interdisciplinary and intercultural research on primary sources in cultural studies, linguistics, literature, and second language studies, as well as on course development and teaching. The program of study combines work that emphasizes traditional scholarly tools and approaches to literature, language, and cultures with twenty-first-century research on emerging forms of textuality and media, cultural identity, migration and exile, cultural contact situations, Web-based and media-based research and teaching, and other theoretical and computer-based approaches to cultural studies and cultural history.

The department encourages programs of study that combine German and other Germanic cultures, especially Danish, Dutch, Norwegian, and Swedish; it welcomes work that makes substantial links between cultural sites in different periods and different regions, as well as between different scholarly disciplines and research paradigms. Course offerings of the resident faculty are supplemented by visiting scholars from Europe, including long-term DAAD lecturers, and occasional writers or scholars in residence. While completing core requirements within the department, students are encouraged to pursue links to and coursework in other programs in the University.

The University Libraries are state-of-the-art. They are one of the ten largest collections in the country and focus especially on digital collections. The Harry Ransom Humanities Research Center, the campus rare books library, has substantial holdings in German drama, manuscripts, and publisher’s correspondence; and the Blanton Museum of Art has one of the largest collections of prints, drawings, and paintings in the country, including significant holdings in European graphic arts.

AREAS OF STUDY

All students in the master’s degree program take a core of required courses. In consultation with the graduate advisor, each student chooses a concentration, usually the area of the proposed report, to aid in the choice of electives. Concentrations may include courses from outside the department that are related to the major area of study.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Katherine M. Arens  John M. Hoberman
Kirsten L. Belgum  Marc Pierce
Hans C. Boas  Sandra B. Straubhaar
Pascale R. Bos  Jurgen K. Streeck
Philip M. Broadbent  Janet K. Swaffar
Sabine Hake  Per K. Urlaub
Peter Hess  Lynn R. Wilkinson

ADMISSION REQUIREMENTS

Entering graduate students must have a bachelor’s degree (or the equivalent from a university outside the United States), ordinarily with a major in German or the appropriate Germanic language.

DEGREE REQUIREMENTS

MASTER OF ARTS

Students enroll in a core program to fulfill the requirements for the master’s degree. The core program consists of four courses: German 381, 382, 386, and 398T, as well as electives.

The master’s degree program requires thirty-three semester hours of coursework, of which three hours are earned in the report course, German 398R. Students must pass an oral examination of up to one and one-half hours based on the master’s report and coursework done in the declared area of the specializa-
tion. Those who concentrate in literature, linguistics, second language studies, or cultural studies must also demonstrate reading competence in one foreign language other than German or the language of concentration; those who concentrate in German and another Germanic language must demonstrate reading competence in a foreign language other than the second Germanic language.

DOCTOR OF PHILOSOPHY

The doctoral program usually requires twenty-seven semester hours of coursework beyond the master’s degree. In consultation with the graduate adviser, the student develops primary and supporting areas of specialization, with the primary area usually being the area of the proposed dissertation. These areas should represent professionally acknowledged focuses for research and teaching in the field, covering the broad spectrum of literature, cultural, and linguistic specializations represented in the major professional organizations. The student chooses coursework from these areas and plans for the candidacy procedure. The student is expected to complete the core program for the Master of Arts degree or its equivalent before admission to the doctoral program. Students must fulfill the following requirements: (1) successfully complete the qualifying procedure administered by the Graduate Studies Committee to enter the doctoral program; (2) demonstrate reading competence in one foreign language other than German or the language of concentration; (3) near the completion of all coursework, pass the candidacy procedure; and (4) defend the dissertation in the final oral examination.

FOR MORE INFORMATION

Campus address: Burdine Hall (BUR) 336, phone (512) 471-4123, fax (512) 471-4025; campus mail code: C3300
Mailing address: The University of Texas at Austin, Graduate Program, Department of Germanic Studies, 1 University Station C3300, Austin TX 78712
E-mail: chair@gmc.utexas.edu
URL: http://www.utexas.edu/cola/depts/germanic/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

GERMAN: GER

381. Studies in Germanic Linguistics and Philology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and twelve semester hours of upper-division coursework in German or consent of instructor.

Topic 2: Introduction to Synchronic Linguistics: German.

Topic 2: German Literature and Culture: Renaissance/Reformation through Baroque (1450–1730).
Topic 3: German Literature and Culture: Enlightenment through Realism (1730–1890).
Topic 4: German Literature and Culture: Naturalism since 1890.
Topic 5: Old Norse Literature and Culture.
Topic 10: Older Germanic Languages and Cultures: Old Norse.
Topic 11: Older Germanic Languages and Cultures: Gothic.
Topic 12: Older Germanic Languages and Cultures: Old High German.
Topic 13: Older Germanic Languages and Cultures: Middle High German.
Topic 14: Older Germanic Languages and Cultures: Old Saxon.

389K. Methods in the Study of Literature and Linguistics. An introduction to the critical and technical procedures used in Germanic studies, especially bibliographical aids. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and twelve semester hours of upper-division coursework in German or consent of instructor.

Topic 1: Fundamentals of Scholarship.
Topic 6: German Rhetoric and Stylistics.

192, 392. Seminar in Germanic Literature and Culture. Study of problems, topics, writers, genres, and movements in Germanic literature and culture. One or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. German 192 is offered on the credit/no credit basis only. Prerequisite: Graduate standing, and twelve semester hours of upper-division coursework in German or consent of instructor.

Topic 1: German Literature and Cinema.

393K. Seminar in Germanic Linguistics and Philology. Study of linguistic topics in Germanic languages, such as grammar, morphology, phonology, dialectology, syntax, lexicology, sociolinguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and twelve semester hours of upper-division coursework in German or consent of instructor.

Topic 1: German Syntax. Same as Linguistics 384 (Topic 4: German Syntax).
Topic 3: The Acquisition of German. Special problems in the acquisition of German or another Germanic language as a first or second language. German 381 (Topic: The Acquisition of German) and 393K (Topic 3) may not both be counted.

Topic 4: Synchronic Linguistics: German Morphology.
Topic 6: Sociolinguistics: Language Contact and Death.
Topic 7: Sociolinguistics: Texas German Dialect.
Topic 8: Sociolinguistics: German Dialectology.

Topic 10: Older Germanic Languages and Cultures: Old Norse.
Topic 11: Older Germanic Languages and Cultures: Gothic.
Topic 12: Older Germanic Languages and Cultures: Old High German.
Topic 13: Older Germanic Languages and Cultures: Middle High German.
Topic 14: Older Germanic Languages and Cultures: Old Saxon.

394C. Topics in Comparative, Cultural, or Theoretical Studies. Topics with a substantial Germanic component or application that fall outside of national-language literary and linguistic studies. May include comparative national approaches to genre, culture, or society; interdisciplinary studies; and surveys or focused studies of approaches to theory or methodology that apply to Germanic studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

397P. Topics in Applied Linguistics and Pedagogy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and twelve semester hours of upper-division coursework in German or consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Germanic studies and consent of the graduate adviser; for 698B, German 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Germanic studies and consent of the graduate adviser.

398T. Supervised Teaching in German. Analysis of the major foreign language teaching methodologies; curriculum and curricular materials development. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, and twelve semester hours of upper-division coursework in German or consent of instructor.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: German 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

With more than sixty full-time or jointly appointed members, the Department of Government is one of the largest political science faculties in the country. The department houses important research centers, including the Public Policy Institute and the Policy Agendas Project. The department’s research resources include excellent computer facilities and an extensive collection of machine-readable social science data.

Students in the department also take advantage of many of the University’s research facilities and programs, including the Teresa Lozano Long Institute of Latin American Studies and Centers for East Asian Studies; Russian, East European, and Eurasian Studies; and Middle Eastern Studies. Many other units provide institutional support for political scientists, including the Brazil Center, the Edward A. Clark Center for Australian and New Zealand Studies, the Center for European Studies, the John L. Warfield Center for African and African American Studies, and the South Asia Institute.

The University has one of the largest academic libraries in the United States, with many collections of value for research in government and politics; these include the Benson Latin American Collection, the Grattan collection on Australia, the Woodrow Wilson collection, the Tobenkin collection on the Russian Revolution, the Jaffe collection on political radicalism, and a variety of special materials on southern and western America, Southwestern history and politics, India, East Asia, the Middle East, Africa, and the British Commonwealth. The library system also includes the Dolph Briscoe Center for American History, the Harry Ransom Humanities Research Center, and the Tarlton Law Library. The campus is the site of the Lyndon Baines Johnson Library and Museum, an invaluable resource for the study of twentieth-century politics.

AREAS OF STUDY

All candidates for graduate degrees are expected to develop a broad competence in the discipline as a whole as well as expertise in specific areas. The program offers specialized instruction in the following fields: American politics, comparative politics, formal theory, international relations, methodology, political theory, public law, and public policy.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester of 2011.

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Itty Abraham</td>
<td>Sanford V. Levinson</td>
<td>Tse-Min Lin</td>
</tr>
<tr>
<td>Jeffrey Bruce Abramson</td>
<td>Stefanie A. Lindquist</td>
<td>Robert C. Luskin</td>
</tr>
<tr>
<td>Bethany L. Albertson</td>
<td>Patricia Maclachlan</td>
<td>Raul L. Madrid</td>
</tr>
<tr>
<td>Zoltan D. Barany</td>
<td>Aloysius P. Martinich</td>
<td>Eric L. Mcdaniel</td>
</tr>
<tr>
<td>Catherine Boone</td>
<td>Patrick J. McDonald</td>
<td>Robert G. Moser</td>
</tr>
<tr>
<td>David Braybrooke</td>
<td>Scott James Moser</td>
<td>Thomas L. Pangle</td>
</tr>
<tr>
<td>Daniel M. Brinks</td>
<td>Lorraine S. Pangle</td>
<td>Ami Pedahzur</td>
</tr>
<tr>
<td>Jason M. Brownlee</td>
<td>Thomas L. Pangle</td>
<td>H. W. Perry Jr.</td>
</tr>
<tr>
<td>Bruce Buchanan II</td>
<td>Tasha S. Philpot</td>
<td>Lucas A. Powe Jr.</td>
</tr>
<tr>
<td>J. Budziszewski</td>
<td>David F. Prindle</td>
<td>Gretchen Ritter</td>
</tr>
<tr>
<td>Walter D. Burnham</td>
<td>Brian E. Roberts</td>
<td>Victoria Rodriguez</td>
</tr>
<tr>
<td>Jason P. Casellas</td>
<td>Thomas K. Seung</td>
<td>Daron R. Shaw</td>
</tr>
<tr>
<td>Terrence L. Chapman</td>
<td>Bartholomew H. Sparrow</td>
<td>Devin A. Stauffer</td>
</tr>
<tr>
<td>Henry A. Dietz</td>
<td>Sean M. Theriault</td>
<td>Sean M. Theriault</td>
</tr>
<tr>
<td>David V. Edwards</td>
<td>Jeffrey K. Tulis</td>
<td>Peter Trubowitz</td>
</tr>
<tr>
<td>Zachary S. Elkins</td>
<td>Kurt G. Weyland</td>
<td>Jeffrey K. Tulis</td>
</tr>
<tr>
<td>James M. Enelow</td>
<td>Lucas A. Powe Jr.</td>
<td>Tasha S. Philpot</td>
</tr>
<tr>
<td>Gary P. Freeman</td>
<td>David F. Prindle</td>
<td>Gretchen Ritter</td>
</tr>
<tr>
<td>James K. Galbraith</td>
<td>Brian E. Roberts</td>
<td>Victoria Rodriguez</td>
</tr>
<tr>
<td>Terri E. Givens</td>
<td>Thomas K. Seung</td>
<td>Daron R. Shaw</td>
</tr>
<tr>
<td>Kenneth F. Greene</td>
<td>Paul E. Black</td>
<td></td>
</tr>
<tr>
<td>Benjamin G. Gregg</td>
<td>Robert G. Moser</td>
<td>Thomas L. Pangle</td>
</tr>
<tr>
<td>Roderick P. Hart</td>
<td>Scott James Moser</td>
<td>Thomas L. Pangle</td>
</tr>
<tr>
<td>John C. Higley</td>
<td>Raul L. Madrid</td>
<td>Raul L. Madrid</td>
</tr>
<tr>
<td>Juliet A. Hooker</td>
<td>Sanford V. Levinson</td>
<td>Tse-Min Lin</td>
</tr>
<tr>
<td>Wendy A. Hunter</td>
<td>Stefanie A. Lindquist</td>
<td>Robert C. Luskin</td>
</tr>
<tr>
<td>William J. Hurst</td>
<td>Patricia Maclachlan</td>
<td>Raul L. Madrid</td>
</tr>
<tr>
<td>Gary J. Jacobsohn</td>
<td>Aloysius P. Martinich</td>
<td>Eric L. Mcdaniel</td>
</tr>
<tr>
<td>Stephen A. Jesseu</td>
<td>Patrick J. McDonald</td>
<td>Robert G. Moser</td>
</tr>
<tr>
<td>Bryan D. Jones</td>
<td>Scott James Moser</td>
<td>Thomas L. Pangle</td>
</tr>
<tr>
<td>David L. Leal</td>
<td>Lorraine S. Pangle</td>
<td>Ami Pedahzur</td>
</tr>
</tbody>
</table>

DEGREE REQUIREMENTS

MASTER OF ARTS

The master’s degree program requires either twenty-four semester hours of coursework and Government 698, the thesis course; or thirty hours of coursework and Government 398R, the report course. At least six hours must be taken as supporting work outside the department.
DOCTOR OF PHILOSOPHY

A doctoral degree candidate must fulfill the following general requirements: (1) complete two foundation courses in political science and more specialized coursework in two fields of study; (2) demonstrate language proficiency or competence in quantitative research methods; (3) pass written examinations in two fields; (4) prepare and defend a dissertation proposal; and (5) write an original dissertation and successfully defend it in oral examination. Additional information on specific requirements and procedures is available from the department.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

GOVERNMENT: GOV

380R. Mathematical Methods for Political Analysis. An introduction to mathematical concepts essential for quantitative analysis, such as statistics and formal political theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

381J. Political Institutions and Processes. Local, state, and national political institutions and policy processes, and specific areas of public policy. Field core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

381L. Seminar in American Government and Politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

   Topic 1: Parties and Interest Groups. An empirically oriented inquiry into political parties and interest groups in the political process.


   Topic 4: State Government and Politics. Institutions, processes, and problems of the American political system at the state level.

FOR MORE INFORMATION

Campus address: Batts Hall (BAT) 2.116, phone (512) 471-5121, fax (512) 471-1061; campus mail code: A1800

Mailing address: The University of Texas at Austin, Graduate Program, Department of Government, 1 University Station A1800, Austin TX 78712

E-mail: gov-gpo@austin.utexas.edu

URL: http://www.utexas.edu/cola/depts/government/

Topic 5: Government and the Economy. Selected topics on the interrelations between governments and economic systems, with particular reference to American experience.

Topic 6: Ethnic Politics. An examination of the status and behavior of racial, ethnic, and religious minorities in the American political system.

Topic 7: The American Presidency.

Topic 8: Congress.

Topic 9: Campaigns and Elections.

Topic 10: American Political Development.


Topic 12: Positive Political Economy.

381R. Political Behavior. Political socialization, political psychology, public opinion, and electoral behavior. Field core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

381S. Seminar in Political Behavior. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.


   Topic 2: Political Participation.

382K. Studies in Political Theory and Philosophy. Intensive study of selected classical and contemporary theorists and source materials related to political theory and philosophy. Field core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

382M. Seminar in Political Theory and Philosophy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

   Topic 1: Contemporary Political Theory. Analysis of contemporary theoretical problems and detailed study of the works of contemporary Western theorists.
Topic 2: American Political Thought. Examination of the origins and development of political ideas that have influenced the evolution of the American political system.

Topic 4: Feminist Theory.

Topic 5: Natural Law Modernized.

Topic 6: Postmodernism.

Topic 7: Classical Liberalism, Utilitarianism, and Democratic Theory.

Topic 8: Philosophy of History.

Topic 9: Rousseau.

383K. Problems in the Study of Politics. Normative orientations in research, theory formation and empirical assessment, various conceptions of explanation, and historical development of the social sciences. Three lecture hours a week for one semester. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

384L. Seminar in Latin American Politics. Analysis of selected problems in politics and international relations of the countries of Latin America. Two class hours and one conference hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser. Some reading knowledge of Spanish or Portuguese is recommended.

Topic 1: Brazilian Public Policies. Same as Latin American Studies 384L (Topic 1: Brazilian Public Policies). Three lecture hours a week for one semester.


384M. Seminar in Public Policy and Administration. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.


Topic 4: Comparative Administration. Study of administrative theory and practice in comparative perspective.


Topic 7: Comparative Public Policy.

Topic 8: Public Policy Clinic. Offered on the credit/no credit basis only.

384N. Seminar in Public Law. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

Topic 1: The Judicial Process. An exploration of the nature of the judicial function, with emphasis on the roles of law and discretion in the decisional process.

Topic 2: Core Readings in Public Law.

Topic 3: Constitutional Interpretation.

Topic 4: State Constitutions and Human Rights.

385K. Foundations of Public Policy. Introduction to major institutions, values, processes, and problems that shape contemporary public policies. Review and appraisal of current international, national, state, and local policy debates. Sampling of theoretical literature in policy analysis, American politics, institutional and organizational theory, macroeconomic management, democratic theory, policy evaluation, and politics-governance conflicts. Field core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

385L. Seminar in Methodology. Intensive examination of selected issues in the methodology of political inquiry. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

Topic 1: Time-Series Analysis.

Topic 2: Introduction to Political Methodology.


Topic 4: Advanced Regression.

185M. Colloquium in Politics. Field roundtables, reports of current research, and panel discussions of significant issues in the study of politics. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

385N. Introduction to Formal Political Analysis. Critical, comparative survey of important formal theories of political processes, stressing general approaches rather than mathematical results. Presupposes no technical background. Field core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

385R. Seminar in Formal Theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

Topic 1: Game Theory.

Topic 2: Spatial Theory. Only one of the following may be counted: Government 381L (Topic: Spatial Theory), 385L (Topic: Spatial Theory), 385R (Topic 2).

388K. The Study of International Relations. Comparison of various theories of international politics and analysis of basic forces that underlie national policies and condition the nature and concerns of contemporary international relations. Discussion, reading, and research. Field core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.
Seminar in International Relations. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

Topic 1: Study of International Conflict. Studies of the determinants of foreign policy in selected countries, with consideration of both domestic and international factors.

Topic 2: American Foreign Policy. Topics in the study of American foreign policy, including the problems and instruments of American diplomacy, and the process by which policy is made.


Topic 4: Contemporary Issues in International Relations. An analysis of major current developments and issues in international politics and military relations.

Topic 5: International Law and Organization. An analysis of the forms and functions of international law and organization, with particular emphasis on the case method as means of adjusting interstate relations.

Topic 6: International Political Economy.

Topic 7: Theory and International Relations.

Topic 8: Competing Approaches to World Politics.

Comparative Study of Political Systems. Theory and method of comparative political study; varieties of governmental institutions in Western and non-Western countries; comparative examination of political institutions. Field core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

Seminars in Comparative Government and Politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

Topic 2: Political Systems of Western Europe. Analysis of Western European politics; may include both particular political systems and comparative study of political institutions, processes, and behavior.

Topic 4: Politics of the Middle East and North Africa. Same as Middle Eastern Studies 381 (Topic 22: Politics of the Middle East and North Africa). Readings and research on the political systems of the Arab world, Israel, Turkey, Iran, and Afghanistan. Precise topics vary.

Topic 7: Authoritarian Political Systems. Same as Asian Studies 390 (Topic 2: Authoritarian Political Systems). Comparative study of authoritarian and totalitarian patterns of government, past and present, Western and non-Western; special emphasis on Communist and Fascist systems.

Topic 9: Political Sociology.


Statistical Analysis in Political Science II. Multivariate statistical techniques and their applications to problems in political science. Field core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing, one course in statistics, and consent of the graduate adviser.

Research Colloquium in Political Science. Forum for development of research projects and dissertation proposals. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

Conference Course in Political Science. Readings in the literature of political science in fields in which the student is preparing for the qualifying examinations for the Doctor of Philosophy. May be repeated for credit. Prerequisite: Graduate standing, twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.
698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in government, twelve semester hours of upper-division or graduate coursework in government, six of which must be in the field of the thesis subject, and consent of the graduate adviser; for 698B, Government 698A.

398R. **Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in government and consent of the graduate adviser.

398T. **Supervised Teaching in Government.** Teaching under the close supervision of the course instructor; group meetings with the instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing, appointment as a teaching assistant, and consent of the graduate adviser.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Government 399R, 699R, or 999R.

---

**HISTORY**

*Master of Arts*  
*Doctor of Philosophy*

---

**FACILITIES FOR GRADUATE WORK**

Graduate students in history have access to major collections of research materials in a number of fields. The Benson Latin American Collection of printed and manuscript materials is of international importance for research and study in the history of Latin America in general and Mexico in particular. The Lyndon Baines Johnson Library and Museum and its Oral History Project offer an unprecedented wealth of material for the study of United States history in the Eisenhower, Kennedy, and Johnson years. In the Perry-Castañeda Library, the Harry Ransom Humanities Research Center, and the Dolph Briscoe Center for American History are major collections related to the history of science, twentieth-century writers, British and European history, and the history of Texas, the South, and the West, and documents of the United States and of the United Nations. The Natchez Trace Collection in the Dolph Briscoe Center for American History provides an unparalleled resource for the study of the history of the lower Mississippi region in the nineteenth century. At the Episcopal Theological Seminary of the Southwest near the University campus are the national archives of the Episcopal Church, containing books and manuscripts from the colonial period onward.

---

**AREAS OF STUDY**

Graduate study in history is offered in the following major fields: Africa; Atlantic history; East Asia; early modern Europe; history of science, technology, and medicine; Latin America; medieval Europe; Middle East; modern Europe; South Asia; and United States.

---

**GRADUATE STUDIES COMMITTEE**

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Robert H. Abzug  
Kamran S. Aghaie  
Kamran Ali  
Samer M. Ali  
Daina R. Berry  
Marion Enid Bodian  
Susan R. Boettcher  
Henry W. Brands  
Benjamin C. Brower  
Jonathan C. Brown  
Erika M. Bsumek  
Virginia Garrard Burnett  
Matthew J. Butler  
Jorge Canizares  
Ruramisai Charumbira  
Sally H. Clarke  
Judith G. Coffin  
David F. Crew  
Janet M. Davis  
Susan Deans-Smith  
James R. Denbow  
Yoav Di-Capua  
Carolyn Eastman  
Jennifer V. Ebbeled  
Oloruntuyin O. Falola  
Neil F. Foley  
William E. Forbath  
George B. Forgje  
Alison K. Frazier  
Seth W. Garfield  
Tiffany M. Gill  
Laurie B. Green  
Frank A. Guridy  
Julie Hardwick  
Roger Hart  
Antony G. Hopkins
DEGREE REQUIREMENTS

MASTER OF ARTS

The degree is offered in three options: with thesis, with report, and without thesis or report. The thesis option requires at least thirty semester hours of coursework, including one research seminar; the report option requires at least thirty-three hours, including two research seminars; and the option without thesis or report requires at least thirty-six hours, including two research seminars. All options require at least six hours of supporting coursework taken outside the major field of specialization in history; some or all of these six hours may be taken either within or outside the department. With the exception of the major field in United States history, all options require demonstrated competence in a foreign language. Each student’s Program of Work must be approved by the student’s primary adviser and the graduate adviser.

DOCTOR OF PHILOSOPHY

The Graduate Program Committee maintains close control over admission to the doctoral program; students are reviewed each year until they enter candidacy, and are approved for continuation only if the committee believes the student will excel in doctoral work.

Students who enter the department with a master’s degree are evaluated for admission to the doctoral program after completing their first semester in the department; those who enter with a bachelor’s degree, after their second semester.

The doctoral degree student must complete at least thirty-six hours of graduate work, at least twenty-four of which must be in history. At least six of the required twenty-four hours must be in research seminars (or at least three of the twenty-four hours if the student has written a master’s thesis at the University). The student must also complete a twelve-hour supporting field outside the major field of interest in history; some or all of these twelve hours may be taken either within or outside the department. Courses taken at the University for the master’s degree are counted toward the hours required for the doctoral degree. The graduate adviser may also permit transfer of up to twelve hours of graduate credit from another institution.

The student must fulfill the foreign language requirement for the major field as prescribed in the official Program of Study of the department.

To qualify for admission to candidacy for the doctoral degree, the student must pass both a written and an oral examination in the major field. He or she must then write a dissertation and defend it before a supervisory committee of at least five faculty members, including one member from outside the department.

The student must meet any other requirements prescribed individually by the Graduate Studies Committee or by the dissertation supervisory committee.

FOR MORE INFORMATION

Campus address: Garrison Hall (GAR) 1.104B, phone (512) 471-3261, fax (512) 475-7222; campus mail code: B7000
Mailing address: The University of Texas at Austin, Graduate Program, Department of History, 1 University Station B7000, Austin TX 78712
URL: http://www.utexas.edu/cola/depts/history/graduate/overview.php
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

HISTORY: HIS

380K. History of Science. Topics cover scientific development since ancient times, including the scientific revolution, 1500–1800; the development of specific scientific disciplines; and the relationship between science and social change. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

380L. Topics in European Imperialism. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

380S. Introductory Conference Course in African History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

381. Topics in World History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

382N. Topics in the History of East and South Asia. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

382Q. Introductory Conference Course in African History. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor; consent forms are available in the departmental graduate advising office.

382R. Introductory Conference Course in Asian History. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor; consent forms are available in the departmental graduate advising office.

382S. Introductory Conference Course in Middle Eastern History. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor; consent forms are available in the departmental graduate advising office.

382T. Introductory Conference Course in European History. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor; consent forms are available in the departmental graduate advising office.

382U. Introductory Conference Course in American History. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor; consent forms are available in the departmental graduate advising office.

382V. Introductory Conference Course in Latin American History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

383. Seminar in Modern European History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

383C. Literature of European History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Required of all entering graduate students in European history. Prerequisite: Graduate standing and consent of the graduate adviser.

383L. Studies in World History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Required of all entering graduate students in world history. Prerequisite: Graduate standing and consent of the graduate adviser.

383M. Studies in the Atlantic Worlds. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.
384K. Seminar in British History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

384M. Seminar in Tudor-Stuart History. Reading and research in the history of England under the Tudors and Stuarts, 1485–1689. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

386K. Seminar in Latin American History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, reading knowledge of Spanish or Portuguese, and consent of the graduate adviser.

386L. Research Seminar in Latin American History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

388K. Seminar in Middle Eastern History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor; these are identified in the Course Schedule.

388M. Studies in Early Modern Europe. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

388L. Seminar in Early Modern Europe. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor; these are identified in the Course Schedule.

388T. Supervised Teaching in History. Designed to expand the graduate student’s opportunity for individual consultation. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor; consent forms are available in the departmental graduate advising office.

389. Research Seminar in United States History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

391C. Conference Course. Designed to expand the graduate student’s opportunity for individual consultation. May be repeated for credit. Prerequisite: Graduate standing and written consent of instructor; consent forms are available in the departmental graduate advising office.

392. Seminar in United States History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser. Some topics also require consent of instructor; these are identified in the Course Schedule.

393L. Qualifying Examination. Preparation for qualifying examinations. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

394H. Introduction to Historical Inquiry. Introduction to a variety of theoretical, methodological, or historiographical approaches to the past. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

395. Seminar in Bibliography and Methods. A seminar to acquaint the advanced student with the nature and extent of materials for study and writing in United States history. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

397K. Literature of United States History. Survey of historical writing and historiography from colonial times to the present. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Required of all entering graduate students in United States history. Prerequisite: Graduate standing and consent of the graduate adviser; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Literature of United States History Before 1865. Survey of historical writing and historiography to 1865. Designed to introduce students to the field of early American history.

Topic 2: Literature of United States History Since 1865. Examines trends in American historiography from 1865 to the present.

397L. Medieval History. Some topics also require consent of instructor; these are identified in the Course Schedule. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in history and consent of the graduate adviser; for 698B, History 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in history and consent of the graduate adviser.

398T. Supervised Teaching in History. Weekly group meetings with the instructor, individual consultations, and reports. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: History 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

The Benson Latin American Collection is the most complete library of its kind in the United States, containing more than eight hundred thousand volumes of printed material in addition to manuscripts, maps, newspapers, and microfilms. Of special interest are the twenty thousand reels of microfilm copies of archival material located in Mexico, Spain, England, and Washington DC. Other campus libraries, including the Perry-Castañeda Library, the Fine Arts Library, the Walter Geology Library, and the Architecture and Planning Library, contain additional Latin American material. Students also have access to a variety of electronic journals, books, and bibliographic tools through the University Libraries Web site, http://www.lib.utexas.edu/.

About sixty-five faculty members regularly teach courses dealing with Latin America, and some 125 additional faculty members have Latin American interests in a wide variety of fields.

AREAS OF STUDY

Graduate work toward a degree in Latin American studies may be concentrated in any academic area in which courses with Latin American content are offered.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Paul C. Adams
Rosental C. Alves
Ronald J. Angel
Arturo Arias
Jossianna Arroyo Martinez
Javier Ayuero
Charles E. Berg
Steve Bourget
Daniel M. Brinks
Jonathan C. Brown
Virginia Garrard Burnett
Noel B. Busch
Matthew J. Butler
Karl W. Butzer
Jorge Canizares
Luis E. Carcamo-Huechante
Harry M. Cleaver Jr.
Kelley A. Crews
Megan J. Crowhurst
Donna De Cesare
Mercedes L. De Uriarte
Susan Deans-Smith
Henry A. Dietz
Hector Dominguez-Ruvalcaba
William Doolittle
Robert A. Dull
David J. Eaton
Zachary S. Elkins
Nora C. England
Karen L. Engle
Enrique H. Fierro
Richard R. Flores
Douglas E. Foley
Neil F. Foley
James K. Galbraith
Seth W. Garfield
Lawrence E. Gilbert
Kate Gillespie
Andrea Giunta
Gloria Gonzalez-Lopez
John M. Gonzalez
Edmund T. Gordon
Kenneth F. Greene
Julia E. Guernsey
Frank A. Guridy
Charles R. Hale
William F. Hanks
Patricia I. Hansen
Barbara J. Harlow
Frederick G. Hensley
John C. Higley
R. Roland Hinojosa Smith
Lori K. Holleran
Juliet A. Hooker
Wendy A. Hunter
Omi Osun Joni L. Jones
Terry D. Kahn
Orlando R. Kelm
Gregory W. Knapp
Dale A. Koike
Fernando Luiz Lara
Lorraine Leu
Jose E. Limon
Naomi E. Lindstrom
Raul L. Madrid
Leticia J. Martelete
James D. Mauseth
John McKiernan-Gonzalez
Martha Menchaca
Robin D. Moore
Moyosore Benjamín Okediji
Yolanda C. Padilla
Ampa Pedahzur
Francisco L. Perez
Gabriela Polit
Joseph E. Potter
Matt U. Richardson
Bryan R. Roberts
America B. Rodriguez
Enrique R. Rodriguez
Nestor P. Rodriguez
Victoria Rodriguez
Sonia Roncador
Maximo R. Salaberry
Cesar A. Salgado
Nicolas Shumway
Lok C. Siu
Bjorn I. Sletto
Christen Smith
Patricia A. Somers
Shannon Speed
Chandler W. Stolp
Joseph Straubhaar
Brian M. Stross
David S. Stuart
Roberto I. Tejada
Almeida J. Toribio
Rebecca M. Torres
Christopher J. Tucker
Ann Twinam
Fred Valdez Jr.
Angela Valenzuela
Joao H. Vargas
Andres Villarreal
Peter Ward
David C. Warner
Kurt G. Weyland
Patricia A. Wilson
Robert H. Wilson
Samuel M. Wilson
Anthony C. Woodbury
Kenneth R. Young

ADMISSION REQUIREMENTS

The entering master’s degree student must have a bachelor’s degree, with a major in any discipline. Reading and speaking knowledge of Spanish or Portuguese is required.

Students must hold the master’s degree by the time they enter the doctoral program.

DEGREE REQUIREMENTS

MASTER OF ARTS

Three degree plans are available; one requires a thesis, while the others require two substantial research papers, one in the major field and one in the minor. The
major and minor fields may be any academic areas that offer Latin American content coursework, such as anthropology, economics, government, history, sociology, public policy, literature, and art history. Most plans require the completion of at least thirty-three semester hours of coursework, including either the thesis course, Latin American Studies 698, or the primary and secondary report courses, Latin American Studies 397R and 398R. Dual degree programs may require a different number of hours.

Under all of the Master of Arts degree plans, the student must develop a proficiency in either Spanish or Portuguese. Examinations are held each semester, and the student may repeat them until proficiency is indicated. Students are strongly encouraged to study both languages.

**DOCTOR OF PHILOSOPHY**

The doctoral degree program provides flexibility for the small number of students who wish to prepare themselves broadly and with sufficient depth to work in areas requiring multidisciplinary competence, such as the study of hieroglyphic writing from both an archaeologist’s and an art historian’s perspective. Students wishing to pursue a doctoral degree are urged to consider carefully the advisability of a program in an appropriate discipline.

Doctoral students must complete at least thirty semester hours of coursework beyond the master’s degree program, excluding hours in the dissertation courses. Once admitted, each student must form, in consultation with the graduate adviser, a program committee that will supervise the student’s work until he or she is admitted to candidacy.

The student must demonstrate a high level of competence in reading and speaking either Spanish or Portuguese, and must be able to read the other language or some alternate language appropriate to the chosen program that has the approval of the Graduate Studies Committee. Working with a program committee approved by the Graduate Studies Committee and the graduate adviser, the student develops a coherent interdisciplinary program of graduate study designed to provide both competence in depth in a particular discipline or disciplines and complementary strength in related fields. Within the concentration, students must acquire the level of competence in the theories and methods of research demanded of students pursuing the doctoral degree in that department. Graduate credit accumulated for the master’s degree may, when deemed appropriate by the program committee, be included in the proposed doctoral degree program. The student’s proposed Program of Work must be submitted to the program committee, which may endorse the program as submitted or require modification to improve it.

The graduate student is admitted to candidacy upon passage of written and oral examinations conducted by the program committee. A research proposal for the dissertation should be submitted by the student to the program committee and the graduate adviser. Evaluation of the proposal is in the hands of the program committee, which may, if appropriate, incorporate the proposal into the oral examination. The doctoral dissertation is submitted to a dissertation supervising committee appointed by the graduate dean. The supervising professor must be from the academic area in which the work is being written. All dissertations submitted for Latin American studies doctoral degrees must be of an interdisciplinary nature, clearly drawing upon at least two academic disciplines.

Details on both the master’s and the doctoral degree program are available from the graduate adviser.

**DUAL DEGREE PROGRAMS**

The Teresa Lozano Long Institute of Latin American Studies offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Communication studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Community and regional planning</td>
<td>Master of Science in Community and Regional Planning</td>
</tr>
<tr>
<td>Global policy studies</td>
<td>Master of Global Policy Studies</td>
</tr>
<tr>
<td>Information studies</td>
<td>Master of Science in Information Studies</td>
</tr>
<tr>
<td>Journalism</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Law</td>
<td>Doctor of Jurisprudence</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
<tr>
<td>Radio-television-film</td>
<td>Master of Arts</td>
</tr>
</tbody>
</table>
FOR MORE INFORMATION

Campus address: Sid Richardson Hall (SRH) 1.310, phone (512) 471-5551, fax (512) 471-3090; campus mail code: D0800

Mailing address: The University of Texas at Austin, Graduate Program, Teresa Lozano Long Institute of Latin American Studies, 1 University Station Do800, Austin TX 78712
E-mail: ilas@uts.cc.utexas.edu
URL: http://www.utexas.edu/cola/insts/lillas/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

LATIN AMERICAN STUDIES: LAS

381. Topics in Latin American Studies. A varied selection of topics each semester, taught by different faculty members and visiting professors. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Some topics are offered on the letter-grade basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 8: International Business Fellows Seminar. Same as Asian Studies 391 (Topic 6: International Business Fellows Seminar); Middle Eastern Studies 380; and Russian, East European, and Eurasian Studies 380. Multidisciplinary seminar for students in area studies, business administration, law, and public policy. The faculty includes both academics and business leaders. Offered on the letter-grade basis only. International Business 395 (Topic: International Business Fellows Seminar) and Latin American Studies 381 (Topic 8) may not both be counted.
Topic 11: Information Resources on, and Services for, Hispanic Americans. Information needs of Hispanic Americans; roles of academic, public, and school libraries in meeting those needs.

Topic 12: Information Resources on Latin America. Historical survey of sources of information on Latin America: bibliographical literature from and about Latin America during the colonial, national, and contemporary periods; various types of book and nonbook sources of information available to contemporary scholars. Additional prerequisite: Proficiency in Spanish or Portuguese and consent of instructor.
Topic 15: Local Economic Development.
Topic 16: Maya Hieroglyphic Writing. Additional prerequisite: Consent of the graduate adviser.
Topic 19: Political Economics of International Communication. Latin American Studies 381 (Topic 19) and Radio-Television-Film 393P (Topic: Political Economics of International Communication) may not both be counted. Additional prerequisite: Consent of instructor and the graduate adviser.
Topic 20: Regional Planning in Latin America.
Topic 21: Business in Emerging Markets. Same as Middle Eastern Studies 384 (Topic 1: Business in Emerging Markets). Only one of the following may be counted: Latin American Studies 381 (Topic 21), 381 (Topic: Business in Developing Countries), Middle Eastern Studies 381 (Topic 36: Business in Emerging Markets), 381 (Topic: Business in Developing Countries).
381C. Quechua Language and Society in the Andes I. Same as Anthropology 381C. Beginning spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 324L (Topic: Quechua Language and Society in the Andes), 351C, 389 (Topic: Quechua Language and Society in the Andes), Latin American Studies 324L (Topic: Quechua Language and Society in the Andes), 351C, 381C, 391 (Topic: Quechua Language and Society in the Andes). Prerequisite: Graduate standing and consent of instructor.

381D. Quechua Language and Society in the Andes II. Same as Anthropology 381D. Intermediate spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 324L (Topic: Advanced Quechua Language and Society in the Andes), 351D, 389 (Topic: Advanced Quechua Language and Society in the Andes), Latin American Studies 324L (Topic: Advanced Quechua Language and Society in the Andes), 351D, 381D, 391 (Topic: Advanced Quechua Language and Society in the Andes). Prerequisite: Graduate standing and consent of instructor.

382. Conference Course in Latin American Studies. Individual study to be arranged with a faculty member. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

384. Proseminar: Current Issues in Latin America. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Latin American Studies 384 (Topic: Proseminar: Latin America in the Twentieth Century) and LAS 384 may not both be counted. Prerequisite: Graduate standing in Latin American studies.

384L. Topics in Latin American Politics. A varied selection of topics each semester, taught by different faculty members and visiting professors. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Brazilian Public Policies. Same as Government 384L (Topic 1: Brazilian Public Policies). Three lecture hours a week for one semester. Additional prerequisite: Twenty-four semester hours of coursework in government or related fields and consent of the graduate adviser. Some reading knowledge of Spanish or Portuguese is recommended.

Topic 2: Latin American Urban Politics. Same as Government 384L (Topic 2: Latin American Urban Politics). Three lecture hours a week for one semester. Additional prerequisite: Twenty-four semester hours of coursework in government or related fields and consent of the graduate adviser. Some reading knowledge of Spanish or Portuguese is recommended.

Topic 3: Development Policy. Same as Government 384M (Topic 6: Development Policy). Three lecture hours a week for one semester. Additional prerequisite: Twenty-four semester hours of coursework in government or related fields and consent of the graduate adviser.

386. Topics in Latin American History. A varied selection of topics each semester, to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

388. Topics in Latin American Geography. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Latin American Studies 381 and 388 may not both be counted unless the topics vary. Prerequisite: Graduate standing.

Topic 1: Regional Geography of Latin America. Same as Geography 385 (Topic 1: Latin America). Additional prerequisite: Consent of instructor.

Topic 2: Indigenous Maps, Architecture, and Enculturation of Colonial Mexico. Same as Geography 388C. The encounter of Spanish and indigenous cultures and ecologies; regional diversity of agricultural, urban, and economic development from 1521 to 1810; ethnic transformation and new socioeconomic configurations.

Topic 3: Latin American Cultures, Environment, and Development. Same as Geography 395D. Exploration through Latin American examples of issues of cultural identity and territory, adaptive strategies, environmental impact, conservation, cultural survival, parks and people, and sustainable development. Additional prerequisite: Consent of instructor.

391. Topics in Latin American Anthropology. A varied selection of topics each semester, taught by different faculty members and visiting professors. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.
391K. Topics in Latin American Economics. A varied selection of topics each semester, taught by different faculty members and visiting professors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Seminar on the Mexican Economy. Same as Economics 391K (Topic 1: Seminar on the Mexican Economy). Additional prerequisite: Six semester hours of upper-division coursework in economics and six additional semester hours of upper-division coursework in social science or business.

Topic 2: Current Issues in Latin American Economics. Same as Economics 391K (Topic 2: Current Issues in Latin American Economics). Latin American Studies 391K (Topic 2) and 391K (Topic: Current Economic Issues in Latin America) may not both be counted. Additional prerequisite: Six semester hours of upper-division coursework in economics and six additional semester hours of upper-division coursework in social science or business.


Topic 4: Entrepreneurship and Development in Latin America. Same as Economics 391K (Topic 4: Entrepreneurship and Development in Latin America). Additional prerequisite: Six semester hours of upper-division coursework in economics and six additional semester hours of upper-division coursework in social science or business.

392P. Topics in Luso-Brazilian Literature, Culture, Civilization, and Linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

392S. Topics in Hispanic Literature, Culture, Civilization, and Linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

397R. Secondary Report. Preparation of a report to be counted toward the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing in Latin American studies and consent of the supervising professor and the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Latin American studies and consent of the supervising professor and the graduate adviser; for 698B, Latin American Studies 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Latin American studies and consent of the supervising professor and the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Latin American Studies 399R, 699R, or 999R.

Linguistics

Master of Arts
Doctor of Philosophy

Facilities for Graduate Work

The University Libraries have extensive collections in linguistics and related fields, in major world and regional languages, and in minority and indigenous languages. The Benson Latin American Collection houses a major archive of materials on or in indigenous and colonial languages of Latin America. The Archive of the Indigenous Languages of Latin America (AILLA) is a digital archive of original sound recordings and related documentary resources on indigenous languages of Latin America that is curated on campus. More information can be found at http://www.ailla.utexas.org/site/welcome.html.

Members of the department maintain cutting-edge laboratories for research in phonetics, computational linguistics, language acquisition, and signed language linguistics. Students may also use the linguistics laboratory, geared toward natural speech analysis, that is maintained by the Department of Anthropology...
ology. The facilities of Information Technology Services are among the most comprehensive at American universities.

Active interdisciplinary student-faculty research groups, which sponsor colloquia or conferences, include the Syntax and Semantics Group; the Sign Language Interest Group; the Latin American Research Group Austin; the Child Language Laboratory; and the Computational Linguistics Laboratory. Conferences include the biennial Center for Indigenous Languages of Latin America (CILLA) conference and two annual student-run conferences, the Texas Linguistics Society and the Symposium about Language and Society—Austin (SALSA).

The Department of Linguistics has close links, including cross-listed faculty members and courses, to such adjacent fields as anthropology, computer science, communication sciences and disorders, philosophy, psychology, area studies such as Asian studies and Latin American studies, Slavic and Eurasian studies, English, Germanic studies, French and Italian, and Spanish and Portuguese.

AREAS OF STUDY

The Department of Linguistics offers a thorough foundation in phonetics, phonology, syntax, and semantics; it also offers strong grounding in computational linguistics, documentary and descriptive linguistics and endangered languages, language acquisition, morphology, signed language linguistics, neurolinguistics, and pidgin and Creole studies. The faculty aims to give students broad training in linguistics alongside their eventual specialization in one or more subfields.

A student’s Program of Work in linguistics may be combined with supporting work in other areas: specific languages, anthropology, computer science, philosophy, psychology, or communication sciences and disorders.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Nicholas M. Asher  
Jason M. Baldridge  
Colin James Bannard  
David I. Beaver  
John T. Beavers  
Megan J. Crowhurst  
Nora C. England  
Patience L. Epps  
Katrin E. Erk  
Ian F. Hancock  
Richard P. Meier  
Scott P. Myers  
David G. Quinto-Pozos  
Rajka Smiljanic  
Harvey M. Sussman  
Stephen M. Wechsler  
Anthony C. Woodbury

ADMISSION REQUIREMENTS

Admission to graduate work is not necessarily restricted to those who have a Bachelor of Arts degree with a major in linguistics, although this background is recommended. A number of other fields can also provide valuable preparation.

DEGREE REQUIREMENTS

MASTER OF ARTS

Candidates for the master’s degree must complete thirty-six semester hours of coursework and submit a thesis or report for approval by a supervising committee.

The following coursework is required. A course used to fulfill requirement 1 or 2 may not also be used to fulfill requirement 3 or 4.

1. Linguistics 380K, 380L, 380M, 381K, 381L, and 381M.
2. Six additional hours of advanced coursework.
3. For those who choose the report option, three additional semester hours in advanced graduate courses in linguistics.
4. Six hours in a minor area.
5. Linguistics 398R or 698.

The department has no formal language requirement, but the faculty recommends that students have or acquire some familiarity with at least one language other than the native language.

DOCTOR OF PHILOSOPHY

Candidates for the doctoral degree in linguistics must complete the following courses: Linguistics 380K, 380L, 380M, 381K, 381L, 381M, and 397. The student must also complete eighteen semester hours of approved advanced coursework in the primary area of interest and nine hours of supporting coursework in a minor area.

The department has no formal language requirement, but the faculty recommends that students have or acquire some familiarity with at least one language other than the native language.

Admission to candidacy. To qualify for admission to candidacy for the doctoral degree, a student must submit a qualifying paper for approval by a faculty committee and must complete a linguistics seminar...
course in an area not related to his or her major area; that seminar course must require a paper. The student must also have an approved dissertation prospectus. Information about the admission procedure is available from the graduate adviser. A student is expected to qualify for doctoral candidacy by the end of the sixth long-session semester in residence.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

LINGUISTICS: LIN

380K. Phonology I. The descriptive techniques of generative phonology. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Linguistics 381M.

380L. Syntax I. An introduction to the description and analysis of syntax. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380M. Semantics I. An introduction to formal semantics and pragmatics, and the logical techniques needed to analyze them. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380S. Sociolinguistics. An introduction to sociolinguistic research, with attention to theoretical issues. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Linguistics 380K and 380L.

381K. Phonology II. Readings and problems in current phonological theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Linguistics 380K.

381L. Syntax II. Advanced description and analysis of syntax. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Linguistics 380K.

381M. Phonetics. Speech production and perception; acoustic phonetics; phonetics and phonology; experimental techniques. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381S. Semantics II. Continuation of Linguistics 380M. Descriptive methods and theoretical tools for investigating meaning in human languages; an introduction to propositional content and speech acts. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Linguistics 380L and 380M.

382. Historical Linguistics. The principles of language change, reconstruction of earlier stages, language contact, and language relatedness. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Linguistics 380K.

383. Comparative and Diachronic Linguistics. The comparative method; applications to particular linguistic families. Includes a four-semester Indo-European sequence. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 3: Introduction to Romance Linguistics. Same as French 396K (Topic 1: Introduction to Romance Linguistics), Italian 396K (Topic 2: Introduction to Romance Linguistics), Portuguese 396K (Topic 2: Introduction to Romance Linguistics), and Spanish 396K (Topic 2: Introduction to Romance Linguistics). Additional prerequisite: Graduate standing in languages and consent of instructor and the graduate adviser.

Topic 4: German Syntax. Same as German 393K (Topic 1: German Syntax).

Topic 8: Introduction to Diachronic Linguistics: Germanic. Same as Anthropology 393 (Topic 16: Introduction to Diachronic Linguistics: Germanic), Classical Civilization 383 (Topic 2: Introduction to Diachronic Linguistics: Germanic), and German 381 (Topic 3: Introduction to Diachronic Linguistics: Germanic). Additional prerequisite: Twelve semester hours of upper-division coursework in German or consent of instructor.

384. Language Structures. Languages studied include Arabic, Chinese, English, Estonian, Finnish, Hebrew, Hindi, Japanese, Lapp, Persian, Swahili, Swedish, Telugu. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in linguistics.

Topic 4: German Syntax. Same as German 393K (Topic 1: German Syntax).

385. Field Methods in Linguistic Investigation. Methods of research in phonological and grammatical description; work with informants in exotic languages. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

FOR MORE INFORMATION

Campus address: Calhoun Hall (CAL) 501, phone (512) 471-1701, fax (512) 471-4340; campus mail code: B5100

Mailing address: The University of Texas at Austin, Graduate Program, Department of Linguistics, 1 University Station B5100, Austin TX 78712-0198

E-mail: linguistics@mail.utexas.edu

URL: http://www.utexas.edu/cola/depts/linguistics/
386M. Mathematical and Computational Linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

   Topic 2: Computational Linguistics I.
   Topic 3: Computational Linguistics II.

387. Linguistics and Language Teaching. Same as Curriculum and Instruction 385G (Topic 6: Linguistics and Language Teaching). Designed primarily for participants in international education exchange programs. Application of the findings of linguistics to the teaching of languages. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

391. Topics in Descriptive Linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.


392. Current Developments in Linguistic Research. A reading course in a selected area of linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.


   Topic 2: Tools for Linguistic Description. Basic tools for analyzing and describing a language through linguistic fieldwork, including phonetic transcription, the discovery and presentation of surface phonology, morphophonology, inflectional morphology, derivational morphology, grammatical categories, and syntax.

   Topic 3: Linguistic Typology. An introduction to the typological study of language: the investigation into the nature of human language, as informed by systematic cross-linguistic comparison.

393. Seminar in Linguistic Topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

   Topic 4: Neurolinguistics.
   Topic 8: Linguistics of Signed Languages.

393C. Language Acquisition. Three lecture hours a week for one semester. Linguistics 393 (Topic 2: Language Acquisition) and 393C may not both be counted. Prerequisite: Graduate standing.

393P. Topics in Phonology and Phonetics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

393S. Topics in Syntax and Semantics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

394K. Philosophy of Language. Same as Philosophy 394K. Three lecture hours a week for one semester. Only one of the following may be counted: Linguistics 393S (Topic: Philosophy of Language), 394K, Philosophy 391 (Topic: Philosophy of Language). Prerequisite: Graduate standing and consent of instructor.

395. Conference Course in Linguistics. Supervised research. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor and the linguistics graduate adviser.

396. Topics in Sociolinguistics. Detailed investigation of an area of current interest in sociolinguistics. Most topics provide an opportunity for field research. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

   Topic 2: Introduction to Graduate Linguistic Anthropology. Same as Anthropology 392N. Additional prerequisite: Consent of instructor.

   Topic 3: Ethnography of Speaking. Same as Anthropology 393 (Topic 8: Ethnography of Speaking). Additional prerequisite: Consent of instructor.

   Topic 4: Turkic Cultures and Languages in Central Asia. Same as Middle Eastern Studies 381 (Topic 26: Turkic Cultures and Languages in Central Asia). Additional prerequisite: Consent of instructor.


397. Forum for Doctoral Candidates. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in linguistics and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in linguistics and consent of the graduate adviser; for 698B, Linguistics 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in linguistics and consent of the graduate adviser.
398T. Supervised Teaching in Linguistics. Teaching under the close supervision of the course instructor; weekly group meetings with instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Linguistics 399R, 699R, or 999R.

MEDIEVAL STUDIES

MEDIEVAL STUDIES: MDV

385L, 685L. Conference Course on Special Topics. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

392L. Readings in Medieval Latin. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

392M, 692M. Seminar in Medieval Culture. Major medieval historical developments and monuments of culture in thought, literature, art, architecture, and music. For 392M, three lecture hours a week for one semester; for 692M, six lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

MEXICAN AMERICAN STUDIES

Master of Arts

FACILITIES FOR GRADUATE WORK

The Center for Mexican American Studies has more than forty affiliated faculty members from a variety of disciplines, making it one of the largest and most diverse centers of its kind. In addition to the expertise of the faculty, graduate students have access to the extensive resources of the Nettie Lee Benson Latin American Collection, the Mexican American Library Program, and the Harry Ransom Humanities Research Center. The University’s central Texas location also provides opportunities for field research within a rapidly growing Mexican American population across the Southwest, and for research in Mexico as well.

AREAS OF STUDY

Mexican American studies has emerged as a significant area of scholarship over the last three decades. The University has been at the forefront of this area under the leadership of faculty members such as George I. Sánchez, Carlos E. Castañeda, and the founder of the Center for Mexican American Studies, Américo Paredes. These scholars helped to define the discipline of Mexican American studies as academic work carried out from the perspective of the Mexican American experience. This work should raise new questions, formulate and explore new theories, and carry out empirical research that expands the understanding of a variety of fields, including social science, history, the humanities and arts, education, public and social policy, and the sciences. The objective of the master’s degree program in Mexican American studies is to prepare
students for professional careers in which advanced knowledge about the Mexican American experience is crucial. In addition, graduates are prepared to pursue doctoral work in a related discipline at the University or in Mexican American studies at other institutions.

**GRADUATE STUDIES COMMITTEE**

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Ricardo C. Ainslie
- Charles E. Berg
- Lorenzo F. Candelaria
- Norma V. Cantu
- Oscar H. Casares
- Jason P. Casellas
- James H. Cox
- Richard R. Flores
- Douglas E. Foley
- Neil F. Foley
- Gloria Gonzalez-Lopez
- John M. Gonzalez
- Julian V. Heilig
- David L. Leal
- Raul L. Madrid
- Anne M. Martinez
- Ramon Antonio Martinez
- John McKiernan-Gonzalez
- Martha Menchaca
- Alba A. Ortiz
- Yolanda C. Padilla
- Deborah A. Paredes
- Domino R. Perez
- Manuel Ramirez III
- Pedro Reyes
- America B. Rodriguez
- Maggie R. Rodriguez
- Nestor P. Rodriguez
- Victor B. Saenz
- Cherise Smith
- Joseph Straubhaar
- Gerald Torres
- Luis Urrieta
- Fred Valdez Jr.
- Richard Valencia
- Angela Valenzuela
- Emilio Zamora

**ADMISSION REQUIREMENTS**

Applicants must meet the minimum requirements for graduate study at the University. An admissions committee composed of Graduate Studies Committee members in Mexican American studies also evaluates applications, giving preference to candidates who demonstrate a strong academic background and a clear sense of the areas they wish to pursue through the master's degree program.

**DEGREE REQUIREMENTS**

Students pursuing the Master of Arts degree may choose one of two plans: Plan A, which requires thirty-three semester hours of coursework, including a thesis, or Plan B, which requires thirty-three semester hours of coursework, including two reports. Checklists for both plans can be found on the Center's Web page, [http://www.utexas.edu/cola/centers/cmas/](http://www.utexas.edu/cola/centers/cmas/). Students in both plans must complete a foundational seminar, Mexican American Studies 390.

Students pursuing Plan A must complete fifteen semester hours of graduate coursework in a major concentration and nine hours in a minor concentration. They must also complete Mexican American Studies 698.

Effective fall semester 2011, all new students pursuing Plan B must complete fifteen semester hours of graduate coursework in a major concentration and nine hours in a minor concentration. They must also complete Mexican American Studies 397R and 398R.

Students currently in the master's program may choose to pursue Plan B under the new requirements after consultation with the graduate adviser or program coordinator. They may also continue to pursue their degree using the Plan B requirements that existed prior to fall semester 2011.

Before completing the program, all students must demonstrate competence in written and/or oral Spanish by means approved by the Graduate Studies Committee.

Effective fall semester 2011, all new master's degree students designate a major in one of two specific course concentrations and a minor in the other: cultural studies and policy studies. Students will organize the courses they take within these concentrations to satisfy either Plan A or Plan B. These course concentrations reflect the intellectual breadth and depth of the Center's faculty associates through their research and teaching interests and the graduate courses offered in past semesters.

Students are allowed on a case-by-case basis to develop their own course concentrations to satisfy either the Plan A or Plan B requirements in consultation with the graduate adviser or program coordinator.

Students currently in the degree program may choose to pursue Plan A or Plan B under the new requirements after consultation with the graduate adviser or program coordinator. Alternatively, students may continue to pursue their degree using the following course concentrations that were in effect prior to fall semester 2011: communication and culture, gender and sexuality, history and identity, knowledge and society, and participation and politics.

**FOR MORE INFORMATION**

**Campus address:** West Mall Office Building (WMB) 5.102, phone (512) 471-4557; fax (512) 471-9639; campus mail code: F9200

**Mailing address:** The University of Texas at Austin, Graduate Adviser, Center for Mexican American Studies, 1 University Station F9200, Austin TX 78712

**E-mail:** cmas01@uts.cc.utexas.edu

**URL:** [http://www.utexas.edu/cola/centers/cmas/](http://www.utexas.edu/cola/centers/cmas/)
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MEXICAN AMERICAN STUDIES: MAS

382. Conference Course in Mexican American Studies. May be repeated for credit. Prerequisite: Graduate standing and consent of the graduate adviser.

390. Introduction to Mexican American Studies. An overview of Mexican American studies for graduate research. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392. Topics in Mexican American Studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser. Additional prerequisites vary with the topic and are given in the Course Schedule.

395. Grammar and Composition for Native and Heritage Speakers. Designed to help students develop graduate-level academic writing and oral expression skills in Spanish. Intensive training in formal communication. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

397R. Secondary Report. Preparation of a report to be counted toward the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Mexican American studies and consent of the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Mexican American studies and consent of the graduate adviser; for 698B, Mexican American Studies 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Mexican American studies and consent of instructor.

398T. Supervised Teaching in Mexican American Studies. Methods of teaching in Mexican American studies. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

MIDDLE EASTERN STUDIES

Master of Arts (in Middle Eastern Studies)
Master of Arts (in Middle Eastern Languages and Cultures')
Doctor of Philosophy (in Middle Eastern Languages and Cultures')

The Center for Middle Eastern Studies administers the master’s degree in Middle Eastern studies. The Department of Middle Eastern Studies administers the master’s and doctoral degree programs in Middle Eastern languages and cultures.

FACILITIES FOR GRADUATE WORK

University library holdings on the Middle East form one of the leading collections in North America. These include 150,000 volumes and 1,230 serial titles in Arabic, Hebrew, Persian, Turkish, Kurdish, Tajiki, and Azerbaijani, and more than 160,000 volumes in Western languages. This collection includes a comprehensive set of English-language reference works, general texts, basic monographs, and essential journals on the Middle East. Among the special collections are strong holdings on Shi’ism, Islamic jurisprudence, and Arabic and Persian literature; a set of Arabic manuscripts on the Yezidis of Yemen; a virtually complete set of Turkish and Azerbaijani periodicals that forms a unique national resource; and more than 2,000 volumes of census records on Middle Eastern countries. The University Libraries has the largest collection of South African Jewish materials in the United States, both in belles lettres and in periodicals. Electronic material supporting Middle Eastern studies is also extensive and includes the Index Islamicus; the Encyclopedia of Islam; Records on Islam: Primary Documents, 1873–1926; The Encyclopaedia Judaica; and the Judaic Classics Library. The Harry Ransom Humani-

1. Pending final approval.
ties Research Center holds writers’ personal papers, including those of T. E. Lawrence, Paul Bowles, Freya Stark, Richard Burton, and others with a special Middle Eastern connection. The Ransom Center has significant holdings relating to Judaica, including the Isaac Bashevis Singer Archive, the Leon Uris Archive, and a portion of the literary archive of Bernard Malamud. The Dolph Briscoe Center for American History holds the Development Communication Archive, donated by the federal Agency for International Development, which consists of more than 350 linear feet of original records on issues ranging from agriculture and the environment to health and community development; about a quarter of the documents cover Middle Eastern projects. University faculty members and students also have access to vast centralized resources such as the Center for Research Libraries in Chicago and the Yale University–sponsored OACIS project.

The Middle East Resource Center houses a collection of approximately four thousand English-language books and reference works, some ten thousand slides, and hundreds of films and periodicals.

**AREAS OF STUDY**

The Center for Middle Eastern Studies offers the Master of Arts with a major in Middle Eastern studies, an interdisciplinary professional degree with a regional concentration on the Middle East. The degree is intended primarily for those preparing for a career in business, communication, government, information studies, law, the military, or community college teaching. There is a good deal of flexibility in meeting degree requirements; each student, in consultation with the graduate adviser, designs an individual program within the framework of the requirements described on pages 344–345.

Students interested in a master’s degree in a single discipline with a concentration on the Middle East should contact the graduate adviser for that discipline; for example, the student might major in anthropology, art history, business, classics, comparative literature, economics, geography, government, history, linguistics, or sociology.

The Department of Middle Eastern Studies offers master’s and doctoral degrees in Middle Eastern languages and cultures. Students at the master’s level may concentrate in Arabic, Hebrew, Persian or comparative Middle Eastern literatures, Arabic or Semitic linguistics, Islamic studies, or Middle Eastern cultures. At the doctoral level, students select a field of study from among the following: Arabic studies, Hebrew studies (Biblical or modern), Persian studies, Middle Eastern literatures, Semitic languages and linguistics, or Islamic studies.

Graduate courses are offered in Akkadian, Arabic, Aramaic, Hebrew (Biblical and modern), and Persian languages; Arabic, Hebrew, and Persian literatures; Arabic and comparative Semitic linguistics; Islamic and Jewish studies; and the cultures of the Middle East. The study of these languages, literatures, and cultures may also be included in programs leading to master’s or doctoral degrees in other fields.

**GRADUATE STUDIES COMMITTEES**

The following faculty members served on the Graduate Studies Committees in the spring semester 2011.

**Middle Eastern Studies**

Peter F. Abboud
Camran S. Aghaie
Mahmoud M. Al-Batal
Camran Ali
Samer M. Ali
Germine H. Awad
Hina Azam
Aaron Bar-Adon
Benjamin C. Brower
Jason M. Brownlee
Kristen Brustad
Karl W. Butzer
Mounira M. Charrad
Yoav Di-Capua
David J. Eaton
Tarek Adnan El-Ariss
William P. Frisbie
Jennifer E. Gates-Foster
Mohammad Ghanoonparvar
Kate Gillespie
Karen Grumberg
Jo Ann Hackett
Barbara J. Harlow
Geraldine Heng
Michael C. Hillmann
John Huehnergard
Syed A. Hyder
Harold A. Liebowitz
William R. Louis
Abraham Marcus
Gail Minault
Mohammad A. Mohammad
Fehintola A. Mosadomi
Stephennie Mulder
James A. Neely
William R. Nethercut
Mary C. Neuberger
Thomas G. Palaima
Anthanasio Papalexiadrou
Na’amah Pat-El
Amine Pedahzur
Glenn A. Peers
Esther L. Raizen
Sonia T. Seeman
Faegheh S. Shirazi
Denise A. Spellberg
Helene Tissieres
Karin G. Wilkins
Seth L. Wolitz
Samer M. Ali
David J. Eaton
Tarek Adnan El-Ariss
Jennifer E. Gates-Foster
Mohammad Ghanoonparvar
Kate Gillespie
Karen Grumberg
Jo Ann Hackett
Barbara J. Harlow
Geraldine Heng
Michael C. Hillmann
John Huehnergard
Syed A. Hyder
Harold A. Liebowitz
William R. Louis
Abraham Marcus
Gail Minault
Mohammad A. Mohammad
Fehintola A. Mosadomi
Stephennie Mulder
Na’amah Pat-El
Amine Pedahzur
Adam T. Rabkinowitz
Esther L. Raizen
Sonia T. Seeman
Faegheh S. Shirazi
Denise A. Spellberg
Karin G. Wilkins
Michael C. Hillmann
John Huehnergard
Syed A. Hyder
Harold A. Liebowitz
William R. Louis
Abraham Marcus
Gail Minault
Mohammad A. Mohammad
Fehintola A. Mosadomi
Stephennie Mulder
Na’amah Pat-El
Amine Pedahzur
Adam T. Rabkinowitz
Esther L. Raizen
Sonia T. Seeman
Faegheh S. Shirazi
Denise A. Spellberg
Karin G. Wilkins
Michael C. Hillmann
John Huehnergard
Syed A. Hyder
Harold A. Liebowitz
William R. Louis
Abraham Marcus
Gail Minault
Mohammad A. Mohammad
Fehintola A. Mosadomi
Stephennie Mulder
Na’amah Pat-El
Amine Pedahzur
Adam T. Rabkinowitz
Esther L. Raizen
Sonia T. Seeman
Faegheh S. Shirazi
Denise A. Spellberg
Karin G. Wilkins
Michael C. Hillmann
John Huehnergard
Syed A. Hyder
Harold A. Liebowitz
William R. Louis
Abraham Marcus
Gail Minault
Mohammad A. Mohammad
Fehintola A. Mosadomi
Stephennie Mulder
Na’amah Pat-El
Amine Pedahzur
Adam T. Rabkinowitz
Esther L. Raizen
Sonia T. Seeman
Faegheh S. Shirazi
Denise A. Spellberg
Karin G. Wilkins
ADMISSION REQUIREMENTS

MASTER OF ARTS

Middle Eastern studies. The entering student must have a bachelor’s degree from an accredited college or university. While the center admits students holding a variety of undergraduate degrees, previous academic work on the region and some proficiency in one of its languages is recommended.

Middle Eastern languages and cultures. Admission to the program requires a bachelor’s degree in a Middle Eastern or related field, demonstrated language proficiency, and academic writing abilities in English. Students of living languages are expected to have completed three years of college-level language study or the equivalent and to have reached intermediate-high (Hebrew) or advanced (Arabic and Persian) proficiency on a nationally recognized scale. Students specializing in ancient Near Eastern languages and cultures are expected to have completed the equivalent of two years of Biblical Hebrew or another ancient Near Eastern language.

DOCTOR OF PHILOSOPHY

Middle Eastern languages and cultures. Because scholarship in Middle Eastern languages and cultures requires a high degree of language proficiency, students normally complete a Master of Arts in the area of concentration before acceptance into the PhD program. In exceptional cases, the Graduate Admissions Committee may take extensive study outside a master’s program into account. For students specializing in a living language tradition, advanced proficiency in the language of concentration is required. Students focusing on the ancient Near East must know Biblical Aramaic, have three years of Biblical Hebrew, one year of a second ancient Semitic language, and either a second year of a second ancient Semitic language or proficiency in German as well as background in the study of the Hebrew Bible.

DEGREE REQUIREMENTS

MASTER OF ARTS

Middle Eastern studies. This program consists of at least thirty semester hours, including a six-semester-hour thesis; or at least thirty-three semester hours, including a three-semester-hour report. Under either option, all courses, including Middle Eastern Studies 698 or 398R, must have Middle Eastern content. Except for Middle Eastern Studies 698 and 398R, all courses must be taken on the letter-grade basis. The student must complete six semester hours in each of the following three areas: history, social sciences, and arts/humanities. The rest of the hours, chosen in consultation with the graduate adviser, constitute a concentration supporting the student’s thesis or report.

The student must complete two upper-division or graduate-level courses in one Middle Eastern language while enrolled in the degree program. These two courses may also fulfill other degree requirements, usually in the humanities. Students who are native speakers of a Middle Eastern language must complete these courses in a second Middle Eastern language.

Middle Eastern languages and cultures. This program offers graduate training in the following core areas within the department: Arabic, Hebrew, Persian or comparative Middle Eastern literatures, Arabic or Semitic linguistics, Islamic studies, and Middle Eastern cultures. The program trains students in research methods for independent investigation, and helps students build the linguistic, textual, and writing skills necessary for academic and professional careers. Students entering the program choose a field of specialization and, in consultation with a faculty mentor, design a coherent program of study including four courses in that area and twelve semester hours of supporting coursework. In the second year of study, students take six semester hours of thesis coursework. The degree is awarded upon completion of the degree requirements and the adviser’s approval of the thesis.

The degree requires thirty semester hours of coursework, including twelve hours of disciplinary coursework in the field of concentration, twelve hours of elective coursework chosen in consultation with a faculty mentor, and six hours of thesis coursework culminating in an approved thesis.

DOCTOR OF PHILOSOPHY

The program is designed to increase the breadth and depth of the student’s knowledge and to develop his or her capacity for independent scholarly research. The courses required are determined by the student’s interests.

Middle Eastern languages and cultures. The aim of the program is to educate and mentor scholars and teachers of the languages and cultures of the Middle East with the depth to support a sustained research career
and the breadth to teach a range of courses on Middle Eastern topics. Students learn to design and execute research projects that will help redefine the frontiers of discovery in their field. Teaching experience helps prepare them to communicate new knowledge to experts and nonexperts alike.

In applying to the program, students select an area of study from among the following: Arabic studies, Hebrew studies (Biblical or modern), Persian studies, Middle Eastern literatures, Semitic languages and linguistics, or Islamic studies. Through the course of their studies, they develop methodological expertise in at least one of the following areas: textual analysis, literary theory, linguistic theory, or cultural theory. During their first year, incoming students choose or are assigned a faculty mentor with whom they plan to work in their major field. This mentor oversees the student’s selection of courses for registration and the design of his or her course of study. Students are also encouraged to seek the advice of other faculty members in the program on their studies and their progress.

Students must develop a mastery of at least one major Middle Eastern language (Arabic, Hebrew, Persian, or Turkish) and must demonstrate scholarly research skills and potential. A period of study abroad in the region of specialization is strongly recommended for students of living languages. Study of a second Middle Eastern language is strongly encouraged, and competency in a research language is required. Doctoral candidates are also expected to present at least one paper at an academic or professional conference before graduation.

PhD students normally take three years of coursework beyond the master’s degree. Before taking the comprehensive examinations, each student must demonstrate, through formal testing, proficiency in the language required by his or her major field. Reading knowledge in one research language is required and must be demonstrated by passing a reading test administered by the department.

To be admitted to candidacy for the degree, the student must pass comprehensive written and oral examinations. The purpose of the examinations is to certify that the student has sufficient knowledge for an academic career, and has the skills and abilities required to complete a doctoral dissertation. The examinations must be taken by the beginning of the fourth year of the program.

After passing these examinations, the candidate sets up a dissertation committee with the help of his or her supervisor. This committee approves the dissertation proposal, guides the student in writing and revising the dissertation, and administers the final oral defense.

DUAL DEGREE PROGRAMS

The Center for Middle Eastern Studies offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Global policy studies</td>
<td>Master of Global Policy Studies</td>
</tr>
<tr>
<td>Information studies</td>
<td>Master of Science in Information Studies</td>
</tr>
<tr>
<td>Journalism</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Law</td>
<td>Doctor of Jurisprudence</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
<tr>
<td>Radio-television-film</td>
<td>Master of Arts</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: West Mall Office Building (WMB) 6.102, phone (512) 471-3881, fax (512) 471-7834; campus mail code: F9400
Mailing address: The University of Texas at Austin, Graduate Program, Middle Eastern Studies, 1 University Station F9400, Austin TX 78712
E-mail: dmes@austin.utexas.edu
URL: http://www.utexas.edu/cola/depts/mes/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ARABIC: ARA

380C. Topics in Arabic Language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and Arabic 420L (or 320L). Additional prerequisites may vary with the topic and are given in the Course Schedule.

- Topic 8: Translating Arabic Texts. Same as Middle Eastern Studies 381 (Topic 39: Translating Arabic Texts). Arabic 360L (Topic 4: Translating Arabic Texts) and 380C (Topic 8) may not both be counted.

381H. Intensive Graduate Language Instruction I. Not open to native speakers of Arabic. Intensive cultural and literacy-focused training in Arabic at the beginning level in preparation for research in the Arab world or with Arabic sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing.

381J. Intensive Graduate Language Instruction II. Not open to native speakers of Arabic. Intensive cultural and literacy-focused training in Arabic at the low-intermediate level in preparation for research in the Arab world or with Arabic sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing and Arabic 381H with a grade of at least B.

381K. Intensive Graduate Language Instruction III. Not open to native speakers of Arabic. Intensive cultural and literacy-focused training in Arabic at the intermediate level in preparation for research in the Arab world or with Arabic sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing and Arabic 381J with a grade of at least B.

381L. Intensive Graduate Language Instruction IV. Not open to native speakers of Arabic. Intensive cultural and literacy-focused training in Arabic at the high-intermediate level in preparation for research in the Arab world or with Arabic sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours week for one semester. Prerequisite: Graduate standing and Arabic 381K with a grade of at least B.

381M. Intensive Graduate Language Instruction V. Not open to native speakers of Arabic. Intensive cultural and literacy-focused training in Arabic at the advanced level in preparation for research in the Arab world or with Arabic sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Five lecture hours a week for one semester. Prerequisite: Graduate standing and Arabic 381L with a grade of at least B.

381N. Intensive Graduate Language Instruction VI. Not open to native speakers of Arabic. Intensive cultural and literacy-focused training in Arabic at the advanced level in preparation for research in the Arab world or with Arabic sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Five lecture hours a week for one semester. Prerequisite: Graduate standing and Arabic 381M with a grade of at least B.

382C. Topics in Arabic Linguistics and Philology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Arabic 420L (or 320L) or 531L with a grade of at least B. Additional prerequisites may vary with the topic.

- Topic 2: Grammar of the Arabic Language. Same as Linguistics 396 (Topic 7: Grammar of the Arabic Language).
- Topic 3: Arab Grammarians.
- Topic 5: The Qur’an: A Linguistic Analysis.
- Topic 6: Varieties and Registers of Arabic. The historical and linguistic development of Arabic varieties and registers, past and present. Arabic 383C (Topic: Varieties and Registers of Arabic) and 382C (Topic 6) may not both be counted.
- Topic 8: Introduction to Arabic Linguistics. Introduction to the major areas of research in Arabic linguistics. Includes formal linguistics and sociolinguistics, and code-switching and dialectology.
- Topic 9: The Structure of Palestinian Arabic. A detailed examination of the syntax of Palestinian Arabic. Additional prerequisite: A graduate course in Arabic grammar or theoretical syntax.

383C. Topics in Arabic Language Teaching, Pedagogy, and Applied Linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Arabic 420L (or 320L) or 531L with a grade of at least B. Additional prerequisites may vary with the topic.

- Topic 1: Teaching Arabic as a Foreign Language. Theory and practice of foreign or second language acquisition, applied to Arabic instruction. Arabic 380C (Topic: Teaching Arabic as a Foreign Language) and 383C (Topic 1) may not both be counted.
Topic 3: Curriculum Design in Arabic. Examines three curricular models that are widely used in teaching foreign languages: proficiency-based instruction, task-based instruction, and content-based instruction. Additional prerequisite: Arabic 383C (Topic 1).

384C. Topics in Arabic Literature. For other topics offered under this course number, consult each semester’s Course Schedule. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Arabic 420L (or 320L) or 531L with a grade of at least B. Additional prerequisites may vary with the topic.

Topic 2: Politics of Court Literature. Same as Middle Eastern Studies 386 (Topic 4: Politics of Court Literature). Arabic 384C (Topic 2) and Middle Eastern Studies 381 (Topic 45: Politics of Court Literature) may not both be counted.

Topic 5: Arab Women Poets.

Topic 6: Classical Arabic Akhbar. Examines classical Arabic prose from the perspective of the individual khabar or story, which was the basic unit for all humanities works, and works in history, geography, zoology, cosmology, and anthropology.

Topic 7: Arab Culture in Sicily from 652 to 1189. Arabic 384C (Topic 7) and 387 (Topic: Arabic Culture in Sicily from 652 to 1189) may not both be counted.

Topic 8: Refiguring Loss in Contemporary Arabic Literature. Explores literary lamentations describing Arab dispossession and humiliation following military and ideological defeats in the second half of the twentieth century.

Topic 9: New Arabic Writings.

Topic 10: Encountering the West in Modern Arabic Literature. Investigates the representation of the West in Arabic literature from the nineteenth century onward by examining travel narratives, novels, essays, and visual texts.

386K. Advanced Spoken Media Arabic I. Development of the specialized vocabulary and skills needed in the media and public policy sectors of the Arab-speaking world. Three lecture hours a week for one semester. Arabic 380C (Topic: Advanced Spoken Media Arabic I) and 386K may not both be counted. Prerequisite: Graduate standing.

386L. Advanced Spoken Media Arabic II. Development of the specialized vocabulary and skills needed in the media and public policy sectors of the Arab-speaking world. Three lecture hours a week for one semester. Arabic 380C (Topic: Advanced Spoken Media Arabic II) and 386L may not both be counted. Prerequisite: Graduate standing and Arabic 386K.

387. Topics in Arab Culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Arabic 420L (or 320L) or 531L with a grade of at least B. Additional prerequisites may vary with the topic.

Topic 1: Contemporary Arabic Cinema.

388. Research Methods and Bibliography in Arabic Studies. Arabic classical and modern sources on a variety of subjects, as well as modern scholarship in Arabic studies both in the West and in the Arab world. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Arabic 420L (or 320L) or 531L with a grade of at least B. Additional prerequisites may vary with the topic.

389. Conference Course in Arabic Studies. Supervised individual study of selected problems in Arabic studies. May be repeated for credit when the subject matter varies. Prerequisite: Graduate standing and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Arabic studies and consent of the graduate adviser; for 698B, Arabic 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Arabic studies and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Arabic 399R, 699R, or 999R.

HEBREW: HEB

380C. Topics in Hebrew and Related Semitic Languages. Taught in English. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 2: Advanced Readings in Modern Hebrew.

Topic 4: Biblical Aramaic.

Topic 5: Mishnaic Hebrew/Talmud Aramaic.

Topic 6: Targumic Aramaic. Examines Aramaic translations of the Hebrew bible that contain many exegetical deviations from the Hebrew text, and provide a glimpse of Jewish theology at the time of their composition. Additional prerequisite: Some knowledge of Hebrew is recommended.

Topic 8: Biblical Hebrew.

Topic 9: Syriac. Study of the eastern Aramaic dialect that was spoken in the ancient Near East until the Muslim occupation. Examines the use of the dialect as a vehicle for Christianity in the East; its use in poetry, science, and philosophy; and its influence on Arabic. Covers the essentials of Syriac grammar for the purpose of reading Syriac texts.

Topic 10: Classical Ethiopic. Study of the fourth-century language of the Semitic people who lived in what is now Ethiopia and Eritrea. Covers the alphabet and grammar needed for reading translations of the Bible and other texts.
381H. Intensive Graduate Language Instruction I. Intensive cultural and literacy-focused training in Hebrew at the beginning level in preparation for research with Hebrew sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing.

381J. Intensive Graduate Language Instruction II. Intensive cultural and literacy-focused training in Hebrew at the intermediate level in preparation for research with Hebrew sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing and Hebrew 381H with a grade of at least B.

382C. Topics in Hebrew Linguistics and Philology and Related Semitics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Additional prerequisites may vary with the topic.

**Top Topic 1:** Biblical Hebrew Grammar.

**Top Topic 2:** Hebrew Grammar. Phonology, morphology, and syntax of Hebrew.

**Top Topic 3:** Hebrew for Academic Reading. Designed to help students improve their skills in modern Hebrew reading and writing.

384C. Topics in Hebrew Literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Additional prerequisites may vary with the topic.

**Top Topic 2:** Contemporary Israeli Fiction.

**Top Topic 3:** Mizrahi Writing in Israel.

385. Hebrew Literature in Translation and Israeli Media. Study of selected works of Hebrew literature in English translation and Israeli film and television programs with English subtitles. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. May be repeated for credit when the topics vary, but no more than six hours may be counted toward the Master of Arts or the Doctor of Philosophy in Hebrew studies. Prerequisite: Graduate standing.

**Top Topic 1:** Post-Zionist Perspectives in Israeli Literature. Israeli literature through the context of the historical, cultural, and artistic movement known as post-Zionism.

**Top Topic 2:** The Book of Job: Text and Language. Hebrew 380C (Topic: The Book of Job: Text and Language) and 385 (Topic 2) may not both be counted.

**Top Topic 3:** Dead Sea Scrolls: Language and Literature. Hebrew 380C (Topic: Dead Sea Scrolls: Language and Literature) and 385 (Topic 3) may not both be counted.

**Topic 4:** Ethic and Social Israeli Cinema.

389. Conference Course in Hebrew Studies. Supervised individual study of selected problems in Hebrew studies. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Hebrew studies and consent of the graduate adviser; for 698B, Hebrew 698A.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Hebrew 399R, 699R, or 999R.

**MIDDLE EASTERN STUDIES: MES**

380. International Business Fellows Seminar. Same as Asian Studies 391 (Topic 6: International Business Fellows Seminar); Latin American Studies 381 (Topic 8: International Business Fellows Seminar); and Russian, East European, and Eurasian Studies 380. Multidisciplinary seminar for students in area studies, business administration, law, and public policy. The faculty includes both academics and business leaders. Three lecture hours a week for one semester. Offered on the letter-grade basis only. International Business 395 (Topic: International Business Fellows Seminar) and Middle Eastern Studies 380 may not both be counted. Prerequisite: Graduate standing.

381. Seminar in Middle Eastern Civilizations and Cultures. Advanced studies of various aspects of the civilizations and cultures of the Middle East and North Africa. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

**Top Topic 11:** Regional Geography of the Middle East and North Africa. Same as Geography 385 (Topic 5: The Middle East and North Africa).

**Top Topic 12:** European Imperialism: British Empire. Same as Asian Studies 391 (Topic 3: European Imperialism: British Empire) and History 380L (Topic 1: European Imperialism: British Empire). Study of the British Empire in the Middle East, Asia, and Africa. Additional prerequisite: Consent of the graduate adviser.

**Top Topic 18:** Ottoman Egypt and Syria, 1516–1918. Same as History 388K (Topic 1: Ottoman Egypt and Syria, 1516–1918).

**Top Topic 20:** Shamanism in Central Asia.

**Top Topic 22:** Politics of the Middle East and North Africa. Same as Government 390L (Topic 4: Politics of the Middle East and North Africa). Additional prerequisite: Twenty-four semester hours of coursework in government or related fields, and consent of the graduate adviser.

**Top Topic 26:** Turkic Cultures and Languages in Central Asia. Same as Linguistics 396 (Topic 4: Turkic Cultures and Languages in Central Asia). Additional prerequisite: Consent of instructor.


Topic 31: Mapping the Middle East. Same as Geography 381C. Ways in which the Middle East is and has been represented cartographically. Cartographic representations of the region during the fifteenth and sixteenth centuries; the nature and evolution of a distinctive Islamic cartographic tradition; the role and use of maps during the nineteenth and twentieth centuries both in the extension of colonialism and in the creation of modern states; and the contemporary use, applications, and implications of geographic information systems in organizing and representing data spatially. Additional prerequisite: Consent of instructor.

Topic 32: The Jordan River Basin after the Peace Agreements. Additional prerequisite: Consent of instructor.


Topic 38: Music Cultures of the Middle East: Past and Present.

Topic 39: Translating Arabic Texts. Same as Arabic 380C (Topic 8: Translating Arabic Texts) and Middle Eastern Studies 381 (Topic 39) may not both be counted.

Topic 41: Gender, Clothing, and Identity in Muslim Society.

382. Conference Course. Individual research on various aspects, periods, civilizations, and cultures of the Middle East and North Africa. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

383. Internships in Applied Middle Eastern Studies. Students conduct research and participate in other work in an appropriate agency or business. At least nine but no more than twelve hours of fieldwork a week for one semester. May not be repeated for credit. Prerequisite: Graduate standing and consent of the graduate adviser.

384. Topics in the Middle East: Social Science. Advanced studies of various aspects of social sciences in the Middle East. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 381, 384, 385, 386, 390, 392. Prerequisite: Graduate standing. Additional prerequisites may vary with the topic.

385. Topics in the Middle East: History. Advanced studies of various aspects of history in the Middle East. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 381, 384, 385, 386, 390, 392. Prerequisite: Graduate standing. Additional prerequisites may vary with the topic.

Topic 1: Business in Emerging Markets. Same as Latin American Studies 381 (Topic 21: Business in Emerging Markets). Only one of the following may be counted: Latin American Studies 381 (Topic: Business in Developing Countries), Middle Eastern Studies 381 (Topic 36: Business in Emerging Markets), 381 (Topic: Business in Developing Countries), 384 (Topic 1).


Topic 6: Cities and Citizenship.

Topic 7: Culture, History, and Power.

Topic 8: Gender and Development.

Topic 9: International Journalism Crisis Coverage.

Topic 10: The Military in Politics.

Topic 11: Nationalism and Gender.
386. **Topics in the Middle East: Arts and Humanities.** Advanced studies of various aspects of the arts and humanities in the Middle East. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 381, 384, 385, 386, 390, 392. Prerequisite: Graduate standing. Additional prerequisites may vary with the topic.

**Topic 2:** Iranian Film and Fiction. Same as Persian 384C (Topic 1: Iranian Film and Fiction). Middle Eastern Studies 381 (Topic 7: Iranian Film and Fiction) and Middle Eastern Studies 386 (Topic 2) may not both be counted.

**Topic 4:** Politics of Court Literature. Same as Arabic 384C (Topic 2: Politics of Court Literature). Middle Eastern Studies 381 (Topic 45: Politics of Court Literature) and Middle Eastern Studies 386 (Topic 4) may not both be given.

**Topic 5:** Theory and Practice in Literary Translation. Middle Eastern Studies 381 (Topic 40: Theory and Practice of Literary Translation) and Middle Eastern Studies 386 (Topic 5) may not both be counted.

**Topic 7:** Arab Women Poets.

**Topic 8:** Arabo-Islamic Ode.

**Topic 9:** Classical Arabic Akhbar.

**Topic 10:** Holy War Redux.

**Topic 11:** Islamic Ornament.

**Topic 12:** Islamic Studies: Disciplinary Introduction.

**Topic 13:** Loyalty and Rebellion in Arabic Literature.

**Topic 14:** Mizrahi Writing in Israel.

**Topic 15:** Post-Zionist Perspectives in Israeli Literature.

**Topic 16:** Readings in Contemporary Persian Political Writings.

**Topic 17:** Refiguring Loss in Contemporary Arabic Literature.

**Topic 18:** Seminar in Music, Gender, and Sexuality.

**Topic 19:** Women in Scripture.

**Topic 20:** Lebanon: Formation and Transformation.

393. **Comprehensive Examination Preparation.** Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Middle Eastern studies and consent of the graduate adviser; for 698B, Middle Eastern Studies 698A.

398R. **Master's Report.** Preparation of a report to fulfill the requirement for the master's degree under the close supervision of a faculty member; weekly group meetings with the instructor, individual consultation, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant or assistant instructor.

398T. **Supervised Teaching in Middle Eastern Studies.** Teaching under the close supervision of a faculty member; weekly group meetings with the instructor, individual consultation, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant or assistant instructor.

**PERSIAN: PRS**

380C. **Topics in Persian Language.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and six semester hours of upper-division coursework in Persian or consent of instructor.

381H. **Intensive Graduate Language Instruction I.** Intensive cultural and literacy-focused training in Persian at the beginning level in preparation for research with Persian sources. Includes an independent project component. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing.

381J. **Intensive Graduate Language Instruction II.** Intensive cultural and literacy-focused training in Persian at the low-intermediate level in preparation for research with Persian sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing and Persian 381H with a grade of at least B.

381K. **Intermediate Graduate Language Instruction I.** Intensive cultural and literacy-focused training in Persian at the intermediate level in preparation for research with Persian sources. Includes an independent project component. Incoming students are placed in the appropriate level by means of a departmental placement test. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Persian 381J with a grade of at least B.

381L. **Intermediate Graduate Language Instruction II.** Intensive cultural and literacy-focused training in Persian at the high-intermediate level in preparation for research with Persian sources. Includes an independent project component. Incoming students are placed in the appropriate level by means of a departmental placement test. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Persian 381K with a grade of at least B.

382C. **Topics in Persian Linguistics and Philology.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in Persian studies.

384C. **Topics in Persian Literature.** Study of various aspects and periods of Persian language and literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, three semester hours of upper-division coursework in Persian, and consent of instructor.

**Topic 1:** Ferdowsi’s *Shāhnāmeh*.

**Topic 2:** *Sa’di’s Golestān*.

**Topic 3:** Hafez and Classical Persian Lyric Poetry.

**Topic 4:** Sadeq Hedayat and Twentieth-Century Persian Prose Fiction.

**Topic 5:** Forugh Farrokhzad and Modernist Persian Poetry.

**Topic 6:** Iranian Women Writers.

**Topic 7:** Persian Prose Nonfiction, Past and Present.

Topic 9: Iranian Drama.

Topic 10: Iranian Film and Fiction. Same as Middle Eastern Studies 386 (Topic 2: Iranian Film and Fiction).

Only one of the following may be counted: Persian 361 (Topic 5: Iranian Film and Fiction), 384C (Topic 10), and Middle Eastern Studies 381 (Topic 7: Iranian Film and Fiction).

389. Conference Course in Persian Studies. Supervised individual study of selected problems in Persian studies. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Persian studies and consent of the graduate adviser; for 698B, Persian 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Persian studies and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Persian 399R, 699R, or 999R.

TURKISH: TUR

380. Topics in Turkish Language and Literature. Study of various aspects or eras of Turkish language and literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Turkish 412L or the equivalent.

381H. Intensive Graduate Language Instruction I. Intensive cultural and literacy-focused training in Turkish at the beginning level in preparation for research in the Turkic-speaking world or with Turkish sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing.

381J. Intensive Graduate Language Instruction II. Intensive cultural and literacy-focused training in Turkish at the low-intermediate level in preparation for research in the Turkic-speaking world or with Turkish sources. Incoming students are placed in the appropriate level by means of a departmental placement test. Six lecture hours a week for one semester. Prerequisite: Graduate standing and Turkish 381H with a grade of at least B.

381K. Intermediate Graduate Language Instruction I. Intensive cultural and literacy-focused training in Turkish at the intermediate level in preparation for research in the Turkic-speaking world or with Turkish sources. Includes an independent project component. Incoming students are placed in the appropriate level by means of a departmental placement test. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Turkish 381J with a grade of at least B.

381L. Intermediate Graduate Language Instruction II. Intensive cultural and literacy-focused training in Turkish at the high-intermediate level in preparation for research in the Turkic-speaking world or with Turkish sources. Includes an independent project component. Incoming students are placed in the appropriate level by means of a placement test. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Turkish 381K with a grade of at least B.

382. Topics in Turkish Culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

389. Conference Course in Turkish Studies. Supervised individual study of selected problems in Turkish studies. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

390K. Advanced Turkish I. Intermediate to high-level Turkish in four basic language skills: speaking, listening, reading, and writing. Turkish culture. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Turkish 412L or the equivalent.

390L. Advanced Turkish II. Continuation of Turkish 390K. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Turkish 390K or the equivalent.
AREAS OF STUDY

The Department of Philosophy offers areas of concentration across the discipline and offers special programs in cooperation with other departments: (1) ancient philosophy, with the Department of Classics; (2) history and philosophy of science, with the Department of History; and (3) philosophy and cognitive science, with the Departments of Linguistics, Psychology, and Computer Sciences. For descriptions of these programs, students should consult the graduate adviser, Department of Philosophy.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Edwin B. Allaire
Ignazio A. Angelelli
Nicholas M. Asher
David I. Beaver
Daniel A. Bonevac
Lawrence R. Buchanan
J. Budziszewski
Robert L. Causey
Jonathan Dancy
John Deigh
Joshua Dever
Sinan Dogramaci
Robert J. Hankinson
Kathleen M. Higgins
Herbert I. Hochberg
Cory F. Juhl
Robert H. Kane
Robert C. Koons
Anna-Sara Malmgren
Aloysius P. Martinich
Alexander Mourelatos
Adam Pautz
Stephen H. Phillips
Ian N. Proops
Richard M. Sainsbury
Sahotra Sarkar
Thomas K. Seung
Tara A. Smith
David Sosa
Michael Tye
Stephen A. White
Paul B. Woodruff

DEGREE REQUIREMENTS

MASTER OF ARTS

The master’s degree program with report requires completion of Philosophy 384F and 398R; twenty-one additional semester hours of graduate coursework in philosophy; and six hours of upper-division or graduate coursework in a supporting subject. The master’s degree program with thesis requires completion of twenty-four hours of graduate coursework in philosophy, including Philosophy 698; and six hours of upper-division or graduate coursework in a supporting subject.

DOCTOR OF PHILOSOPHY

In addition to the general requirements given in chapter 3, the requirements for the doctoral degree are as follows:

1. Philosophy 384F and 389, completed in the first year of graduate study.
2. A graduate course in each of the following: history of philosophy (any period up to or including Kant), metaphysics and epistemology, and ethics.
3. Philosophy 398T, a one-semester teaching internship.
4. Five additional graduate courses in philosophy.
5. Proficiency in a language other than English, or two additional graduate seminars in philosophy, or two additional upper-division or graduate seminars in a related area approved by the Graduate Studies Committee chair. Proficiency in a foreign language may be shown by completion of four semesters of coursework, or the equivalent, either before or after admission to the program.
6. Completion and defense of a dissertation prospectus, by the end of the third year.
7. Completion and defense of a dissertation.

FOR MORE INFORMATION

Campus address: Waggener Hall (WAG) 329, phone (512) 471-6093, fax (512) 471-4806; campus mail code: C3500
Mailing address: The University of Texas at Austin, Graduate Program, Department of Philosophy, 1 University Station C3500, Austin TX 78712
E-mail: graduatephilosophy@austin.utexas.edu
URL: http://www.utexas.edu/cola/depts/philosophy/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

PHILOSOPHY: PHL

380. Contemporary Philosophy. Past topics include pragmatism; postmodernism; contemporary Marxism; critical theory. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

381. History of Philosophy. Past topics include major figures and movements in ancient, medieval, early modern, and nineteenth- and twentieth-century philosophy. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

382. Metaphysics. Past topics include basic issues in metaphysics; particulars and universals; identity and individuation; realism and antirealism; mind-body issues. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

383. Theory of Knowledge. Past topics include basic issues in epistemology; theories of belief and rationality; justification and truth. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.


384F. First-Year Seminar. Central problems in philosophy. Three lecture hours a week for one semester. Prerequisite: Graduate standing in philosophy, or graduate standing and consent of the graduate adviser.

384K. The Analytic Tradition. A selective examination of works by major figures such as Frege, Moore, Russell, and Wittgenstein. Three hours a week for one semester. Prerequisite: Graduate standing.

385. Theory of Value. Past topics include basic issues in value theory; the objectivity of value; literature and philosophy; philosophy of art; literary criticism. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

386. Philosophy of Science. Past topics include basic issues in the philosophy of science; theories and explanations; philosophy of quantum mechanics; philosophy of the social sciences. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

387. Ethical, Political, and Legal Philosophy. Past topics include contemporary ethical theory; theories of justice; philosophy of law; social contract theories; political philosophy. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

388. Conference Course. Mainly a reading course in the works of classical and modern philosophers. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of the graduate adviser.

388C. Prospectus Course. Mainly a reading course for development of a dissertation prospectus. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

389. Logic. Rigorous definitions of syntax and semantics. Proofs of soundness and completeness of sentential and predicate logics; other topics in metatheory. May include extensions of and alternatives to classical logic. Philosophical significance of logic and metalogical results. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

391. Logic and Philosophy. Past topics include identity and substitutivity; philosophy of logic; discourse representation. Three hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

394K. Philosophy of Language. Same as Linguistics 394K. Three lecture hours a week for one semester. Only one of the following may be counted: Linguistics 393S (Topic: Philosophy of Language), Philosophy 391 (Topic: Philosophy of Language), 394K. Prerequisite: Graduate standing and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. For 698A, graduate standing in philosophy, twelve semester hours of upper-division or graduate coursework in philosophy, and consent of the graduate adviser; for 698B, Philosophy 698A.
398R. **Master's Report.** Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in philosophy and consent of the graduate adviser.

398T. **Supervised Teaching in Philosophy.** Teaching experience developed through an apprentice relationship between student and faculty member. Three hours a week for one semester. Offered on the credit/no credit basis only. Students may register for this course as many as four times, but only three semester hours of credit in this course may be applied toward a graduate degree. Prerequisite: Graduate standing and consent of the graduate adviser.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Philosophy 399R, 699R, or 999R.

---

**PSYCHOLOGY**

*Master of Arts  
Doctor of Philosophy*

---

**FACILITIES FOR GRADUATE WORK**

The Department of Psychology is located in the Sarah M. and Charles E. Seay Building. Except for laboratories in behavioral neuroscience, which are housed in the Animal Resources Center across the street, the Seay Building houses all the activities of the department. State-of-the-art computer networking is integrated into the building; there are computer facilities, computerized laboratories, and technological support for students and faculty members. Laboratory facilities include environmental control of sound, light, and temperature, with vibration-free areas for auditory and vision research. A number of specialized research centers are located in the building, including the Children's Research Laboratory, the Center for Perceptual Systems, the Center for Cognitive Science, the Laboratory for the Study of Anxiety Disorders, the Female Sexual Psychophysiology Laboratory, and the Clinical Training Clinic.

Graduate students and faculty members in the Department of Psychology participate in research programs with graduate students and faculty members in the Department of Human Development and Family Sciences, also housed in the Seay Building, and in many other fields, including biological sciences, communication, computer sciences, educational psychology, kinesiology, linguistics, pharmacy, and sociology. The Hogg Foundation for Mental Health and the Waggoner Center for Alcohol and Addiction Research provide additional collaborative opportunities.

---

**AREAS OF STUDY**

Graduate work is offered in the following areas of specialization: behavioral neuroscience; sensory neuroscience; cognitive systems; perceptual systems; clinical psychology; developmental psychology; individual differences and evolutionary psychology; and social and personality psychology. Students are admitted for graduate work in one of these areas. Students in any of these areas may also complete a neuroimaging track in psychology. The program in clinical psychology has been approved by the Commission on Accreditation of the American Psychological Association.
DEGREE REQUIREMENTS

MASTER OF ARTS

The graduate program in psychology is designed primarily to lead to the degree of Doctor of Philosophy. Students intending to earn the doctoral degree may enroll for the Master of Arts with special permission. The department’s requirements for the Master of Arts include the first statistics course and one course from at least two of the following core content groups: (1) behavioral neuroscience/psychopharmacology; (2) cognitive/perceptual systems; (3) social/developmental/clinical/evolutionary psychology. One core course must be taken the first year; the remaining requirements must be fulfilled during the first three years.

Students are formally evaluated by the entire faculty at the end of the first year. This evaluation is based on the student’s performance in the first-year core courses and other coursework, demonstration of research aptitude, and, when appropriate, potential for professional competence. In subsequent years, students are expected to demonstrate competence in their area of specialization, develop research skills, and, when appropriate, develop professional skills. Each of the areas has established criteria for evaluating student performance.

The department’s general requirements for the doctoral degree include completion of the core courses and other appropriate courses, completion of area requirements, and preliminary and final oral examinations related to a dissertation that gives evidence of the student’s ability to carry out independent investigation in the major field. Clinical students are also expected to complete an internship and to demonstrate ultimate suitability for the practice of professional psychology. Further information about requirements for the doctoral program is available from the graduate adviser and the heads of the areas of specialization.

FOR MORE INFORMATION

Campus address: Sarah M. and Charles E. Seay Building (SEA) 3.214, phone (512) 471-6398, fax (512) 471-6175; campus mail code: A8000
Mailing address: The University of Texas at Austin, Graduate Program, Department of Psychology, 1 University Station A8000, Austin TX 78712
E-mail: gradoffice@psy.utexas.edu
URL: http://www.psy.utexas.edu/psy/gradprogram/gradhome.html
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

PSYCHOLOGY: PSY

380C. Human Neuropsychology. Basic issues in normal and abnormal human brain function reviewed with emphasis on disorders of higher cerebral functioning. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Psychology 383C or consent of instructor.

380D. Neuropsychological Assessment. Diagnostic neuropsychological testing procedures, including techniques for evaluating motor, sensory, memory, language, and higher cortical functions. Three lecture hours a week for one semester, with three practicum hours to be arranged. Prerequisite: Graduate standing, Psychology 380C, and consent of instructor.

380E. Vision Systems. Introduction to the anatomy, physiology, and psychophysics of human vision from an information-processing and computational perspective. Three lecture hours a week for one semester. Neuroscience 380E and Psychology 380E may not both be counted. Prerequisite: Graduate standing and consent of instructor.

380F. Fundamentals of Evolutionary Psychology. Survey of important theories and research in evolutionary psychology, with emphasis on current problems. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

382K. Internship in Clinical Psychology. Supervised practical experience in clinical assessment and treatment. Practicum hours to be arranged. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree in clinical psychology.

383C. Functional Neuroanatomy. An examination of the anatomy of the brain and spinal cord, emphasizing connections and functions of neural systems. Three lecture hours a week for one semester. Neuroscience 383C and Psychology 383C may not both be counted. Prerequisite: Graduate standing and consent of instructor.

383M. Fundamentals of Physiological Psychology. Survey of important theories and research in physiological psychology, with emphasis on current problems. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

383T. Principles of Sensory and Behavioral Neuroscience. A proseminar covering the core material on essential topics in sensory and behavioral neuroscience. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 381D, Kinesiology 383T, Neuroscience 383T, Pharmacy 383T, Psychology 383T. Prerequisite: Graduate standing and consent of instructor.

384C. Bootstrap Statistics. Same as Neuroscience 384C. An introduction to modern methods of statistical analysis based on numerical computer simulation. Covers a range of common data analysis situations drawn mainly from the fields of neuroscience and experimental psychology. Techniques include point estimation, two-group and multiple group experiments, regression and curve fitting, and Bayesian analysis. Three lecture hours a week for one semester. Psychology 384C and 394U (Topic: Bootstrap Statistics) may not both be counted. Prerequisite: Graduate standing, an undergraduate statistics course, and consent of instructor.

384K. Advanced Statistics: Experimental Design. Consideration of problems of analysis and design commonly encountered in psychological research. Three lecture hours a week for one semester. Prerequisite: Graduate standing, an undergraduate statistics course, and consent of instructor.

384M. Advanced Statistics: Inferential. Same as Neuroscience 384M. Covers t-test, chi-square, analysis of variance, and nonparametric tests. Three lecture hours a week for one semester. Prerequisite: Graduate standing. A core course option. Prerequisite: Graduate standing and consent of instructor.

385N. Fundamentals of Personality Psychology. Survey of important theories and research in personality psychology, with emphasis on current problems. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

385P. Fundamentals of Social Psychology. Survey of important theories and research in social psychology, with emphasis on current problems. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

386N. Fundamentals of Psycholinguistics. Survey of important theories and research in psycholinguistics, with emphasis on current problems. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

387C. Human Language Process. An overview of current psycholinguistic research, primarily in the production and comprehension of spoken language by adults. Three lecture hours a week for one semester. Psychology 387C and 394U (Topic: Human Language Process) may not both be counted. Prerequisite: Graduate standing.

387N. Perceptual Systems. Overview of theory and research in visual perception and perceptual information processing. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.
387R. Fundamentals of Cognition. Review of theories and empirical research on pattern recognition, attention, memory, imagery, and problem solving. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

388D. Individual Differences Psychology. Person-to-person differences in cognitive abilities and personality, with emphases on genetic and environmental influences, developmental processes, and relations to real-world outcomes. Three lecture hours a week for one semester. Neuroscience 388D and Psychology 388D may not both be counted. Prerequisite: Graduate standing and consent of instructor.

388K. Conference on Special Topics. Readings, conferences, and other work on individually selected topics. May be repeated for credit. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in psychology. Students must sign up in the Department of Psychology Graduate Office before enrolling in some sections; these are identified in the Course Schedule.

389K. Theory and Techniques of Assessment I. Introduction to intelligence and personality testing procedures, test interpretation, and ethical issues pertaining to clinical interviewing and testing. Includes instruction and feedback on clinical report writing. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

389L. Theory and Techniques of Assessment II. Clinical interviewing with adults and children. Observation and feedback for test administration and clinical skills. Three lecture hours and three hours of observation a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, Psychology 389K, and consent of instructor received prior to registering.

190, 290, 390. Research. Individual research. May be repeated for credit. Prerequisite: Graduate standing and twelve semester hours of upper-division coursework in psychology. Students must sign up in the Department of Psychology Graduate Office prior to registering.

391N. Learning and Memory. Same as Neuroscience 391N. Presentation of contemporary approaches to the study of conditioning and learning at the behavioral level. Focuses on empirical data and theoretical analysis of acquisition and performance in Pavlovian and instrumental conditioning. Includes discussion of habituation, sensitization, stimulus control, and other paradigms for studying cognitive processes in nonverbal organisms. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

391P. Issues and Controversies in Statistical and Scientific Inquiry. Selected topics on the design and analysis of psychological research. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

392N. Fundamentals of Comparative Psychology. History and current status of comparative psychology, emphasizing several biological disciplines, including behavior genetics, ethology, evolutionary biology, and sociobiology. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

393. Clinical Practicum I. Supervised practical experience in the use of clinical techniques. Three lecture hours a week for one semester, with ten to twelve hours of practicum experience to be arranged. Prerequisite: Graduate standing, Psychology 389K, and consent of instructor.

393K. Clinical Practicum II. Continuation of supervised practical experience in the use of clinical techniques. Three lecture hours a week for one semester, with ten to twelve hours of practicum experience to be arranged. Prerequisite: Graduate standing, Psychology 393, and consent of instructor.

394K. Fundamentals of Social and Personality Development. Survey of important theories, issues, and research in social and personality development. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

394N. Fundamentals of Cognitive Development. Survey of important theories, issues, and research in the development of perception, language, and cognition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

394P. Seminars in Behavioral Neuroscience and Biopsychology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Course Schedule**

**Topic 1: Current Topics in Behavioral Neuroscience**

Brain-behavior relationships, particularly recent research in behavioral neuroscience, including the anatomical and neurochemical mechanisms of behavioral events, and behavioral influences on the brain. Offered on the credit/no credit basis only. Neuroscience 394P (Topic 1) and Psychology 394P (Topic 1) may both be counted.

**Topic 2: Clinical Psychopharmacology**

Recent findings concerning the mechanisms of action and the behavioral effects of psychoactive drugs, particularly those used in psychiatry. Various drug types (such as sedative-hypnotics, hallucinogens, and drugs used to treat depression, schizophrenia, Parkinson’s disease, and anxiety) and pathways in the brain are discussed to examine the neurochemical basis of psychiatric disorders and substance abuse. Neuroscience 394P (Topic 2: Clinical Psychopharmacology) and Psychology 394P (Topic 2) may both be counted.

**Topic 3: Neurobiology of Learning and Memory**

Neuroanatomical systems that are functionally related to basic forms of learning and memory in mammals. Neuroscience 394P (Topic 3: Neurobiology of Learning and Memory) and Psychology 394P (Topic 3) may both be counted.

**Topic 4: Animal Communication**

**Topic 7: Advanced Topics in Neuroanatomy**

Neuroanatomical systems and functions across species; advanced forms of neuroanatomy in mammals. Neuroscience 394P (Topic 4: Advanced Topics in Neuroanatomy) and Psychology 394P (Topic 7) may both be counted.


194Q, 394Q. Seminars in Clinical Psychology. One or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Current Topics in Clinical Psychology. Offered on the credit/no credit basis only.
Topic 2: Empirically Supported Interventions with Adults.
Topic 4: Advanced Practicum in Clinical Psychology.
Topic 5: Human Neuropsychology II.
Topic 6: Empirically Supported Interventions with Children.
Topic 17: Seminar in Positive Psychology. A survey of the emerging field of positive psychology and well-being. Topics include character strengths and virtues, positive emotion, personality influences, motivation and goals, the happiness set point, and the issue of whether happiness can or should be changed.

Topic 18: Research Methods in Clinical Psychology. Advanced training in research methodology as it pertains to the field of clinical psychology.

Topic 19: History and Professional Issues in Clinical Psychology. History and development of clinical psychology as a profession. Includes clinical psychology before World War II, the recognition of stress, the rise of evidence-based practice, professional psychology, and multicultural diversity.

Topic 20: Diversity Issues in Research and Practice. Methodological considerations involved in designing research projects, and clinical assessment and treatment concerns that arise when working with diverse populations.

394S. Seminars in Developmental Psychology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Current Topics in Developmental Psychology. Offered on the credit/no credit basis only.
Topic 2: Children’s Racial/Gender Schemata.
Topic 3: Literacy Acquisition.
Topic 4: Psychological Processes in Family Violence.
Topic 5: Language and Conceptual Development.
Topic 7: Professional Issues in Academia.

394T. Seminars in Evolutionary Psychology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

394U. Seminars in Cognitive and Perceptual Systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Current Topics in Cognitive Systems. Offered on the credit/no credit basis only.


Topic 4: Cognition.
Topic 6: Memory.
Topic 7: Speech Perception.
Topic 8: Topics in Vision and Hearing. Current research in human vision and/or hearing. Only one of the following may be counted: Neuroscience 385L (Topic 7: Topics in Vision and Hearing), 394U (Topic 2: Topics in Vision and Hearing), Psychology 394U (Topic 8).

394U. Seminars in Vision and Hearing. Offered on the credit/no credit basis only.

Topic 12: Knowledge Representation. Psychological approaches to the ways in which information is stored and processed, focusing on how particular assumptions and mental representation make tasks either easy or difficult to perform.
Seminars in Social and Personality Psychology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Current Topics in Social and Personality Psychology. Offered on the credit/no credit basis only.

Topic 10: Close Relationships. Social psychological theory and research on the topic of close relationships.

Topic 11: Social Neuroscience. Introduction to psychological and neural foundational concepts in social neuroscience. Surveys current work in the field to examine how it may or may not contribute to the study of social psychology.

396. Advanced Behavior Pathology. Evaluation of the experimental and theoretical literature concerning major behavioral disorders. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

396C. Child and Adolescent Psychopathology. The epidemiology, etiology, associated features, developmental course, and prognosis of childhood and adolescent behavior disorders. Three lecture hours a week for one semester. A core course option. Prerequisite: Graduate standing and consent of instructor.

396D. Clinical Psychopharmacology. Same as Neuroscience 396D. Recent findings concerning the mechanism of action and the behavioral effects of psychoactive drugs, particularly those used in psychiatry. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in psychology, twelve semester hours of upper-division or graduate coursework in psychology, and consent of the graduate adviser; for 698B, Psychology 698A.

398T. Supervised Teaching in Psychology. Teaching under close supervision of course instructor for two semesters; weekly meetings of two to four hours during the semester; individual consultation and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Psychology 399R, 699R, or 999R.
RELIGIOUS STUDIES

Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Graduate students in religious studies have access to significant collections of research materials in a number of fields. The Perry-Castañeda Library houses nearly two hundred thousand volumes cataloged under categories pertaining to religious studies. The University Libraries also have extensive microfilm and microfiche holdings of document collections and provide access to important online collections of source materials. University Libraries’ substantial holdings in history, classics, sociology, anthropology, Asian studies, and Middle Eastern studies are invaluable to students studying religion. Special collections in the Harry Ransom Humanities Research Center, the Benson Latin American Collection, and the Dolph Briscoe Center for American History also offer opportunities for research.

AREAS OF STUDY

All candidates for graduate degrees are expected to develop a broad competence in the discipline as a whole as well as expertise in their area of concentration. The program offers five concentrations, each with its own specific objectives: religion in Asia; religion in the ancient Mediterranean; religion in Europe and the Middle East; religion in the Americas; and transregional and comparative studies in religion.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Robert H. Abzug
Joel P. Brereton
Virginia Garrard Burnett
Alison K. Frazier
Oliver Freiberger
Steven J. Friesen
Karl Galinsky

Jo Ann Hackett
Martha G. Newman
J. P. Olivelle
Glenn A. Peers
John W. Traphagan
Thomas A. Tweed
L. M. White

DEGREE REQUIREMENTS

MASTER OF ARTS

To obtain the master’s degree in religious studies, students must complete a total of thirty semester hours: either twenty-seven hours of coursework and a three-hour report or twenty-four hours of coursework and a six-hour thesis. At least eighteen hours must be in graduate courses in religious studies. No more than six hours of upper-division undergraduate credit may be counted toward the degree. All students must complete Religious Studies 383M and must participate in a departmental colloquium that meets twice a month.

Students also complete the core courses required for their area of specialization.

In addition, in consultation with his or her adviser, each student identifies a supporting field outside the area of concentration in which to complete six hours of graduate coursework. This coursework may be either from outside the department or in another area of religious studies. The related field must be approved by representatives of the Graduate Studies Committee during the student’s second-year review.

Each student’s progress is reviewed during his or her fourth semester of study by a committee comprising representatives of the Graduate Studies Committee. This committee makes one of three recommendations: that the student (1) progress to the PhD program upon satisfactory completion of the master’s thesis or report; (2) leave the program after receiving a Master of Arts degree; (3) be reviewed again before admission to the PhD program.

DOCTOR OF PHILOSOPHY

A doctoral student in religious studies must complete the courses required for the master’s degree, a doctoral seminar, dissertation research and writing courses, and additional courses related to the student’s concentration. Students who enter with a master’s degree from another institution may petition to have up to six hours transferred toward the doctoral requirements. All students must participate in a departmental colloquium that meets twice a month.
Students enter the program having chosen one of the five areas of concentration. They must fulfill the foreign language requirement for the concentration. In addition, each student identifies a thematic field and completes other courses necessary for examination preparation.

To qualify for admission to candidacy for the doctoral degree, students must pass their comprehensive examinations, which consist of written essays in four fields as specified within the student’s area of concentration, and an oral defense of the essays. Candidacy is also contingent upon regular participation in the departmental colloquium, as certified by the graduate adviser. Students then write the dissertation and defend it in a final oral examination before a dissertation committee. Students are expected to write the dissertation, have it approved, and pass the final oral examination within three years of admission to candidacy.

**FOR MORE INFORMATION**

**Campus address:** Burdine Hall (BUR) 406, phone (512) 232-7737; campus mail code: A3700

**Mailing address:** The University of Texas at Austin, Graduate Program, Department of Religious Studies, 1 University Station A3700, Austin TX 78712

**URL:** [http://www.utexas.edu/cola/depts/rs/graduate/](http://www.utexas.edu/cola/depts/rs/graduate/)

---

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**RELIGIOUS STUDIES: RS**

180. **Proseminar.** An introduction to the research methodology and ancillary disciplines used in current religious studies. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

380R. **Topical Readings in Religious Studies.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

381. **Conference Course in Religious Studies.** May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

383. **Topical Seminars.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

383C. **Topics in Comparative Religion.** Advanced treatment of selected problems, topics, or themes concerning comparative approaches to the study of religion. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

383M. **Theory and Method in the Study of Religion.** Introduction to the history of the discipline, discussion of classical interpretative works, and examination of current theoretical and methodological developments in the field. Three lecture hours a week for one semester. Religious Studies 383 (Topic: Theory and Method in the Study of Religion) and 383M may not both be counted. Prerequisite: Graduate standing and consent of the graduate adviser.

383T. **Topics in Theoretical Approaches to the Study of Religion.** Advanced treatment of selected problems, topics, or themes concerning theoretical approaches to the study of religion. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

384D. **Doctoral Seminar in Religious Studies.** Advanced seminar designed to introduce students to the profession of religious studies. Includes development and preparation of a dissertation proposal, placing scholarship within a broader theoretical context, and pedagogical issues in teaching religious studies at the undergraduate college level. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

385H. **Proseminars in Ancient Near Eastern Studies.** A survey of methods and approaches in the study of the ancient Near Eastern and early Hebrew environments. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

385K. **Early Jewish and Christian Literature I.** A survey of major categories of early Jewish and Christian literature by genre in light of comparative historical research. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

385L. **Early Jewish and Christian Literature II.** A survey of major categories of early Jewish and Christian literature by genre in light of comparative historical research. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.
386C. Critical Issues in Christian Origins. Studies of key scholarly works in and critical approaches to the study of Christian origins in their historical, social, and cultural contexts. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

386H. Critical Issues in the Hebrew Bible. Advanced studies of critical issues in research on key areas of study in the Hebrew Bible and its environment. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

386M. Critical Issues in Ancient Mediterranean Religions. Studies of key scholarly works in and critical approaches to the study of ancient Mediterranean religions in their historical, cultural, and archaeological contexts. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

387M. Seminars in Ancient Mediterranean Religions. Advanced treatment of selected problems, topics, or themes in the study of the religions of the ancient Mediterranean world. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

388E. Core Readings in Religion in Europe. Discussion of key scholarly works in and major approaches to the study of religion in Europe. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

388J. Core Readings in Jewish Studies. Discussion of key scholarly works in and major approaches to Jewish studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

388M. Core Readings in Islamic Studies. Discussion of key scholarly works in and major approaches to the study of Islam and Muslim societies. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

389R. Research Seminars on Religion in Europe and the Middle East. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

390T. Topics in European and Middle Eastern Religion. Advanced treatment of selected problems, topics, or themes concerning religion in Europe and the Middle East. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

391L. Approaches to the Study of Religion in Latin America. An introduction to the history of scholarship about religion in Latin America and the Caribbean. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

391N. Approaches to the Study of Religion in the United States. An introduction to the history of scholarship about religion in the United States, including recent research on the Atlantic world, the Pacific world, and the Western Hemisphere. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

392T. Topics in Religion in the Americas. Advanced treatment of selected problems, topics, or themes concerning religion in the Americas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

393C. Core Readings in Religion in Asia. Discussion of key scholarly works in and major approaches to the study of religion in Asia. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

393F. Topics in the Foundations of Asian Religions. Introduction to and analysis of primary sources for the study of religion in Asia. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

394T. Topics in Religion in Asia. Advanced treatment of selected problems, topics, or themes concerning religion in Asia. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

397Q. Preparation for Qualifying Exams. Designed for religious studies doctoral students preparing for qualifying examinations. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in religious studies and consent of the graduate adviser; for 698B, Religious Studies 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in religious studies and consent of the graduate adviser.

398T. Supervised Teaching in Religious Studies. Weekly group meetings with the supervising instructor, individual consultations, and reports. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Religious Studies 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

The University Libraries contain about eighty thousand volumes and excellent supporting material on Russia and Eastern Europe. The Harry Ransom Humanities Research Center holds important original documents, including the Alexander Kerensky papers and collections on Soviet history and literature. The Population Research Center houses extensive census data for Eastern Europe and the former Soviet Union, dating back to the Russian census of 1897. The Audio Visual Library in the Flawn Academic Center has several hundred films and video recordings from Russia, Eastern Europe, and Eurasia.

The Center for Russian, East European, and Eurasian Studies Resource Center houses about five hundred books and journals on the region, as well as audio and video recordings. The center maintains the Russian and East European Network Information Center (REENIC), which gives Internet users easy access to databases worldwide.

More than sixty faculty members regularly teach courses dealing with Russia, Eastern Europe, and Eurasia.

AREAS OF STUDY

The Master of Arts in Russian, East European, and Eurasian studies is a two-year, multidisciplinary program that offers advanced scholarly training for students who seek integrated knowledge of the language, history, society, and culture of the former Soviet Union and Eastern and Central Europe, or one or more of their subareas. The program is designed for students preparing for careers in the professions, and for those seeking an intermediate, interdisciplinary master’s degree before pursuing a doctorate in a particular discipline. Within the requirements of the program, the student may choose an individual course of study to meet his or her needs and may have a broader choice of courses than is possible in a disciplinary master’s degree program.

The program may involve work in any of the following academic disciplines: anthropology, architecture, art history, business, comparative literature, economics, geography, government, history, law, linguistics, music, philosophy, public affairs, radio-television-film, sociology, Slavic languages and literatures, and Turkic languages.

Students who complete this degree are expected to have an extensive understanding of the country or countries of their specialization, including a working knowledge of one of the region’s languages.

ADMISSION REQUIREMENTS

The entering student must have a bachelor’s degree. He or she must have completed at least nine semester hours in upper-division undergraduate courses, other than language courses, that focus primarily or exclusively on the former Soviet Union or East/Central Europe, and three years or the equivalent of formal language training in a language of the area. An applicant who does not meet these requirements may be admitted conditionally, but he or she must make up the deficiencies while obtaining the degree. The amount of coursework to be made up is determined by the graduate adviser before the student is admitted to the program.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoltan D. Barany</td>
<td>Keith A. Livers</td>
</tr>
<tr>
<td>Cynthia Buckley</td>
<td>Inga Markovits</td>
</tr>
<tr>
<td>David J. Eaton</td>
<td>Robert G. Moser</td>
</tr>
<tr>
<td>James K. Galbraith</td>
<td>Joan H. Neuberger</td>
</tr>
<tr>
<td>Thomas J. Garza</td>
<td>Mary C. Neuberger</td>
</tr>
<tr>
<td>Francis J. Gavin</td>
<td>Michael A. Pesenson</td>
</tr>
<tr>
<td>Sabine Hake</td>
<td>Gilbert C. Rappaport</td>
</tr>
<tr>
<td>Ian F. Hancock</td>
<td>Danilo F. Udovicki</td>
</tr>
<tr>
<td>Tatiana Kuzmic</td>
<td>Charters S. Wynn</td>
</tr>
</tbody>
</table>

DEGREE REQUIREMENTS

The requirements of the program are designed to give students a broad background in the Russian, East European, and Eurasian area. Students may choose the thesis option, consisting of at least thirty semester...
hours of coursework, including the thesis; or the report option, consisting of at least thirty-three semester hours, including the report.

Under either option, at least eighteen hours must be in nonlanguage graduate coursework that deals primarily with the Russian, East European, and Eurasian area. In addition to the interdisciplinary core course, Russian, East European, and Eurasian Studies 381, each student must take at least one course from each of the following groups: literature and culture; history, economics, and government; and sociology, geography, and anthropology. All courses counted toward the degree must have content relevant to the former Soviet Union or East/Central Europe. The student must also complete a fourth year or the equivalent of formal language instruction. He or she must pass a proficiency test in the language at the Interagency Language Roundtable level 2 or the American Council of Teachers of Russian advanced level. Credit earned in fulfilling the language requirement may not be counted toward the degree, since language competence is a necessary tool for graduate study in Russian, East European, and Eurasian studies.

DUAL DEGREE PROGRAMS

The Center for Russian, East European, and Eurasian Studies offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Global policy studies</td>
<td>Master of Global Policy Studies</td>
</tr>
<tr>
<td>Law</td>
<td>Doctor of Jurisprudence</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
<tr>
<td>Radio-television-film</td>
<td>Master of Arts</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

Campus address: Calhoun Hall (CAL) 413, phone (512) 471-3607, fax (512) 471-6710; campus mail code: F3600
Mailing address: The University of Texas at Austin, Graduate Program, Center for Russian, East European, and Eurasian Studies, 1 University Station F3600, Austin TX 78712
URL: http://www.utexas.edu/cola/centers/creees/

GRADUATE COURSES

The following courses are offered by the Center for Russian, East European, and Eurasian Studies. Courses in some languages of the area are offered by the Department of Slavic and Eurasian Studies; they are listed on pages 367–368.

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

RUSSIAN, EAST EUROPEAN, AND EURASIAN STUDIES: REE

380. International Business Fellows Seminar. Same as Asian Studies 391 (Topic 6: International Business Fellows Seminar), Latin American Studies 381 (Topic 8: International Business Fellows Seminar), and Middle Eastern Studies 380. Multidisciplinary seminar for students in area studies, business administration, law, and public policy. The faculty includes both academics and business leaders. Three lecture hours a week for one semester. Offered on the letter-grade basis only. International Business 395 (Topic: International Business Fellows Seminar) and Russian, East European, and Eurasian Studies 380 may not both be counted. Prerequisite: Graduate standing.

381. Seminar in Russian, East European, and Eurasian Civilizations and Cultures. Core course. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
382. Conference Course in Russian, East European, and Eurasian Studies. Individual instruction on some aspect of the former Soviet Union or Eastern Europe. May be repeated for credit. Prerequisite: Graduate standing.

385. Topics in Russian, East European, and Eurasian Studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic and are given in the Course Schedule.

   Topic 1: Chechnya: Politics, Power, and People. The history, culture, religions, and recent upheaval of Chechnya.

385. Topics in Russian, East European, and Eurasian Studies.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Russian, East European, and Eurasian studies; for 698B, Russian, East European, and Eurasian Studies 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Russian, East European, and Eurasian studies.

SCIENCE, TECHNOLOGY, AND SOCIETY

SCIENCE, TECHNOLOGY, AND SOCIETY: STC

380. Proseminar: Current Issues in the Societal Impact of Science and Technology. Overview of the fundamentals of the practice of science, and of science as a human enterprise that interacts with and transforms cultural views, ideas, and habits. Includes lectures by natural scientists, engineers, and social scientists on the societal impact of rapid scientific technological developments from the perspectives of their individual disciplines. Students complete a comprehensive research project on a topic related to the course. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. May not be repeated for credit. Prerequisite: Graduate standing.

SLAVIC LANGUAGES AND LITERATURES

Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The University Libraries, anchored by the Perry-Castañeda Library, contain extensive holdings in the primary and secondary works, reference materials, and periodicals needed for advanced research in the languages and cultures of the Slavic lands. The Harry Ransom Humanities Research Center is an archival resource that houses the Alexander Kerensky archive and an extensive collection of diaries, correspondence, and other material dealing with the cultural and political life of Russia and the Soviet Union. Liberal Arts Instructional Technology Services has extensive audio, video, and computer-based resources, including recordings of folklore and dialect speech.

The Center for Russian, East European, and Eurasian Studies offers resources related to the Slavic languages and cultures in print, video, and audio form; it also organizes an extensive program of visitors, conferences, and other events. The Department of Slavic and Eurasian Studies has its own reference room and multimedia resources, including an extensive film collection. As the faculty places increasing emphasis on electronic media resources in teaching and research, facilities for Internet access and use are being expanded.
AREAS OF STUDY

The Department of Slavic and Eurasian Studies offers coursework in Slavic linguistics, Slavic literatures and cultures, and applied linguistics/pedagogy. Each degree plan includes coursework in a supporting field.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Zoltan D. Barany
Cynthia Buckley
Thomas J. Garza
Tatiana Kuzmic
Keith A. Livers
Robert G. Moser
Joan H. Neuberger
Mary C. Neuburger
Michael A. Pesenson
Gilbert C. Rappaport
Charters S. Wynn

ADMISSION REQUIREMENTS

Students entering the master’s degree program should have a bachelor’s degree with a major in Russian or another field of Slavic studies, or they must demonstrate equivalent knowledge. A student admitted to the program without this background must acquire it by special coursework for which no graduate credit is given. To be admitted to the doctoral degree program, the student must have a master’s degree in Russian or Slavic languages.

DEGREE REQUIREMENTS

MASTER OF ARTS

The degree plan consists of Russian 390 (Topic: Old Church Slavonic); eighteen additional semester hours of coursework in Slavic languages and literatures; six hours of supporting work; a three-hour graduate course in a primary Slavic language; a one-hour proseminar in Slavic studies, Slavic 180K; and six hours in the thesis course. Supporting work typically is taken outside the Department of Slavic and Eurasian Studies; it may be taken within the department, with the consent of the graduate adviser, if there is a substantial comparative component. A master’s report (three hours) and three additional hours of coursework in Slavic languages and literatures may be substituted for the thesis. Students must pass a reading skills examination in Russian as early as possible and must demonstrate a sound knowledge of a second Slavic language by examination or by coursework taken without graduate credit. Finally, each student must present an acceptable master’s thesis or report.

Further information about the master’s degree program is available from the graduate adviser.

DOCTOR OF PHILOSOPHY

Students must choose one of three major fields of concentration: literature and culture, linguistics, or applied linguistics/pedagogy. Students may minor in another of these three areas or, with approval of the graduate adviser, in a related discipline outside the department. The degree program consists of fifteen semester hours of coursework in the major, nine hours in the minor, and a three-hour graduate course in a primary Slavic language, all beyond the coursework counted toward the master’s degree; and six hours in the dissertation course. Each student must demonstrate reading knowledge of a non-Slavic research language. Linguistics majors must demonstrate a sound knowledge of a third Slavic language. Both of these language requirements may be met by examination or by coursework taken without graduate credit. To be admitted to candidacy, all students must pass advanced examinations of oral and writing skills in a primary Slavic language and a set of comprehensive examinations based on coursework and a departmental reading list for the major field of concentration. The dissertation must be in the major field.

Further information about the doctoral degree program is available from the graduate adviser.

FOR MORE INFORMATION

Campus address: Calhoun Hall (CAL) 415, phone (512) 471-3607, fax (512) 471-6710; campus mail code: F3600
Mailing address: The University of Texas at Austin, Graduate Program, Department of Slavic and Eurasian Studies, 1 University Station F3600, Austin TX 78712
URL: http://www.utexas.edu/cola/depts/slavic/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

CZECH: CZ

383. Periods in Czech Literature. Advanced work in selected periods of Czech literature. Topics may include Old Czech literature, literature of the National Revival, romanticism, realism, naturalism, decadence, poetics, and contemporary literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

391. Studies in Czech Literature. Topics may include Czech fiction, poetry, drama, comparative Slavic literature, and Czech oral literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

392. Studies in Czech Language. Topics may include Czech linguistics, pedagogy, and comparative language study. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

395. Conference Course. Survey of Czech literature, language, culture, linguistics, history, and politics. Individual instruction. May be repeated for credit. Prerequisite: Graduate standing.

POLISH: POL

395. Conference Course. Study of individual problems in Polish language, literature, and culture. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

RUSSIAN: RUS

380C. Advanced Russian Composition and Conversation I. Analysis of stylistic characteristics of texts and development of practical stylistic skills in written and spoken Russian. Three lecture hours a week for one semester. Prerequisite: Graduate standing and three years of Russian.

380D. Advanced Russian Composition and Conversation II. Analysis of stylistic characteristics of texts and development of practical stylistic skills in written and spoken Russian. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Russian 380C.

380P. Political Russian. An intermediate course in Russian language for graduate students in the social sciences. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and two years of Russian or the equivalent.

383. Periods in Russian Literature. Advanced work in selected periods of Russian literature. Sample topics include Old Russian literature, eighteenth-century literature, romanticism, realism, naturalism, symbolism, acmeism, futurism, Soviet realism, and contemporary literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

385. Topics in Russian Linguistics. Sample topics include Old Russian and the history of the Russian literary language, as well as more specialized topics in synchronic, historical, or applied perspective. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

386. Linguistic Analysis of Contemporary Russian. Study of the structure of Russian and methods of linguistic analysis. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

   Topic 1: Phonology.
   Topic 2: Morphology.
   Topic 3: Syntax.

390. Studies in Slavic Linguistics. Sample topics include comparative Slavic linguistics; East, West, or South Slavic; Old Church Slavonic; and medieval Slavic manuscripts. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

391. Studies in Slavic Literature. Sample topics include Russian fiction, poetry, drama, comparative Slavic literature, Slavic oral literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in the Department of Slavic and Eurasian Studies, or graduate standing and consent of instructor.

392. Studies in Slavic Languages and Literatures other than Russian. Topics include Bulgarian, Macedonian, Serbian/Croatian, Slovenian, Czech, Sorbian, Polish, Slovak, Ukrainian, and Belorussian. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in the Department of Slavic and Eurasian Studies, or graduate standing and consent of instructor.

395. Conference Course. Study of individual problems in Slavic languages. May be repeated for credit. Prerequisite: Graduate standing.
397P. Topics in Applied Linguistics and Pedagogy. Study of topics in applied linguistics related to the teaching of Russian and other Slavic languages. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in the Department of Slavic and Eurasian Studies and consent of the graduate adviser; for 698B, Russian 698 A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in the Department of Slavic and Eurasian Studies and consent of the graduate adviser.

398T. Supervised Teaching in Russian. Principles and methods of teaching Russian. Analysis of relevant foreign language teaching theories and methodologies, curriculum and curricular materials development for university and secondary school teachers of Russian. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Russian 399R, 699R, or 999R.

SERBIAN/CROATIAN: SC

395. Conference Course. Study of individual problems in Serbian and Croatian languages, literature, and culture. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in the Department of Slavic and Eurasian Studies, or graduate standing and consent of instructor.

SLAVIC: SLA

380. Studies in Slavic Culture. Study of various intellectual, artistic, and social movements in the cultures of the Slavic-speaking countries. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

180K. Proseminar on Slavic Studies. Introduction to literary study, linguistics, foreign language methodology, area studies, research methods, and library resources. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

390. Studies in Slavic Linguistics. Subjects may include comparative Slavic linguistics; East, West, or South Slavic; Old Church Slavonic; and medieval Slavic manuscripts. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395. Conference Course. Study of individual problems in or among Slavic languages, literatures, and culture. May be repeated for credit. Prerequisite: Graduate standing.

SOCIOLOGY

Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The Department of Sociology at the University of Texas at Austin is one of the top graduate programs in the country. Its forty-five faculty members are involved in research and publication on a broad range of topics. Among the department’s specialties are gender, race/ethnicity, demography, family, health, poverty and inequality, religion, and political sociology. Graduate students receive instruction in the full range of sociological methodologies, including comparative/historical methods, ethnographic fieldwork, and quantitative data analysis. Professionalization courses include formal instruction on publishing, presenting papers at professional conferences, and teaching. The department has housed a number of prominent journals, including Gender & Society and The Journal of Health and Social Behavior, and the Latin American Research Review. Faculty members serve key roles in a number of national and international professional societies, including the American Sociological Association and the Population Association of America.

The Department of Sociology is located in Burdine Hall, which is also the home of the Liberal Arts Computer Instruction Laboratory (LACIL). Through LACIL, students have access to computers and a wide array of national and international data sets. Staff members in LACIL are available to assist graduate students with their survey research.
Many department faculty and graduate students are affiliated with the Population Research Center (PRC), one of the preeminent demographic research and training centers in the United States. The PRC is located in the Main Building. Research grant and fellowship opportunities are available through the PRC. The research foci of the PRC include children, youth, and families; population health; religion and demographic processes; and Latin American and border demography. The PRC has a computer laboratory, data archives, and a weekly lecture series. The PRC also offers opportunities for students to receive travel and fellowship funds to support their work.

Faculty and students are also affiliated with the Center for Women's and Gender Studies (CWGS), which provides graduate students with the opportunity to receive a certification in women's studies. Many sociology students present their original research at the CWGS annual graduate student conference. Other centers on campus provide research and teaching opportunities for sociology graduate students, including the Warfield Center for African and African American Studies, the Center for Mexican American Studies, the Center for Asian American Studies, the Center for Middle Eastern Studies, the Schusterman Center for Jewish Studies, and the Lozano Long Institute of Latin American Studies.

Areas of Study

Graduate study is offered in theory; education; health; family; race and ethnicity; development; gender; political sociology; crime, law, and deviance; religion; demography; and work, occupations, and organizations.

The following sociology courses meet the area requirements (see the Graduate Courses section for more details).

- Crime, Law, and Deviance: 396N (Topics 1, 2, 3, 4, 5, 6)
- Demography: 389K (Topics 1, 2, 3, 4, 6, 9, 11, 12, 13), 391L
- Development and Globalization: 395D (Topics 1, 2, 3, 5, 7, 8, 9)
- Education: 395E (Topics 1, 2, 3, 4, 5)
- Family: 389K (Topic 11), 395E (Topic 3), 395F (Topics 2, 3, 7, 8), 395G (Topic 3)
- Gender: 395F, 395G (Topics 3, 5, 6, 7, 8, 9, 10, 11), 395J (Topic 13), 396P (Topic 12)
- Health: 395F (Topic 3), 395J (Topics 1, 6, 7, 8, 10, 12, 13), 389K (Topics 1, 2, 3, 12)
- Law and Human Rights, Seminars in: 396Q
- Political Sociology: 394K (Topic 14), 395D (Topic 3), 396P (Topics 1, 2, 3, 6, 7, 12)
- Race and Ethnicity: 389K (Topics 4, 9), 395E (Topic 2), 395L (Topics 1, 8, 9, 10)
- Religion: 396R (Topics 1, 2, 3)
- Theory: 394K (Topics 2, 3, 12, 13, 14), 395G (Topic 7), 395L (Topics 9, 10)
- Work, Occupations, and Organizations: 395D (Topic 5), 395E (Topic 1), 395L (Topics 10, 15, 16, 17)

Graduate Studies Committee

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Ari Adut
- Jacqueline L. Angel
- Ronald J. Angel
- Javier Auyero
- Simone A. Browne
- Cynthia Buckley
- Johnny S. Butler
- Ben Carrington
- Shannon E. Cavanagh
- Mounira M. Charrad
- Robert Crosnoe
- Sheldon Ekland-Olson
- Toni L. Falbo
- William P. Frisbie
- Norval D. Glenn
- Gloria Gonzalez-Lopez
- Mark D. Hayward
- John C. Higley
- Robert A. Hummer
- William R. Kelly
- David S. Kirk
- John Mirowsky
- Chandra L. Muller
- Marc A. Musick
- Pamela Marie Paxton
- Joseph E. Potter
- Daniel A. Powers
- Tetyana Pudrovskaya
- Thomas W. Pullum
- Kelly Raley
- Mark Regnerus
- Pedro Reyes
- Catherine Riegle-Crumb
- Bryan R. Roberts
- Keith Robinson
- Nestor P. Rodriguez
- Mary Rose
- Catherine E. Ross
- Sharmila Rudrappa
- Arthur Sakamoto Jr.
- Debra J. Umberson
- Andres Villarreal
- Peter Ward
- Eric M. Warr
- Samuel C. Watkins
- Alexander Ariel Weinreb
- Christine L. Williams
- Robert D. Woodberry
- Michael P. Young
- Wei-Hsin Yu

Degree Requirements

Master of Arts

Students typically earn the Master of Arts in the course of work leading to a doctoral degree, rather than as an end in itself. The master’s degree requires thirty semester hours of graduate work, including six hours
in the thesis course. The coursework must include two courses in social statistics, one in research methods, and two in theory; two graduate courses outside the department; and two electives. The degree program usually takes two years. Students often enter the graduate program with a master’s degree from another institution. Such students must take the required courses at the University or transfer credit for them as described on pages 18–19.

**DOCTOR OF PHILOSOPHY**

The doctoral program requires at least fifty-four semester hours of graduate coursework in addition to the dissertation courses; fifty-seven hours in addition to the dissertation are required for the specialization in demography. The coursework requirements include the twenty-four semester hours of work required for the master’s degree, one additional course in methods, an additional graduate course outside the department, and a variety of substantive courses in sociology. Additional information is available from the department.

To be admitted to candidacy for the doctoral degree, the student must have completed all master’s degree requirements and the doctoral course requirements, must pass a comprehensive examination in the area of specialization, and must defend a dissertation proposal. The degree is awarded after completion and defense of the dissertation. Most students need three or four years beyond the master’s degree to complete the doctorate.

**FOR MORE INFORMATION**

**Campus address:** Burdine Hall (BUR) 536, phone (512) 471-1122, fax (512) 471-1748; campus mail code: A1700

**Mailing address:** The University of Texas at Austin, Graduate Program, Department of Sociology, 1 University Station A1700, Austin TX 78712

**E-mail:** gradsoc@austin.utexas.edu

**URL:** http://www.utexas.edu/cola/depts/sociology/

---

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**SOCIOLGY: SOC**

**180, 280, 380. Conference Course.** Sociological topics not otherwise offered at the graduate level. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit, but no more than six semester hours may be counted toward the Master of Arts and no more than twelve semester hours may be counted toward the doctoral degree. May not be substituted for required courses in statistics, methods, or theory, nor may more than one of the three other area requirements be fulfilled by Sociology 380. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

**383K. Seminars in Social Psychology.** Substantive issues and current topics in social psychology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**384J. Special Topics in Social Statistics.** Three lecture hours a week for one semester; additional laboratory hours may be required for some topics. May be repeated for credit when the topics vary. Not all topics are offered every year. May be counted toward the statistics and methods requirement. Prerequisite: Graduate standing, and Sociology 384L and 385L with a grade of at least B- in each.

**384M. Seminar in Data Analysis.** Quantitative sociological research integrating the use of statistical analysis with computer applications and survey data. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be counted toward the statistics and methods requirement. Required of all graduate students during their first semester of study. Prerequisite: Graduate standing.

**Topic 1: History and Theories of Social Psychology.** May be counted toward elective requirements.

**384L. Social Statistics: Basic Concepts and Methods.** Review of descriptive statistics; probability concepts; statistical inference, bivariate correlation and regression, multiple regression, dummy variables, analysis of variance, analysis of covariance; applications of statistical computing packages to social science data. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be counted toward the statistics and methods requirement. Required of all graduate students during their first semester of study. Prerequisite: Graduate standing.

**384M. Seminar in Data Analysis.** Quantitative sociological research integrating the use of statistical analysis with computer applications and survey data. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be counted toward the statistics and methods requirement. Required of all graduate students during their first semester of study. Prerequisite: Graduate standing, and Sociology 384L or the equivalent.

**Topic 1: Evaluation of Social Policy.** May be counted toward the statistics and methods requirement.
385K. Social Statistics: Discrete Multivariate Models. Assumptions, estimation, testing, and parameter interpretation for models using categorical data; applications of statistical computing packages and programs to social science data. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Prerequisite: Graduate standing, and Sociology 384L or the equivalent.

385L. Social Statistics: Linear Models and Structural Equation Systems. Model specification; review of simple regression; multiple regression in matrix form; ordinary and generalized least squares; recursive and nonrecursive structural equation models; measurement error and unobserved variables. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be counted toward the statistics and methods requirement. Prerequisite: Graduate standing, and Sociology 384L or the equivalent.

386L. Social Statistics: Dynamic Models and Longitudinal Data Analysis. Applications of dynamic models to data collected at successive points in time. Dynamic structural equation models; statistical time-series analysis; stochastic processes, panel, and event-history analysis. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Prerequisite: Graduate standing, and Sociology 384L or the equivalent.

387C. Special Topics in Social Research Methods. Three lecture hours a week for one semester; additional laboratory hours may be required for some topics. May be repeated for credit when the topics vary. Not all topics are offered every year. May be counted toward the statistics and methods requirement. Prerequisite: Graduate standing and Sociology 387L.

387J. Fundamentals of Research Methods. Fundamental assumptions and procedures for conducting sociological research, including the logic of science, the links between theory and methods, measurement, experiments, sampling, surveys, qualitative methods, and ethics. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Required of all graduate students during their first semester of study. Prerequisite: Graduate standing.

387L. Qualitative Methods for the Social Sciences. Qualitative survey research methods, approaches, and designs, including participant observational techniques, semi-structured interviewing, and formal questionnaire and census-type surveys. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Sociology 387L and 387T may not both be counted. Prerequisite: Graduate standing, and Sociology 384L or the equivalent.

387T. Constructing the Texas Survey. Restricted to students in the Texas Survey Project. Principles of sampling, questionnaire design, and survey implementation. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Sociology 387L and 387T may not both be counted. Prerequisite: Graduate standing and consent of instructor.

388K. Field and Observational Methods. Rationale and logic for field research; participant and nonparticipant observation; informant and conversational interviewing; personal documents, records, and physical traces; life histories; sources of error and bias; personal and ethical dilemmas; modes of analysis. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Prerequisite: Graduate standing.

388L. Historical and Comparative Methods. Scope and methods of historical and comparative sociology; application of historical sources to answer sociological questions; logic of comparative analysis in theory construction. Three lecture hours a week for one semester. May be counted toward either the statistics and methods requirement or the political sociology specialization. Prerequisite: Graduate standing.

388M. Integrating Qualitative and Quantitative Methods. New approaches in the use of qualitative methodologies, including focus groups and ethnography, that complement traditional quantitative methodologies in the study of social phenomena. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Prerequisite: Graduate standing, and Sociology 384L or the equivalent.

388T. Analysis of the Texas Survey. Restricted to students in the Texas Survey Project. Data cleaning, analysis, and reporting, including final projects based on survey data. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Prerequisite: Graduate standing, consent of instructor, and Sociology 387L or 387T.

389K. Seminars in Demography. Substantive issues and current topics in population studies and social demography. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: General Approaches to the Study of Population. May be counted toward the demography specialization. Required for all students specializing in demography.

Topic 2: Human Fertility. May be counted toward either the demography specialization or the health specialization.

Topic 3: Human Mortality. May be counted toward either the demography specialization or the health specialization.

Topic 4: International Migration. Same as Latin American Studies 381 (Topic 1: International Migration). May be counted toward either the demography specialization or the race and ethnicity specialization.

Topic 6: Training Seminar in Demography. Offered on the credit/no credit basis only. May be counted toward the demography specialization. Required for all students specializing in demography.

Topic 9: Immigration Policy. May be counted toward either the demography specialization or the race and ethnicity specialization.
Topic 11: Family and Household Demography. Trends in family behavior, theories about family change, and analytical techniques for studying families and households. May be counted toward either the demography specialization or the family specialization. Sociology 389K (Topic 11) and Women's and Gender Studies 393 (Topic: Family and Household Demography) may not both be counted.

Topic 12: Demography of Health and the Life Course. An in-depth introduction to the major conceptual frameworks and empirical research that examine distal and proximate social factors influencing adult health. The underlying question is, “Does the body forget experiences and exposures from adverse as well as advantageous social conditions over the life course?” To deal with the question, close attention is paid to the intersection between the etiology of adult health conditions and the major life-course trajectories of socioeconomic position and family. Of major importance is the assessment of key social and biological pathways linking social conditions at particular points in the life course with adult health outcomes. May be counted toward either the demography specialization or the health specialization.

Topic 13: Event History Analysis. Substantive issues and current topics in population studies and social demography. May be counted toward the demography specialization. Sociology 389K (Topic 13) and Statistics and Scientific Computation 385 (Topic: Event History Analysis) may not both be counted.

190K, 290K, 390K, 690K, 990K. Proposal Preparation. Preparation of proposal for the doctoral dissertation. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, completion of all coursework, and consent of instructor.

391L. Basic Demographic Methods and Materials. Population composition, change, and distribution; methods of standardizing and decomposing rates; life tables and population models; analysis of data from advanced and developing countries; applications of computer programs for demographic analysis. Three lecture hours a week for one semester. May be counted toward the statistics and methods requirement. Required of all students specializing in demography. Prerequisite: Graduate standing, and Sociology 384L or the equivalent.

394K. Seminars in Sociological Theory. Development of social thought; the emergence of systematic sociological theory; interrelations with other social sciences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Graduate students in sociology must take Topics 2 and 3. Prerequisite: Graduate standing.

Topic 2: Contemporary Sociological Theory. May be counted toward the theory requirement. Required of all graduate students during their second semester of study.

Topic 3: Classical Sociological Theory. A review of classic works in sociological theory, focusing on the work of nineteenth-century and early twentieth-century theorists. Critically examines the historical and theoretical context of sociology’s founding ideas. Explores the promises and problems of the relationship between sociological theory and the modern era. May be counted toward the theory requirement. Required of all graduate students during their first semester of study.

Topic 12: Sociology of Culture. An overview of some of the major contemporary research in the sociology of culture. Includes discussion of meaning systems and their transformations; symbolic nature of consumption; relationship between culture and social stratification; cultural bases of power; culture industry; and sociology of the arts. May be counted toward the theory requirement.

Topic 13: Cultural Studies. Examines the history, debates, and key developments within the trans-disciplinary field of cultural studies. Considers the significance of the intellectual work produced in Britain from the 1940s to the present and the relationship today between the sociology of culture and cultural sociology. May be counted toward the theory requirement.

Topic 14: Theories of Power. Examines the social theory controversy over the definition of the terms power and domination. Considers the classical and contemporary theoretical understandings of power and domination and studies the diverse ways in which these concepts have been deployed in empirical research. May be counted toward either the theory requirement or the political sociology specialization.

395D. Seminars in Development and Globalization. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Not all topics are offered every year. Prerequisite: Graduate standing.

Topic 1: Economic Development and Social Change. May be counted toward the development and political sociology specializations.


Topic 3: The Mexican Political System in Transition. May be counted toward the development and political sociology specializations.

Topic 4: Housing Practices and Public Policy in Latin America. Same as Latin American Studies 381 (Topic 6: Housing Practices and Public Policy in Latin America). May be counted toward either the development specialization or the work, occupations, and organizations specialization.

Topic 7: Citizenship and Social Policy. May be counted toward the development and political sociology specializations.

Topic 5: Economic Sociology. May be counted toward the development specialization.
**395E. Seminars in Education.** In-depth theoretical and policy discussions designed to give students intensive exposure to specific issues in education. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**Topic 1: Sociology of Education.** Provides an overview of the field of sociology of education. Examines the ways in which schools reproduce, reinforce, and challenge the prevailing social, economic, and political relationships in society. Includes discussions of why people go to schools, who has access, and the effects of schools on individuals, communities, and society. May be counted toward either the education specialization or the work, occupations, and organizations specialization. Sociology 395L (Topic: Sociology of Education) and 395D (Topic 9) may not both be counted.

**Topic 2: Poverty, Race, and Schools.** Focuses on children's academic outcomes within the contexts of poverty, race, and schools in K–12 education. Includes an assessment of a number of student groups in an effort to understand why some children have higher quality schooling experiences than others. Considers the roles of teachers and parents in affecting children's academic outcomes, with primary emphasis placed on their importance in elementary and middle school. May be counted toward either the education specialization or the race and ethnicity specialization. Sociology 395L (Topic: Poverty, Race, and Schools) and 395E (Topic 2) may not both be counted.

**Topic 3: High School and Transition to Adulthood.** Focuses on how education is related to adolescents' transition to adulthood in modern society. Examines the structure of schooling and the life course stages of adolescence and early adulthood, societal stratification, and intergenerational mobility. May be counted toward either the education specialization or the family specialization. Sociology 395E (Topic 3) and 395L (Topic: High School and Transition to Adulthood) may not both be counted.

**Topic 4: International Issues in Education.** Introduction to key theoretical and empirical work on education and social stratification from an international perspective. Focuses on studies of school access, educational attainment and achievement, and inequality of educational opportunity in Africa, Asia, and Latin America. Includes discussion of comparative and case study readings that explore specific themes such as education and social mobility, gender, race and ethnicity, and school contexts. May be counted toward the education specialization.

**Topic 5: Social Contexts of Education.** Explores school as a social context by delving into the informal processes of education, such as socialization and the organization of social relations. Includes discussion of the school as a site of social relations, social psychological influences on educational trajectories, and the social psychological consequences of educational experiences. May be counted toward the education specialization. Sociology 395L (Topic: Social Context of Education) and 395E (Topic 5) may not both be counted.

**395F. Seminars in Family.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Not all topics are offered every year. Prerequisite: Graduate standing.

**Topic 2: Marriage, Family, and Kinship.** May be counted toward the family specialization.

**Topic 3: Family and Health.** May be counted toward the family and health specializations.

**Topic 7: Aging and the Life Course.** Concepts and controversies about aging and the adult life course in the United States. Includes discussion of the biology of aging as it relates to current social issues and trends, population aging and related demographic trends, the economics and politics of aging, the trajectories and transitions of the adult life course, healthy aging, age as a social status, health care rights and responsibilities, retirement as a social institution, generational equity, and the conditions and choices at the end of life. May be counted toward the family specialization.

**Topic 8: Gender, Marital Status, and Well-Being.** Examines gender and relationships from social psychological perspectives. Considers how and why intimate relationships differ for men and women as well as the gendered consequences of relationships for mental and physical health. May be counted toward the family specialization. Sociology 395F (Topic 8) and 395G (Topic: Gender, Marital Status, and Well-Being) may not both be counted.

**395G. Seminars in Gender.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Not all topics are offered every year. Prerequisite: Graduate standing.
Topic 3: Gender and Family. Review of basic theoretical perspectives and empirical evidence concerning gender and family relationships. Considers how and why family relationships differ for men and women as well as the gendered consequences of relationships for men’s and women’s well-being. Includes discussion of marital status, marital transitions, marital quality, same sex intimate relationships, cohabiting relationships, and parent/child relationships. May be counted toward either the gender specialization or the family specialization.

Topic 4: Gender and Health. May be counted toward the gender and health specializations.

Topic 5: Gender and Development. May be counted toward the gender and development specializations.

Topic 6: Gender and Work. Examines theoretical and empirical issues regarding gender inequality in the labor market. Includes discussion of changes in female labor force participation, gender segregation in the workplace, gender gaps in earnings and promotions, as well as gender differences in career processes. May be counted toward either the gender specialization or the work, occupations, and organizations specialization.

Topic 7: Feminist Theory. Examines social categories such as the state, citizenship, nationalism, and globalization from a feminist perspective. May be counted toward either the gender specialization or the theory specialization. Sociology 394K (Topic: Feminist Theory) and 395G (Topic 7) may not both be counted.

Topic 8: Readings in Gender and Sexuality. Presents an overview of sociological theories of sexuality and provides a forum for discussion of recently published works in the sociology of gender and sexuality. May be counted toward the gender specialization.

Topic 9: Gender and Society. Examines the social construction of gender inequality, paying special attention to how divisions by race, class, and sexuality contribute to and occasionally undercut men’s power and privilege over women. Emphasis is also placed on moments of resistance and change in gender arrangements. May be counted toward the gender specialization.

Topic 10: Sociology of Sexual Violence. Examines the different social forces and dynamics responsible for a variety of expressions of sexual violence existing in contemporary society. Designed to examine these processes promoting social violence from feminist-informed sociological perspectives; explore and analyze the historical, economic, and socio-cultural contexts responsible for these processes; study the issues and concerns with regard (but not limited) to gender, race and ethnicity, class, sexuality, and political activism associated with sexual violence research in the social sciences; and discuss and critique published sexual violence research based on qualitative methodologies across disciplines. May be counted toward the gender specialization.

Topic 11: Qualitative Methods and Sexuality Research. Examines major qualitative approaches to the study of sexuality from a sociological perspective; issues and concerns with regard to gender, race and ethnicity, class, same-gender sexualities, and activism associated with sexuality research in the social sciences; and published sexuality research based on qualitative methodologies. May be counted toward either the gender specialization or the statistics and methods requirement.

Topic 12: Education, Socioeconomic Status, and Health. Examines why people with higher socioeconomic status have better health than lower status individuals. Explores the links between aspects of social status and health and how education influences health in ways that are varied, present at all stages of adult life, cumulative, self-amplifying, and uniformly positive. May be counted toward the health specialization.

Topic 13: Gender, Health, and Society. Focuses on the gender dimensions of health, illness, and the medical care industry in the United States, with some international comparisons. Examines the role of women as major actors in changing the health-care system, reducing health risks for themselves and their families, and their roles as health-care providers, public administrators, and leaders in the health-care estab-
lishment. Also examines the role of different levels and branches of government and the relative power of key nongovernmental actors and the media in the formation of public policy and the definition and framing of our health agenda. May be counted toward either the health specialization or the gender specialization.

395L. Seminars in Race and Ethnicity. Sociological theories and findings concerning various aspects of race and ethnicity. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Comparative Perspectives in Race and Ethnicity. May be counted toward the race and ethnicity specialization.

Topic 8: Race, Media, and Culture. May be counted toward the race and ethnicity specialization.

Topic 9: Race and the Body. Explores theories and research methodologies in the sociological study of the body, with a focus on race, racism, gender, and sexualities. May be counted toward either the race and ethnicity specialization or the theory specialization.

Topic 10: Critical Theories on Race and Racism. Introduces to global perspectives on race, ethnicity, and racism. Examines the historical relationship between the emergence of ideas about race and Western modernity: importance of slavery and European colonialism in producing modern understandings of race and racial difference; contemporary racial formation in the period after the anticolonial struggles of the mid-twentieth century. May be counted toward the race and ethnicity specialization or the theory specialization. Sociology 394K (Topic: Critical Theories on Race and Racism) and 395L (Topic 10) may not both be counted.

396L. Seminars in Work, Occupations, and Organizations. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only. Prerequisite: Graduate standing.

Topic 10: Stratification and Social Mobility. May be counted toward the work, occupations, and organizations specialization.

Topic 15: Nongovernmental Organizations in the Developing World. Explores how nongovernmental organizations reflect local and international initiatives related to human rights, the environment, sustainable development, health, education, and much more. May be counted toward the work, occupations, and organizations specialization.

Topic 16: Sociology of Poverty in the United States. Review of selected sociological literature on poverty and related aspects of inequality, mostly in the United States but with some comparisons made with other developed nations. Both quantitative and qualitative research on American poverty are considered. May be counted toward the work, occupations, and organizations specialization.

Topic 17: Entrepreneurship and Incubation. May be counted toward the work, occupations, and organizations specialization.

396N. Seminars in Crime, Law, and Deviance. Substantive issues and current topics in the study of crime, law, and deviance. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Criminology. Examines major topics in the social scientific study of crime, including the measurement of crime, profiles of criminals, criminal behavior across the life course, and public perceptions of and reactions to crime. May be counted toward the crime, law, and deviance specialization.

Topic 2: Theories of Crime Causation. Focuses on the major theories of criminal behavior and whether and in what ways empirical data support or refute various theoretical perspectives. May be counted toward the crime, law, and deviance specialization.

Topic 3: Criminal Justice. Designed to provide an overview of research on how the penal system works in practice by examining the empirical literature on sentencing, prisons, recidivism, and evaluation research on penal programs. May be counted toward the crime, law, and deviance specialization.

Topic 4: Introduction to Law and Society. Focuses on the noncrime aspects of the legal system, especially civil justice; the pursuit of perceived legal entitlements and grievances; studies of legal professionals and legal decision makers; and the use of the legal system to advance social change. May be counted toward the crime, law, and deviance specialization.

Topic 5: Law, Legitimacy, and Control. Explores the interconnections between law, morality, and the sense of injustice. Examines the attributes of a moral system as they influence the collective assessment of legitimacy, the emergence of social movements for reform, and the resulting efficacy of law as an instrument of control. May be counted toward either the crime, law, and deviance specialization or the political sociology specialization.

Topic 6: Deviance. Examines the characteristics, causes of, and societal reactions to several types of deviant behavior. May be counted toward the crime, law, and deviance specialization. Sociology 396M (Topic 6: Deviance) and 396N (Topic 6) may not both be counted.

396P. Seminars in Political Sociology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Not all topics are offered every year. Prerequisite: Graduate standing.

Topic 1: Political Sociology. May be counted toward the political sociology specialization.

Topic 2: Social Movements. May be counted toward the political sociology specialization.

Topic 3: Social Change. May be counted toward the political sociology specialization.
Topic 6: Elites. Same as Government 390L (Topic 10: Elites). May be counted toward the political sociology specialization.

Topic 7: Peace, Conflict, and Violence. May be counted toward the political sociology specialization.

Topic 8: Cultural Sociology. May be counted toward the political sociology and religion specializations.

Topic 12: Gender and Politics. Provides a comprehensive introduction to the history of women’s entry into politics internationally, the current state of women’s political representation across countries and regions, and contemporary debates on why and how women’s access to political power varies across countries. May include discussion of the ways in which gender intersects with other social identities, such as race, ethnicity, class, and sexual orientation. May be counted toward either the political sociology specialization or the gender specialization.

396Q. Seminars in Law and Human Rights. Theory and research on those instances in which legal regimes and/or legal institutions, such as prisons, raise human rights issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

396R. Seminars in Religion. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Not all topics are offered every year. Prerequisite: Graduate standing.

Topic 2: Religion and Global Change. Examines the global spread of Catholicism, Protestantism, Hinduism, Buddhism, and Islam. Explores why these traditions were adopted in some places but not others; the processes of transformation that occur as these religions adapted to new economic and cultural situations; and how these religious traditions have shaped the societies where they have been adopted. May be counted toward the religion specialization.

Topic 3: Sociology of Judaism. Maps selected features of Jews’ long historical experience onto social theory. Includes the micro-sociology of Jewish knowledge and of the Jewish mind; the structural roots of Jewish cultural expression, including revolutionary and other non-normative behavior; the politics of identity and the recent resurgence of Jewish physical expression; Jewish religious economies and survival; perception of Jews and Jews’ self-perception; Jewish social structures; reform, false messiahs, and the creation and fragmentation of rabbinical authority. May be counted toward the religion specialization.

397D. Publishing Papers in Sociology. Three lecture hours a week for one semester. May be counted toward elective requirements. Prerequisite: Graduate standing.

397P. Proseminar. A review of the requirements and responsibilities of professional sociologists. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in sociology.

397R. Special Topics in Professionalization. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in sociology, twelve semester hours of graduate coursework in sociology, and consent of the graduate adviser; for 698B, Sociology 698A.

398T. Supervised Teaching in Sociology. Teaching under the close supervision of the course instructor for two semesters; weekly group meetings with the instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Sociology 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

The Perry-Castañeda Library contains extensive holdings related to the history, languages, and cultures of Spain, Portugal, and Latin America. Students also have access to an array of electronic databases, journals, and books related to these areas through the University Libraries Web site, http://www.lib.utexas.edu/. In addition, the Benson Latin American Collection is the world’s foremost university research collection for Latin American studies, with more than eight hundred thousand volumes as well as extensive collections of manuscripts, maps, photographs, and broadsides.

The several language and computer laboratories furnish excellent opportunities for technical and professional preparation for teaching and research in Romance languages and linguistics. A large collection of tape recordings of dialect materials is also available.

AREAS OF STUDY

Graduate work in Spanish is offered in Hispanic literature and Hispanic linguistics. The graduate program in Portuguese is focused on Luso-Brazilian literature.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

SPANISH AND PORTUGUESE

Master of Arts

Doctor of Philosophy

ADMISSION AND DEGREE REQUIREMENTS

MASTER OF ARTS

The entering student must hold a bachelor’s degree with a major in Spanish or Portuguese or must demonstrate equivalent knowledge. A student admitted without this background must acquire it by supplemental reading and coursework before undertaking a regular degree program.

Students seeking the Master of Arts with a concentration in Hispanic literature or Luso-Brazilian literature must earn thirty semester hours of credit in ten organized courses and must pass a comprehensive examination. Those with a concentration in Hispanic linguistics must earn thirty semester hours of credit, including eight organized courses (twenty-four semester hours) and a report (three semester hours) plus electives.

All students must demonstrate proficiency in a second language. The second language may be either (1) Spanish (for Portuguese majors) or Portuguese (for Spanish majors); or (2) a language other than English, Spanish, or Portuguese that is relevant to the student’s field and is approved by the graduate adviser. Students who choose Spanish or Portuguese as the second language must demonstrate proficiency equivalent to that shown by completion of Spanish 508K and 612 or Portuguese 508 and 516 with a grade of at least B in each course. Those who choose a language other than English, Spanish, or Portuguese must demonstrate reading knowledge of the language by earning a grade of at least B in a reading course approved by the graduate adviser, in a fourth-semester college course, or on an examination specified by the graduate adviser.

Upon completion of required coursework, a student in the Hispanic literature or Luso-Brazilian literature concentration must pass a written comprehensive examination. Lists of fundamental works are provided by the graduate adviser to help the student prepare. In place of the comprehensive exam, Hispanic linguistics students write a series of papers directed toward the completion of the thesis or report.
**Concentration in Hispanic literature.** In this program, the student must take at least nine semester hours of Spanish literature and nine semester hours of Spanish American literature. At least three hours must be taken in each of the following periods: (1) beginnings through fifteenth century; (2) sixteenth and seventeenth centuries; (3) eighteenth and nineteenth centuries; and (4) twentieth century. A civilization course covering the same period may replace one of the four literature courses. The student must also take one graduate linguistics course from the Department of Spanish and Portuguese.

**Concentration in Luso-Brazilian literature.** The Master of Arts degree program in Portuguese consists of courses in literature, language, and civilization prescribed by the Portuguese faculty in consultation with the graduate adviser. The courses in civilization may be taken in the Department of Spanish and Portuguese or in another department but must have Luso-Brazilian content.

**Concentration in Hispanic linguistics.** The student must take three introductory courses and three Spanish courses in the student’s area of specialization within Hispanic linguistics. In addition, the student takes three courses in another area of linguistic study, including one course in research design; if appropriate coursework is unavailable in the Department of Spanish and Portuguese, then courses taught by the Department of Linguistics are preferred. Students are encouraged to take one or two graduate courses in literature as electives if such courses are related to the program of research. Finally, students complete the report course, Spanish 398R. At least half of the graduate courses required in the program of study must be taken in the Department of Spanish and Portuguese. Courses taken outside of the department must be approved by the graduate adviser.

**DOCTOR OF PHILOSOPHY**

Although the PhD is not awarded on the basis of a specific number of courses or hours of credit, twelve courses (thirty-six hours) beyond the master’s degree are usually recommended. Depending on the student’s academic background, the supervising committee, the graduate adviser, or the Graduate Studies Committee may require additional coursework. Nine of the thirty-six semester hours must be in one or more related fields outside the Department of Spanish and Portuguese, such as other foreign languages, English, history, linguistics, and philosophy.

Upon completion of the course requirements described below, students in Hispanic literature and Luso-Brazilian literature must pass written and oral comprehensive examinations based on four fields of concentration to be admitted to candidacy for the degree. The student chooses the fields for in-depth study in consultation with the graduate adviser and with the approval of the Graduate Studies Committee. Students in the Hispanic linguistics concentration must complete one paper of publishable quality and a series of short papers and a defense of the dissertation proposal. More information is available at the department Web site and from the graduate adviser.

Before admission to candidacy, students in Hispanic and Luso-Brazilian literature must have advanced proficiency in a second Romance language, usually Portuguese or Spanish. In addition, students in all departmental doctoral programs must have a reading knowledge of a language other than English, Spanish, or Portuguese, chosen in consultation with the graduate adviser on the basis of the student’s needs. The student may not use his or her native language to fulfill any language requirement.

**Concentration in Hispanic literature.** The student must take (1) two courses in early Hispanic literature (medieval, Renaissance, golden age, colonial); (2) one course in eighteenth-, nineteenth-, or twentieth-century Spanish (Peninsular) literature; (3) one course in nineteenth- or twentieth-century Spanish American literature; (4) two linguistics courses in the Department of Spanish and Portuguese; and (5) three courses in supporting work chosen in consultation with the graduate adviser.

**Concentration in Luso-Brazilian literature.** The student must take (1) one course in early Portuguese literature (medieval through baroque) or colonial Brazilian literature; (2) one or two courses in nineteenth-century Portuguese/Brazilian literature; (3) one or two courses in twentieth-century Portuguese/Brazilian literature and culture; (4) two courses in linguistics; and (5) two courses in supporting work chosen in consultation with the graduate adviser.

**Concentration in Hispanic linguistics.** The student must complete at least twelve courses beyond the master’s degree; depending on the student’s academic background, more coursework may be required. The twelve courses must include the following:
Five nonintroductory courses in the area of specialization within Hispanic linguistics, either in the Department of Spanish and Portuguese or outside the department.

Three nonintroductory courses in other areas relevant to the specialization within Hispanic linguistics, either in the Department of Spanish and Portuguese or outside the department. Instead of these three courses, students who did not complete the master’s in Hispanic linguistics at the University of Texas at Austin must take three introductory-level courses in the Department of Spanish and Portuguese when such courses are offered (or in other departments when necessary).

Four elective courses either in or outside the department, including one graduate course in research. A statistics course is required for students in all experimental fields; students in other fields may complete an appropriate topic or conference course.

Students are encouraged to take one or two graduate courses in literature as electives if such courses are related to the program of research. At least half of the graduate courses required in the program of study must be taken in the Department of Spanish and Portuguese. Courses taken outside the department must be approved by the graduate adviser. A more detailed description of the program is available from the graduate adviser and on the department Web page.

FOR MORE INFORMATION

Campus address: Benedict Hall (BEN) 2.116, phone (512) 471-4936, fax (512) 471-8073; campus mail code: B3700

Mailing address: The University of Texas at Austin, Graduate Program, Department of Spanish and Portuguese, 1 University Station B3700, Austin TX 78712

URL: http://www.utexas.edu/cola/depts/spanish/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

PORTUGUESE: POR

380. Studies in Luso-Brazilian Civilization and Culture. Topics in the social, political, and cultural ideas of Portugal and Brazil. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, six semester hours of upper-division coursework in Portuguese, and consent of the graduate adviser.

381. Studies in Brazilian Literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, six semester hours of upper-division coursework in Portuguese, and consent of the graduate adviser.

382. Studies in Portuguese Literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and six semester hours of upper-division coursework in Portuguese.

284P, 384P. Examination Preparation. Preparation for the master’s comprehensive and doctoral qualifying examination. Designed to be taken in the same semester in which the student takes the examination. Individual instruction. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

285L, 385L. Conference Course in Luso-Brazilian Literatures and Linguistics. For students with special interests not met by other courses offered in any one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent of the graduate adviser.

393. Topics in Luso-Brazilian Literatures and Linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

395L. Comprehensive Examination Preparation. Supervised preparation for the Comprehensive Examination for the doctoral degree. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and completion of all course requirements for the doctoral degree.

396K. Comparative Romance Linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in languages and consent of instructor and the graduate adviser.

Topic 1: Comparative Studies in the Literatures of Brazil and Spanish America. Same as Spanish 380K (Topic 1: Comparative Studies in the Literatures of Brazil and Spanish America).
Topic 2: Introduction to Romance Linguistics. Same as Italian 396K (Topic 1: Introduction to Romance Linguistics), Linguistics 383 (Topic 3: Introduction to Romance Linguistics), and Spanish 396K (Topic 2: Introduction to Romance Linguistics).

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Portuguese and consent of the graduate adviser; for 698B, Portuguese 698A.

398R. Master's Report. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Portuguese and consent of the graduate adviser.

398T. Supervised Teaching in Portuguese. Same as Spanish 398T. Fundamentals of foreign language teaching methodology, with particular reference to the teaching of Portuguese. Presentation of theoretical concepts on which classroom practice is based, in conjunction with classroom practice under close supervision of the course instructor, individual consultations, reading assignments, and reports. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Required for teaching assistants during the first semester that they teach. Prerequisite: Graduate standing, appointment as a teaching assistant, and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the graduate adviser.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Portuguese 399R, 699R, or 999R, and consent of the graduate adviser.

SPANISH: SPN

380K. Studies in Spanish American Literature. Topics include Modernismo; the short story; contemporary trends of the Spanish American novel; the literary prose of Sarmiento; gaucho literature; Rubén Darío; contemporary Argentine fiction. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.

Topic 1: Comparative Studies in the Literatures of Brazil and Spanish America. Same as Portuguese 381 (Topic 1: Comparative Studies in the Literatures of Brazil and Spanish America).

380M. Studies in the History of Ideas in Spain and Latin America. Intensive study of cultural and ideological currents, especially as they are reflected in the works of essayists and other writers. Topics include Spain and European culture; European thought in Latin America; the Renaissance in Spanish literature and social life; Spain and the Western tradition; Spain between Islam and Christianity; the search for national identity in Mexico; three intellectual generations in Argentina; Hispanic-Arabic culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.

381M. Studies in Criticism and Literary Genres. Examination of the development of certain genres or critical ideas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.

182M. Proseminar: Methods and Procedures of Graduate Degree Preparation. Basic procedural information about preparation for comprehensive and qualifying examinations. Discussion of methods of preparation and the nature of departmental expectations. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

383M. Methods of Study in Spanish Linguistics. Examination of various methods of linguistic analysis in Spanish, such as Spanish syntax, discourse analysis, sociolinguistics, or applied linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in Spanish or in linguistics, six semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.

383N. Studies in Spanish Linguistics. Advanced topics in specialized aspects of Spanish linguistics, such as Spanish historical linguistics, Hispanic phonology, Spanish morpho-syntax, Spanish semantics, Spanish-English contrastive analysis, Spanish dialectology, the Spanish of the Americas, and Spanish language acquisition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.

284P, 384P. Examination Preparation. Individual preparation for the master's comprehensive and doctoral qualifying examination. Designed to be taken in the same semester in which the student takes the examination. Individual instruction. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

285L, 385L. Conference Course in Hispanic Literatures and Linguistics. For students needing specialized courses not normally or not often included in the regular course offerings. May be repeated for credit. Prerequisite: Graduate standing and written consent of the graduate adviser.

385M. Studies in Spanish Literature since 1700. Intensive examination of a period or a major writer. Topics include eighteenth-century essayists, Galdós, la generación del ‘98, Miguel de Unamuno, romanticism, Pardo Bazán and Clarín, the theatre of García Lorca, contemporary Spanish poetry. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.
386. Old Spanish Language. Three lecture hours a week for one semester. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.

387. Old Spanish Literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.

391. Studies in Renaissance and Golden Age Literature of Spain. Topics include Don Quijote, Gongorism, La Celestina, the picaresque novel, Lope de Vega, and new literary forms of the Golden Age. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in Spanish, and consent of the graduate adviser.

393T. Topics in Hispanic Literatures and Linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

295L, 395L. Comprehensive Examination Preparation. Supervised preparation for the comprehensive examination for the doctoral degree. Offered on the credit/no credit basis only. Prerequisite: Satisfactory completion of all course requirements for the doctoral degree.

396K. Comparative Romance Linguistics. General survey of the development of spoken Latin in Italy, Spain, Portugal, and France; main traits of phonology, morphology, and syntax of each modern derivative language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in languages and consent of instructor and the graduate adviser.

Topic 1: Comparative Romance Linguistics. Same as Portuguese 396K (Topic 1: Comparative Romance Linguistics).


698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in Spanish and consent of the graduate adviser; for 698B, Spanish 698A and consent of the graduate adviser.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in Spanish and consent of the graduate adviser.

398T. Supervised Teaching in Spanish. Same as Portuguese 398T. Required for teaching assistants during the first semester that they teach. Fundamentals of foreign language teaching methodology, with particular reference to the teaching of Spanish. Presentation of theoretical concepts on which classroom practice is based, in conjunction with teaching under close supervision of the course instructor, individual consultations, reading assignments, and reports. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, appointment as a teaching assistant, and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the graduate adviser.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Spanish 399R, 699R, or 999R, and consent of the graduate adviser.

WOMEN’S AND GENDER STUDIES

Master of Arts

FACILITIES FOR GRADUATE WORK

The Center for Women’s and Gender Studies, which administers the master’s degree program in women’s and gender studies, is a campus-wide interdisciplinary program with almost three hundred affiliated faculty members from almost all colleges and schools. The center hosts a major lecture series or scholarly conference each year and its annual Emerging Scholarship in Women’s and Gender Studies Conference in which graduate and undergraduate students present their work.

The University offers several unique resources for interdisciplinary and cross-cultural research in women’s and gender studies. The Harry Ransom Humanities Research Center includes celebrated rare book and manuscript collections in American and modern literature; the Gernsheim Collection, one of the world’s largest archives of photographs, negatives, and books related to the history of photography; the...
Performing Arts Collection, with materials related to the theatre, movies, vaudeville, the circus, and the history of magic; and the New York Journal-American photographic archive. The Nettie Lee Benson Latin American Collection is one of the world’s great archives of materials about and from Latin America, and the Dolph Briscoe Center for American History contains the early archives of Texas, the largest collection now extant of historical manuscripts dealing with Texas, and an extensive collection of rare and scarce books, pamphlets, and broadsides related to Texas and Southwestern history. The University’s rich archival collections include manuscripts of the Austin Women’s Suffrage Association; the Ima Hogg Papers; the Natchez Trace American Collection is one of the world’s great archives of manuscripts, oral history collections, including the Voices of American Homemakers Collection and Today’s Pioneer Women Oral Histories; and numerous collections of manuscripts and materials related to important women writers, artists, and activists. The University Libraries also houses microfilm sets of such notables as Eleanor Roosevelt, Margaret Sanger, and Elizabeth Cady Stanton. Additional information about women’s studies holdings can be found at http://www.lib.utexas.edu/subject/gender/.

Convenient to the University are other research facilities, including the Lyndon Baines Johnson Library and Museum, the Texas State Library and Archives, the United Daughters of the Confederacy Library, the Catholic Archives of Texas, the Archives of the Episcopal Church, and the Republic of Texas Museum.

AREAS OF STUDY

Women’s and gender studies comprises research or creative work that raises new questions, formulates theories, or carries out empirical investigations that further understanding of science, social science, history, the humanities and arts, education, public and social policy, and paradigms of knowledge in applied and professional fields in such a way that women and gender systems are brought to the center of scholarship. Students pursue disciplinary and interdisciplinary research or creative work that prepares them for research or professional careers in which knowledge about women and gender is crucial. The master’s degree in women’s and gender studies is excellent preparation for further training in public policy, social work, health care, education, the arts, technology, and business. It also prepares graduates to pursue doctoral work in a traditional discipline or in women’s and gender studies at another institution.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Jemel P. Aguilar
Kamran Ali
Jacqueline L. Angel
Katherine M. Arens
Marilyn Armour
Germaine H. Awas
Hina Azam
Phillip J. Barrish
Kirsten L. Belgium
Rebecca Bigler
Daniel A. Bonevac
Pascale R. Bos
Keffrelyn D. Brown
Simone A. Browne
Cynthia Buckley
Noel B. Busch
Charlotte Canning
Ben Carrington
Mia E. Carter
Shannon E. Cavanagh
Ruramisai Charumbira
Dana L. Cloud
Judith G. Coffin
David J. Crew
Elizabeth Cullingford
Anne Cvetkovich
Janet M. Davis
Mercedes L. De Uriarte
Andrew F. Dell’Antonio
Marlene A. Dixon
Hector Domínguez-Ruvalcaba
Philip Doty
Carolyn Eastman
Elizabeth Engelhardt
Jennifer Fuller
Laura J. Furman
Dorie J. Gilbert
Tiffany M. Gill
Gloria Gonzalez-Lopez
Darlene Grant
Benjamin G. Gregg
Daniel S. Hamermesh
Barbara J. Harlow
Tracie C. Harrison
Mark D. Hayward
Elizabeth A. Hedrick
Kurt O. Heinzelman
Susan S. Heinzelman
Geraldine Heng
Kathleen M. Higgins
Neville Hoad
Carole K. Holahan
Juliet A. Hooker
Thomas K. Hubbard
Aletha C. Huston
Ted L. Huston
Eun-Ok Im

Robert W. Jensen
Jacqueline Jones
Mary C. Kearney
Su Yeong Kim
Sara E. Kimball
Nhi T. Lieu
Carol H. MacKay
Michael S. Mackert
Jill A. Marshall
Julia L. Mckenberg
Gail Minault
Lisa L. Moore
Fehintola A. Mosadomi
Gretchen Murphy
Joan H. Neuberger
Mary C. Neuberger
Martha G. Newman
Cynthia Osborne
Shelley M. Payne
Julia A. Reed
Donna L. Rew
Ann M. Reynolds
Matt U. Richardson
Gretchen Ritter
Daniel H. Robinson
America B. Rodriguez
Victoria Rodriguez
Sharmila Rudrappa
Nancy Schiesari
Sonia T. Seeman
Martha A. Selby
Alissa R. Sherry
Faegheh S. Shirazi
Patricia A. Somers
Shannon Speed
Waneen W. Spiriduso
Janet Staiger
Allucquere Sand Stone
Pauline T. Strong
Sharon L. Strover
Catherine A. Surra
Gayle M. Timmerman
Janice S. Todd
Ann Twinam
Anita L. Vangelisti
Kamala Viraseswaran
Lorraine O. Walker
Samuel C. Watkins
Jo Lynn Westbrook
Lynn R. Wilkinson
Jennifer M. Wilks
Christine L. Williams
James A. Wilson Jr.
Zipporah B. Wiseman
Helena Woodward
Michelle D. Young
ADMISSION REQUIREMENTS

An admission committee composed of Graduate Studies Committee members evaluates all applications. The committee seeks to admit a small, dynamic group of students who will make a difference in the community, both in and outside of academia. The limited size of the incoming cohort allows the program to provide each student with personal attention and fosters a sense of community among students and faculty members.

The Admissions Committee looks for candidates with a strong academic background and a clear sense of the topics or areas they wish to pursue through the master’s degree. The Center for Women’s and Gender Studies depends on students to be activists and leaders in the community. The Admissions Committee also looks for students who will not only attend class but also attend workshops and conferences, form organizations, volunteer, and participate in extracurricular activities.

A complete list of required application materials is published by the Center for Women's and Gender Studies at http://www.utexas.edu/cola/centers/cwgs/.

DEGREE REQUIREMENTS

Students pursuing a master’s degree in women’s and gender studies may write either a thesis or a report at the end of their coursework. The thesis option requires thirty-six semester hours of coursework, of which six hours are earned in the thesis course. The report option requires thirty-six semester hours of coursework, of which three hours are earned in the report course.

All students must complete the following three core foundations courses in their first year: Women's and Gender Studies 390, Foundations I: Introduction to Women's and Gender Studies, 391, Foundations II: Feminist Theories, and 392, Foundations III: Research Seminar in Women's and Gender Studies. Students are required to meet weekly with the graduate adviser during their second year.

In addition, each student must demonstrate competence in the research skills appropriate to the student’s overall academic and career objectives and to the final thesis or report. A minimum of four additional courses related to women, gender, sexuality, or feminism may be selected from the extensive offerings of faculty members affiliated with the Center for Women’s and Gender Studies. Other courses may be substituted with the graduate adviser’s approval.

GRADUATE PORTFOLIO PROGRAM

The women’s and gender studies graduate portfolio program is open to all graduate students at the University of Texas at Austin. It offers graduate students from all disciplines an opportunity to incorporate women’s and gender studies into their degree programs. Students may enter the program at any point in their graduate work, but it is recommended that they do so as soon as they decide to pursue the portfolio.

The program builds upon the Center’s rich and broad-based expertise across disciplines and colleges/schools. Portfolio students develop a specialization unique to their own program of work through women’s and gender studies courses, scholarly papers, and presentations.

Once all portfolio requirements are completed and the student’s graduate degree is awarded, their official University transcript will indicate completion of the graduate portfolio in women’s and gender studies.

Requirements and application information is available on the Web page: http://www.utexas.edu/cola/centers/cwgs/academics/Graduate-Portfolio/application.php.

GRADUATE SEMINAR COURSES

The Center for Women’s and Gender Studies offers an interdisciplinary program that focuses on understanding women’s experiences from a variety of perspectives and on the role gender plays in shaping society. The program’s large and diverse faculty draws on the scholarship of more than 270 distinguished faculty members from twenty-nine departments and fourteen colleges and schools. Women’s and Gender Studies 393, Seminar: Topics in Women’s and Gender Studies, provides access to cutting-edge scholarship from multiple perspectives by offering topics from nearly every graduate discipline. The program’s faculty affiliates offer as many as thirty different seminar classes every semester.
**DUAL DEGREE PROGRAMS**

The Center for Women’s and Gender Studies offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information studies</td>
<td>Master of Science in Information Studies</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>

**FOR MORE INFORMATION**

**Campus address:** Dorothy L. Gebauer Building (GEB) 4.200, phone (512) 471-5765, fax (512) 475-8146; campus mail code: A4900  
**Mailing address:** The University of Texas at Austin, Graduate Program, Center for Women’s and Gender Studies, 1 University Station A4900, Austin TX 78712  
**E-mail:** wstudies@uts.cc.utexas.edu  
**URL:** [http://www.utexas.edu/cola/centers/cwgs/](http://www.utexas.edu/cola/centers/cwgs/)

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

**WOMEN’S AND GENDER STUDIES: WGS**

**384N. Internship in Women’s and Gender Studies.** Practical working involvement with participating nonprofit and research agencies. The equivalent of ten class hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the graduate adviser.

**390. Foundations I: Introduction to Women’s and Gender Studies.** Three lecture hours and one hour-long faculty colloquium a week for one semester. Offered in the fall semester only. Prerequisite: Graduate standing and consent of the graduate adviser.

**391. Foundations II: Feminist Theories.** Introduction to the feminist theories and methods used in various disciplines; the ways these theories can inform interdisciplinary perspectives in the student’s own field of study. Three lecture hours a week for one semester. Offered in the fall semester only. Prerequisite: Graduate standing, Women’s and Gender Studies 390, and consent of the graduate adviser.

**392. Foundations III: Research Seminar in Women’s and Gender Studies.** Three lecture hours and one hour-long faculty colloquium a week for one semester. Offered in the spring semester only. Prerequisite: Graduate standing, Women’s and Gender Studies 391, and consent of the graduate adviser.

**393. Seminar: Topics in Women’s and Gender Studies.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser. Additional prerequisites vary with the topic and are given in the *Course Schedule*.

**394. Conference Course in Women’s and Gender Studies.** Individual directed readings and conferences on selected problems or topics in women’s and gender studies. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of the graduate adviser.

**698. Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in women’s and gender studies and consent of the graduate adviser; for 698B, Women’s and Gender Studies 698A.

**398R. Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in women’s and gender studies and consent of the graduate adviser.
FACILITIES FOR GRADUATE WORK

Facilities for research in astronomy are located on the campus in Austin, at the McDonald Observatory in West Texas, and at the California Institute of Technology Submillimeter Observatory on Mauna Kea, Hawaii. Equipment in Austin includes a 16-inch reflector and several smaller telescopes. In addition to the facilities of Information Technology Services, a dedicated Sun Enterprise 3501 server, one hundred Sun workstations, and numerous desktop computers serve the Department of Astronomy and McDonald Observatory for data reduction and analysis, image processing, and other computer needs. The department operates an electronics shop, engineering and instrumentation laboratories, and a well-stocked research library. The Kuehne Physics Mathematics Astronomy Library is located in Robert Lee Moore Hall.

Facilities for research at McDonald Observatory include the 2.7-m reflector, which has Cassegrain and coude foci and a variety of auxiliary instruments, including Cassegrain and coude spectrometers equipped with digital detectors. The telescope is supplemented by a versatile computer system. The 2.1-m Struve reflector is used at the Cassegrain focus, or with a large spectrograph at the coude focus. Cassegrain instrumentation includes a low-resolution spectrograph with linear detectors, direct and intensified cameras, two-channel high-speed photometers, a polarimeter, and a Fabry-Pérot interferometer.

The Hobby-Eberly telescope is a composite mirror instrument with an effective aperture of about 8.5-m, intended primarily for spectroscopic work. A low-resolution spectrograph, a medium-resolution spectrograph, and a high-resolution spectrograph are available and provide useful data. Two smaller reflectors, 0.9-m and 0.8-m, are used primarily for photoelectric photometry and CCD surveys. An excellent library is maintained for research and instruction, and other facilities include darkrooms, instrument and machine shops, and transient quarters.

The 10-m submillimeter-wavelength radio telescope built by the California Institute of Technology on Mauna Kea, Hawaii, is also used by faculty members and students in astronomy; three weeks a year are dedicated to University of Texas at Austin research. This research involves primarily the study of radiation from interstellar molecules and dust; it also includes the development of novel instrumentation.

AREAS OF STUDY

Graduate instruction and research are conducted in observational astronomy and astrophysics. Observational opportunities are available in conventional photometry, polarimetry, fast photometry of stellar oscillations, spectroscopy and spectrophotometry of planets, stars, nebulae, galaxies, and quasars, galactic and extragalactic research, planetary and cometary studies, infrared and millimeter astronomy, radio astronomy and instrumentation, and space astronomy. There are also instruction and research opportunities in theoretical astrophysics, including the origin of the elements, celestial mechanics, cosmology, stellar structure and evolution, stellar atmospheres, and interstellar material. There are opportunities for cooperative interdepartmental research with groups in the Department of Physics and the Department of Aerospace Engineering and Engineering Mechanics.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Volker Bromm            David L. Lambert
Harriet L. Dinerstein   Milos Milosavljevic
Sarah E. Dodson-Robinson Edward L. Robinson
Neal J. Evans II        John M. Scalo
Karl Gebhardt           Paul R. Shapiro
Jenny E. Greene         Gregory A. Shields
Daniel T. Jaffe         Christopher A. Sneden
Shardha Jogee           Steven Weinberg
Eiichiro Komatsu        John C. Wheeler
John Kormendy           Derek Wills
Pawan Kumar             Don Winget

ADMISSION REQUIREMENTS

Prerequisites for graduate work in astronomy are at least fifteen to eighteen semester hours of upper-division coursework in astronomy and physics, including courses in mechanics, electricity and magnetism, statistical physics, and quantum mechanics; and a satisfactory score on the Graduate Record Examinations Physics Test. The Physics Test must be taken in addition to the General Test of the Graduate Record Examinations, which is required for admission to the Graduate School. An applicant who does not present a satisfactory score on the Physics Test may, on recommendation of the Graduate Studies Committee, be granted a conditional admission to the program requiring remediation in physics. A detailed evaluation is made of each new student’s physics and astronomy background to identify any deficiencies that should be removed.

DEGREE REQUIREMENTS

MASTERS OF ARTS

Students must complete six of the following introductory courses: Astronomy 380E, 381C, 382C, 383C, 383D, 386C, 392D, 392J, 393F, 396C. Students must also complete Astronomy 185C and two elective courses; the electives may include additional courses from the required group. At least thirty-three semester hours, including Astronomy 398R, or thirty hours, including Astronomy 698, are required.

Students begin research during their first year. Research is done under the supervision of an adviser and committee and normally takes a year and a half. Upon completing an acceptable research project, with thesis or report, the student is awarded a degree. An alternative program prepares the student to teach college-level astronomy. It includes teaching experience and preparation of a report and normally takes two full years to complete.

DOCTOR OF PHILOSOPHY

Students must earn a grade of at least B in Astronomy 185C and in seven of the following required courses: Astronomy 380E, 381C, 382C, 383C, 383D, 386C, 392D, 392J, 393F, 396C. They must also complete two elective courses; the electives may include additional courses from the required group.

Students begin research during their first year. Research is done under the supervision of an adviser and committee and normally takes four to five years. In the spring of their second year, students must present their research to date and pass an oral qualifying examination. They must apply for candidacy by the end of the summer of the second year. Two presentations on research must be given in colloquia or seminars. Finally, the student must complete the dissertation and pass an oral examination on the dissertation.

FOR MORE INFORMATION

Campus address: Robert Lee Moore Hall (RLM) 15.202AA, phone (512) 471-3350, fax (512) 471-6016; campus mail code: C1400
Mailing address: The University of Texas at Austin, Graduate Program, Department of Astronomy, 1 University Station C1400, Austin TX 78712
E-mail: studentinfo@astro.as.utexas.edu
URL: http://www.as.utexas.edu/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ASTRONOMY: AST

380E. Radiative Processes and Radiative Transfer. Classical and quantum radiative processes relevant to astrophysics; basic radiative transfer. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

381. Theoretical Astrophysics. Topics include stellar atmospheres, spectral line analysis, stellar structure, stellar evolution, stellar stability, cosmical electrodynamics, cosmical gas dynamics, interstellar matter and galactic nebulae, high-energy and nuclear astrophysics, atomic and diatomic spectroscopy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

381C. Gravitational Dynamics. Orbital, collective, and tidal effects of astronomical objects, such as planets, stars, galaxies, and interstellar medium, under the influence of a gravitational field. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

381S. Seminar in Theoretical Astrophysics. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

382C. Astrophysical Gas Dynamics. The basic principles of compressible gas dynamics and magnetohydrodynamics, developed and applied in an astrophysical context to a wide range of astronomical phenomena. Three lecture hours a week for one semester. Prerequisite: Graduate standing in astronomy or physics, or graduate standing and consent of instructor.

383. Stellar Astronomy. Topics include properties of stars, including double and multiple stars, clusters, stellar distances, luminosities, motions, variability, populations, and evolution; stellar spectroscopy, photometry, and spectrophotometry; fundamental astronomy and astrometry. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

383C. Stellar Atmospheres. Observational properties of stellar atmospheres; theoretical calculations of stellar atmospheres and stellar spectra. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

383D. Stellar Structure and Evolution. Theoretical calculations of the structure and evolution of stars. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

383L. Seminar in Planets and Life. Discussions concerning the solar system; the detection, formation, and evolution of planets; planetary atmospheres, climates, and meteorology; and various aspects of life in the universe. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

383T. Seminar in Stellar Astronomy. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

384T. Current Studies in Astronomy for Teachers. Lectures and laboratory work in astronomy for elementary and secondary school teachers of earth science, physical science, or astronomy. Three lecture hours and twelve laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

385. Conference Course. Three conference hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

185C. Conference on Modern Astronomy. A broad introduction to the research being conducted by the faculty and research staff in astronomy. One lecture hour a week for one semester. Prerequisite: Graduate standing and consent of instructor.

386. Extragalactic Astronomy. Topics include classification of galaxies, distance indicators, luminosities, dimensions, colors, spectra, polarization, radio emission, rotation, masses; formation and evolution; pairs, groups, clusters, superclusters, large-scale distribution, redshifts, cosmology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
386C. Properties of Galaxies. Observational properties of galaxies and their interpretation; includes a discussion of the Milky Way galaxy. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

386S. Seminar in Extragalactic Astronomy. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

389. Dynamical Astronomy. Topics include planetary and stellar motions, asymptotic representations of quasi integrals, galactic dynamics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

391. Graduate Research in Astronomy. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in astronomy and consent of instructor.

392D. Mathematical Methods of Astrophysics. Statistics, error theory, least squares and curve fitting, numerical methods, approximation theory, Fourier transforms, sampling theory, time-series analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

392E. Optical Techniques in Astronomy. Topics include photometry, spectroscopy, direct imaging, interferometry and polarimetry at ultraviolet, visual, and infrared wavelengths. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

392G. Observing Techniques in Astronomy. Survey of techniques used at the McDonald Observatory. Includes workshop at the observatory. Three lecture hours a week for one semester. Offered in the summer session only. Prerequisite: Graduate standing and consent of instructor.

392J. Astronomical Instrumentation. A hands-on course in instrument development, including mechanical design and machining, electronics design, optical design and optics, computer interfacing, and project planning. Students use CAD programs in each area and design and build a computer-controlled instrument. Learning activities are carried out in groups and teams. One lecture hour and five laboratory hours a week for one semester. Prerequisite: Graduate standing.

393F. Survey of the Interstellar Medium. A broad introduction to the processes and properties of the interstellar medium. Topics include H I regions, H II regions, molecular clouds, interstellar dust, and the distribution of the interstellar medium in our galaxy. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

393S. Seminar in Interstellar Matter. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

396C. Elements of Cosmology. A theoretical discussion of the origin and evolution of the universe; includes a brief review of general relativity and modern particle physics. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

697. Graduate Research Project. Two-semester graduate research project in astronomy. The equivalent of three hours of work a week for two semesters. Prerequisite: For 697A, graduate standing and consent of instructor; for 697B, Astronomy 697A.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in astronomy and consent of the graduate adviser; for 698B, Astronomy 698A.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in astronomy and consent of the graduate adviser.

398T. Supervised Teaching in Astronomy. Effective astronomy teaching: course design, instructional materials, test design, other methods. In-class practice teaching. Projects in astronomy education. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and current or previous appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Astronomy 399R, 699R, or 999R.
BIOCHEMISTRY

Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Research in biochemistry is carried out in the Biochemical Institute and the Department of Chemistry and Biochemistry. Facilities available through the department are listed on page 406 in the description of the graduate program in chemistry.

AREAS OF STUDY

Graduate study in biochemistry is offered in a wide range of areas, including drug metabolism; nutritive aspects of human disease; metabolic regulation; structure and function of enzymes, toxins, and contractile proteins; mechanism and regulation of protein biosynthesis; cloning, sequencing, and site-directed mutagenesis of enzyme-coding genes; enzymology of DNA repair and replication; and biochemical taxonomy. Details are available from the graduate adviser.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Hal S. Alper
Eric V. Anslyn
Dean R. Appling
Jeffrey E. Barrick
Karen S. Browning
Richard M. Crooks
Kevin N. Dalby
Ron Elber
Andrew Ellington
Walter L. Fast
Richard H. Finnell
George Georgiou
Marvin L. Hackert
David W. Hoffman
Jon M. Hubregtse
Brent L. Iverson
Kenneth Johnson
Adrian T. Keatinge-Clay
Sean M. Kerwin
George B. Kitts
Robert M. Krug
Alan Lambowitz
Seongmin Lee
Hung-Wen Liu
Edward M. Marcotte
Stephen F. Martin
Mikhail V. Matz
Jennifer A. Maynard
Edward M. Mills
Tanya F. Paull
Austen F. Riggs II
Jon D. Robertus
Krishnendu Roy
Rick Russell
Christine E. Schmidt
Jason B. Shear
Scott W. Stevens
Christopher S. Sullivan
Lauren J. Webb
Marvin Whiteley
Christian P. Whitman
Claus O. Wilke
Yuhui W. Yin
Yan Zhang
Zhiwen Zhang

ADMISSION REQUIREMENTS

Students seeking a graduate degree in biochemistry must have a bachelor’s degree or the equivalent in a cognate area, such as chemistry, biology, physics, or microbiology, with the following preparation: mathematics through one year of calculus; chemistry, including organic chemistry, biochemistry, and physical chemistry; general physics; and biology, including cell biology. Deficiencies in undergraduate courses, if not too extensive, may be corrected during the student’s first two semesters in the graduate program. These courses are usually not counted toward graduate degrees.

DEGREE REQUIREMENTS

One semester of Chemistry 398T is required of all candidates for advanced degrees.

MASTER OF ARTS

Master’s degree students must complete at least thirty semester hours of coursework and must submit a thesis based on individual research. The thesis course may be counted as six of the thirty semester hours required for the degree. A minor of at least six semester hours is required, which may be in another area of chemistry, such as organic or physical chemistry, or in a related discipline, such as biology. No more than nine semester hours of upper-division coursework may be counted; these hours must be divided between the major and the minor field, with no more than six hours in the major field and three in the minor.

Courses required for the major in biochemistry are Chemistry 387D or 387K, 394, 395G, and 395J. Most students take two and one-half years to earn the Master of Arts.

DOCTOR OF PHILOSOPHY

For admission to candidacy for the doctoral degree, a student must complete the following courses with a grade of at least B in each: Chemistry 387D or 387K, 394, 395G, and 395J. Students are also required to
complete two elective courses, which may be selected from Chemistry 395F, 395H, certain topics of Chemistry 391L, or, with the approval of the graduate adviser, other upper-division or graduate courses. Students must complete Chemistry 192G five times and make four presentations, which is normally accomplished by the end of the third year of the graduate program. A qualifying examination designed to test the student’s knowledge of the basic principles of biochemistry must be completed within the first two years. A major part of this examination consists of a research proposal written in the form used for a National Institutes of Health grant application. The student presents and defends this proposal orally and is examined in terms of his or her ability to do independent research.

After the requirements for admission to candidacy have been completed, the chair of the Graduate Studies Committee petitions the dean of the Graduate School to appoint a dissertation committee. A student must do dissertation research under the supervision of a member of the Graduate Studies Committee. Generally, this faculty member, chosen by mutual consent of the student and the professor, serves as chair of the dissertation committee.

**DUAL DEGREE PROGRAM**

**DOCTOR OF PHILOSOPHY/DOCTOR OF MEDICINE**

The graduate program in biochemistry participates in a dual degree program with the University of Texas Medical Branch at Galveston (UTMB). Applicants must apply separately to and be admitted to both the PhD program in biochemistry at the University of Texas at Austin and the medical school at UTMB. Students accepted into the dual degree program spend their first two years in the medical school at UTMB, followed by at least three to four years of doctoral work at UT Austin and eighteen months of clinical rotations. The degrees are conferred separately by each institution. Additional information may be found at http://www.mdphd.utexas.edu/.

**FOR MORE INFORMATION**

**Campus address:** Robert A. Welch Hall (WEL) 2.218, phone (512) 471-4538 or (866) 471-3890, fax (512) 475-8839; campus mail code: A5300

**Mailing address:** The University of Texas at Austin, Graduate Program in Biochemistry, Department of Chemistry and Biochemistry, 1 University Station A5300, Austin TX 78712

**URL:** http://www.cm.utexas.edu/

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**CHEMISTRY: CH**

**387D. Physical Methods in Biochemistry and Molecular Biology.** Theory of physical methods used in biochemistry and molecular biology. Three lecture hours a week for one semester. Prerequisite: Graduate standing, an undergraduate course in physical chemistry, and an undergraduate course in biochemistry.

**387K. Biochemical Techniques.** Discussion of procedures and equipment used in modern biochemical investigation, with laboratory work to provide experience in techniques of general importance. Two lecture hours and seven laboratory hours a week for one semester. Prerequisite: Graduate standing, six semester hours of undergraduate coursework in biochemistry, and consent of instructor.

**190. Seminar in Chemistry.** The equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in chemistry.

- Topic 1: Analytical-Physical Chemistry.
- Topic 2: Organic Chemistry.
- Topic 3: Biochemistry.
- Topic 4: Inorganic Chemistry.

**391L. Advanced Topics in Biochemistry.** Topics include physical methods for the study of macromolecules; chemistry of proteins; enzyme chemistry; regulatory mechanisms for gene expression, protein–nucleic acid interactions. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.
Graduate degrees in the biological sciences are offered by the School of Biological Sciences. The three degree programs—ecology, evolution, and behavior; microbiology; and plant biology—are described on pages 392–394. Each program is administered by its own Graduate Studies Committee.

**BIOLOGICAL SCIENCES**

*Master of Arts*  
*Doctor of Philosophy*

**FACILITIES FOR GRADUATE WORK**

The primary facilities for graduate instruction and research are provided in the Biological Laboratories building, the Louise and James Robert Moffett Molecular Biology Building, the Neural Molecular Science Building, and the J. T. Patterson Laboratories Building, and at the Marine Science Institute at Port Aransas. Additional facilities include the Life Science Library, the Brackenridge Field Laboratory, the Stengl “Lost Pines” Biological Station, the Institute for Cellular and Molecular Biology, the Plant Resources Center, the...
Texas Memorial Museum, the Texas Natural Science Center, the Culture Collection of Algae, the Institute of Reproductive Biology, the Center for Computational Biology and Bioinformatics, the Institute for Neuroscience, the Environmental Science Institute, and the Animal Resources Center.

AREAS OF STUDY

Graduate study supervised by the School of Biological Sciences is available in areas of specialization that cross the boundaries between the biological disciplines as classically defined. Among the broad areas of specialization are behavioral biology, biological chemistry, biophysics, cellular and molecular biology, cytology and cytogenetics, developmental biology, ecology, population biology, evolution, host-parasite biology, human biology, immunobiology, genetics, molecular genetics, neurobiology, nutrition, paleontology, physiology, systematics, and virology. Additional areas of specialization are listed in the sections for the three graduate programs below.

ECOLOGY, EVOLUTION, AND BEHAVIOR

The graduate program in ecology, evolution, and behavior is large and diverse. Research ranges from the molecular level to the ecosystem, with approaches that include fieldwork, laboratory analyses, and mathematical modeling.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Daniel I. Bolnick  
Deborah A. Bolnick  
Franklin H. Bronson  
James J. Bull  
David Cannatella  
David P. Crews  
Molly E. Cummings  
Norma L. Fowler  
Lee A. Fuiman  
Lawrence E. Gilbert  
Christine V. Hawkes  
Dean Hendrickson  
David M. Hillis  
Johann Hofmann  
Robert K. Jansen  
Thomas E. Juenger  
Timothy H. Keitt  
Mark A. Kirkpatrick  
Mathew A. Leibold  
Donald A. Levin  
Craig R. Linder  
Mikhail V. Matz  
Lauren A. Meyers  
Ian J. Molineux  
Ulrich G. Mueller  
Jose I. Panero  
Camille Parmesan  
Steven M. Phelps  
Eric R. Pianka  
William H. Press  
Mary A. Rankin  
Timothy B. Rowe  
Michael J. Ryan  
Sahotra Sarkar  
Sara L. Sawyer  
S. M. Shankland  
Beryl B. Simpson  
Michael C. Singer  
Edward C. Theriot  
Peter Thomas  
Tandy Warnow  
Claus O. Wilke  
Harold H. Zakon

DEGREE REQUIREMENTS

MASTER OF ARTS

The graduate program is focused on the doctoral degree; this degree is designed for those who anticipate careers in research, possibly combined with teaching or other activities. Students seeking only the master’s degree are rarely admitted. If a master’s degree student is admitted, his or her proposed program must be approved by the Graduate Studies Committee. Supporting work is chosen most commonly from plant biology, chemistry, geological sciences, marine science, mathematics, microbiology, psychology, physics, or education.

DOCTOR OF PHILOSOPHY

For the Doctor of Philosophy, preliminary training should have provided a working core of knowledge in general biology and the history of biology; other helpful areas are plant biology, vertebrate and invertebrate zoology, embryology, genetics and evolution, and physiology.

The student must take a two-semester core course in his or her first year in the program. Students typically take a total of seven additional courses, four of which are formal lecture courses, and two of which are either outside of biological sciences or outside of ecology, evolution, and behavior. The remaining courses may be seminars. Courses from outside of biological sciences or outside of ecology, evolution, and behavior are commonly chosen from plant biology, chemistry, computer science, geological sciences, marine science, mathematics, microbiology, molecular biology, psychology, or physics, as needed to support the area of specialization chosen. With the approval of the supervising committee, relevant courses in these fields may also be included as a part of the major.

Students are expected to fulfill all requirements for admission to candidacy by the end of the fifth long semester.

The School of Biological Sciences provides information on graduate work and on available fellowships and assistantships at http://www.biosci.utexas.edu/graduate/eeb/.
MICROBIOLOGY

Microbiology offers a focused program of study encompassing disciplines in bacteriology, virology, immunology, genetics, and biochemistry, using both prokaryotic and eukaryotic model systems.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Jeffrey E. Barrick
Henry R. Bose
R. Malcolm Brown Jr.
Clarence Shiu Man Chan
Arturo De Lozanne
Jaquelin P. Dudley
Lauren Ilyse Richie Ehrli
Andrew Ellington
George Georgiou
Ellen Gottlieb
Rasika M. Harshley
David L. Herrin
Jon M. Huibregtse
Vishwanath R. Iyer
Makkuni Jayaram
Arlen W. Johnson
Robert M. Krug
Alan Lambowitz
Richard J. Meyer
Jan J. Molneux
Theresa J. O’Halloran
Tanya T. Paull
Shelley M. Payne
Bob G. Sanders
Sara L. Sawyer
Scott W. Stevens
Christopher S. Sullivan
Michael Stephen Trent
Philip W. Tucker
James R. Walker
Marvin Whiteley

DEGREE REQUIREMENTS

MASTER OF ARTS

The microbiology graduate program does not accept applications for the master’s degree. However, a student accepted into and in good standing with the doctoral program may, at the discretion of the graduate adviser, be permitted to pursue a master’s degree in lieu of the PhD. The student must complete thirty-six semester hours of coursework, including Biology 395F or 395G, 395H, 395J, 391R or 391M, and 398T, and six hours in related fields outside the microbiology program. He or she must earn a grade of at least B- in Biology 395F or 395G, 395H, 395J, and 391R or 391M. Each long semester, he or she must register for a weekly journal club that is offered by a member of the Graduate Studies Committee or approved by the graduate adviser. No more than nine semester hours of upper-division coursework may be counted toward the degree, and no more than six of these nine may be in any one field of study. In addition to the above requirements, a master’s degree student must pursue original research under the direction of a faculty member and submit an approved thesis.

DOCTOR OF PHILOSOPHY

To be admitted to candidacy for the doctoral degree, the student must complete during the first three years a two-part preliminary examination. Part A, taken in the spring of the student’s second year, consists of presentation and defense of a mock National Institutes of Health grant proposal. Part B, taken within twelve months of Part A, consists of presentation of a proposal for dissertation research. Individual programs of study are tailored to the student’s interests, but each student must complete Biology 395F or 395G, 395H, 395J, 391R or 391M (with a grade of at least B- in each), 398T, and at least six additional hours in graduate lecture courses approved by the graduate adviser. He or she must attend a weekly journal club each long semester. The student must also pursue independent, original research under the direction of a faculty member; the results of this research constitute the dissertation, which fulfills the requirements of the required courses Biology 399R and 399W. Each student must serve as a teaching assistant for one long-session semester; two six-week summer terms are considered equivalent to a semester. A well-qualified student can usually complete the doctoral degree program in five to six years.

FOR MORE INFORMATION

Campus address: Biological Laboratories (BIO) 311A, phone (512) 232-2716, fax (512) 232-3404; campus mail code: A6700
Mailing address: The University of Texas at Austin; Graduate Coordinator for Ecology, Evolution, and Behavior; School of Biological Sciences; 1 University Station A6700; Austin TX 78712
E-mail: eeb@biosci.utexas.edu
URL: http://www.biosci.utexas.edu/graduate/eeb/
PLANT BIOLOGY

Graduate study in plant biology is available in the following areas: algal physiology, plant biochemistry, cell biology, development, ecology, evolution, molecular biology, natural products chemistry, photobiology, phycology, plant anatomy, plant biogeography, plant morphology, plant physiology, population biology, systematics, and ultrastructure.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Jerry J. Brand
R. Malcolm Brown Jr.
Karen S. Browning
Zengjian J. Chen
Norma L. Foeller
Lawrence E. Gilbert
Christine V. Hawkes
David L. Herrin
Enamul Huq
Robert K. Jansen
Thomas E. Juenger

John W. La Claire II
Donald A. Levin
Craig R. Linder
Alan M. Lloyd
James D. Mauseth
Mona Mehdy
Jose L. Panero
Stanley J. Roux Jr.
Beryl B. Simpson
Edward C. Theriot
Tracy A. Villareal

ADMISSION REQUIREMENTS

The undergraduate training of students planning to undertake graduate study in plant biology should ordinarily include at least twenty-four semester hours in plant biology and/or other biological sciences. At least twelve of these must be in upper-division work. This requirement in the major should be supported by coursework in the other sciences, especially chemistry, physics, and mathematics.

DEGREE REQUIREMENTS

MASTER OF ARTS

At least thirty semester hours of coursework, including Biology 698 or 398R, are required. The coursework must include a minor of six hours of work acceptable for graduate credit in another area or areas. In general, at least one full year (including the summer) is needed to meet the requirements for the master’s degree.

DOCTOR OF PHILOSOPHY

Mastery of an integrated and meaningful program of graduate study is deemed more important than the completion of a prescribed number of semester hours. Most programs include at least four graduate courses in plant biology. Further supporting work in related sciences augments the program.

Admission to candidacy for the Doctor of Philosophy degree requires approval of the Graduate Studies Committee and is based on the total record of the student, performance in graduate courses, and such further examinations as the committee may require. An oral examination covering the major area of study is administered by the student’s Qualifying Examination Committee no later than the end of the student’s fourth long-session semester of residence.

FOR MORE INFORMATION

Campus address: Biological Laboratories (BIO) 311A, phone (512) 471-8490, fax (512) 232-3402; campus mail code: A6720
Mailing address: The University of Texas at Austin, Graduate Coordinator for Plant Biology, School of Biological Sciences, 1 University Station A6720, Austin TX 78712
E-mail: plantbio@biosci.utexas.edu
URL: http://www.biosci.utexas.edu/graduate/plantbio/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

The abbreviations EEB, MIC, and PB in the following list identify the program(s) in the School of Biological Sciences with which the course is most closely associated. The abbreviation EEB represents ecology, evolution, and behavior; MIC, microbiology; and PB, plant biology.

BIOLOGY: BIO

380M. Topics in Biology (Cooperative Programs). EEB, MIC, PB. Formal, organized courses taught at institutions other than the University of Texas at Austin. Three lecture hours a week for one semester. Not all topics are offered every year. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, consent of the student’s graduate adviser or department chair and the University’s graduate dean, and consent of the graduate dean at the host institution. Additional prerequisites vary with the topic and are given in the Course Schedule.

180R, 280R, 380R. Advanced Readings in the Biological Sciences. EEB. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

380T. Current Concepts in Biology. EEB, MIC, PB. Designed for beginning graduate students seeking a review of modern biological concepts. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing in the School of Biological Sciences, and consent of instructor and the graduate adviser.

381K. Ecology, Evolution, and Behavior: Physiology and Biophysics. Lectures, conference discussion, and laboratory projects, depending on topic. Not all topics are offered every year. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Topics in Biophysics. EEB. Irritability of living systems and the principles of energy transformation and transfer in organisms; emphasis on bioelectrical processes and electrical energy changes. Three lecture hours a week for one semester.

Topic 2: Comparative Neurophysiology. EEB. General treatment of the physiology of neurons, synapses, sensory and motor systems; neural basis of behavior; emphasis on invertebrates. Three lecture hours a week for one semester.

Topic 3: Sensory Physiology. EEB. Physiology and biophysics of the transduction and peripheral processes of the major sensory systems. Three lecture hours a week for one semester.

Topic 4: Current Concepts in Neurobiology. EEB. A series of seminars designed to give students a broad background in neurobiology. Three lecture hours a week for one semester. Biology 381K (Topic 4) and Neuroscience 385L (Topic 2: Current Concepts in Neurobiology) may not both be counted.

Topic 5: Laboratory in Neurophysiology. EEB. Training in research techniques useful for the neurophysiological study of vertebrate and invertebrate nervous systems. Three lecture hours a week for one semester.

Topic 6: Insect Physiology. EEB. An in-depth study of the physiology of insect organ systems, development, and behavior. Three lecture hours a week for one semester.

Topic 7: Developmental Neurobiology. EEB. Neuronal cell lineage and differentiation, neuronal migration, axon guidance, neural cell death, synapse formation and maintenance. Three lecture hours a week for one semester.

Topic 8: Addiction Biology. EEB. Three lecture hours a week for one semester. Biology 381K (Topic 8) and Neuroscience 385L (Topic 3: Addiction Biology) may not both be counted.

Topic 9: Comparative Animal Physiology. EEB. Three lecture hours a week for one semester.

Topic 10: Basic Processes of Nerve Cells. EEB. Study of information processing by, and trophic functions of, nerve cells. Three lecture hours a week for one semester. Biology 381K (Topic 10) and Neuroscience 385L (Topic 1: Basic Processes of Nerve Cells) may not both be counted.

Topic 11: Current Concepts in Neurophysiology. EEB. Three lecture hours a week for one semester.

182, 282, 382. Advanced Study and Research. EEB, MIC, PB. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

383K. Ecology, Evolution, and Behavior: Development and Reproduction. Three lecture hours a week for one semester, or as required by the topic. Not all topics are offered every year. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.
Introduction to Ecology, Evolution, and Behavior I. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Introduction to Ecology, Evolution, and Behavior II. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Population Ecology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Ecology, Evolution, and Behavior. Basic concepts and methods of laboratory and field analysis in various fields of biology; systematics and ecology of natural populations. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Ornithology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Herpetology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Entomology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Evolutionary Biology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Environmental and Evolutionary Biology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Community and Ecosystem Ecology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Mathematical Ecology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Aquatic Entomology. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Course Schedule

Topic 1: Hormonal Control of Development and Reproduction. EEB. Three lecture hours a week for one semester.

Topic 2: Techniques in the Study of Development and Reproduction. EEB. Eight laboratory hours a week for one semester.

Topic 3: Comparative Endocrinology. EEB. Structure, function, and interrelationships of endocrine glands, with emphasis on the control of hormone synthesis and secretion and mechanisms of hormone action. Three lecture hours a week for one semester.

Topic 4: Recent Advances in Development and Reproduction. EEB. Discussion of recent scientific papers and their contribution to modern work in development and reproduction. Three lecture hours a week for one semester.

Topic 5: Molecular Analysis of Development. EEB. Lectures and discussion concerning the principles of animal development at the molecular level. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Topic 6: Current Literature in Cell and Developmental Biology. EEB. Three lecture hours a week for one semester. Offered on the credit/no credit basis only.

Topic 7: Seminar in Physiology and Behavior. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Topic 8: Development and Evolution. EEB. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

Topic 9: Survey of Animal Development. EEB. Three lecture hours a week for one semester. Offered on the credit/no credit basis only.

Topic 10: Ecological Studies in a Tropical–Temperate Transition. EEB. Three lecture hours a week for one semester. Offered on the credit/no credit basis only.

Topic 11: Ecological and Historical Biogeography. EEB. Three lecture hours a week for one semester. Offered on the credit/no credit basis only.

Topic 12: Mathematical Ecology. EEB. Three lecture hours a week for one semester. Offered on the credit/no credit basis only.

Topic 13: Aquatic Entomology. EEB. Three lecture hours a week for one semester. Offered on the credit/no credit basis only.
Topic 14: Advanced Systematics. EEB. Survey of systematic theory and methods, with emphasis on molecular phylogenetics and computational methods. Three lecture hours and three laboratory hours a week for one semester. Additional prerequisite: Biology 458L or the equivalent or consent of instructor.

Topic 15: Insect-Plant Relationships. EEB. Three lecture hours a week for one semester.

Topic 16: Molecular Evolution. EEB. Three lecture hours a week for one semester.

Topic 17: Behavioral Ecology. EEB. Advanced topics in behavioral ecology, considering the following in detail: animal communication, altruism, sexual selection, plant-animal interactions. Three lecture hours a week for one semester.

Topic 19: Natural Resource Management. EEB. Three lecture hours a week for one semester.

Topic 20: Recent Advances in Computational Biology. EEB. Discussion of current scientific papers, methods, and ideas in computational biology and bioinformatics. Three lecture hours a week for one semester.

Topic 21: Recent Advances in Ecology and Systematics. EEB. Discussion of recent scientific papers and their contributions to modern work in systematic and environmental zoology. Three lecture hours a week for one semester.

Topic 22: Advanced Topics in Microbial Ecology. EEB. Discussion of current scientific ideas and controversies in microbial ecology, including community and ecosystem perspectives. Three lecture hours a week for one semester.

Topic 23: Invasion Ecology. EEB. Overview of the study of biological invasions by nonnative species. Three lecture hours a week for one semester.

Topic 24: Coevolution. EEB. Explores the reciprocal evolutionary interactions between species (mutualism, symbiosis, predator–prey, herbivore–host, pathogen–host interactions), within-species interactions (male–female or parent–offspring) as well as interactions between several coevolving partners. Three lecture hours and one discussion hour per week for one semester.

Topic 25: Ecological and Evolutionary Genetics. EEB. Introduction to quantitative genetic theory and approaches, with emphasis on experimental methods and analysis. Focuses on current subjects including natural selection, response to selection, genetic constraints, evolvability, local adaptation, linkage mapping, and quantitative trait locus and association mapping. Three lecture hours a week for one semester.

Topic 26: Research Proposal Design and Writing. EEB. Designed for students preparing grant proposals or postdoctoral grant applications. Students write proposals and submit them to a funding agency. Three lecture hours and one discussion hour per week for one semester.

Topic 27: Python Programming for Biology. EEB. Three lecture hours a week for one semester.


384L. Issues in Population Biology. EEB. Analysis at an advanced level of currently active areas of research in population biology. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

385C. Conservation Genetics. EEB, PB. Genetic attributes of rare plant and animal species, especially as they affect conservation; germ plasm resource conservation in wild and domesticated species. Three lecture hours a week for one semester. Biology 376 and 385C may not both be counted. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

385K. Ecology, Evolution, and Behavior; Genetics. Training in the fields of genetics shown by the topics. Lectures, conference discussion, or lecture and laboratory, depending on topic. Not all topics are offered every year. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Developmental Genetics. EEB. Discussion of biological processes controlling development, with particular attention to recent experimental investigations. Three lecture hours a week for one semester.

Topic 2: Evolution. EEB, PB. Current problems and developments in evolution theory. Three lecture hours a week for one semester. Biology 370 and 385K (Topic 2) may not both be counted.

Topic 3: Recent Advances in Population Genetics. EEB. Discussion of recent scientific papers and their impact on theory and practice in population genetics. Three lecture hours a week for one semester.

Topic 4: Population Genetics. EEB. Dynamics and statistics of genetic populations. Three lecture hours a week for one semester.

Topic 5: Research Design in Biology. EEB. Formulation and criticism of research plans; the analysis and interpretation of biological observations. Three lecture hours a week for one semester.

Topic 6: Genomics. EEB, MIB. Genome structure, organization, and function of model organisms; theory and methodology of genetic and physical mapping; sequencing analysis and annotation; genome duplication and evolution; and ethics for biotechnology and cloning. Three lecture hours a week for one semester. Biology 384K (Topic: Genomics) and 385K (Topic 6) may not both be counted.

386. Topics in Plant Science: Ecology and Evolution. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Biogeography, EEB, PB.
Topic 2: Methods of Systematics. EEB, PB.

Topic 3: Philosophies of Systematics. EEB, PB.

Topic 4: Plant Population Biology Seminar. EEB, PB.


Topic 6: Principles and Methods of Plant Monography. EEB, PB.

Topic 7: Principles of Pollination Biology. EEB, PB.

Topic 8: Global Environmental Change. EEB, PB. Global change as it affects terrestrial ecosystems, including feedbacks between ecosystems and the atmosphere. Topics include greenhouse gases and global warming, ozone, biological invasions, and land-use change.

Topic 9: Synantherology. PB.

387C. Plant Genetics. EEB, PB. Genes, gene systems, linkage systems, and genetic systems in higher plants. Three lecture hours a week for one semester. Biology 367 and 387C may not both be counted. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387D. Biometry. EEB, PB. An introduction to a variety of statistical techniques, including ANOVA, regression, and contingency table analysis. Students analyze their own data. Emphasis on biological applications. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387E. Plant Speciation. EEB, PB. Nature of species in higher plants, speciation phenomena in plants, natural hybridization, polyploidy, agamospermy, evolution of hybrid complexes. Three lecture hours a week for one semester. Biology 367 and 387E may not both be counted. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387F. Plant Systematics. EEB, PB. Principles of plant taxonomy, as exemplified by families of flowering plants found seasonally around Austin. Two lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387G. Taxonomic Plant Anatomy. EEB, PB. An advanced course that emphasizes those aspects of plant anatomy that are most reliable and useful for systematic purposes. Three lecture hours and two laboratory hours a week for one semester. Biology 347L and 387G may not both be counted. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387L. Laboratory in Advanced Plant Anatomy. EEB, PB. Demonstration of cellular details and tissue systems of plant organs, and instruction on the preparation of plant materials for histological examination. Three laboratory hours a week for one semester. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and concurrent enrollment in Biology 387J.

387M. Reproductive Biology of Flowering Plants. EEB, PB. Pollination biology, breeding systems, and fruit and seed dispersal from evolutionary and ecological vantage points. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387N. Plant Ecology. EEB, PB. Advanced topics in plant ecology, including evaluation of ecological concepts, aspects of experimental ecology, and the principles of plant distribution. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387P. Plant Ecology Laboratory. EEB, PB. Demonstrations and experiments stressing plant ecological principles, including laboratory and field exercises. Three laboratory hours a week for one semester. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and credit or registration for Biology 387N.

387R. Population Ecology of Plants. EEB, PB. A combination of lectures and student-led discussions covering major concepts and current literature in plant population ecology. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387S. Laboratory Methods in Molecular Ecology and Systematics. EEB, PB. An introduction to DNA methods in the study of molecular ecology, systematics, and evolution: DNA isolation and purification; DNA quantification; polymerase chain reaction; restriction fragment length polymorphism; random amplified polymorphic DNA; amplified fragment length polymorphism; cloning; simple sequence repeat (microsatellite) marker development; DNA sequencing; automated sequencing; automated genotyping; phylogenetic and population genetic analyses. Seven laboratory hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

387T. Angiosperm Diversity Laboratory. PB. Practical experience in recognizing, identifying, and classifying families of flowering plants. Four laboratory hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

388C. Transmembrane Signaling Mechanisms. PB. Mechanisms by which hormones, light, and other stimuli trigger changes in plant and animal cell metabolism. Three lecture hours a week for one semester. Biology 347M and 388C may not both be counted. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.
388D. Research Topics in Plant Biology. PB. An introduction to various fields of plant biology. Students attend seminars, faculty research presentations, and other meetings. Three lecture hours a week for one semester, with additional meeting times to be arranged. Prerequisite: Graduate standing in the School of Biological Sciences.

388E. Plant Growth and Development. PB. Emphasis on whole plant physiology, especially growth and development, water relations, and mineral nutrition of vascular plants. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

388J. General Phycology. PB. Survey of the algae, including significant biological aspects of selected genera, research techniques, and readings in the literature. Three lecture hours a week for one semester. Biology 327 and 388J may not both be counted. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and concurrent enrollment in Biology 188K.

388K. Advanced Cell Biology. EEB Three lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

388L. Laboratory Studies in Cell Biology: Plant Biology. PB. Research exercises involving light microscopy, including polarization, phase contrast, Nomarski interference, dark field, fluorescence, and bright-field optics. High-resolution transmission electron microscopy. Hands-on experience with atomic and molecular imaging, including digital image processing and time-lapse video microscopy. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

388M. Plant Molecular Biology. PB. Fundamentals of plant molecular biology, including structure and expression of the chloroplast and mitochondrial genomes. Three lecture hours a week for one semester. Biology 350M and 388M may not both be counted. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

389. Topics in Plant Science: Cell and Development. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser. Additional prerequisites vary with the topic and are given in the Course Schedule.

Topic 1: Advanced Studies in Light Microscopy. PB.
Topic 2: Biology of the Blue-green Algae. PB.
Topic 3: Cell Biology Seminar. PB.
Topic 4: Genetic Engineering of Plants: Basic and Applied Aspects. PB. Strategies for isolation and characterization of genes; transfer of genes into plants; basic and applied uses of genetic engineering and the impact on agriculture and the environment.
Topic 5: Medical Plant Chemistry. PB.
Topic 6: Natural Products Chemistry. PB.

389C. Chemistry and Biology of Membranes. PB. Consideration of the origin and structure of biological membranes at the microscopic and molecular levels; describes membrane function, especially with regard to transport properties. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Chemistry 339K or the equivalent, and consent of instructor and the graduate adviser.

389G. Applied Public Health and Medical Microbiology. MIC. One semester (or one summer session) of full-time training in the Texas Department of Health Laboratories, with rotation in the divisions of medical microbiology, mycology, parasitology, virology, sanitary bacteriology, and biologics. Assigned reading and regular meetings with the Department of Health Laboratories staff and the molecular genetics and microbiology faculty. Forty hours of supervised fieldwork a week for one semester. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and courses in immunology, public health bacteriology, and virology.

290K. Scanning Electron Microscopy, Theory and Practice. MIC, PB. Theory of scanning electron microscopy and basic principles of instrument design; basic procedures in specimen preparation; hands-on experience. Two lecture hours and six laboratory hours a week for six weeks. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

490M. Electron Microscopy I: Theory and Practice. MIC, PB. An introduction to electron optics; emphasis on basic operation and maintenance of the transmission microscope; theory and practice of basic preparative techniques. Two lecture hours and six laboratory hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor and the graduate adviser.

390P. Techniques in Molecular Genetics. MIC. Laboratory training in modern molecular genetics, with emphasis on the manipulation of bacterial plasmid DNA as a model system. DNA purification, gene mapping and cloning, site-directed mutagenesis, polymerase chain reaction, and DNA sequencing. One lecture hour and seven laboratory hours a week for one semester. Biology 368L and 390P may not both be counted. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and Biology 366.
391K. Cellular Immunology. MIC. Cell-associated immune responses, with emphasis on transplantation, immunity, tumor immunology, delayed hypersensitivity, and acquired cellular resistance. Three lecture hours a week for one semester. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and Biology 360K and 160L.

391M. Tumor Biology. MIC. Natural history and causal mechanisms of cancer; viral and chemical carcinogens. Three lecture hours a week for one semester. Biology 336 and 391M may not both be counted. Prerequisite: Graduate standing; consent of instructor and the graduate adviser; and Biology 360K, or 330 and 230L or 130L.

391P. Advanced Virology. MIC. Replication of and transformation by DNA and RNA animal viruses. Three lecture hours a week for one semester. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and Biology 330.

391R. Advanced Metabolism and Biochemistry of Microorganisms. MIC. Study of the metabolic processes of microorganisms, using a biochemical approach. Three lecture hours a week for one semester. Biology 339 and 391R may not both be counted. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

391S. Microbial Genetics. MIC. Molecular biology of nucleic acids; biosynthesis of macromolecules, transfer of genetic material from cell to cell, recombination, mutagenesis, and regulatory mechanisms. Three lecture hours a week for one semester. Biology 366 and 391S may not both be counted. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

392. Problems in Host-Parasite Biology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing, consent of instructor and the graduate adviser. Additional prerequisites vary with the topic and are given in the Course Schedule.

   Topic 1: Current Topics in Cell Envelope Structure and Functions. MIC.

   Topic 2: Current Topics in Microbial Signal Transduction. MIC.

394M. Advanced Studies in Microbiology. In-depth study of microbiology topics. Students read original research papers in addition to text assignments. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing, consent of instructor and the graduate adviser. Additional prerequisites vary with the topic and are given in the Course Schedule.

   Topic 1: Advanced Immunology. MIC. Studies in cell signaling in the immune system, transgenic and knockout gene analysis, T and B cell selection and maturation, and development of the immune system.

   Topic 2: Advanced Microbial Signal Transduction. MIC. Studies in molecular and cellular biology of a wide variety of signal transduction systems in diverse microorganisms; the role of signal transduction across biological membranes in allowing cells to recognize and respond to their environment.

   Topic 3: Advanced Medical Mycology. MIC. Studies in medical mycology and an overview of research involving both the fungal zoopathogen and its host.

   Topic 4: Advanced Fungal Cell and Molecular Biology. MIC. Studies of the structure, function, and biological activities of fungi, with emphasis on recent advances in research.

395. Plant Biology: Laboratory Studies in Molecular Biology. PB. Laboratory experience in modern molecular biology, including cloning using recombinant DNA methods, organelle isolation, purification of eukaryotic DNA and RNA, blot hybridization and transformation. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Graduate standing; consent of instructor and the graduate adviser; and one of the following courses: Biology 320, 325, 328, 344, Chemistry 339L.

395F. Genetics. MIC. Same as Chemistry 395F and Molecular Biology 395F. Basic principles of Mendelian and molecular genetics, and an exploration of the genetic toolbox using examples of analytic methods and modern manipulations. Focus on the genetic analysis of model organisms. Use of genetic tools in dissecting complex biological pathways, developmental processes, and regulatory systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing. An introductory course in genetics, such as Biology 325, is strongly recommended.
395C. **Biochemistry.** MIC. Same as Chemistry 395G and Molecular Biology 395G. Detailed consideration of the structure and function of proteins, with discussion of enzyme mechanisms and kinetics, the biochemistry of energy production, and the metabolism of lipids and nucleotides. Three lecture hours a week for one semester. Prerequisite: Graduate standing. A one-year undergraduate sequence in biochemistry, such as Chemistry 339K and 339L, is strongly recommended.

395H. **Cell Biology.** MIC. Same as Chemistry 395H and Molecular Biology 395H. Detailed consideration of mechanisms of growth control, cell regulation, mitosis, cell signaling, protein targeting, and the integration of these processes in various cellular processes. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Biology 395F and 395G, or consent of instructor.

395J. **Molecular Biology.** MIC. Same as Chemistry 395J and Molecular Biology 395J. Detailed consideration of prokaryotic and eukaryotic mechanisms of DNA replication and transcription; posttranscriptional processing of transcription products; and mechanism and regulation of the translation of messenger RNAs. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Biology 395F and 395G, or consent of instructor.

395M. **Advanced Microbial Genetics.** MIC. Restricted to microbiology students. Prokaryotic and lower eukaryote genome organization; control of gene/operator/regulon expression; chromosome replication and its control; signal transduction; protein trafficking; organelle assembly; the cell cycle and its control; developmental processes; cell-to-cell communication; and DNA polymorphisms and adaption. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

396. **Membranes and Walls of Bacteria.** MIC. Structure, biosynthesis, and function of bacterial envelopes and walls, including associated optional components. Three lecture hours a week for one semester. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and a course in general microbiology and a course in general biochemistry.

396R. **Microbiology Research Seminar.** MIC. Students present their research findings and receive feedback from faculty and peers. Designed to help students refine their presentation techniques, practice giving critical feedback, and gain familiarity with a wide variety of research topics. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

197. **Seminar in Microbiology.** MIC. One lecture hour a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Required of all molecular genetics and microbiology majors. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

397. **Advanced Genetics.** MIC. Intended mainly for first- and second-year graduate students. Selected related topics of current interest with an emphasis on molecular developmental genetics, and any needed review of classical genetics. Designed to help the student to read the literature critically, deliver a good seminar, and participate in thoughtful discussion. Three lecture hours a week for one semester. May not be counted toward the doctoral degree in microbiology. Prerequisite: Graduate standing, consent of instructor and the graduate adviser, and a course in genetics.

698. **Thesis.** EEB, MIC, PB. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. For 698A, graduate standing in the School of Biological Sciences and consent of the graduate adviser; for 698B, Biology 698A or the equivalent.

398R. **Master's Report.** EEB, MIC, PB. Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in the School of Biological Sciences and consent of the graduate adviser.

398T. **Supervised Teaching in Biological Sciences.** EEB, MIC, PB. Teaching under the close supervision of course instructors; weekly group meetings with the instructor, individual consultations, and reports throughout the teaching period. The equivalent of three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. **Dissertation.** EEB, MIC, PB. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** EEB, MIC, PB. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Biology 399R, 699R, 999R, or the equivalent.

**RELATED COURSES**

The following courses are described in the section "Marine Science," which begins on page 419.

  Topic 1: Marine Ecology. EEB.
  Topic 2: General Marine Microbiology. MIC.
  Topic 5: Ecology of Fishes. EEB.

  Topic 6: Marine Ichthyology. EEB.

Marine Science 384E. Marine Microbial Ecology. MIC.
FACILITIES FOR GRADUATE WORK

Core research facilities. The Institute for Cellular and Molecular Biology (ICMB) core facilities support cellular and molecular biology research at the University of Texas at Austin. The facilities offer a full range of services in nucleic acid and protein sequencing, microscopy, peptide synthesis, mass spectrometry, protein purifications and analysis, DNA microarrays, next-generation sequencing, X-ray crystallography, and transgenic knock-out mice. The core facilities are open to all faculty, regardless of whether or not they are ICMB members. Keeping the core facilities as comprehensive and accessible as possible increases faculty, staff, and student research productivity.

DNA and Genomics Facility. The DNA and Genomics Facility provides DNA sequencing, fragment analysis, quantitative real-time PCR, NanoDrop spectrophotometer, phosphor and fluor imaging, a plate reader, and automated liquid handling. Automated DNA sequencing is performed using capillary-based Applied Biosystems 3730 and 3130 DNA analyzers. These instruments offer high throughput and sensitivity with a capability of handling more than 800 samples per day, with reads greater than 700 base pairs and a success rate of over 90 percent. The AB 3730 and 3730XL are also used for the analysis of microsattelites, AFLP, SNPs, and other fragment applications. Quantitative real-time PCR is run on an Applied Biosystems 7900HT. This instrument allows researchers to analyze gene expression using allelic discrimination and SNP analysis in 96 or 384 wells. The quantification of DNA, RNA, and proteins using only one or two microliters without a cuvette is performed on the NanoDrop spectrophotometer. The Typhoon Trio and Bio-Rad Molecular Imager FX measure and image radioactive signals from gels or membranes and fluorescence from gels, membranes, TLC plates, and microtiter plates. Other instruments include an Agilent bioanalyzer, Beckman Biomek NX and FX pipetting robots, and a Beckman plate washer. A Berthold NightOWL is available for low-light imaging of luminescence or fluorescence in plants or animals. More information about the facility’s services is available at http://www.icmb.utexas.edu/core/DNA/.

Microscopy and Imaging Facility. The Microscopy and Imaging Facility provides extensive microscopic equipment and services for ultrastructural analysis. The facility offers assisted use and training on its instrumentation and consults on microscopy- and spectroscopy-related research. Equipment in the facility includes scanning and transmission electron microscopes; confocal and wide-field fluorescence microscopes; and cryo, paraffin, ultramicrotome, laser microdissection, and stereology systems. The facility also provides state-of-the-art image processing and analysis software. The Microscopy and Imaging Facility also manages the Flow Cytometry Laboratory, which houses both a fluorescence cell analyzer and a cell sorter. More information about the facility’s services is available at http://www.icmb.utexas.edu/core/microscopy/.

Proteomics and Metabolomics Facility. The Proteomics and Metabolomics Facility provides a variety of biomolecular analyses using sophisticated mass spectrometry instrumentation, as well as related protein support services. It is administered collectively by ICMB, the College of Pharmacy, and the University of Texas M. D. Anderson Cancer Center-Science Park. Bioplex instrumentation brings on board multiplex assays using antibody bead technology, providing sensitive quantification of cytokines and hormones. A MALDI-TOF/TOF mass spectrometer with a nano LC spotting robot is used for identification and quantification of proteins. Protein modification studies are conducted in collaboration with researchers using enrichment and mass spectrometry techniques. An LCQ provides protein/peptide molecular weight determination. Quantitative analysis of metabolites, drugs, nutrients, and natural products is performed on AB Sciex 4000 QTRAP, GC-MS, and HPLC-EC instruments. Sensitive detection is possible for a variety of metabolites including 8-oxo-dG, neurotransmitters, prostaglandins, and fatty acids. N-terminal protein/peptide sequencing, peptide synthesis, in-gel digest, and gel electrophoresis services are also available. The facility houses self-service HPLC, mass spectrometry, and analytical centrifugation systems. Researchers can utilize these instruments after a training session with the facility staff. More information about the facility’s services is available at
Mouse Genetic Engineering Facility. The Mouse Genetic Engineering Facility is located in the Animal Resource Center (ARC) and provides many services to the University research community. The primary service is the production of genetically altered mice. This includes (1) the generation of transgenic mice (pronuclear injections); (2) gene targeting in mouse embryonic stem cells by homologous recombination (electroporation and selection); and (3) the subsequent generation of knock-out/knock-in mice (blastocyst injections). Other services include embryo cryopreservation, long-term storage and recovery of frozen embryos, conversion of mouse strains to a pathogen-free status, isolation of new embryonic stem cell lines from specific existing mouse strains, and assistance with timed-mating experiments for developmental studies. Our staff has expertise in obtaining blood samples from mice as well as administering tail vein injections. The facility also maintains a specific pathogen-free barrier for the housing and husbandry of mice. More information about the facility’s services is available at http://www.icmb.utexas.edu/facilities/mouse/.

Genomic Sequencing and Analysis Facility. The Genomic Sequencing and Analysis Facility provides advanced analytical resources for analysis of DNA and RNA at whole-genome scales and extends these resources through ongoing research and development. These resources include DNA microarray and next-generation DNA sequencing equipment (Life Technologies SOLiD DNA sequencer), Agilent bioanalyzer, NanoDrop, Biomek robotic liquid handling, and arrayer capabilities. More information on services is available at http://cssb.icmb.utexas.edu/UTMCF/Services/Services.html.

Macromolecular Crystallography Facility. The Macromolecular Crystallography Facility, in Welch Hall, allows users to solve the three-dimensional structures of crystallized macromolecules using X-ray diffraction methods. Dozens of high-resolution protein structures have been solved using these facilities. The capacities of the center were recently expanded into a modern core facility. Current equipment includes two X-ray generators and three state-of-the-art detection systems. The Rigaku MicroMax 007HF generator has two detectors, one mounted with VariMax HighRes optics and the other with VariMax HighFlux optics. The HighRes optics facilitate data collection on crystal unit cells up to 300 Å in size, and the HighFlux optics provide some of the strongest radiation outside of synchrotron sources. Cryo-cooling is available for all three detectors, greatly facilitating collection of high-resolution data. The facility also contains an Art Robbins Instruments Phoenix liquid-handling robot. It uses extremely small volumes, down to 50 nl, and is ideal for high-throughput crystallization experiments. The new crystallography facility is staffed to carry out structural analysis on a service basis, or to train and assist interested users in both crystallization and collection, processing, and interpretation of X-ray data. More information about the facility’s services is available at http://www.icmb.utexas.edu/core/xray/.

Areas of Study

The Institute for Cellular and Molecular Biology provides the support and infrastructure for the largest life science graduate program at the University of Texas at Austin. The interdisciplinary graduate program in cell and molecular biology is supported by more than 130 faculty members from three colleges and over ten academic departments.

The program offers students training in seven different research tracks: bioinformatics and computational biology, biomolecular structure and function, cell and developmental biology, chemical biology and drug discovery, molecular genetics, neurobiology and plant molecular biology. Each of the tracks provides specialized courses and training for the graduate student beyond the basic core curriculum of genetics, biochemistry, molecular biology, and cell biology.

Graduate Studies Committee

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Seema Agarwala  Henry P. Ciolino
Richard W. Aldrich  David P. Crews
Hal S. Alper  Maria A. Croyle
Orly Alter  Kevin N. Duby
Eric V. Anslyn  Arturo De Lozanne
Dean R. Appling  Jaquelin P. Dudley
Nigel S. Atkinson  Johann K. Eberhart
Chandrajit L. Bajaj  Ron Elber
Halil Berberoglu  Andrew Ellington
George D. Bittner  Walter L. Fast
Henry R. Bose  Janice A. Fischer
Shawn B. Bratton  Ernst-Ludwig Florin
R. Malcolm Brown Jr.  George Georgiou
Karen S. Browning  Nace L. Golding
James J. Bull  Andrea C. Gore
Clarence Shiu Man Chan  Ellen Gottlieb
Zengjian J. Chen  Jeffrey M. Gross
Applicants must provide evidence of strong accomplishment in the natural sciences, documented by undergraduate grades and a bachelor's degree or the equivalent in an area such as one of the biological sciences, chemistry, or physics. Preparation should include at least one semester each of cell biology and molecular biology, and one year each of calculus, organic chemistry, and general physics. Coursework in genetics and biochemistry is also required. Deficiencies in undergraduate work should be corrected before application to the program.

Because the graduate program is focused on the doctoral degree, students seeking only the master's degree are not admitted.

DEGREE REQUIREMENTS

Master of Arts. The master's degree is only granted under special circumstances. The student must have the approval of the graduate adviser.

Doctor of Philosophy. The doctoral degree program requires the student to accomplish creative, independent research and to document the research in a scholarly dissertation. In preparation, the student must acquire a strong foundation in biochemistry, molecular genetics, and cell biology and a working knowledge of the area of biology in which he or she intends to conduct research. This preparation is provided by the core courses and electives required for the master's degree. The student must earn a grade of at least B- in each core course. To be admitted to candidacy for the degree, the student must formulate a feasible research program and pass a qualifying examination.

DUAL DEGREE PROGRAM

DOCTOR OF PHILOSOPHY/DOCTOR OF MEDICINE

The graduate program in cell and molecular biology participates in a dual degree program with the University of Texas Medical Branch at Galveston (UTMB). Applicants must apply separately to and be admitted to both the PhD program in cell and molecular biology at the University of Texas at Austin and the medical school at UTMB. Students accepted into the dual degree program spend their first two years in the medical school at UTMB, followed by three to four years of doctoral work at UT Austin and eighteen months of clinical rotations. The degrees are conferred separately by each institution. Additional information may be found at http://www.mdphd.utexas.edu/.

FOR MORE INFORMATION

Campus address: Louise and James Robert Moffett Molecular Biology Building (MBB) 1.220F, phone (512) 471-0957, fax (512) 471-2149; campus mail code: A4810
Mailing address: The University of Texas at Austin, Graduate Program in Cell and Molecular Biology, 1 University Station A4810, Austin TX 78712
E-mail: grad.program@icmb.utexas.edu
URL: http://www.icmb.utexas.edu/cmb/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MOLECULAR BIOLOGY: MOL

380. Advanced Readings in Molecular Biology. Individual instruction in the literature of molecular biology. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

080M. Dual MD/PhD Program with UT Medical Branch. Preclinical medical study at the University of Texas Medical Branch at Galveston. May not be taken concurrently with another course at the University of Texas at Austin. Prerequisite: Graduate standing and admission to the MD/PhD dual degree program in cell and molecular biology.

190, 390. Seminar in Molecular Biology. Lectures and discussions on current topics in molecular biology. One or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

192, 292, 392, 492, 592, 692, 792, 892, 992. Research Problems. One lecture hour a week for one semester, with additional laboratory hours. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

195. Molecular Biology Conference Course. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

395F. Genetics. Same as Biology 395F and Chemistry 395F. Basic principles of Mendelian and molecular genetics, and an exploration of the genetic toolbox using examples of analytic methods and modern manipulations. Focus on the genetic analysis of model organisms. Use of genetic tools in dissecting complex biological pathways, developmental processes, and regulatory systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing. An introductory course in genetics, such as Biology 325, is strongly recommended.

395G. Biochemistry. Same as Biology 395G and Chemistry 395G. Detailed consideration of the structure and function of proteins, with discussion of enzyme mechanisms and kinetics, the biochemistry of energy production, and the metabolism of lipids and nucleotides. Three lecture hours a week for one semester. Prerequisite: Graduate standing. A one-year undergraduate sequence in biochemistry, such as Chemistry 339K and 339L, is strongly recommended.

395H. Cell Biology. Same as Biology 395H and Chemistry 395H. Detailed consideration of mechanisms of growth control, cell regulation, mitosis, cell signaling, protein targeting, and the integration of these processes in various cellular processes. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Molecular Biology 395F and 395G, or consent of instructor.

395J. Molecular Biology. Same as Biology 395J and Chemistry 395J. Detailed consideration of prokaryotic and eukaryotic mechanisms of DNA replication and transcription; posttranscriptional processing of transcription products; mechanism and regulation of the translation of messenger RNAs. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Molecular Biology 395F and 395G, or consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in molecular biology and consent of the graduate adviser; for 698B, Molecular Biology 698A.

398T. Supervised Teaching in Molecular Biology. Teaching under close supervision of the instructor; weekly laboratory instruction of undergraduates, group meetings with the instructor, individual consultations, and reports throughout the teaching period. Three lecture hours a week for one semester. Prerequisite: Graduate standing in molecular biology.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Molecular Biology 399R, 699R, or 999R.
CHEMISTRY

Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The Mallet Chemistry Library is the most comprehensive chemistry library in the Southwest and one of the largest in the country. In addition to extensive print-based collections in all areas of chemistry and chemical engineering, the library provides access to major database resources such as SciFinder (chemical abstracts) and Beilstein Crossfire, as well as several hundred electronic scholarly journals. These resources are available through the University Libraries Web site, http://www.lib.utexas.edu/.

The Department of Chemistry and Biochemistry maintains suitably equipped and well-staffed shops for glassblowing, machine work, and electronics maintenance and design. There are service laboratories equipped for organic analysis and for work in spectrophotometry; spectropolarimetry; photoelectron, nuclear magnetic, and electron spin resonance; X-ray diffraction; and mass spectrometry. Other specialized equipment is available in various laboratories. The facilities of Information Technology Services are used in numerous research programs.

AREAS OF STUDY

Graduate study in chemistry is offered in the areas of biochemistry, chemical physics, and analytical, inorganic, organic, or physical chemistry. Each of these broad areas encompasses specialized aspects of the subject. Details are available from the chair of the department’s Graduate Admissions Committee. The separate graduate program in biochemistry is described on pages 389–391.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eric V. Anslyn</td>
<td>Michael J. Krische</td>
</tr>
<tr>
<td>Dean R. Applying</td>
<td>Alan Lambowitz</td>
</tr>
<tr>
<td>Allen J. Bard</td>
<td>Sang-Hyun Lim</td>
</tr>
<tr>
<td>Jeffrey E. Barrick</td>
<td>Hung-Wen Liu</td>
</tr>
<tr>
<td>Christopher W. Bielawski</td>
<td>Philip D. Magnus</td>
</tr>
<tr>
<td>Jennifer S. Brodbelt</td>
<td>Dmitrii E. Makarov</td>
</tr>
<tr>
<td>Karen S. Browning</td>
<td>Edward M. Marcotte</td>
</tr>
<tr>
<td>Alan Campion</td>
<td>Stephen F. Martin</td>
</tr>
<tr>
<td>James R. Chelikowsky</td>
<td>Stephen A. Monti</td>
</tr>
<tr>
<td>Alan H. Cowley</td>
<td>Charles B. Mullins</td>
</tr>
<tr>
<td>Richard M. Crooks</td>
<td>Jon D. Robertus</td>
</tr>
<tr>
<td>Ananth Dodabalapur</td>
<td>Peter J. Rosisky</td>
</tr>
<tr>
<td>Ron Elber</td>
<td>Rick Russell</td>
</tr>
<tr>
<td>Andrew Ellington</td>
<td>Jonathan L. Sessler</td>
</tr>
<tr>
<td>Richard H. Finnell</td>
<td>Jason B. Shear</td>
</tr>
<tr>
<td>John B. Goodenough</td>
<td>Dionicio R. Siegel</td>
</tr>
<tr>
<td>Marvin L. Hackert</td>
<td>Greg O. Sitz</td>
</tr>
<tr>
<td>Graeme A. Henkelman</td>
<td>John F. Stanton</td>
</tr>
<tr>
<td>David W. Hoffman</td>
<td>Keith J. Stevenson</td>
</tr>
<tr>
<td>James A. Holcombe</td>
<td>David A. Vandenbout</td>
</tr>
<tr>
<td>Bradley J. Holliday</td>
<td>Lauren J. Webb</td>
</tr>
<tr>
<td>Simon M. Humphrey</td>
<td>Katherine A. Willets</td>
</tr>
<tr>
<td>Brent L. Iverson</td>
<td>Carlton G. Willson</td>
</tr>
<tr>
<td>Kenneth Johnson</td>
<td>Robert E. Wyatt</td>
</tr>
<tr>
<td>Richard A. Jones</td>
<td>Yuhui W. Yin</td>
</tr>
<tr>
<td>Adrian T. Keatinge-Clay</td>
<td>Yan Zhang</td>
</tr>
<tr>
<td>Sean M. Kerwin</td>
<td>Xiaoyang Zhu</td>
</tr>
</tbody>
</table>

ADMISSION REQUIREMENTS

The preliminary training of students seeking a graduate degree in chemistry must include at least twenty-four semester hours of undergraduate work in chemistry, consisting of twelve or more semester hours of upper-division coursework and at least two courses (including laboratory) in organic chemistry and two in physical chemistry; one in analytical chemistry; and one in inorganic chemistry.

DEGREE REQUIREMENTS

One semester of Chemistry 398T is required of all candidates for advanced degrees.
Master of Arts. Master’s degree students must complete thirty semester hours of coursework, including a minor of at least six semester hours. No more than nine hours of upper-division work may be counted; these hours must be divided between the major and the minor. Candidates normally must also submit a thesis based on individual research. The thesis course may be counted as six of the thirty semester hours required for the degree. In general, two and one-half years are necessary to finish the Master of Arts. The Master of Arts degree with report is available for approved programs only.

Doctor of Philosophy. Doctoral degree students who plan to specialize in biochemistry or in analytical, inorganic, organic, or physical chemistry must complete six courses on the letter-grade basis in three areas of science. The qualifying examinations are usually completed within the first eighteen months in residence or before application for candidacy. The student is examined by members of the Graduate Studies Committee in his or her areas of concentration before admission to candidacy. Four to five years of full-time study are usually required to complete the Doctor of Philosophy degree program.

DUAL DEGREE PROGRAM

DOCTOR OF PHILOSOPHY/DOCTOR OF MEDICINE

The graduate program in chemistry participates in a dual degree program with the University of Texas Medical Branch at Galveston (UTMB). Applicants must apply separately to and be admitted to both the PhD program in chemistry at the University of Texas at Austin and the medical school at UTMB. Students accepted into the dual degree program spend their first two years in the medical school at UTMB, followed by at least three to four years of doctoral work at UT Austin and eighteen months of clinical rotations. The degrees are conferred separately by each institution. Additional information may be found at http://www.mdphd.utexas.edu/.

FOR MORE INFORMATION

Campus address: Robert A. Welch Hall (WEL) 2.218, phone (512) 471-3890 or (866) 471-3890, fax (512) 475-8839; campus mail code: A5300
Mailing address: The University of Texas at Austin, Graduate Program in Chemistry, Department of Chemistry and Biochemistry, 1 University Station A5300, Austin TX 78712
URL: http://www.cm.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

CHEMISTRY: CH

380L. Inorganic Reactions and Structures. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

380M. Advanced Study in Chemistry. For nonchemistry majors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, a bachelor’s degree with a major in science or mathematics, and consent of the graduate adviser in chemistry.

380N. Advanced Inorganic Chemistry: Spectroscopy and Structure. Advanced inorganic chemistry, with emphasis on structure, spectroscopy, and ligand field theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.
080R. Dual MD/PhD Program with UT Medical Branch. Preclinical medical study at the University of Texas Medical Branch at Galveston. May not be taken concurrently with another course at the University of Texas at Austin. Prerequisite: Graduate standing and admission to the MD/PhD dual degree program in chemistry.

380T. Current Concepts in Chemistry and Biochemistry: UTeach. Designed for beginning graduate students seeking a review of modern chemical concepts. Three lecture hours a week for one semester. May be repeated for credit with consent of instructor. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

381M. Advanced Analytical Chemistry. Theory and application of special methods and recent advances. Three lecture hours a week for one semester. Prerequisite: Graduate standing in chemistry and consent of instructor.

382J. Survey of Physical Chemistry. Surface chemistry and catalysis, transport properties, macromolecules, electrochemistry and electrolyte solutions, molecular thermodynamics, solution kinetics, and photochemistry. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

382K. Advanced Physical Chemistry: Introduction to Quantum Mechanics. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Chemistry 354 or the equivalent.

382L. Advanced Physical Chemistry: Statistical Mechanics. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

382M. Advanced Physical Chemistry. Quantum chemistry. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Chemistry 354, 382K, or consent of instructor.

182T, 282T, 382T, 682T. Advanced Study and Research: UTeach. Designed for beginning graduate students seeking review of modern chemical concepts. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

386J. Advanced Organic Chemistry. Advanced organic chemistry, with emphasis on theory and reaction mechanisms. Three lecture hours a week for one semester. Prerequisite: Graduate standing, six semester hours of coursework in organic chemistry, and six semester hours of coursework in physical chemistry.

386K. Advanced Organic Chemistry. Advanced organic chemistry, with emphasis on synthetic methods. Three lecture hours a week for one semester. Prerequisite: Graduate standing, six semester hours of coursework in organic chemistry, and six semester hours of coursework in physical chemistry.

387D. Physical Methods in Biochemistry and Molecular Biology. Theory of physical methods used in biochemistry and molecular biology. Three lecture hours a week for one semester. Prerequisite: Graduate standing, an undergraduate course in physical chemistry, and an undergraduate course in biochemistry.

387K. Biochemical Techniques. Discussion of procedures and equipment used in modern biochemical investigation, with laboratory work to provide experience in techniques of general importance. Two lecture hours and seven laboratory hours a week for one semester. Prerequisite: Graduate standing, six semester hours of undergraduate coursework in biochemistry, and consent of instructor.

190. Seminar in Chemistry. The equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in chemistry.

Topic 1: Analytical-Physical Chemistry.
Topic 2: Organic Chemistry.
Topic 3: Biochemistry.
Topic 4: Inorganic Chemistry.

390K. Advanced Topics in Inorganic Chemistry. Topics include magnetic resonance; organometallic, main-group, and transition metal chemistry; nonaqueous solvents; high-temperature superconductors; new developments in synthetic chemistry; and aspects of inorganic chemistry relevant to material science. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in chemistry, Chemistry 380L, and consent of instructor.

390L. Advanced Topics in Analytical Chemistry. Topics include electrochemistry, electronics, mathematical methods, mass spectrometry, and optical methods. For most topics, three lecture hours a week for one semester; for topics on electronics and optical methods, two lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

391. Advanced Topics in Organic Chemistry. Topics include organic photochemistry; molecular orbital theory; free radical chemistry; organometallic compounds; nuclear magnetic resonance and mass spectrometry; organic synthesis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

391L. Advanced Topics in Biochemistry. Topics include physical methods for the study of macromolecules; chemistry of proteins; enzyme chemistry; regulatory mechanisms for gene expression, protein-nucleic acid interactions. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

192G. Biochemistry Student Seminar. Student presentations on current research topics. The equivalent of one lecture hour a week for one semester. Prerequisite: Graduate standing and consent of instructor.

392H. Biomolecular Structure by Nuclear Magnetic Resonance Spectroscopy. Theory and application of modern nuclear magnetic resonance spectroscopy methods. Emphasis on applications to biological macromolecules, including protein and nucleic acid structure determination. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.
392W. Analytical Student Seminar. Student seminar presentations covering current research topics. Two lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

392T. Biotransformations of Drugs and Other Nonnutritive Compounds. Absorption and metabolism of naturally occurring and synthetic nonnutritive compounds. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Chemistry 394 or consent of instructor.

392U. Comparative Biochemistry. Comparative aspects of protein structure, metabolism, respiration, and cellular regulation. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Chemistry 395G and 394, or consent of instructor.

393J. Molecular Biology of the Yeast Saccharomyces. The use of yeast as a tool for the study of important areas of eukaryotic biology; the use of classical and molecular genetic techniques in the study of gene expression, DNA replication and repair, development and growth control, protein targeting, and metabolism. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Chemistry 329D or the equivalent or consent of instructor.

392N. Physical Chemistry of Macromolecular Systems. Theory of macromolecular solutions and methods for characterization of macromolecular systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and undergraduate coursework in physical chemistry or consent of instructor.

395J. Molecular Biology. Same as Biology 395J and Molecular Biology 395J. Detailed consideration of mechanisms of growth control, cell cycle regulation, mitosis, cell signaling, protein targeting, and the integration of these processes. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Chemistry 395F and 395G, or consent of instructor.

395K. Advanced Individual Study in Chemistry and Biochemistry. Supervised reading or individual tutorial sessions on advanced topics in chemistry and biochemistry. For each semester hour of credit earned, one class hour a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Graduate standing in chemistry or biochemistry and consent of the graduate adviser.

397C, 297C, 397C, 597C, 697C. Problems in Chemistry. Conference course with laboratory work. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in chemistry and consent of instructor and the graduate adviser.

398. Thesis. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in chemistry and consent of instructor.

397S. Advanced Topics in Chemistry. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in chemistry and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in chemistry and consent of the graduate adviser; for 698B, Chemistry 698A.

398T. Supervised Teaching in Chemistry. Teaching under close supervision of the instructor; weekly group meetings with the instructor; individual consultations; reports. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant in chemistry.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Chemistry 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

To provide the most advanced resources for teaching and research, the Department of Computer Science manages its own network and system of more than one thousand hosts.

A staff of sixteen, under the direction of the department’s associate chair for operations, specifies, buys, installs, and maintains this computing infrastructure. Through accounts on the department’s Unix, Windows, and Macintosh workstations, students, faculty members, and staff members have access to additional public laboratories and private equipment.

Many different computer systems are available for research use by faculty members and students in the department. The department operates a general-purpose high throughput computing (HTC) Linux cluster with over 2,000 cores, and a twenty-four terabyte, enterprise-class NetApp filer. This cluster and all public computing resources are available to users via Condor, a resource management tool for widely distributed systems. The department has an immersive theater and video wall for graphics and visualization research. There are several hundred Linux machines in public computer laboratories and over one thousand hosts.

All departmental computers are networked together using 1 Gbps or 100 Mbps Ethernet. The network, managed and maintained by departmental staff, consists of over thirty Cisco switches, with a Cisco 6509 serving as its point of presence and firewall. Network servers include a NetApp FAS3160 with thirty-six terabytes of RAIDed disk space that is used for home directory service, as well as many other file servers, print servers, and communication servers.

AREAS OF STUDY

Graduate study in computer science is offered in the areas of analysis of algorithms and programs, artificial intelligence, automated reasoning, communication protocols, compilers, computational biology, computational complexity, computational visualization, computer architecture, computer graphics, computer networks, data mining, database management, distributed systems, fault-tolerant computing, formal methods, machine learning, mathematical software, mobile and ad hoc networks, natural language processing, neural networks, numerical analysis, operating systems, parallel programming, randomized computation, real-time systems, robotics, secure computing, software construction from components, system modeling, theoretical computer science, VLSI, and wireless networks.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

J. K. Aggarwal
Lorenzo Alvisi
Chandrajit L. Bajaj
Dana H. Ballard
Don S. Batory
Alan C. Bovik
Alan K. Cline
William R. Cook
Michael D. Dahlin
Inderjit S. Dhillon
E. Allen Emerson
Donald S. Fussell
Anna Gal
Vijay K. Garg
Joydeep Ghosh
Mohamed G. Gouda
Kristen L. Grauman
Warren A. Hunt Jr.
Lizy K. John
Stephen W. Keckler
Adam R. Klivans
Simon S. Lam
Vladimir Lifschitz
Calvin Lin
Kathryn S. McKinley
Risto P. Miikkulainen

Daniel P. Miranker
Jayadev Misra
Aloysius K. Mok
Raymond J. Mooney
J. S. Moore II
Gordon S. Novak Jr.
Zhigang Pan
Dewayne E. Perry
Keshav K. Pingali
C. Greg Plaxton
Bruce W. Porter
William H. Press
Lili Qiu
Vijaya Ramachandran
Theodore S. Rappaport
Pradeep Ravikumar
Vitaly Shmatikov
Peter H. Stone
Robert A. Van De Geijn
Michael H. Walfish
Tandy Warnow
Brent R. Waters
Andrew B. Whinston
Emmett Witchel
Yin Zhang
David I. Zuckerman
ADMISSION REQUIREMENTS

Most entering graduate students have degrees in computer science. Students with degrees in other areas may be considered for admission; if admitted, they may be required to take undergraduate courses in computer science, without credit toward a graduate degree, to satisfy background requirements.

DEGREE REQUIREMENTS

FIVE-YEAR INTEGRATED BACHELOR’S AND MASTER’S PROGRAM

The Department of Computer Science offers an integrated program to enable highly motivated students with strong intellectual capacities to earn a Bachelor of Science in Computer Science and a Master of Science in Computer Science within a five-year period. The integrated program is designed to prepare students for competitive doctoral programs and provide strong leadership skills and technical depth to students entering professional positions.

MASTER OF SCIENCE

The Department of Computer Science offers two options for the master’s program. The thesis option requires thirty semester hours of coursework, which includes six hours in the thesis course. The option without thesis requires thirty semester hours of coursework.

DOCTOR OF PHILOSOPHY

The Doctor of Philosophy is a research degree for students who wish to pursue research careers in academia or industry. The main goal of the doctoral program is to prepare students to do outstanding research. Doctoral students take courses that provide the foundation on which to build their research programs, and are expected to become involved in research during their first semester and continue their involvement throughout their study at the University.

Students should complete all course requirements within a three-year period and maintain a grade point average of at least 3.00 in all computer science graduate courses. After application to candidacy, students must complete at least one year in residence.

FOR MORE INFORMATION

Campus address: T. S. Painter Hall (PAI) 5.72B, phone (512) 471-9503, fax (512) 471-7866; campus mail code: D9500
Mailing address: The University of Texas at Austin, Graduate Program, Department of Computer Science, 1616 Guadalupe, Ste. 2.408, Austin TX 78701
E-mail: csadmis@cs.utexas.edu
URL: http://www.cs.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

COMPUTER SCIENCE: CS

380C. Compilers. Basics of static analysis and transformation techniques; exploration in depth of one aspect of compilation and optimization. Three lecture hours a week for one semester. Computer Science 380C and 395T (Topic: Compilers) may not both be counted. Prerequisite: Graduate standing; Computer Science 357 and 375 are recommended.

380D. Distributed Computing I. Models of distributed systems; language issues, proving properties of distributed systems; time, clocks, partial ordering of events; deadlock and termination detection; diffusing computations; computing in hostile environments; distributed resource management. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Computer Science 372.
380J. Operating Systems Implementation. Seminar about how operating systems work. Readings and discussion about classic and recent research papers. Intensive programming assignments in the construction of a prototype operating system. Three lecture hours a week for one semester. Computer Science 380J and 395T (Topic: Operating Systems Implementation) may not both be counted. Prerequisite: Graduate standing; and an undergraduate course in operating systems, networking, or distributed systems, or consent of instructor.

380L. Advanced Operating Systems. Study of the formal structure, design principles, organization, implementation, and performance analysis of multiprogramming and/or multiprocessor computer systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 372 or consent of instructor.

380N. Systems Modeling. Theory and applications of Markovian models: birth-death models, queueing models, and networks of queues. Numerical methods: computational algorithms, approximation techniques, discrete-event simulation. Performance of scheduling disciplines: priority, time-sharing, multiple access. Three lecture hours a week for one semester. Prerequisite: Graduate standing and an undergraduate course in probability theory.

380P. Parallel Systems. Explores parallel systems, from languages to hardware, from large-scale parallel computers to multicore chips, and from traditional parallel scientific computing to modern uses of parallelism. Includes discussion of and research methods in graphics, languages, compilers, architecture, and scientific computing. Three lecture hours a week for one semester. Prerequisite: Computer Science 380P and 395T (Topic: Parallel Systems) may not both be counted. Prerequisite: Graduate standing.

380S. Theory and Practice of Secure Systems. Survey of modern security, designed to introduce the basic techniques used in the design and analysis of secure systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 353 and 372 or consent of instructor.

381K. Artificial Intelligence. Use of computers in problem solving, game playing, theorem proving, natural language understanding, and related tasks; methods of search, knowledge representation, learning, and other topics. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 351 or consent of instructor.

382M. Advanced Computer Architecture. Algorithms and their realizations, special techniques for coding, addressing, and control; integration of computer units; relations between programming and design considerations. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

383C. Numerical Analysis: Linear Algebra. Same as Computational Science, Engineering, and Mathematics 383C; Mathematics 383E; and Statistics and Scientific Computation 383C. Survey of numerical methods in linear algebra: floating-point computation, solution of linear equations, least squares problems, algebraic eigenvalue problems. Three lecture hours a week for one semester. Prerequisite: Computer Science 383C and Computer Science 383C may not both be counted. Prerequisite: Graduate standing; Computer Science 367 or Mathematics 368K; and Mathematics 340L, 341, or consent of instructor.


384G. Computer Graphics. Same as Computational Science, Engineering, and Mathematics 384G. Advanced material in computer graphics, including in-depth treatments of techniques for realistic image synthesis, advanced geometric modeling methods, animation and dynamic simulation, scientific visualization, and high-performance graphics architectures. Three lecture hours a week for one semester. Prerequisite: Graduate standing; Computer Science 354 or another introductory course in computer graphics, or equivalent background and consent of instructor.

384M. Multimedia Systems. Theoretical and practical issues in advanced systems, including multimedia systems, digital audio and video compression techniques, operating system and network support for digital audio and video, and multimedia conferencing systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and either Computer Science 356 and 372 or 380D and 380L.
384R. Geometric Modeling and Visualization. Computational image processing, computational geometry and geometric modeling algorithms with an emphasis on spatial realism, and the programmatic use of physiological simulation and visualization to quantitatively depict how things work at the molecular, cellular, tissue, organ, and system levels. Three lecture hours a week for one semester. Computer Science 384R and 395T (Topic: Graphics, Modeling, and Visualization) may not both be counted; Computer Science 384R and 395T (Topic: Multiscale Bio-Modeling and Visualization) may not both be counted; Computer Science 384R and 395T (Topic: Physically Based Geometric Modeling) may not both be counted. Prerequisite: Graduate standing, and Computer Science 354 or consent of instructor.

384V. Introduction to VLSI Design. Basic techniques required to design custom negative metal oxide semiconductor digital integrated circuits. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 352 or consent of instructor.

386C. Dependable Computing Systems. System models from synchronous to asynchronous, with emphasis on in-between models such as the timed asynchronous model. Control structures such as timed state-transition systems, and constraints in temporal and real-time logics. Analysis techniques such as model checking of timed systems, and extended Presburger arithmetic. Basic building blocks such as clock synchronization, synchronous atomic broadcast, time-bounded membership protocols, real-time scheduling theory, and state recovery methods. Practical implementation issues such as special operating system data structures and algorithms, open system design, and security concerns. Three lecture hours a week for one semester. Computer Science 386C and 395T (Topic: Dependable Computing Systems) may not both be counted. Prerequisite: Graduate standing, and an undergraduate course in operating systems or consent of instructor.

386D. Database Systems. Introduction to the principles of database systems, including fundamental ideas and algorithms used in the construction of centralized database management systems, distributed database management systems, and database machines and their roles in Internet infrastructure. Topics include data storage and indexing algorithms, query processing and optimization, concurrency control, recovery, XML and object-oriented databases, database evaluation and tuning, and recent directions in database research. Three lecture hours a week for one semester. Computer Science 386 and 386D may not both be counted; Computer Science 386D and 387H may not both be counted. Prerequisite: Graduate standing and Computer Science 347 and 375.

386K. Numerical Treatment of Differential Equations. The analysis of numerical methods for solving ordinary and partial differential equations. Three lecture hours a week for one semester. Only one of the following may be counted: Computational and Applied Mathematics 386K, Computer Science 386K, Mathematics 383G. Prerequisite: Graduate standing; and Computational and Applied Mathematics 383D, Computer Science 383D, Mathematics 368K, 383F, or consent of instructor.

386L. Programming Languages. Topics include formal syntax representations, program correctness, typing, and data abstraction. Features and problems in languages that allow parallelism. Exploration of different programming styles, such as imperative, functional, logic, data flow, and object-oriented programming. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 345 or consent of instructor.

386M. Communication Networks. Switching techniques, network and protocol architectures, communication protocols, resource allocation problems, internetworking, design and analysis methods. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386S. Network Protocol Security. Techniques and research in Internet and network security. Three lecture hours a week for one semester. Computer Science 386S and 395T (Topic: Secure Network Protocols) may not both be counted. Prerequisite: Graduate standing.

386W. Wireless Networking. Fundamental concepts and principles of wireless network technologies and protocol design, ranging from physical layer to application layer, and in-depth studies of current wireless research. Three lecture hours a week for one semester. Computer Science 386W and 395T (Topic: Wireless Networking) may not both be counted. Prerequisite: Graduate standing.

388. Natural Language Processing. Computational methods for syntactic and semantic analysis of structures representing meanings of natural language; study of current natural language processing systems; methods for computing outlines and discourse structures of descriptive text. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and a course in artificial intelligence or consent of instructor.

388C. Combinatorics and Graph Theory. Counting, matching theory, extremal set theory, Ramsey theory, probabilistic method, linear algebra method, coding theory. Applications to computer science, including randomized algorithms. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 316 or the equivalent or consent of instructor. An understanding of elementary proof and counting techniques is assumed.

388F. Automata and Formal Languages. Formal grammars, languages and related classes of automata, language hierarchies, operations on languages, decidability, related complexity issues, closure properties, other classes of automata. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Linguistics 340 or consent of instructor.
388G. Algorithms: Techniques and Theory. Sorting and searching algorithms, graph algorithms, algorithm design techniques, lower bound theory, fast Fourier transforms, NP-completeness. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 357 or the equivalent or consent of instructor.

388H. Cryptography. Surveys the foundations of cryptography from formal notions of security to fundamental protocols, including one-way functions, encryption, pseudorandom generators, signature schemes, and zero-knowledge. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 353 or consent of instructor.

388L. Introduction to Mathematical Logic. Introduction to some of the principal topics of mathematical logic: propositional and predicate calculus; Gödel’s completeness theorem; first-order theories; formalizing mathematical reasoning; first-order arithmetic; recursive functions; Gödel’s incompleteness theorems; axiomatic set theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing and experience in abstract mathematical thinking.

388M. Communication Complexity. Covers the most important models of communication complexity and their applications, including recent research results and various open problems. Three lecture hours a week for one semester. Computer Science 388M and 395T (Topic: Communication Complexity) may not both be counted. Prerequisite: Graduate standing.

388P. Parallel Algorithms. Parallel algorithm design on shared memory machines (PRAMs); parallel complexity results; lower bounds; relationship of PRAM model to other models of parallel computation. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Computer Science 357 or the equivalent, or Computer Science 388G, or consent of instructor.

388R. Randomized Algorithms. The design and analysis of efficient randomized algorithms. Three lecture hours a week for one semester. Computer Science 388R and 395T (Topic: Randomized Algorithms) may not both be counted. Prerequisite: Graduate standing; and Computer Science 357 or consent of instructor.

388S. Formal Semantics and Verification. Sequential execution: partial and total correctness; deductive, operational, and denotational semantics; formal derivation of programs; parallel execution: partial correctness, deadlock, and starvation; methodology, parallel versus distributed execution. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

388T. Theory of Computation. Models of computation, decidability, complexity theory, relations between complexity classes, reductions, and completeness; NP-complete problems, randomized computation; approximability; circuit complexity; parallel computation. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Computer Science 353 or 357 or consent of instructor.

389M. Principles of Object-Oriented Software Technology. Fundamental principles of object-oriented software engineering, including design and implementation of object-oriented analysis methods, software architectures, translators of high-level programming language representations, translations to multiple-software architectures. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Computer Science 371S or the equivalent, and consent of instructor.

389R. Recursion and Induction I. The development of a formal theory for reasoning about computer programs, with emphasis on recursively defined functions in the LISP style and proof by mathematical induction. Heavy emphasis on student discovery and presentation of proofs. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390D. Distributed Computing II. Synchronous and asynchronous algorithms, with particular emphasis on notations for expressing the algorithms and logics for reasoning about them. Algorithms from a variety of application areas and for a variety of architectures. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Computer Science 380D.

391D. Data Mining: A Mathematical Perspective. Mathematical and statistical aspects of data mining. Topics include supervised learning (regression, classification, support vector machines) and unsupervised learning (clustering, principal components analysis, dimensionality reduction). Uses technical tools that draw from linear algebra, multivariate statistics, and optimization. Three lecture hours a week for one semester. Computer Science 391D and 395T (Topic: Data Mining: A Statistical Learning Perspective) may not both be counted. Prerequisite: Graduate standing, and Mathematics 341 or the equivalent.

391K. Artificial Intelligence II. Advanced course in artificial intelligence. Topics include planning, probabilistic reasoning, truth maintenance, abduction, model-based diagnosis, and speech recognition. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 381K or equivalent knowledge of artificial intelligence and LISP.

391L. Machine Learning. Computing systems that automatically improve their performance with experience, including various approaches to inductive classification such as version space, decision tree, rule-based, neural network, Bayesian, and instance-based methods; as well as computational learning theory, explanation-based learning, and knowledge refinement. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 381K or equivalent knowledge of artificial intelligence and LISP.

392C. Methods and Techniques for Parallel Programming. Models of parallel fundamental concepts for representation of parallel computation structures, study of representative parallel programming languages, formulation of languages and translation methods, translation of parallel programs to multiple targets, laboratory exercises in parallel programming. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.
392F. Feature-Oriented Programming. Software design and program synthesis, including automatic programming, transformation systems, generative programming (metaprogramming), software product lines, feature models, compositional verification, metamodel protocols and aspect-oriented programming, feature interactions, multidimensional separation of concerns, modularly extensible programming languages, program algebras and category theory, and model-driven engineering. Three lecture hours a week for one semester. Computer Science 392F and 395T (Topic: Feature-Oriented Programming) may not both be counted. Prerequisite: Graduate standing.

393C. Agent-Based Electronic Commerce. Focuses on the intersection of computer science (including multiagent systems and machine learning), economics, and game theory. Explores economic mechanisms of exchange suitable for use by automated intelligent agents, including auctions and auction theory, game theory and mechanism design, and autonomous bidding agents. Students demonstrate programming proficiency in a trading agent competition. Three lecture hours a week for one semester. Computer Science 393C and 395T (Topic: Agent-Based Electronic Commerce) may not both be counted. Prerequisite: Graduate standing.

393D. Topics in Numerical Analysis. Recent topics have included numerical methods in ordinary differential equations, numerical methods in partial differential equations, computational problems in linear algebra, numerical solution of systems of equations, numerical methods in functional approximation, numerical integration. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

393N. Numerical Solution of Elliptic Partial Differential Equations. Same as Mathematics 393N. The numerical solution of large systems of linear algebraic equations arising in the solution of elliptic partial differential equations by discretization methods. Three lecture hours a week for one semester. Computational and Applied Mathematics 393M and Computer Science 393N may not both be counted. Prerequisite: Graduate standing; and Computational Science, Engineering, and Mathematics 383K (or Computational and Applied Mathematics 386K), Computer Science 386K, Mathematics 387C (or 383G), or consent of instructor.

393R. Autonomous Robots. Covers the steps necessary to create and program fully functional teams of autonomous robots, including locomotion, object manipulation, vision (segmentation and object detection), localization, interrobot communication, Kalman filters and control theory, individual behavior creation, and multiagent coordination and strategic reasoning. Three lecture hours a week for one semester. Computer Science 393R and 395T (Topic: Autonomous Robots) may not both be counted. Prerequisite: Graduate standing.

394C. Algorithms for Computational Biology. Algorithm design in computational molecular biology, with a focus on multiple sequence alignment and phylogeny (evolutionary history) reconstruction. Topics include the design and analysis of algorithms under probabilistic models of evolution, heuristics, and exact solutions for NP-hard optimization problems. Three lecture hours a week for one semester. Computer Science 394C and 395T (Topic: Algorithms for Computational Biology) may not both be counted. Prerequisite: Graduate standing, and Computer Science 357 or the equivalent.

394F. Knowledge Representation and Reasoning. Surveys the research and practice of building knowledge systems, including knowledge representation, automated reasoning, knowledge acquisition, and explanation generation. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Computer Science 381K or the equivalent or consent of instructor.

394N. Neural Networks. Biological information processing; architectures and algorithms for supervised learning, self-organization, reinforcement learning, and neuro-evolution; theoretical analysis; hardware implementations and simulators; applications in engineering, artificial intelligence, and cognitive science. Three lecture hours a week for one semester. Prerequisite: Graduate standing. Computer Science 375 and 381K are recommended.

394P. Automatic Programming. Automatic generation of computer programs from high-level specifications. Program analysis, optimization, and transformation; partial evaluation; object-oriented programming; transformation of formal specifications; specialization of generic procedures; views. Three lecture hours a week for one semester. Prerequisite: Graduate standing. Computer Science 375 and 381K are recommended.

394R. Reinforcement Learning: Theory and Practice. Introduces the theory and practice of modern reinforcement learning, with emphasis on temporal difference learning algorithms. Three lecture hours a week for one semester. Computer Science 394R and 395T (Topic: Reinforcement Learning: Theory and Practice) may not both be counted. Prerequisite: Graduate standing.

195, 295, 395. Conference Course. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only, and some are offered on the letter-grade basis only; these sections are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

195T, 395T. Topics in Computer Science. From eight to fifteen topics are offered each semester. One or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; complete prerequisite varies with the topic and is given in the Course Schedule.

Topic 1: Parallel Computations. Computational and Applied Mathematics 395T (Topic 1: Parallel Computations) and Computer Science 395T (Topic 1) may not both be counted.
396. Research Practice and Experience. Open only to those in their first two years as graduate students in computer science. Designed to provide an early research experience for new doctoral students in computer science. Students conduct an independent research project and present the results. Individual instruction. Offered on the credit/no credit basis only. May not be counted toward a master’s degree in computer science. Prerequisite: Graduate standing.

396M. Advanced Networking Protocols. Topics include routing, multiple access, internetworking, security, performance models, and verification methods. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in computer science and consent of the graduate adviser; for 698B, Computer Science 698A.

398T. Supervised Teaching in Computer Science. Supervised teaching experience, and seminar focused on curriculum construction and teaching methods. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Computer Science 399R, 699R, or 999R.

HUMAN DEVELOPMENT AND FAMILY SCIENCES

Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The Department of Human Development and Family Sciences is housed in the Sarah M. and Charles E. Seay Building, which provides excellent resources for teaching and research. Computer facilities are extensive. In addition to the facilities of Information Technology Services, students have access to the department’s computer laboratory, a state-of-the-art facility equipped with advanced computers and statistical software. These resources are supplemented by extensive computer equipment in individual faculty laboratories.

The HDFS Reference Room houses a noncirculating collection of more than five hundred volumes and twenty journals.

The half-day preschool and infant/toddler programs of the University Child and Family Laboratory provide a setting for research by faculty members and graduate students, a facility for student observation and training, and a model program for children and their families. They also provide opportunities for family involvement in the classroom, parent education programs, parent conferences, and family research. Because the laboratory has served Austin families for over eighty years, the opportunities for multigenerational and longitudinal research are significant.

The department has extensive facilities for observing and recording social interaction. The Marital and Family Interaction Laboratory is available for recording husband-wife and family interaction in a comfortable setting. The laboratory consists of a naturalistic living room connected to well-equipped control rooms that enable interactions to be recorded unobtrusively. The facility is augmented by numerous other one-way observation and coding rooms that enable recorded data to be analyzed using state-of-the-art computer-video analysis systems.

The department also has excellent facilities for conducting survey research. These include a series of individual interview rooms and a telephone research center.

Several rich sets of data, many of which include longitudinal data from families, are housed in the department and available to graduate students for research. These sets of data focus on a wide range of topics, including the impact of courtship experiences on marriage; the prediction of divorce and remarriage.
and their impact on children; parent-child interaction; the connection between family and peer relationships; the connection between work roles and family relationships; and the impact on children of poverty, television, child care policy, and adoption policy.

AREAS OF STUDY

The graduate program in human development and family sciences is designed to prepare students for research, teaching, and administrative positions in colleges and universities and for positions in government, policy-related research organizations, and other public and private settings. The program emphasizes research and theory on the interplay among individual development, family relationships, and institutions outside the family. Development of the individual is considered within the contexts of the family, peer group, community, and culture. The family is studied as a system of relationships, with attention to roles, communication, conflict resolution and negotiation, and family members’ perceptions of each other and of their family. Public policies and care settings outside the family are among the community influences considered in relation to the development of individuals and families. The program emphasizes the investigation of the family and other social processes that contribute to competence and optimal development in individuals from birth to maturity and how such competence is reflected in interpersonal relationships and family interactions.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Edward R. Anderson
Robert Crosnoe
Theodore H. Dix
Elizabeth Thompson Gershoff
Marcie Elizabeth Joy Gleason
Sue A. Greninger
Nancy L. Hazen-Swann
Aletha C. Huston
Ted L. Huston
Deborah B. Jacobvitz
Su Yeong Kim
Karrol A. Kitt
Judith H. Langlois
Timothy J. Loving
Lisa Ann Neff
Catherine A. Surra
Anita L. Vangelisti

DEGREE REQUIREMENTS

Master of Arts. The master’s degree requires completion of at least thirty-six semester hours of coursework: a core course sequence of fifteen semester hours, consisting of theoretical and methodological foundations courses; twelve hours in research and thesis; and nine hours of electives. The graduate program in human development and family sciences is designed primarily to lead to the Doctor of Philosophy degree. Students normally earn the Master of Arts degree only in the course of work leading to the doctoral degree. Further information is available from the graduate adviser.

Doctor of Philosophy. Detailed descriptions of admission procedures and program requirements are available from the graduate adviser. Work leading to the Doctor of Philosophy includes: (1) the substantive major, which consists of a cohesive sequence of courses in human development and family sciences and related disciplines; (2) coursework in research design and statistics; (3) the supporting program, which consists of work complementary to the substantive major; (4) ongoing supervised research experience; (5) a predoctoral research project (the equivalent of a master’s thesis); (6) a comprehensive paper that reviews the student’s area of specialization; and (7) the dissertation.

FOR MORE INFORMATION

Campus address: Sarah M. and Charles E. Seay Building (SEA) 1.432A, phone (512) 475-8800, fax (512) 475-8662; campus mail code A2702
Mailing address: The University of Texas at Austin, Graduate Program in Human Development and Family Sciences, School of Human Ecology, 1 University Station A2702, Austin TX 78712
E-mail: he-hdfgrad@utlists.utexas.edu
URL: http://www.he.utexas.edu/hdfs/index.php
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after this catalog was published.

HUMAN DEVELOPMENT AND FAMILY SCIENCES: HDF

380K. Research Methods. Two lecture hours and one and one-half laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in human development and family sciences, or graduate standing and consent of instructor; and three semester hours of coursework in statistics.
Topic 1: Research Methods in Human Development and Family Sciences. Human Development and Family Sciences 480K (Topic 1) and 381K may not both be counted.
Topic 2: Analysis of Structure and Change in Dyadic Relationships.
Topic 4: Advanced Regression and Structural Models.

192, 292, 392, 692. Research Problems. Directed research in various topics in the area of human development and family sciences. One, two, three, or six lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in human development and family sciences, or graduate standing and consent of instructor.
Topic 1: Child Development.
Topic 2: Family Relationships.
Topic 3: Marital Relationships.
Topic 4: Peer Relationships.
Topic 6: The Family and Public Policy.

394. Graduate Seminar. Seminars in various topics in the area of human development and family sciences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in human development and family sciences, or graduate standing and consent of instructor.
Topic 1: Parent-Child Interaction. Offered on the credit/no credit basis only.
Topic 2: Family-Peer Relationships. Offered on the credit/no credit basis only.
Topic 3: Marital Relationships. Offered on the credit/no credit basis only.

395. Recent Advances in Human Development and Family Sciences. Research and theory focused on the interplay between individual development, family relationships, and institutions and relationships outside the family. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in human development and family sciences, or graduate standing and consent of instructor.
Topic 1: Family Development and Interaction.
Topic 2: Contextual Influences on Individual and Family Development.

396. Theories and Research in Human Development and Family Sciences. Three lecture hours a week for one semester. Human Development and Family Sciences 396 and 496K may not both be counted. Human Development and Family Sciences 396 and 496L may not both be counted. Prerequisite: Graduate standing.

397P. Practicum in Human Development and Family Sciences. Practicum hours to be arranged. Prerequisite: Graduate standing and consent of the graduate adviser.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in human development and family sciences and consent of the graduate adviser; for 698B, Human Development and Family Sciences 698A.
398T. Supervised Teaching in Human Development and Family Sciences. Teaching under close supervision, group meetings, individual conferences, and reports. Conference course. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Human Development and Family Sciences 399R, 699R, or 999R.

HUMAN ECOLOGY

In addition to the following course, the School of Human Ecology offers graduate degree programs in human development and family sciences, nutritional sciences, and textile and apparel technology. These programs are described elsewhere in this chapter.

HUMAN ECOLOGY: H E

392. Research Problems. Problems may be chosen from the areas of family and consumer economics or textiles and apparel. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

MARINE SCIENCE

Master of Science in Marine Science
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Facilities for graduate work in marine science are located at the shoreside laboratory of the Marine Science Institute in Port Aransas. The institute is located on the Aransas Pass ship channel among the dunes at the tip of Mustang Island, with easy access to bays, beaches, and the Gulf of Mexico. Environmental systems nearby include the hypersaline Laguna Madre, seagrass meadows, fresh and salt water marshes, and the continental shelf. The Port Aransas facility offers a specialized library, classrooms, laboratories, and a flowing seawater system. The institute’s fleet includes the 57-foot R/V Katy and ten smaller boats. In addition there is a pool of four-wheel-drive vehicles for work in and around the local habitats. The shoreside research and teaching facilities also include a cafeteria, dormitories, and graduate student apartments.

Graduate students take their early coursework in Austin, including supporting work in other departments. Many courses taught in Port Aransas are available to students on the Austin campus via videoconference facilities. Normally the first academic year is spent in Austin. Most students then reside in Port Aransas while they undertake thesis and dissertation research at the Marine Science Institute. These students also take additional instruction at the institute, including organized courses and seminars.

AREAS OF STUDY

Graduate study is organized around a curriculum with three core areas: fish physiology and ecology, ecosystems dynamics, and biogeochemistry. Each of these broad core areas includes specialized topics. Further information is available from the graduate adviser.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Edward J. Buskey
Kenneth H. Dunton
Deana L. Erdner
Lee A. Fuiman
Wayne S. Gardner
Gloria J. Holt
Zhanfei Liu
James W. McClendon

Dong-Ha Min
Pablo Munguia
Luiz Alves Rocha Filho
Gerald C. Shank
Peter Thomas
Tracy A. Villareal
Benjamin D. Walther

ADMISSION REQUIREMENTS

A prospective student’s undergraduate training should include twenty-four semester hours in one of the life or physical sciences. At least twelve of these hours must be in upper-division work. Adequate preparation in mathematics is expected of all students.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN MARINE SCIENCE

For the master’s degree, students must complete at least thirty semester hours of acceptable graduate work in marine science and related natural sciences, including Marine Science 698. Each student must complete the three core courses listed below. Six to nine hours of graduate credit in the natural sciences, outside of the area of specialization selected by the student, make up the minor or supporting area. These may include courses from the other core areas of marine science.

DOCTOR OF PHILOSOPHY

Doctoral candidates must complete the three core courses listed below, for a total of twelve hours. While additional courses are not specified, each student is expected to complete advanced courses as required by the Graduate Studies Committee or the supervising committee.

Students are expected to fulfill all requirements for candidacy by the end of the second year. This involves, as a minimum, completion of the required core courses, passage of a qualifying examination to demonstrate competence in the core areas, passage of a comprehensive examination to demonstrate mastery of the chosen area of specialization, and selection of a dissertation committee and supervising professor.

Further information on graduate work and on available fellowships and assistantships may be found at http://www.utmsi.utexas.edu/ and by consultation with the graduate adviser.

CORE COURSES

Marine Science 481C, Marine Ecosystem Dynamics
Marine Science 482C, Marine Biogeochemistry
Marine Science 483C, Adaptations to the Marine Environment

FOR MORE INFORMATION

Location: 750 Channel View Drive, Port Aransas, phone (361) 749-6801, fax (361) 749-6777; campus mail code: T2500
Mailing address: University of Texas Marine Science Institute, Graduate Program, 750 Channel View Drive, Port Aransas TX 78373-5015
E-mail: gradinfo@utlists.utexas.edu
URL: http://www.utmsi.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MARINE SCIENCE: MNS

180, 380, 680. Research in Marine Science. Research work on the Texas coast. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.
481C. Marine Ecosystem Dynamics. Interactions between organisms and the physical processes that regulate productivity and distribution of marine life in oceanic and coastal ecosystems. Four lecture hours a week for one semester. Prerequisite: Graduate standing; and either consent of instructor or the following: six semester hours of coursework in biological sciences chosen from Biology 311C, 311D, and the equivalent; and Chemistry 301 and 302, or the equivalent.

382. Principles of Marine Science. Lectures, laboratory, and fieldwork. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 6: Marine Ichthyology. Systematics of fishes, including major classifications, comparative anatomy, embryology, and general distribution. Additional prerequisite: Comparative vertebrate anatomy or consent of instructor.

Topic 9: Endocrinology. Endocrinology, with special reference to lower vertebrates and the evolution of control systems. Marine Science 352 (Topic 9: Endocrinology) and 382 (Topic 9) may not both be counted. Additional prerequisite: Courses in physiology and consent of instructor.

Topic 14: Biology of Seagrasses. Analyses of plant and animal characteristics of seagrass ecosystems, including biomass, reciprocal salinity transplants, productivity. Marine Science 352 (Topic 14: Biology of Seagrasses) and 382 (Topic 14) may not both be counted.

482C. Marine Biogeochemistry. Study of chemical, biological, geological, and physical processes that influence cycling of bioactive elements in marine waters and sediments. Four lecture hours a week for one semester. Prerequisite: Graduate standing; and either consent of instructor or the following: Physical Science 303 and 304, or the equivalent; Chemistry 301, 302, 310M, and 310N, or the equivalent; and six semester hours of coursework in biological sciences chosen from Biology 311C, 311D, and the equivalent.

383. Topics in Marine Science. Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Biogeochemistry of Carbon. Production, distribution, composition, and preservation of organic matter in the sea. Marine Science 353 (Topic 1: Biogeochemistry of Carbon) and 383 (Topic 1) may not both be counted.

Topic 7: Isotope Ecology. Consideration of the stable hydrogen, carbon, nitrogen, and sulfur stable isotope ratio variations in ecological settings, including chemical fundamentals; current literature on food-webs and source studies. Additional prerequisite: Graduate standing in one of the natural sciences.

Topic 8: Benthic Plants and Animals. Interactions among organisms, sediments, and physical processes of estuarine systems, including the factors that regulate primary and secondary productivity.

Topic 10: Methods in Marine Science. Introduction through laboratory and field work to the methods of marine science and oceanographic research. Topics include small boat handling and safety; field collection of physical, chemical, and biological data; and laboratory analysis of seawater chemistry and marine organisms.

Topic 11: Global Change. Study of natural and anthropogenically mediated changes in the earth’s climate and biogeochemical cycles.


Topic 13: Marine Botany. Introduction through lectures and field work to the diversity and importance of marine vegetation of the South Texas coast. Includes the evolution, taxonomy, ecology, physiology, and trophic importance of marine vegetation.


Topic 15: Molecular Methods in Marine Science. Introduction to the principles and methods of molecular biology and the application of molecular techniques to research in marine science.

Topic 16: Zooplankton Ecology. Advanced study of the morphological, physiological, and behavioral adaptations of zooplankton to their environment.

Topic 17: Coastal Watersheds. Covers water use, land use and land cover change, and climate change as they relate to biological, physical, and geochemical processes in watersheds. Includes the impact of changing watershed export on coastal ocean ecosystems. Emphasizes case studies on different regions of the United States.

483C. Adaptations to the Marine Environment. The physiological basis for organismal and population-level responses to marine environments. Four lecture hours a week for one semester. Prerequisite: Graduate standing; and either consent of instructor or the following: six semester hours of coursework in biological sciences chosen from Biology 311C, 311D, and the equivalent; and Chemistry 301 and 302, or the equivalent.

384C. Benthic Ecology. Interactions among organisms, sediments, and physical processes of estuarine and oceanic bottoms. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Marine Science 354 or the equivalent, and consent of instructor.

384E. Marine Microbial Ecology. Metabolism of photosynthetic and chemosynthetic microorganisms in the sea. Three lecture hours and eight laboratory hours a week for one semester. Marine Science 354E and 384E may not both be counted. Prerequisite: Graduate standing; six semester hours of coursework in biological science chosen from Biology 311C, 311D, or the equivalent; Chemistry 301 and 302, or the equivalent; and consent of instructor.
384F. Marine Geology. Development of ocean basins; marine and coastal depositional environments, processes, and sedimentary parameters; marine field techniques. Three lecture hours a week for one semester. Marine Science 354F and 384F may not both be counted. Prerequisite: Graduate standing; six semester hours of coursework in general chemistry or mineralogy; six semester hours of coursework in biology or paleontology; and six semester hours of upper-division coursework in geological sciences or consent of instructor.

384J. Marine Ecology. Principles of competition and of predator-prey, herbivore-plant, and reproductive interactions within diverse marine phyla. Three lecture hours a week for one semester. Prerequisite: Graduate standing, a basic course in biological science, and consent of instructor.

384K. Ecology of Fishes. Organismal, population, and community ecology of marine and freshwater fishes. Three lecture hours a week for one semester. Prerequisite: Graduate standing in marine science or biological sciences; and consent of instructor.

384L. Marine Chemistry. Chemical processes in the sea. Three lecture hours and eight laboratory hours a week for one semester. Prerequisite: Graduate standing, general physics, and six semester hours of upper-division coursework in chemistry.

384T. Biological Oceanographic Processes. An advanced course in biological processes in oceanic and coastal waters, with emphasis on empirical and theoretical concepts of marine ecosystem dynamics, primary and secondary production, and detrital cycling. Three lecture hours and eight laboratory hours a week for one semester. Prerequisite: Graduate standing; and either consent of instructor or the following: six semester hours of coursework in biological sciences chosen from Biology 311C, 311D, and the equivalent; and Chemistry 301 and 302, or the equivalent.

384U. Reproductive Physiology of Fishes. Endocrine and environmental control of reproductive cycles in teleost fishes. Three lecture hours a week for one semester. Prerequisite: Graduate standing, a beginning course in physiology, and consent of instructor.

385E. Marine Macrophytes. A lecture, laboratory, and field course that examines the systematics, ecology, and productivity of marine macroalgae and seagrasses, strategies and seasonal patterns of growth, photosynthesis, and carbon metabolism in relation to in situ light environments. Three lecture hours a week for one semester, with forty hours of laboratory and fieldwork. Prerequisite: Graduate standing, six semester hours of upper-division coursework in biology, and consent of instructor.

385F. Environmental Modeling. Introductory course in modeling, with emphasis on the models used in ecology, oceanography, and earth sciences. Two lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Graduate standing in marine science and consent of instructor.

386. Phytoplankton Ecology. The interactions of physiology, morphology, and behavior of microalgae with physical, chemical, and biological features of the environment as related to the distribution of marine phytoplankton. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor. Biology 478L, 448L or 455L, and 456L or 373.

387. Planktonic Processes. Advanced study of processes that affect the distribution and abundance of marine planktonic organisms, primary and secondary production in marine planktonic environments, and trophic interactions between planktonic species. Three lecture hours a week for one semester. Marine Science 383 (Topic 9: Planktonic Processes) and 387 may not both be counted. Prerequisite: Graduate standing and consent of instructor.

188, 388. Marine Research Training Cruise. Shipboard training in marine research through participation in research projects and completion of report. One five- to seven-day cruise; additional laboratory work is required for 388. Prerequisite: Graduate standing.

191. Seminar in Marine Science. Recent advances in the marine sciences, discussed by students, faculty and staff members, and guest lecturers. Topics to be announced. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in marine science and consent of the graduate adviser; for 698B, Marine Science 698A.

398T. Supervised Teaching in Marine Science. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Marine Science 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

The Kuehne Physics Mathematics Astronomy Library has a broad range of mathematical literature for study and research. The collection offers access to a wide variety of print-based and electronic research tools, including bibliographic databases and research and teaching journals in all areas of mathematics. The collection of e-journals is extensive. Electronic resources are accessible through the University Libraries Web site, http://www.lib.utexas.edu/.

The Department of Mathematics computer system is available for use in connection with courses and investigations in both pure and applied mathematics.

AREAS OF STUDY

Graduate study in mathematics is offered in the areas of algebra, number theory, analysis, topology, geometry, applied mathematics, probability and statistics, numerical analysis, and actuarial mathematics.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Daniel J. Alcock
- Todd J. Arbogast
- Efrain P. Armendariz
- Chandrakant L. Bajaj
- William Becker
- David D. Ben-Zvi
- Klaus R. Bichteler
- Andrew Justin Blumberg
- Patrick L. Brockett
- Luis A. Caffarelli
- Thomas Chen
- Mirela Ciperiani
- Alan K. Cline
- Katherine M. Davis
- Rafael De La Llave
- John D. Dollard
- Bjorn Engquist
- Alessio Figalli
- Daniel S. Freed
- Irene M. Gamba
- John E. Gilbert
- Robert E. Gompf
- Lorenzo A. Sadun
- Mikhail Sirbu
- Michael P. Starbird
- Philip U. Teisman
- Yen-Hsi Tsai
- Karen Uhlenbeck
- Jeffrey D. Vaaler
- Alexis F. Vasseur
- James W. Vick
- Mikhail M. Vishik
- Jose F. Voloch
- Tandy Warnow
- Mary F. Wheeler
- Lexing Ying
- Thaleia Zariphopoulou
- Gordan Zitkovic
- David I. Zuckerman
- Ondrej Turek

DEGREE REQUIREMENTS

Master of Arts. Most students take thirty semester hours of coursework and the report course. The thirty hours are divided into major and minor areas. The major consists of mathematics courses, and the minor area consists of courses that are related to mathematics. Students should consult the graduate adviser about the courses that are allowable for the minor. Students must complete eighteen to twenty-four hours in the major area and six to twelve hours in the minor area. Some students qualify for an option of completing thirty-three semester hours of coursework (eleven courses) without thesis or report; consult the graduate adviser for details.

A special concentration in actuarial mathematics is available. Students in this concentration may select one of two options. The report option requires thirty semester hours of coursework (ten courses) and the report course. The option without thesis or report requires thirty-three semester hours of coursework (eleven courses). The major and minor requirements are the same as those described in the preceding paragraph except that the option without thesis or report requires seven to nine courses in the major area and two to four courses in the minor area. For both options, no more than nine semester hours of upper-division coursework may be counted.

Doctor of Philosophy. A detailed description of the procedure for admission to candidacy is available from the graduate adviser. Each student is first required to pass preliminary examinations. A small advisory committee is then set up to approve the student’s choice of coursework. This committee administers an advanced examination in the chosen area of specialization. The
preliminary examinations are given once each semester. The advanced examination may be given by mutual agreement of the student and the advisory committee at any time within a year after the student has passed the preliminary examinations; the student must pass the advanced examination before admission to candidacy will be approved.

FOR MORE INFORMATION

Campus address: Robert Lee Moore Hall (RLM) 8.100, phone (512) 471-7711, fax (512) 471-9038; campus mail code: C1200
Mailing address: The University of Texas at Austin, Graduate Program in Mathematics, Department of Mathematics, 1 University Station C1200, Austin TX 78712
E-mail: gradadv@math.utexas.edu
URL: http://www.ma.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

MATHEMATICS: M

380C. Algebra. A survey of algebraic structures, including groups, fields, rings, and modules. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor or the graduate adviser.

380D. Algebra. Continuation of Mathematics 380C. Three lecture hours a week for one semester. Prerequisite: Graduate standing, consent of instructor or the graduate adviser, and Mathematics 380C.

381C. Real Analysis. Same as Computational Science, Engineering, and Mathematics 385R. Measure and integration over abstract spaces; Lebesgue’s theory of integration and differentiation on the real line. Three lecture hours a week for one semester. Computational and Applied Mathematics 381R and Mathematics 381C may not both be counted. Prerequisite: Graduate standing and consent of instructor or the graduate adviser.

381D. Complex Analysis. Same as Computational Science, Engineering, and Mathematics 385S. Introduction to complex analysis. Three lecture hours a week for one semester. Computational and Applied Mathematics 381D and Mathematics 381D may not both be counted. Prerequisite: Graduate standing and consent of instructor or the graduate adviser.

381E. Functional Analysis. Introduction to functional analysis. Three lecture hours a week for one semester. Computational and Applied Mathematics 381S and Mathematics 381E may not both be counted. Prerequisite: Graduate standing; Computational Science, Engineering, and Mathematics 385R (or Computational and Applied Mathematics 381R) or Mathematics 381C; and consent of instructor or the graduate adviser.

382C. Algebraic Topology. Surfaces, covering spaces, fundamental group, and homology. Three lecture hours a week for one semester. Prerequisite: Graduate standing, an undergraduate course in topology, and consent of instructor or the graduate adviser.

382D. Differential Topology. Continuation of Mathematics 382C. Manifolds and maps, differential forms, transversality, and intersection theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing, an undergraduate course in topology, and consent of instructor or the graduate adviser.

382E. Advanced Algebraic Topology. Continuation of Mathematics 382C. Three lecture hours a week for one semester. Prerequisite: Graduate standing, consent of instructor or the graduate adviser, and Mathematics 382C.

382F. Algebraic Topology. Continuation of Mathematics 382E. Three lecture hours a week for one semester. Prerequisite: Graduate standing, consent of instructor or the graduate adviser.

382G. Differential Geometry. Continuation of Mathematics 382D. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor or the graduate adviser.

383C. Methods of Applied Mathematics. Same as Computational Science, Engineering, and Mathematics 386C. Topics include basic normed linear space theory; fixed-point theorems and applications to differential and integral equations; Hilbert spaces and the spectral theorem; applications to Sturm-Liouville problems; approximation and computational methods such as the Galerkin, Rayleigh-Ritz, and Newton procedures. Three lecture hours a week for one semester. Computational and Applied Mathematics 383C and Mathematics 383C may not both be counted. Prerequisite: Graduate standing.
383D. Methods of Applied Mathematics. Same as Computational Science, Engineering, and Mathematics 383D. Topics include distributions, fundamental solutions of partial differential equations, the Schwartz space and tempered distributions, Fourier transform, Plancherel theorem, Green’s functions, Sobolev spaces, weak solutions, differential calculus in normed spaces, implicit function theorems, applications to nonlinear equations, smooth variational problems, applications to classical mechanics, constrained variational problems. Three lecture hours a week for one semester. Computational and Applied Mathematics 383D and Mathematics 383D may not both be counted. Prerequisite: Graduate standing; and Computational Science, Engineering, and Mathematics 383C (or Computational and Applied Mathematics 383C) or Mathematics 383C.


384C. Mathematical Statistics I. Same as Computational Science, Engineering, and Mathematics 384R and Statistics and Scientific Computation 384 (Topic 2: Mathematical Statistics I). The general theory of mathematical statistics. Includes distributions of functions of random variables, properties of a random sample, principles of data reduction, an overview of hierarchical models, decision theory, Bayesian statistics, and theoretical results relevant to point estimation, interval estimation, and hypothesis testing. Three lecture hours a week for one semester. Computational and Applied Mathematics 384R and Mathematics 384C may not both be counted. Prerequisite: Graduate standing; and Mathematics 362K and 378K, Statistics and Scientific Computation 382, or consent of instructor.


384E. Design and Analysis of Experiments. Same as Computational Science, Engineering, and Mathematics 384U and Statistics and Scientific Computation 384 (Topic 6: Design and Analysis of Experiments). Design and analysis of experiments, including one-way and two-way layouts; components of variance; factorial experiments; balanced incomplete block designs; crossed and nested classifications; fixed, random, and mixed models; and split plot designs. Three lecture hours a week for one semester. Computational and Applied Mathematics 384U and Mathematics 384E may not both be counted. Prerequisite: Graduate standing; and Mathematics 362K and 378K, Statistics and Scientific Computation 382, or consent of instructor.

384F. Design of Experiments. Design of experiments, including 2^p and 3^q factorial experiments, confounding, fractional factorials, sequential experimentation, orthogonal arrays, D-optimal designs, and response surface methodology. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Mathematics 378K or the equivalent or consent of instructor.

384G. Regression Analysis. Same as Computational Science, Engineering, and Mathematics 384T and Statistics and Scientific Computation 384 (Topic 4: Regression Analysis). Simple and multiple linear regression, inference in regression, prediction of new observations, diagnosis and remedial measures, transformations, and model building. Emphasis on both understanding the theory and applying theory to analyze data. Three lecture hours a week for one semester. Computational and Applied Mathematics 384T and Mathematics 384G may not both be counted. Prerequisite: Graduate standing; and Mathematics 362K and 378K, Statistics and Scientific Computation 382, or consent of instructor.

384H. Multivariate Statistical Analysis. Introduction to the general multivariate linear model; a selection of techniques, such as principle component, factor, and discriminant analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

385C. Theory of Probability. Same as Computational Science, Engineering, and Mathematics 385C. Three lecture hours a week for one semester. Computational and Applied Mathematics 385K and Mathematics 385C may not both be counted. Prerequisite: Graduate standing and consent of instructor.
385D. Theory of Probability. Same as Computational Science, Engineering, and Mathematics 384L. Continuation of Mathematics 385C. Three lecture hours a week for one semester. Computational and Applied Mathematics 384L and Mathematics 385D may not both be counted. Prerequisite: Graduate standing; Computational Science, Engineering, and Mathematics 384K (or Computational and Applied Mathematics 384K) or Mathematics 385C; and consent of instructor.

387C. Numerical Analysis: Algebra and Approximation. Same as Computational Science, Engineering, and Mathematics 383J. Advanced introduction to scientific computing, theory and application of numerical linear algebra, solution of nonlinear equations, and numerical approximation of functions. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and consent of instructor or the undergraduate adviser.

387D. Numerical Analysis: Differential Equations. Same as Computational Science, Engineering, and Mathematics 383L. Advanced introduction to the theory and practice of commonly used numerical algorithms for the solution of ordinary differential equations, and elliptic, parabolic, and hyperbolic partial differential equations. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Computer Science 383C, Mathematics 387C (or 383G), or consent of instructor.

389F. Theory of Interest. Measurement of interest, present and accumulated value, amortization, sinking funds, bonds, duration, and immunization. Covers the interest theory portion of an exam of the Society of Actuaries and the Casualty Actuarial Society. Three lecture hours a week for one semester. Actuarial Foundations 329 and Mathematics 383F may not both be counted. Prerequisite: Graduate standing, Mathematics 383K; or registration for Actuarial Foundations 329 or Mathematics 383K.

389J. Probability Models with Actuarial Applications. Introductory actuarial models for life insurance, property insurance, and annuities. With Mathematics 389J, covers the syllabus for the professional actuarial exam on model construction. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Mathematics 358K or 378K with a grade of at least C.

389P. Actuarial Statistical Estimates. Statistical estimation procedures for random variables and related quantities in actuarial models. With Mathematics 389P, covers the syllabus for the professional actuarial exam on model construction. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Mathematics 340L and 389P with a grade of at least C in each.

189S. Seminar on Actuarial Practice. Presentations by working actuaries on current issues in actuarial practice. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, and Actuarial Foundations 329 or Mathematics 389F, and Mathematics 389J or 389U with a grade of at least C in each.

389T. Time Series and Survival-Model Estimation. Introduction to the probabilistic and statistical properties of time series; parameter estimation and hypothesis testing for survival models. Covers 30 percent of the syllabus for exam #4 of the Society of Actuaries and the Casualty Actuarial Society. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Mathematics 341 or 340L, 358K or 378K, and 389U.

389U. Actuarial Contingent Payments I. Intermediate actuarial models for life insurance, property insurance, and annuities. Three lecture hours a week for one semester. Prerequisite: Graduate standing; Mathematics 362K with a grade of at least C; credit with a grade of at least C or registration for Mathematics 340L (or 341); and credit with a grade of at least C or registration for Actuarial Foundations 329 or Mathematics 383F.

389V. Actuarial Contingent Payments II. Advanced actuarial models for life insurance, property insurance, and annuities. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Mathematics 389F and 389U with a grade of at least C in each.

389W. Financial Mathematics for Actuarial Applications. Options and other financial derivatives, pricing models, stock-price models, and interest-rate models for actuarial applications. With Mathematics 389W, covers the syllabus for the professional actuarial exams on models. Prerequisite: Graduate standing; Mathematics 362K and 389F with a grade of at least C in each; and Actuarial Foundations 129D, or Finance 377 (Topic 2: Financial Risk Management) with a grade of at least C.

390C. Topics in Algebra. Recent topics have included algebraic geometry, number theory, algebraic curves, algebraic number theory, algebraic functions, rational curves on varieties, homological algebra. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

391C. Topics in Analysis. Recent topics have included measure and integration, real variables, complex analysis, functional analysis, ordinary differential equations, partial differential equations, integral transforms, operator theory, approximation theory, abstract harmonic analysis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

392C. Topics in Topology. Recent topics have included algebraic topology, differential topology, geometric topology, Lie groups. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.
393C. **Topics in Applied Mathematics.** Recent topics have included quantum mechanics, statistical physics, ergodic theory, group representations, statistical mechanics, quantum field theory, introductory partial differential equations, monotone operators and partial differential equations, Hilbert space methods for partial differential equations, Hamiltonian dynamics, nonlinear functional analysis, Euler and Navier-Stokes equations, microlocal calculus and spectral asymptotics, calculus of variations. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

393N. **Numerical Solution of Elliptic Partial Differential Equations.** Same as Computer Science 393N. The numerical solution of large systems of linear algebraic equations arising in the solution of elliptic partial differential equations by discretization methods. Three lecture hours a week for one semester. Computational and Applied Mathematics 393M and Mathematics 393N may not both be counted. Prerequisite: Graduate standing; and Computational Science, Engineering, and Mathematics 383K (or Computational and Applied Mathematics 386K), Computer Science 386K, Mathematics 387C (or 383G), or consent of instructor.

394C. **Topics in Probability and Statistics.** Recent topics have included nonparametric statistics, advanced probability. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

395C. **Topics in Logic and Foundations.** Recent topics have included set theory, model theory, proof theory, axiomatic theorem proving, automatic theorem proving, foundations of mathematics, recursion theory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

396C. **Topics in Mathematics.** Recent topics have included set theory, history of mathematics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

397C. **Topics in Numerical Analysis.** Recent developments and advanced topics in the field of numerical analysis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on a credit/no credit basis only. Mathematics 393D and 397C may not both be counted unless the topics vary. Prerequisite: Graduate standing.

197S, 397S. **Seminar in Mathematics.** One or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in mathematics and consent of the graduate adviser; for 698B, Mathematics 698A.

398R. **Master's Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in mathematics and consent of the supervising professor and the graduate adviser.

398T. **Supervised Teaching in Mathematics.** Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Mathematics 399R, 699R, or 999R.
NEUROSCIENCE

Master of Science in Neuroscience
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The Institute for Neuroscience offers excellent opportunities for multidisciplinary graduate study in the neurosciences. Facilities include those maintained by the participating programs in the Colleges of Natural Sciences, Liberal Arts, Pharmacy, Education, and Communication, and in the Cockrell School of Engineering. Institutional support, training grants, and federal and state grants to investigators in the institute provide stipends and support research. Faculty members throughout the institute participate in interdisciplinary seminars, two semester-long broadly based neuroscience courses and multiple topically oriented neuroscience courses. The goal of the institute is to train students to employ multidisciplinary approaches in their careers in neuroscience research and teaching. Toward this end, the faculty seeks to provide a diverse, cohesive, and interactive atmosphere and a flexible curriculum that meets the needs of each individual.

AREAS OF STUDY

Neuroscience encompasses behavioral, systems, cellular, molecular, and computational approaches to understanding the nervous system. The faculty use a wide variety of state-of-the-art techniques for their studies, including functional magnetic and optical imaging, various behavioral analyses of animals and humans, transmission and scanning electron microscopy, molecular and cellular biophysics, cellular- and systems-level neurophysiology, biochemistry, molecular genetics, and various types of computer modeling. The research-intensive environment emphasizes multidisciplinary investigations. The program offers students both a sound education in neuroscience and a broad research experience.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

<table>
<thead>
<tr>
<th>Graduate Faculty</th>
<th>Graduate Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawrence D. Abraham</td>
<td>Daniel Johnston</td>
</tr>
<tr>
<td>Seema Agarwala</td>
<td>Theresa A. Jones</td>
</tr>
<tr>
<td>Richard W. Aldrich</td>
<td>Robert A. Josephs</td>
</tr>
<tr>
<td>Greg Allen</td>
<td>Helmut J. Koester</td>
</tr>
<tr>
<td>Nigel S. Atkinson</td>
<td>Hongjoo J. Lee</td>
</tr>
<tr>
<td>Chandrakant L. Bajaj</td>
<td>W.T. Maddox</td>
</tr>
<tr>
<td>Dana H. Ballard</td>
<td>Michael Mauk</td>
</tr>
<tr>
<td>Jennifer S. Beer</td>
<td>Dennis McDadden</td>
</tr>
<tr>
<td>Adela Ben-Yakar</td>
<td>S.J. Mihic</td>
</tr>
<tr>
<td>George D. Bittner</td>
<td>Risto P. Miikkulainen</td>
</tr>
<tr>
<td>Craig A. Champlin</td>
<td>Marie H. Monfils</td>
</tr>
<tr>
<td>Laura Lee Colgin</td>
<td>Jennifer R. Morgan</td>
</tr>
<tr>
<td>Lawrence K. Cormack</td>
<td>Hitoshi Morikawa</td>
</tr>
<tr>
<td>Yvon Delville</td>
<td>Richard A. Morrissett</td>
</tr>
<tr>
<td>Juan M. Dominguez</td>
<td>Hiroshi Nishiyama</td>
</tr>
<tr>
<td>Michael P. Domjan</td>
<td>Jonathan T. Pierce-Shimomura</td>
</tr>
<tr>
<td>Michael Drew</td>
<td>Jonathan William Pillow</td>
</tr>
<tr>
<td>Andrew K. Dunn</td>
<td>Martin Poenie</td>
</tr>
<tr>
<td>Christine L. Duvauthelle</td>
<td>Russell A. Poldrack</td>
</tr>
<tr>
<td>Johann K. Eberhart</td>
<td>George D. Pollak</td>
</tr>
<tr>
<td>Ila P. Fiete</td>
<td>Alison R. Preston</td>
</tr>
<tr>
<td>Wilson S. Geisler III</td>
<td>Nicholas J. Priebe</td>
</tr>
<tr>
<td>Nace L. Golding</td>
<td>Kimberly Raah-Graham</td>
</tr>
<tr>
<td>Ruben A. Gonzales</td>
<td>David Ress</td>
</tr>
<tr>
<td>F. Gonzalez-Lima</td>
<td>Michael J. Ryan</td>
</tr>
<tr>
<td>Andrea C. Gore</td>
<td>Timothy J. Schallert</td>
</tr>
<tr>
<td>Lisa Griffin</td>
<td>Christine E. Schmidt</td>
</tr>
<tr>
<td>Jeffrey M. Gross</td>
<td>David M. Schnyer</td>
</tr>
<tr>
<td>Andreana P. Haley</td>
<td>Eyal Seidemann</td>
</tr>
<tr>
<td>Kristen M. Harris</td>
<td>Jason B. Shear</td>
</tr>
<tr>
<td>R.A. Harris</td>
<td>D.M. Snodderly</td>
</tr>
<tr>
<td>Mary M. Hayhoe</td>
<td>Wesley J. Thompson</td>
</tr>
<tr>
<td>Johann Hofmann</td>
<td>John B. Wallingford</td>
</tr>
<tr>
<td>Alexander C. Huk</td>
<td>Harold H. Zakon</td>
</tr>
<tr>
<td>Jody Jensen</td>
<td>Boris Zemelman</td>
</tr>
</tbody>
</table>

ADMISSION REQUIREMENTS

The requirements of the Graduate School for admission into a Doctor of Philosophy degree program must be met. However, the qualifications of most admitted applicants exceed these minimum requirements. All applicants must hold a bachelor’s degree from an accredited college or university, usually in a biological science, chemistry, computer science, experimental psychology, pharmacy, or engineering. Undergraduate preparation should include one year of chemistry, one year of biology, mathematics through calculus, and courses in psychology and physics. However, students...
without some of these prerequisites may be admitted on the condition that they make up any deficiencies during their first two years of study.

DEGREE REQUIREMENTS

Master of Science in Neuroscience. Under certain circumstances, students enrolled in the doctoral program may be granted the master's degree if they are unable to complete the requirements for the doctoral degree. These students must complete thirty semester hours of coursework and must submit a thesis based on individual research. The thirty hours must include the core courses in neuroscience: Neuroscience 482T, 383T, four elective courses, a statistics course, an ethics course, and a graduate seminar in neuroscience.

Doctor of Philosophy. Students must complete a core curriculum that includes Neuroscience 482T and 383T, a statistics course, an ethics course, four graduate elective courses in neuroscience, a graduate seminar in neuroscience, and a supervised teaching course. A qualifying exam is taken in the spring of the second year in which the student prepares a written proposal and defends it before an examining committee made up of Institute for Neuroscience faculty members who are experts in the scientific areas covered by the proposal. All eligible students must submit a predoctoral fellowship application by their third year of study, and all students must serve as teaching assistants for undergraduate or graduate courses.

DUAL DEGREE PROGRAM

DOCTOR OF PHILOSOPHY/DOCTOR OF MEDICINE

The graduate program in neuroscience participates in a dual degree program with the University of Texas Medical Branch at Galveston (UTMB). Applicants must apply separately to and be admitted to both the PhD program in neuroscience at the University of Texas at Austin and the medical school at UTMB. Students accepted into the dual degree program spend their first two years in the medical school at UTMB, followed by three to four years of doctoral work at UT Austin and eighteen months of clinical rotations. The degrees are conferred separately by each institution.

FOR MORE INFORMATION

Campus address: Norman Hackerman Building Building (NHB) 2.512, phone (512) 471-3640, fax (512) 471-0590; campus mail code: C7000
Mailing address: The University of Texas at Austin, Institute for Neuroscience, 1 University Station C7000, Austin TX 78712
E-mail: neuroscience@mail.clm.utexas.edu
URL: http://neuroscience.utexas.edu/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

Courses in other fields of study that are related to the graduate program in neuroscience are described in other sections of this catalog. A list of these courses is available from the advising office.

NEUROSCIENCE: NEU

380E. Vision Systems. Introduction to the anatomy, physiology, and psychophysics of human vision from an information-processing and computational perspective. Three lecture hours a week for one semester. Neuroscience 380E and Psychology 380E may not both be counted. Prerequisite: Graduate standing and consent of instructor.

380G. Visual Neuroscience. Physiology of the eye, the retina, and the visual pathways. Nutritional influences on risks for blinding diseases. Functional and ecological adaptations of primate vision. Three class hours a week for one semester. Neuroscience 380G and 385L (Topic: Visual Neuroscience) may not both be counted. Prerequisite: Graduate standing and consent of instructor.

080M. Dual MD/PhD Program with UT Medical Branch. Preclinical medical study at the University of Texas Medical Branch at Galveston. May not be taken concurrently with another course at the University of Texas at Austin. Prerequisite: Graduate standing and admission to the MD/PhD dual degree program in neuroscience.
482T. **Principles of Neuroscience I.** Examines the core material on essential topics in neuroscience from the molecular to the systems and behavioral levels. Four lecture hours a week for one semester. Only one of the following may be counted: Biology 381C, Kinesiology 382T, Neuroscience 382T, 482T, Pharmacy 382T, Psychology 382T. Prerequisite: Graduate standing and consent of instructor.

383C. **Functional Neuroanatomy.** An examination of the anatomy of the brain and spinal cord, emphasizing connections and functions of neural systems. Three lecture hours a week for one semester. Neuroscience 383C and Psychology 383C may not both be counted. Prerequisite: Graduate standing and consent of instructor.

383D. **Neuropharmacology.** An advanced survey of neurotransmitters and systems in the brain. Emphasis is on pharmacological analysis at the molecular level to determine mechanisms of action of drugs that act on the brain. Three lecture hours a week for one semester. Neuroscience 383D and Pharmacy 383D may not both be counted. Prerequisite: Graduate standing.

383M. **Data Analysis and Statistics for the Neurosciences.** Statistical applications relevant to areas of research in neuroscience. Three lecture hours a week for one semester. Prerequisite: Graduate standing, an undergraduate statistics course, and consent of instructor.

383T. **Principles of Neuroscience II.** Review and discussion of research in all fields of neuroscience, including molecular, cellular, behavioral, and systems. Examines important early studies and contemporary work. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 381D, Kinesiology 383T, Neuroscience 383T, Pharmacy 383T, Psychology 383T. Prerequisite: Graduate standing and consent of instructor.

384C. **Bootstrap Statistics.** Same as Psychology 384C. An introduction to modern methods of statistical analysis based on numerical computer simulation. Covers a range of common data analysis situations drawn mainly from the fields of neuroscience and experimental psychology. Techniques include point estimation, two-group and multiple group experiments, regression and curve fitting, and Bayesian analysis. Three lecture hours a week for one semester. Only one of the following may be counted: Neuroscience 384C, 385L (Topic: Bootstrap Statistics). Prerequisite: Graduate standing, an undergraduate statistics course, and consent of instructor.

384M. **Advanced Statistics: Inferential.** Same as Psychology 384M. Covers t-test, chi-square, analysis of variance, and nonparametric tests. Three lecture hours a week for one semester. Prerequisite: Graduate standing, an undergraduate statistics course, and consent of instructor.

185D. **Responsible Conduct of Science.** Ethical considerations in the conduct of science, including issues of animal welfare, data analysis, fraud, publications, misconduct, intellectual property, grants, peer review, and mentor responsibility. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Neuroscience 185D and Pharmacy 185D may not both be counted. Prerequisite: Graduate standing and consent of instructor.

385L. **Topics in Neuroscience.** Lectures, conference discussion, and laboratory projects, depending on topic. Not all topics are offered every year. With consent of instructor, may be repeated for credit when the topics vary. Prerequisite: Graduate standing, twelve semester hours of upper-division coursework in biology, and consent of instructor. Topic 1: Basic Processes of Nerve Cells. Three lecture hours a week for one semester. Biology 381K (Topic 10: Basic Processes of Nerve Cells) and Neuroscience 385L (Topic 1) may not both be counted.

Topic 3: Addiction Biology. Current research in addiction biology. Students present individual research papers and reports. Three lecture hours a week for one semester. Biology 381K (Topic 8: Addiction Biology) and Neuroscience 385L (Topic 3) may not both be counted.

Topic 5: Behavioral Neuroendocrinology. Current research in neuroendocrinology, including action of neuroendocrine systems on behavior, assays of substances in the blood to identify gene products, and examination of stress from neuroendocrine, behavioral, health, and immunity perspectives. Three lecture hours a week for one semester. Only one of the following may be counted: Neuroscience 385L (Topic 5), 394P (Topic: Behavioral Neuroendocrinology), Psychology 394P (Topic 17), 394P (Topic: Behavioral Neuroendocrinology).


Topic 7: Topics in Vision and Hearing. Current research in human vision and hearing. Three lecture hours a week for one semester. Only one of the following may be counted: Neuroscience 385L (Topic 7), 394U (Topic 2: Topics in Vision and Hearing), Psychology 394U (Topic 8: Topics in Vision and Hearing).

Topic 8: Ion Channels and Neuronal Signaling. Molecular properties of ion channels and the mechanisms of electrical signaling in neurons and other excitable cells. Three lecture hours a week for one semester.

Topic 9: Synaptic Physiology and Plasticity in the Central Nervous System. Detailed background in the physiology and plasticity of synaptic transmission in the mammalian central nervous system. Three lecture hours a week for one semester.
Topic 10: Neurobiology of Synaptic Circuits. The structure and function of synapses throughout different brain systems, including learning and memory circuits and sensory perception. Analysis of differences in the ultrastructure and composition of organelles and molecules involved in synapse-specific signaling and plasticity that alters synaptic function and related behaviors. Three lecture hours a week for one semester. Additional prerequisite: Undergraduate coursework in neuroscience or consent of instructor.

Topic 12: Quantifying Brain Structure. Concepts and hands-on applications for quantifying aspects of brain and cellular structure, with a focus on stereological approaches. Three lecture hours a week for one semester. Only one of the following may be counted: Neuroscience 385L (Topic 12), 394P (Topic: Quantitative Methods for Brain Structure), Psychology 394P (Topic 16: Quantifying Brain Structure), 394P (Topic: Quantitative Methods for Brain Structure).

190, 290, 390. Research. Individual research. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and fifteen semester hours of coursework in neuroscience. Students must sign up in the Neuroscience Graduate Studies Office before registering.

191. Graduate Seminar in Neuroscience. Presentations and discussions of research topics in neuroscience. One lecture hour a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

391N. Learning and Memory. Same as Psychology 391N. Presentation of contemporary approaches to the study of conditioning and learning at the behavioral level. Focuses on empirical data and theoretical analysis of acquisition and performance in Pavlovian and instrumental conditioning. Includes discussion of habituation, sensitization, stimulus control, and other paradigms for studying cognitive processes in nonverbal organisms. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

394P. Seminars in Neuroscience. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

Topic 1: Current Topics in Behavioral Neuroscience. Brain-behavior relationships, particularly recent research in behavioral neuroscience, including the anatomic and neurochemical mechanisms of behavioral events, and behavioral influences on the brain. Offered on the credit/no credit basis only. Neuroscience 394P (Topic 1) and Psychology 394P (Topic 1: Current Topics in Behavioral Neuroscience) may not both be counted.

Topic 3: Neurobiology of Learning and Memory. Neuroanatomical systems that are functionally related to basic forms of learning and memory in mammals. Neuroscience 394P (Topic 3) and Psychology 394P (Topic 3: Neurobiology of Learning and Memory) may not both be counted.

Topic 4: Advanced Topics in Neuroanatomy. Neuroanatomical systems and function across species. Basic forms of neuroanatomy in mammals. Neuroscience 394P (Topic 4) and Psychology 394P (Topic 7: Advanced Topics in Neuroanatomy) may not both be counted.

Topic 5: Cognitive Neuroscience. Focuses on the links between neural activity and behavior as simultaneously measured during the performance of sensory decision-making tasks. Includes functional magnetic resonance imaging experiments. Neuroscience 394P (Topic 5) and 394U (Topic: Cognitive Neuroscience) may not both be counted.


Topic 8: Topics in Systems Neuroscience. Focuses on one or two topics and examines them in depth through group discussions of key scientific manuscripts. Discusses both classical studies and contemporary research. Only one of the following may be counted: Neuroscience 394P (Topic 8), 394U (Topic: Advanced Topics in Systems Neuroscience), Psychology 394U (Topic 14: Topics in Systems Neuroscience), 394U (Topic: Advanced Topics in Systems Neuroscience).

Topic 9: Perception and Action. Current topics in visually guided behavior, including eye movements, attention, and motor control, from behavioral, computational, and neurophysiological approaches. Neuroscience 394P (Topic 9) and Psychology 394U (Topic 16: Perception and Action) may not both be counted.

Topic 10: Statistical Methods in Computational Neuroscience. Same as Psychology 394U (Topic 19: Statistical Methods in Computational Neuroscience). Introduction to statistical and computational methods for understanding information processing in the nervous system, with emphasis on neural coding and statistical modeling of neural responses. Three class hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

396D. Clinical Psychopharmacology. Same as Psychology 396D. Recent findings concerning the mechanisms of action and the behavioral effects of psychoactive drugs, particularly those used in psychiatry. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in neuroscience and consent of the graduate adviser; for 698B, Neuroscience 698A.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Neuroscience 399R, 699R, or 999R.
NUTRITIONAL SCIENCES

Master of Arts
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

Facilities for research and graduate instruction in nutritional sciences include modern laboratories for biochemical, immunological, and cellular/molecular biological techniques such as cell and tissue culture, immunological assays, cytokine bioassays, radioisotope analyses, stable isotope analyses, and protein structure and function determination. Facilities are also available for analysis of vitamins, amino acids, minerals, lipids, carbohydrates, and other substances of nutritional and physiological importance. Local, state, and federal health, child-care, and geriatrics programs provide research and clinical settings. Other resources are the Life Science Library, the Mallet Chemistry Library, the Perry-Castañeda Library, the Animal Resources Center, and Information Technology Services. Graduate students have access to the Student Microcomputer Facility and to statistical applications maintained by the Department of Nutritional Sciences.

PROGRAMS OF STUDY

The graduate program has biochemical, molecular-biological, and clinical components and includes study in the following areas: molecular and cellular aspects of nutrient function; molecular and cellular approaches to the study of nutrition and disease; nutritional biochemistry; behavioral and child nutrition; nutrient requirements and intakes and health assessment; nutrition and cancer, obesity, aging, and immunity; and nutrition education.

The master’s degree program is designed to prepare individuals for teaching in community colleges; administration in public health programs; technical positions at food, pharmaceutical, and chemical laboratories; and, for those who are registered dietitians, advanced practitioner and teaching positions in clinical dietetics. Students may also apply to the Coordinated Program in Dietetics, which provides courses and experience that will meet the requirements for registration eligibility of the Commission on Dietetic Registration of the American Dietetic Association.

The doctoral degree program is designed to prepare students for research, teaching, and administrative positions in colleges, universities, government, and industry. Competence in related fields is emphasized, and supporting work is selected from areas such as biochemistry, biology, molecular biology, computer science, genetics, communication, geriatrics, immunology, physiology, kinesiology, psychology, or health promotion.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Margaret E. Briley
Linda A. Degraffenried
John Digiovanni
Richard H. Finnell
Jeanne H. Freeland-Graves
Stephen D. Hursting
Christopher A. Jolly
Kimberly Kline
Roseann Loop
Nomeli P. Nunez
Bob G. Sanders
D. M. Snodderly
Bugao Xu

ADMISSION AND DEGREE REQUIREMENTS

The preliminary training of students seeking a graduate degree should include courses in the following fields: inorganic chemistry with laboratory, organic chemistry with laboratory, biochemistry with laboratory, vertebrate or human physiology, cellular and molecular biology, statistics, and nutrition. The Graduate Studies Committee may recommend that some or all of these courses be completed as a prerequisite for admission to the program or in addition to the courses required for the graduate degree. For students who wish to combine the advanced degree with courses and experiences meeting the requirements for registration eligibility with the American Dietetic Association, additional courses may be required.

A handbook available from the graduate coordinator gives details of policies, procedures, and requirements.
MASTER OF ARTS

The Graduate Studies Committee must approve the Program of Work before the student is admitted to candidacy for the master's degree. Thirty semester hours are required, distributed as follows: (1) eighteen hours in specified nutrition courses; (2) six hours in a minor or supporting field such as biology, anthropology, biochemistry, immunology, educational psychology, curriculum and instruction, health education, public health, pharmacology, or kinesiology; and (3) six hours in the thesis course, involving an original research project. The eighteen hours in nutrition must include at least three hours in research methods, at least three in research problems, at least three in seminar, and at least six in recent advances; the remaining three hours may be in either research methods or recent advances.

A degree program with report is also available, for students seeking a terminal master's degree. In this program, Nutrition 398R and three additional hours in either research methods or recent advances replace the thesis course.

DOCTOR OF PHILOSOPHY

The doctoral program typically requires four to five years of full-time study. Students are expected to meet the following requirements for admission to candidacy by the end of the second year: (1) completion of courses conditional to admission; (2) eighteen semester hours in nutrition, including the following courses with a grade of at least B in each: Nutrition 390 (Topic 1: Advances in Nutritional Sciences I), 390 (Topic 6: Molecular Nutritional Sciences), 390 (Topic 7: Advances in Nutritional Sciences II), and 394 (Topic 1: General Nutrition); (3) six hours of graduate coursework outside nutrition in fields germane to the dissertation research, such as biology, biochemistry, molecular biology, educational psychology, curriculum and instruction, health education, and kinesiology; (4) presentation and defense of a dissertation research proposal and satisfactory response to questions on nutrition and related sciences; and (5) approval by the Graduate Studies Committee of the proposed course plan and proposed dissertation research program. Further supporting work in nutrition or related sciences is usually needed to augment the program. All doctoral candidates must write a dissertation based on the results of their original research and must make a formal oral defense of the dissertation. The Graduate Studies Committee must certify that all of the degree requirements have been completed.

FOR MORE INFORMATION

Campus address: T. S. Painter Hall (PAI) 4.36B, phone (512) 471-0337, fax (512) 471-5844; campus mail code: A2703
Mailing address: The University of Texas at Austin, Graduate Program in Nutritional Sciences, Department of Nutritional Sciences, 1 University Station A2703, Austin TX 78712
E-mail: hegrad@uts.cc.utexas.edu
URL: http://www.he.utexas.edu/ntr/ntrgrad.php

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

NUTRITION: NTR

380K. Research Methods in Nutritional Sciences. One lecture hour and six laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in nutrition, or graduate standing and consent of instructor.

Topic 1: Experimental Nutrition.
Topic 2: Nutritional Immunology.
Topic 4: Advanced Experimental Design and Statistics.
Additional prerequisite: Nutrition 380K (Topic 3) or consent of instructor.
Topic 5: Carcinogenesis.
Topic 6: Nutritional Biochemistry.
390. **Recent Advances in Nutritional Sciences.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; and one of the following: Chemistry 339K and 339L, Chemistry 369, equivalent coursework, or consent of instructor.

**Topic 1:** Advances in Nutritional Sciences I. Required of all graduate students in nutrition.
**Topic 2:** Carbohydrates and Fiber.
**Topic 3:** Lipids.
**Topic 4:** Vitamins and Minerals.
**Topic 5:** Minerals.
**Topic 6:** Molecular Nutritional Sciences.
**Topic 7:** Advances in Nutritional Sciences II. Required of all graduate students in nutrition.
**Topic 8:** Clinical Nutrition. Additional prerequisite: Nutrition 370 (or 668) or the equivalent or consent of instructor.
**Topic 9:** Nutrition, Immunology, and Cancer.
**Topic 10:** Geriatric Nutrition and Metabolism. Study of how aging influences nutrient requirements and metabolism at the biochemical and molecular level. Discussion of dietary changes to offset the effects of aging and to improve quality of life.
**Topic 11:** Nutrition, Cancer, and Development. The role of nutrition in development from embryo to adult, the role of nutrition in the prevention and treatment of cancer, and the ability of nutrients to affect development and disease.

392. **Research Problems in Nutritional Sciences.** One lecture hour and six laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** Biochemical Nutrition.
**Topic 2:** Nutrient Requirements.
**Topic 3:** Nutrition and Cancer.
**Topic 4:** Nutrition and Immunology.
**Topic 5:** Food Sciences.
**Topic 6:** Clinical Nutrition.
**Topic 7:** Nutrition Education.
**Topic 8:** Developmental Nutrition.
**Topic 9:** Foodservice Systems.
**Topic 10:** Nutrition and Metabolism.
**Topic 11:** Obesity.

194, 294, 394. **Graduate Seminar in Nutritional Sciences.** One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**Topic 1:** General Nutrition. Required of all students.
**Topic 2:** Clinical Nutrition.
**Topic 3:** Molecular and Cellular Nutrition.
**Topic 4:** Nutrition, Immunology, and Disease.
**Topic 5:** Nutrition through the Life Cycle.

397C, 697C. **Conference Course in Nutritional Sciences.** For 397C, one lecture hour and six laboratory hours a week for one semester; for 697C, two lecture hours and twelve laboratory hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in nutrition and consent of the graduate adviser; for 698B, Nutrition 698A.

398R. **Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of the supervising professor.

398T. **Supervised Teaching in Nutrition.** Teaching under close supervision; group meetings, individual conferences, and reports. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Offered on the credit/no credit basis only. Prerequisite: Nutrition 399R, 699R, or 999R.
FACILITIES FOR GRADUATE WORK

Modern facilities for graduate study and research include a large-scale cryogenic laboratory; synthesis and strong magnetic field equipment; nuclear magnetic and electron paramagnetic resonance laboratories; extensive facilities for tunneling and force microscopy and nanostructure characterization, SQUID magnetometry, and electron spectroscopy; well-equipped laboratories in optical spectroscopy, quantum optics, femtosecond spectroscopy and diagnostics, electron and surface scattering and high-intensity laser science; and facilities for turbulent flow and nonlinear dynamics experiments. Plasma physics experiments are conducted at the major national tokamaks in Boston and San Diego. Experiments in high-energy heavy ion nuclear and particle physics are conducted at large accelerator facilities such as Brookhaven National Laboratory (New York), Fermi National Accelerator Laboratory (Illinois), and Stanford Linear Accelerator Center. Theoretical work in plasma physics, condensed matter physics, acoustics, nonlinear dynamics, relativity, astrophysics, statistical mechanics, and particle theory is conducted within the Department of Physics. Students have access to excellent computer and library facilities. The department maintains and staffs a machine shop, student workshop, low-temperature and high-vacuum shop, and electronics design and fabrication shop.

AREAS OF STUDY

The Department of Physics has active research groups in nine main areas of current physics research: atomic, molecular, and optical physics; classical physics; nuclear physics; statistical mechanics and thermodynamics; plasma physics; condensed matter physics; nonlinear dynamics; relativity and cosmology; and elementary particle physics. In most of these fields both experimental and theoretical work is in progress.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Peter R. Antoniewicz
- Sanjay K. Banerjee
- Roger D. Bengtson
- Herbert L. Berk
- Arno R. Bohm
- Boris Breizman
- James R. Chelikowsky
- Charles B. Chiu
- William R. Coker
- Rafael De La Llave
- Alejandro L. De Lozanne
- Alexander A. Demkov
- Duane A. Dicus
- Jacques Distler
- Todd Ditmire
- Michael W. Downer
- James L. Erskine
- Gregory A. Fiete
- Manfred Fink
- Willy Fischler
- Richard Fitzpatrick
- Ernst-Ludwig Florin
- Daniel S. Freed
- Kenneth W. Gentle
- Austin M. Gleeson
- John B. Goodenough
- Vernita Gordon
- Mark F. Hamilton
- Richard D. Hazeltine
- Daniel J. Heinzen
- Paul S. Ho
- Gerald W. Hoffmann
- Vadim Kaplanovsky
- John W. Keto
- Leonard Kleinman
- Hans A. Koch
- Eiichiro Komatsu
- Sacha E. Kopp
- Sheldon Landsberger
- Karel Lang
- Xiaoxin E. Li
- Allan H. Macdonald
- Michael P. Marder
- Hans M. Mark
- Christina Markert
- John T. Markert
- Richard A. Matzner
- Milos Milosavljevic
- Tessie J. Moon
- Philip J. Morrison
- Qian Niu
- Sonia Paban
- Charles L. Radin
- Mark G. Raizen
- Linda E. Reichl
- Peter J. Riley
- Jack L. Ritchie
- Rodney S. Ruoff
- Roy F. Schwitters
- Paul R. Shapiro
- Chih-Kang Shih
- George T. Shubeita
- Gennady Shvets
- Greg O. Sitz
- Ben G. Streetman
- George Sudarshan
- Harry L. Swinney
- Maxim Tsoi
- Jack S. Turner
- James W. Vick
- Steven Weinberg
- John C. Wheeler
- Robert E. Wyatt
- Zhen Yao

DEGREE REQUIREMENTS

It is assumed that the student has an undergraduate background that includes mechanics, electricity and magnetism, thermodynamics, atomic physics, and quantum mechanics.
**MASTER OF ARTS**

The Master of Arts is not a part of the qualifying process for the doctoral degree. First-year students plan the first semester registration with the graduate adviser in physics. Students are encouraged to investigate all research groups in the department before selecting a professor to supervise a thesis project. The degree plan is then designed by the student, the supervising professor, and the graduate adviser. The time involved for completing a master’s degree is related to the quality of the student’s undergraduate background: the average time for completion by students with a good undergraduate background is one calendar year and one semester.

**MASTER OF SCIENCE IN APPLIED PHYSICS**

This degree program is designed to provide students with a broad background in physics and related fields, with an emphasis on those aspects of the science most used in an industrial setting. The required physics courses include Physics 380N, 386K, 386N, 387K, and 389K. A thesis is also required. The supporting work must be in engineering, chemistry, or geological sciences. Physics 383K, *Classical Mechanics*, may be taken as an optional course.

**DOCTOR OF PHILOSOPHY**

To be admitted to candidacy for the doctoral degree, the student must (1) fulfill the core course requirement described below; (2) show evidence of exposure to modern methods of experimental physics; this exposure may be gained in a senior-level laboratory course taken by the student as an undergraduate and approved by the graduate adviser and the chair of the Graduate Studies Committee, by previous participation in an experimental program, or in Physics 380N; and (3) fulfill the oral examination requirement described below.

**Core courses.** During the first two years of graduate study, the student must take four core courses: Physics 385K, 385L, 387K or 387L, and 389K or 389L. The student must earn an official grade of at least B- in each course and a grade point average of at least 3.33 in the four courses. The student may ask for the grade he or she earns in Physics 380N to be substituted for the grade in one of the core courses when the average is computed. A well-prepared student may seek to fulfill the core course requirement by earning satisfactory grades on the final examinations for some of these courses rather than by registering for them; in this case, the student does not receive graduate credit for these courses and the grade is not counted toward the required average.

**The oral qualifying examination.** After satisfying the first two requirements above, and within twenty-seven months of entering the program, the student must take an oral qualifying examination. The examination consists of a presentation before a committee of four physics faculty members, one of whom is a member of the Graduate Studies Subcommittee. The presentation is open to all interested parties. It is followed by a question period restricted to the student and the committee. The questions during this session are directed toward clarifying the presentation and helping the committee determine whether the student has a solid grasp of the basic material needed for research in his or her specialization. The student passes the examination by obtaining a positive vote from at least three of the four faculty members on the oral qualifying committee.

Each Program of Work for the doctoral degree must include at least four advanced courses in physics; a list of acceptable courses is maintained by the Graduate Studies Subcommittee. The program must also include three courses outside the student’s area of specialization. One of these must be an advanced physics course; another must be outside the Department of Physics; the third may be either an advanced physics course or a course outside the Department of Physics. A dissertation is required of every candidate, followed by a final oral examination covering the dissertation and the general field of the dissertation.

**FOR MORE INFORMATION**

**Campus address:** Robert Lee Moore Hall (RLM) 5.224, phone (512) 471-1624, fax (512) 471-9637; campus mail code: C1600

**Mailing address:** The University of Texas at Austin, Graduate Program, Department of Physics, 1 University Station C1600, Austin TX 78712

**URL:** http://www.ph.utexas.edu/
GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

PHYSICS: PHY

380L. Plasma Physics I. Particle drifts, equations for plasmas, magnetohydrodynamics, waves and instabilities in the two-fluid model, Vlasov equation, Landau damping, controlled thermonuclear research, plasma diagnostics. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380M. Plasma Physics II. Plasma containment, stability theory in fluid models, derivation of Vlasov and Fokker-Planck equations, the dielectric tensor, velocity space and gradient instabilities, Nyquist diagrams. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 380L or consent of instructor.

380N. Experimental Physics. Experimental work to provide exposure to physics research techniques. Eighteen laboratory hours a week for one semester. Prerequisite: Graduate standing and concurrent enrollment in Physics 390.

380T. Advanced Study in Physics. Not open to physics majors. Special topics for physics teachers. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, a bachelor’s degree in science or mathematics, and consent of the graduate adviser.

381C. Computational Physics. Dynamical and statistical descriptions and solutions of many-body, nonlinear physical systems by computation. Theory of computation and applications to various branches of physics. Three lecture hours a week for one semester. Computational and Applied Mathematics 381C and Physics 381C may not both be counted. Prerequisite: Graduate standing; and Physics 385K and 385K, or consent of instructor.

381M. Methods of Mathematical Physics. Same as Computational Science, Engineering, and Mathematics 385M. Theory of analytic functions; linear algebra and vector spaces; orthogonal functions; ordinary differential equations; Green’s functions; complex variables. Three lecture hours a week for one semester. Computational and Applied Mathematics 381M and Physics 381M may not both be counted. Prerequisite: Graduate standing.

381N. Methods of Mathematical Physics. Same as Computational Science, Engineering, and Mathematics 385N. Continuation of Physics 381M. Topology, functional analysis, approximation methods, group theory, differential manifolds. Three lecture hours a week for one semester. Computational and Applied Mathematics 381N and Physics 381N may not both be counted. Prerequisite: Graduate standing; and Computational Science, Engineering, and Mathematics 385M (or Computational and Applied Mathematics 381M) or Physics 381M.

382M. Fluid Mechanics. Flow of ideal and viscous fluids; introduction to turbulence; boundary layers; sound and shock waves. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 381N, 385K, and 385K.

382N. Nonlinear Dynamics. Basic concepts of evolution and stability, examples of instabilities, low dimensional dynamical systems, chaos, characterization of temporal chaos, pattern formation, Hamiltonian systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

382P. Biophysics. The cell, small molecules and chemical kinetics, forces on the molecular scale, proteins, lipids and membranes, biopolymers, neurons and electrical signal transduction, and complex pattern formation in cells and cell aggregates. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

382Q. Cell and Molecular Biophysics. Advanced biophysics with emphasis on biologically relevant questions addressed with physical approaches. Biopolymer mechanics, protein-nucleic acid interaction, protein structure and function, membrane dynamics, cytoskeletal dynamics, motor proteins, cell shape and motility, cell communication, tissue mechanics. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Physics 382P or consent of instructor.

382S. Seminar in Nonlinear Dynamics. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

385K. Classical Mechanics. Classical and relativistic Hamiltonian mechanics; Hamilton-Jacobi theory; Lagrangian mechanics for continuous media; symmetry principles and conservation laws. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385L. Statistical Mechanics. Equilibrium statistical mechanics; introduction to nonequilibrium concepts; ensembles; classical and quantum gases; statistical physics of solids. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385S. Seminar in Statistical Physics. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.
385T. Special Topics in Statistical Physics. Topics to be announced. Three lecture hours a week for one semester. With consent of the graduate adviser, may be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

386K. Physics of Sensors. Physical principles of acoustic, optical, electromagnetic, radiation, and motion sensors. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

386N. Technical Seminar. Physics for applied and industrial purposes. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of the graduate adviser.

386S. Seminar in Applied Physics. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

387K. Electromagnetic Theory. Electrostatics and magnetostatics; boundary value problems; Maxwell’s equations; plane waves; wave guides; diffraction; multipole radiation. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

387L. Electromagnetic Theory. Magnetohydrodynamics and plasmas; relativity; collisions of charged particles; radiation from moving charges; radiation damping. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 387K.

387M. Relativity Theory I. Tensor calculus; Riemannian geometry; geometry of Minkowski space-time; special relativity theory. Three lecture hours a week for one semester. Offered in the fall semester only. Prerequisite: Graduate standing and Physics 387K.

387N. Relativity Theory II. General relativity theory; gravitational field equations; weak field approximations; Schwarzschild solution, observable consequences; other topics. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Graduate standing and Physics 387M.

388M. Graduate Colloquy. Reviews of current topics in physics research. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

388S. Seminar in Teaching Physics. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

389K. Quantum Mechanics. Hilbert space and operators; Schrödinger and Heisenberg equations; solutions for systems in one and three dimensions; theory of spin and orbital angular momentum; the effect of symmetries; approximation techniques; elementary scattering theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

389L. Quantum Mechanics. Perturbation techniques; systems of identical particles; quantum theory of radiation; emission and absorption of photons; selection rules; life times; scattering theory for light and particles, S-matrix; relativistic corrections to electron motion. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 389K.

190, 290, 390, 690. Graduate Research. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May not be counted toward the master’s degree in physics. Prerequisite: Graduate standing, and written consent of instructor filed with the graduate adviser.

391M. Nonlinear Plasma Theory. Quasi-linear theory, weak turbulence, large amplitude waves, plasma radiation, shock waves, shock structure, computer techniques. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 380L.

391S. Seminar in Plasma Physics. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

391T. Special Topics in Plasma Physics. Topics to be announced. Three lecture hours a week for one semester. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. With consent of instructor, may be repeated for credit. Prerequisite: Graduate standing, Physics 380L, and consent of instructor.

391U. Seminar in Plasma Theory. Current topics in plasma theory. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

392K. Solid-State Physics. Lattice vibrations and thermal properties of solids; band theory of solids; transport properties of metals and semiconductors; optical properties; magnetic properties; magnetic relaxation; superconductivity. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Physics 389K, and Physics 375S or the equivalent.

392L. Solid-State Physics. Elementary excitations: phonons, electrons, spin waves; interactions: phonon-phonon, electron-electron, electron-phonon; theory of metals and semiconductors; transport theory; optical properties. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 392K.

392N. Many-Body Theory. Overview of many-body theory; second quantization; Green’s functions and Feynman diagrams; finite-temperature, imaginary-time Green’s functions; the disordered metal; path integrals; broken symmetries; and local moments. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.
392S. Seminar in Solid-State Physics. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

392T. Special Topics in Solid-State Physics. Topics to be announced. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

393S. Seminar in Relativity. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

393T. Special Topics in Relativity. Topics to be announced. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

394T. Special Topics in Theoretical Physics. Topics to be announced. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

395. Survey of Atomic and Molecular Physics. Spectra of atoms and diatomic molecules; quantum electronics; experimental techniques. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

395K. Nuclear Physics. Systematics of stable nuclei; nuclear structure; decay of the nucleus; cross sections and reaction mechanisms; the elementary particles. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Physics 389K or consent of instructor.

395L. Quantum Field Theory I. Quantization of the Klein-Gordon, Dirac, and electromagnetic field theories; theory of interacting fields, perturbation theory, and renormalization. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 389K.

396K. Quantum Field Theory II. Path-integral formalism, massless particles, electrodynamics, nonperturbative methods, one-loop calculations in quantum electrodynamics, general renormalization theory, soft photons, bound statics in quantum electrodynamics. Three lecture hours a week for one semester. Prerequisite: Graduate standing and either Physics 389K or the equivalent or consent of instructor.

396P. String Theory I. Introduction to string theory and conformal field theory. The free string, conformal invariance and conformal field theory, supersymmetry and string interactions. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Physics 396K or the equivalent or consent of instructor.

396Q. String Theory II. Advanced conformal field theory, perturbative string theory and compactification. Introduction to nonperturbative aspects of string theory. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Physics 396Q.

396S. Seminar in Particle Physics. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. With consent of instructor, any topic may be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

396T. Special Topics in Particle Physics. Topics to be announced. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit. Some sections are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

396U. Theory Group Seminar. Seminars in theoretical physics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

397K. Nuclear Physics. Systematics of stable nuclei; nuclear structure; decay of the nucleus; cross sections and reaction mechanisms; the elementary particles. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Physics 389K or consent of instructor.

397S. Seminar in Nuclear Physics. Topics to be announced. Three lecture hours a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.
397T. Special Topics in Nuclear Physics. Topics to be announced. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

197U. Graduate Seminar in Nanoscience. Various seminar topics in nanoscience. One lecture hour a week for one semester. May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in physics and written consent of the supervising professor filed with the graduate adviser; for 698B, Physics 698A.

398T. Supervised Teaching in Physics. A review of physics teaching strategies, administrative procedures, and classroom responsibilities. Includes a review and critique of each participant’s classroom teaching. Three lecture hours a week for one semester. Prerequisite: Graduate standing and appointment as a teaching assistant.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and written consent of instructor filed with the graduate adviser.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Physics 399R, 699R, or 999R; and written consent of instructor filed with the graduate adviser.

STATISTICS

Master of Science in Statistics
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The Division of Statistics and Scientific Computation is located in the Will C. Hogg Building, which houses classrooms, faculty and administrative offices, and a statistical consulting center. The division offers campus-wide programming with the assistance of over one hundred associated faculty members in nine colleges and schools, the Population Research Center, and the Texas Advanced Computing Center. The division supports a computer lab for undergraduate and graduate courses, statistical consulting courses, a distinguished lecture series, an annual summer statistics institute, short courses on statistical software, and a graduate fellows program for students seeking consulting experience.

AREAS OF STUDY

Graduate degree candidates are expected to develop broad competence in the discipline as a whole as well as expertise in their chosen area of concentration. The Master of Science in Statistics is a two-year program that offers advanced training for students in classical and modern statistical methods. The program is designed for students preparing for careers in statistical professions as well as those seeking additional statistical training while pursuing a doctoral degree in another discipline. The PhD program is a four-year degree that focuses on training future researchers on theory and methods of statistics. Major emphases are placed on probability models and modern computational statistical tools. Throughout the program, students are exposed to central ideas of both Bayesian and classical approaches to inference. The program integrates the following substantive areas of application into the Program of Work: biology, computer science, economics, education, engineering, government, neuroscience, and psychology.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Paul C. Adams
Susan N. Beretvas
J. Eric Bickel
Patrick L. Brockett
Carlos Marinho Carvalho

Lawrence K. Cormack
Paul Damien
Inderjit S. Dhillon
Betsy S. Greenberg
John J. Hasenbein

1. Pending final approval.
DEGREE REQUIREMENTS

MASTER OF SCIENCE IN STATISTICS

Degree requirements are designed to provide students with a firm foundation in statistical theory as well as a rich understanding of how statistics are applied in practice. The master’s program requires completion of thirty-three semester hours of approved coursework and includes a master’s report. Degree requirements are distributed as follows: (1) twelve hours in core courses that provide a foundation for further study. These courses must be taken on a graded basis; (2) nine hours of statistics courses chosen from an approved list, one of which must be an approved course in computational methods; (3) nine hours of supporting coursework, which may be in a subject area other than statistics, and together with the other degree coursework makes a coherent degree program; and (4) three hours of master’s report coursework.

Upon admission to the program, the student should demonstrate a background knowledge of mathematics and statistics equivalent to that acquired in an upper-division course in probability and statistics. Deficiencies may be made up by taking courses suggested by the graduate adviser. In most cases, the courses may not be counted toward the degree.

DOCTOR OF PHILOSOPHY

A doctoral student in statistics must complete a core set of courses in statistical theory and methods. At the end of the first year, students must complete a preliminary written examination covering the main concepts in these core courses. By the end of the second year, students must successfully present a plan of study and demonstrate research proficiency in an oral examination to qualify for candidacy. Students are expected to write and defend their dissertation within two years of admission to candidacy.

FOR MORE INFORMATION

Campus address: Will C. Hogg (WCH) 2.104, phone (512) 232-0693, fax (512) 232-1045, campus mail code: G2500
Mailing address: The University of Texas at Austin, Graduate Program in Statistics, Division of Statistics and Scientific Computation, 1 University Station G2500, Austin TX 78712
URL: http://ssc.utexas.edu/

STATISTICS AND SCIENTIFIC COMPUTATION: SSC

380C. Statistical Methods I. Introduction to the fundamental concepts and methods of statistics. Includes descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. May include simple and multiple linear regression, analysis of variance, and categorical analysis. Use of statistical software is emphasized. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

380D. Statistical Methods II. Continuation of Statistics and Scientific Computation 380C. Surveys advanced statistical modeling and may include random and mixed effects models, time series analysis, survival analysis, Bayesian methods, and multivariate analysis of variance. Use of statistical software is emphasized. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Statistics and Scientific Computation 380C or the equivalent.
381. Mathematical Methods for Statistical Analysis. Introduction to mathematical concepts and methods essential for multivariate statistical analysis. Areas may include basic matrix algebra, eigenvalues and eigenvectors, quadratic forms, vector and matrix differentiation, unconstrained optimization, constrained optimization, and applications in multivariate statistical analysis. Three lecture hours a week for one semester. Prerequisite: Graduate standing and a course in statistics.

382. Introduction to Probability and Statistics. Expectation and variance of random variables, conditional probability and independence, sampling distributions, point estimation, confidence intervals, hypothesis tests, and other topics. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Mathematics 408D or 408L.

383C. Statistical Modeling I. An introduction to core applied statistical modeling ideas from a probabilistic, Bayesian perspective. Topics include exploratory data analysis, programming in R, Bayesian probability models, an introduction to the Gibbs sampler, applied regression analysis, and hierarchical models. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

383D. Statistical Modeling II. Use of structured, probabilistic models that incorporate multiple layers of uncertainty to describe real-world systems. Topics include multivariate normal distribution, mixture models, nonparametric Bayesian analysis, advanced hierarchical models and latent-variable models, generalized linear models, and advanced topics in linear and nonlinear regression. Three lecture hours per week for one semester. Prerequisite: Graduate standing; Economics 392M (Topic 19: introduction to the use of SPSS software), Mathematics and Applied Mathematics 384R (or Computational and Applied Mathematics 384R), Mathematics 384C, or Statistics and Scientific Computation 384 (or the equivalent; and Statistics and Scientific Computation 384D).

183K. Data Analysis Applications. Introduction to the use of statistical or mathematical applications for data analysis. Two lecture hours a week for eight weeks. May be repeated for credit when the topics vary. Offered on the credit/no credit basis only. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

Topic 1: SPSS Software.
Topic 2: SAS Software.
Topic 3: Stata Software.

384. Topics in Statistics and Probability. Concepts of probability and mathematical statistics with applications in data analysis and research. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; and Mathematics 362K and 378K, Statistics and Scientific Computation 382, or consent of instructor.


Topic 2: Mathematical Statistics I. Same as Computational Science, Engineering, and Mathematics 384R and Mathematics 384C. The general theory of mathematical statistics. Includes distributions of functions of random variables, properties of a random sample, principles of data reduction, an overview of hierarchical models, decision theory, Bayesian statistics, and theoretical results relevant to point estimation, interval estimation, and hypothesis testing. Computational and Applied Mathematics 384R and Statistics and Scientific Computation 384 (Topic 2) may not both be counted.


Topic 4: Regression Analysis. Same as Computational Science, Engineering, and Mathematics 384T and Mathematics 384G. Simple and multiple linear regression, inference in regression, prediction of new observations, diagnosis and remedial measures, transformations, and model building. Emphasis on both understanding the theory and applying theory to analyze data. Computational and Applied Mathematics 384T and Statistics and Scientific Computation 384 (Topic 4) may not both be counted.

Topic 5: Design and Analysis of Experiments. Same as Computational Science, Engineering, and Mathematics 384U and Mathematics 384E. Design and analysis of experiments, including one-way and two-way layouts; components of variance; factorial experiments; balanced incomplete block designs; crossed and nested classifications; fixed, random, and mixed models; and split plot designs. Computational and Applied Mathematics 384U and 384G (Topic 6) may not both be counted.


Topic 7: Time Series Analysis. Introduction to statistical time series analysis. Includes autoregressive integrated moving average (ARIMA) and more general models, forecasting, spectral analysis, time domain regression, model identification, estimation of parameters, and diagnostic checking. Additional prerequisite: Mathematics 384D.

385. **Topics in Applied Statistics.** Theories, models, and methods for the analysis of quantitative data. Three lecture hours a week for one semester. With consent of the graduate adviser, may be repeated for credit when the topics vary. Prerequisite: Graduate standing; and Statistics and Scientific Computation 380c, 382, or consent of instructor.

**Topic 1: Experimental Design.** Principles, construction, and analysis of experimental designs. Includes one-way classification, randomized blocks, Latin squares, factorial and nested designs, fixed and random effects, multiple comparisons, and analysis of covariance.

**Topic 2: Applied Regression.** Simple and multiple linear regression, residual analysis, transformations, building models with real data, and testing models. Additional prerequisite: Statistics and Scientific Computation 385 (Topic 1) or consent of instructor.

**Topic 3: Applied Multivariate Methods.** Introduction to the analysis of multivariate data as applied to examples from the social sciences. Includes multivariate linear models, principal components and factor analysis, discriminant analysis, clustering, and canonical correlation. Additional prerequisite: Statistics and Scientific Computation 385 (Topic 2) or the equivalent.

**Topic 4: Analysis of Categorical Data.** Methods for analyzing categorical data. Includes categorical exploratory variables within the general linear model, models of association among categorical variables, and models in which the response variable is categorical or is a count. Emphasis on logical similarities across methods.

**Topic 5: Structural Equation Modeling.** Introduction to the basic concepts, methods, and computing tools used in structural equation modeling. Designed to help students develop a working familiarity with some common statistical procedures and their application through the use of statistical software. Additional prerequisite: Statistics and Scientific Computation 385 (Topic 2) or the equivalent or consent of instructor.

**Topic 6: Hierarchical Linear Models.** Introduction to multilevel data structures, model building and testing, effect size, fixed and random effects, missing data and model assumptions, hierarchical linear modeling (HLM) logistics, statistical power, and design planning. Additional prerequisite: Statistics and Scientific Computation 385 (Topic 2) or the equivalent or consent of instructor.

**Topic 7: Survey Sampling and Methodology.** Survey planning, execution, and analysis. Includes the principles of survey research, including sampling and measurement; questionnaire construction and distribution; response effects; validity and reliability; scaling data sources; and data reduction and analysis.

**Topic 8: Introduction to Bayesian Methods.** A practical introduction to Bayesian statistical interference, with an emphasis on applications in behavioral and measurement research. Examines how Bayesian statistical inference differs from classical inference in the context of simple statistical procedures and models, such as hypothesis testing, analysis of variance (ANOVA), and regression. Additional prerequisite: Statistics and Scientific Computation 385 (Topic 2) or the equivalent or consent of instructor.

**Topic 9: Longitudinal Data Analysis.** Applications of models to data collected at successive points in time. Includes latent growth curve models, models for non-linear growth, discrete-time and continuous-time event history models, multilevel models for change, random coefficient models, and applications of models to event-occurrence data.

**Topic 10: Modern Statistical Methods.** Introduction to conducting statistical analysis using modern resampling methods, including bootstrapping and Monte Carlo simulation. Emphasis on theoretical understanding and application.

**Topic 11: Applied Mathematical Statistics.** Designed for doctoral students who plan to use statistical methods in their research but do not require a highly mathematical investigation of the subject. Introduction to the basic concepts of probability and mathematical statistics. Includes probability distributions and estimation theory and hypothesis testing techniques. Additional prerequisite: A calculus course covering integration and differentiation.

**Topic 12: Meta-Analysis.** Introduction to the statistics used to synthesize results from a set of studies. May include calculation of different effect sizes, calculating pooled estimates using fixed and random effects models, testing moderating variables using fixed and mixed effects models, testing heterogeneity of effect sizes, and assessing and correcting publication bias. Additional prerequisite: Statistics and Scientific Computation 385 (Topic 2) or the equivalent.

**Topic 13: Factor Analysis.** Introduction to exploratory and confirmatory factor analysis. May include review of matrix algebra and vector geometry, principal components and principal axis factoring, and factor rotation methods, as well as single-factor and multiple-factor multisample models, multitrait-multimethod technique, and latent means modeling. Emphasis on critiquing current research. Additional prerequisite: Statistics and Scientific Computation 385 (Topic 2) or the equivalent or consent of instructor.

**Topic 14: Maximum-Likelihood Statistics.** Introduction to the likelihood theory of statistical inference. Includes probability distributions, estimation theory, and applications of maximum-likelihood estimation (MLE) to models with categorical or limited dependent variables, even count models, event history models, models for time-series cross-section data, and models for hierarchical data.

**Topic 15: Survival Analysis and Duration Modeling.** Focuses on the statistical methods related to the analysis of survival or of time to event data. Emphasis on practical applications in medicine, biology, economics, criminology, sociology, and engineering. May include Kaplan-Meier estimators, semiparametric and parametric regression models, model development, and model adequacy assessment.
386C. Computational and Statistical Learning. An introduction to statistical learning methods, exploring both the computational and statistical aspects of data analysis. Topics include numerical linear algebra, convex optimization techniques, basics of stochastic simulation, nonparametric methods, kernel methods, graphical models, decision trees, and data resampling. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386D. Monte Carlo Methods in Statistics. Stochastic simulation for Bayesian inference, designed to develop an understanding of Markov chain Monte Carlo methods and their underlying theoretical framework. Topics include Markov chains, Monte Carlo integration, Gibbs sampler, Metropolis-Hastings algorithms, slice sampling, and sequential Monte Carlo. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Economics 392M (Topic 19: Probability and Statistics), Statistics and Scientific Computation 384, or the equivalent.

387. Linear Models. An exploration of practical applications of the projection approach to linear models, building from a review of essential linear algebra concepts to the theory of linear models from a projection-based perspective. Introduction to Bayesian ideas. Additional topics include analysis of variance, generalized linear models, and variable selection techniques. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Economics 392M (Topic 19: Probability and Statistics), Statistics and Scientific Computation 384, or the equivalent; and basic coding skills in R, Matlab, or Stata.

388. Consulting Seminar. Supervised experience in applying statistical or mathematical methods to real problems. Includes participation in weekly consulting sessions, directed readings in the statistical literature, the ethics of research and consulting, and report writing and presentations. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

389. Time Series and Dynamic Models. Exploration of the general class of state-space models, or dynamic models. Emphasis is placed on the implementation and use of the models presented, with applications focused on the social sciences. Topics include dynamic regression models, the Kalman filter, time series models, multivariate time series models, conditional variance models, Markov chain Monte Carlo algorithms for state-space models, and particle filters. Three lecture hours a week for one semester. Prerequisite: Graduate standing; Economics 392M (Topic 19: Probability and Statistics), Statistics and Scientific Computation 384, or the equivalent; and coding skills in R, Matlab, or Stata.

189R, 289R, 389R. Graduate Research. Individual research project supervised by one or more faculty members. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

190. Readings in Statistics. Faculty-directed research seminar. Activities may vary, but will include readings of cutting-edge research papers, discussion of on-going student and faculty research projects, and consulting projects. May be repeated for credit. Prerequisite: Graduate standing.

391D. Data Mining. Study of various mathematical and statistical aspects of data mining. Includes supervised learning (regression, classification, and support vector machines) and unsupervised learning (clustering, principal components analysis, and dimensionality reduction). Uses technical tools drawn from linear algebra, multivariate statistics, and optimization. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Mathematics 341 or the equivalent.

292. Introduction to Scientific Programming. Introduction to programming using both the C and Fortran (95/2003) languages, with applications to basic scientific problems. Covers common data types and structures, control structures, algorithms, performance measurement, and interoperability. Two lecture hours a week for one semester. Prerequisite: Graduate standing and credit or registration for Mathematics 408C or 408K.

392M. Computational Economics. Introduction to the development and solution of economic models of growth; macroeconomic fluctuations; environmental economics; financial economics; general equilibrium models; game theory; and industrial economics. Includes neural nets, genetic algorithms and agent-based methods, and stochastic control theory applied to a variety of economic topics. Three lecture hours a week for one semester. Prerequisite: Graduate standing.


394. **Scientific and Technical Computing.** Comprehensive introduction to computing techniques and methods applicable to many scientific disciplines and technical applications. Covers computer hardware and operating systems, system software and tools, code development, numerical methods and math libraries, and basic visualization and data analysis tools. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Mathematics 408D or 408M. Prior programming experience is recommended.

394C. **Parallel Computing for Scientists and Engineers.** Parallel computing principles, architectures, and technologies. Parallel application development, performance, and scalability. Designed to prepare students to formulate and develop parallel algorithms to implement effective applications for parallel computing systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Mathematics 408D or 408M, Mathematics 340L, and prior programming experience using C or Fortran on Linux or Unix systems.

394D. **Distributed and Grid Computing for Scientists and Engineers.** Distributed and grid computing principles and technologies. Covers common modes of grid computing for scientific applications, developing grid-enabled applications, and future trends in grid computing. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Mathematics 408D or 408M, Mathematics 340L, and prior programming experience using C or Fortran on Linux or Unix systems.

394E. **Visualization and Data Analysis.** Scientific visualization principles, practices, and technologies, including remote and collaborative visualization. Introduces statistical analysis, data mining, and feature detection. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Mathematics 408D or 408M, Mathematics 340L, and prior programming experience using C or Fortran on Linux or Unix systems.

395. **Advanced Topics in Scientific Computation.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Additional prerequisites vary with the topic and are given in the Course Schedule.

398R. **Master's Report.** Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in statistics and scientific computation and consent of the supervising professor and the graduate adviser.

398T. **Supervised Teaching in Statistics and Scientific Computation.** Supervised teaching experience; weekly group meetings, individual consultations, and reports. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and appointment as a teaching assistant.

---

**TEXTILE AND APPAREL TECHNOLOGY**

*Master of Science in Textile and Apparel Technology*

---

**FACILITIES FOR GRADUATE WORK**

The program in textile and apparel technology is housed in Mary E. Gearing Hall, which offers state-of-the-art resources for teaching and research, including several laboratories and libraries. Modern laboratories for material synthesis and processing provide the capability of synthesizing fibers and producing woven, knitted, and non-woven structures. An environmentally controlled advanced fiber and fibrous materials evaluation laboratory has instruments for testing a wide array of fundamental properties of these materials. A human dimension research laboratory with body scanning, computer-aided design, fabric printing and cutting, and other digital equipment aids in apparel technology research. In addition, there is a renewable fiber and composite laboratory for graduate studies and research, and a consumer and market analysis laboratory. Other resources include the McKinney Engineering Library, the Mallet Chemistry Library, the Life Science Library, the Perry-Castañeda Library, the Fine Arts Library, and Information Technology Services.

**AREAS OF STUDY**

The international textile and apparel industry operates as a total system that integrates environment, strategy, structure, and performance. Innovative research, effective product management and design, and optimal product management rely on the creative use of advanced technology. The master's program is designed to
prepare students to meet the challenges of design-driven industries through innovative problem solving, product development, and managerial strategies that incorporate the application of new technologies.

**GRADUATE STUDIES COMMITTEE**

The following faculty members served on the Graduate Studies Committee in the spring semester 2011:

- Jonathan Yan Chen
- Richard L. Corsi
- Mourad Krifa
- Hyun-Hwa Lee
- Julia A. Reed
- Bugao Xu

**ADMISSION AND DEGREE REQUIREMENTS**

Students seeking a graduate degree in textile and apparel technology should have a strong academic background in textiles, apparel, or a related field.

**MASTER OF SCIENCE IN TEXTILE AND APPAREL TECHNOLOGY**

Thirty-one to thirty-two semester hours of coursework are required for the degree and should be distributed as follows: (1) thirteen to fourteen hours in specified textiles and apparel core courses; (2) twelve hours in supporting fields, nine hours of which are specified; and (3) six hours in the thesis completing an original research project. The Graduate Studies Committee must approve the student’s Program of Work.

**FOR MORE INFORMATION**

- **Campus address:** Mary E. Gearing Hall (GEA) 223, phone (512) 471-0941, fax (512) 471-5630; campus mail code: A2700
- **Mailing address:** The University of Texas at Austin, Graduate Program in Textile and Apparel Technology, 1 University Station A2700, Austin TX 78712
- **E-mail:** he-txa@utlists.utexas.edu
- **URL:** [http://www.he.utexas.edu/txa/](http://www.he.utexas.edu/txa/)

**GRADUATE COURSES**

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

**TEXTILES AND APPAREL: TXA**

**392. Research Problems in Textile and Apparel Technology.** Directed research in various topics in the area of textile and apparel technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in textile and apparel technology, or graduate standing and consent of instructor.

**394. Recent Advances in Textile and Apparel Technology.** An in-depth study of textile and apparel topics. Students may read original research papers and carry out fieldwork assignments. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in textile and apparel technology, or graduate standing and consent of instructor.

**Topic 1: Advances in Product Development and Technical Design.** Development of specification, sizing, grading systems, and quality control methodology. Three lecture hours a week for one semester.

**Topic 2: International Sourcing and the Global Economy.** Economic, social, and public issues related to international production and sourcing of textiles and apparel. Three lecture hours a week for one semester.

**Topic 3: E-Commerce and Direct Marketing.** Recent developments and evaluation of nontraditional retailing of apparel. Three lecture hours a week for one semester.

**Topic 4: Textile Instrumentation.** Application of image analysis, neural networks, and wavelet transforms to textile and apparel products. Three lecture hours a week for one semester.

**Topic 5: Digital Design and Printing.** Principles and elements of digital design and printing. Recent developments in digital knits, weaves, prints, and nonwoven textiles. Two lecture hours and three laboratory hours a week for one semester.

**Topic 6: Textile Functional Finishes.** Study of the application and adaptation of functional finishes to textiles. Three lecture hours a week for one semester.

**Topic 7: Textile Microscopy and Image Analysis.** Basic techniques for characterizing fiber properties visually with a microscope and using technology and computer analysis. Three lecture hours a week for one semester.
Topic 8: Digital Modeling of Textiles. Recent developments in two- and three-dimensional modeling. Three lecture hours a week for one semester.

Topic 9: Production Mechanics and Properties of Woven Fabrics. The relationship between the mechanics of production and mechanical properties of woven fabric; the unit operations required to prepare yarns for weaving and the mechanisms employed in weaving; fabric structure, geometry, and mechanical properties; designing for specific fabric properties. Three lecture hours a week for one semester.

Topic 10: Global Textile and Apparel Business Dynamics. Elements of competitive strategy and planning methods within the textile complex, with an emphasis on the concepts of strategy in a mature industry, defining business in a global industry, allocating resources through strategic planning methods, and implementing strategy in single- and multi-business firms. Three lecture hours a week for one semester.

Topic 11: Market Research in Textiles. Study and analysis of quantitative methods employed in market research in the textile industry, including the function of market research and its proper orientation to management and decision making. Three lecture hours a week for one semester.

Topic 12: Color Science. The basis of modern techniques for color specification, measurement, control, and communication. Applications of color science to textiles, plastics, color reproduction, computer-based imaging, and display systems. Basic concepts are taught using computer color graphics. Three lecture hours a week for one semester.

395. Seminar in Textiles and Apparel. Lectures and discussions on current topics in textiles and apparel. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in textile and apparel technology, or graduate standing and consent of instructor.

Topic 1: Mass Customization of Apparel. The principles and implementation of newly developed three-dimensional technology for apparel mass customization.


698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in textile and apparel technology and consent of the graduate adviser; for 698B, Textiles and Apparel 698A.
School of Nursing

Master of Science in Nursing
Doctor of Philosophy

The Master of Science in Nursing degree program is fully accredited by the Commission on Collegiate Nursing Education (CCNE).

FACILITIES FOR GRADUATE WORK

In addition to the extensive library and computer resources of the University, certain special resources within the School of Nursing provide support for graduate work.

The Cain Center for Nursing Research. The focus of this office is the promotion of funded research by nursing faculty members. The staff provides support and consultation services and compiles information about opportunities for research funding and presentations, including some for which graduate students are eligible. The computer laboratory is used for graduate courses and is available for graduate student research projects. The Research Office also provides employment opportunities for graduate students interested in experience as research assistants.

The Learning Center. The Learning Center includes an audiovisual and reference library, a graphic and audiovisual production studio, clinical simulation laboratories for teaching psychomotor nursing skills, and a computer classroom and user facility equipped with Macintosh and Windows-based computers. Group study rooms and individual study carrels are available.

Clinical research and practice sites. The School of Nursing has access to a wide variety of private practice community and state facilities for field research and clinical placement. These include all major health care facilities in Austin and in several surrounding communities.

AREAS OF STUDY

Graduate work in the School of Nursing may lead to either the Master of Science in Nursing or the Doctor of Philosophy degree. The master’s degree program is designed to give students the theoretical, analytical, and clinical knowledge needed for specialized nursing practice. Those preparing for advanced practice should choose either the clinical nurse specialist track, with a concentration in holistic adult health nursing; or the nurse practitioner track, with a concentration in family, pediatric, or family psychiatric mental health. Students preparing for careers in maternal nursing (with an additional focus in teaching, administration, or public health) should choose the concentration in maternity nursing. Students preparing for careers in child health nursing (with an additional focus in teaching, administration, or public health) should choose the concentration in child health nursing. Students preparing for careers in midlevel management of health care facilities should choose the concentration in nursing administration and health care systems management. Students preparing for careers in public health and care of populations in the community should choose the concentration in public health nursing. Students preparing for careers in holistic adult health (with an additional focus in teaching or administration) should choose the concentration in holistic adult health nursing.

The doctoral degree program emphasizes the acquisition of a sound foundation in nursing science and research methods as a basis for developing nursing knowledge and scholarship. Graduates of the doctoral program typically enter positions in nursing education, research, or executive management of health care agencies. Some prepare to make contributions to the development of nursing theory or health policy.
GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Gayle J. Acton
Heather A. Becker
Sharon A. Brown
Linda J. Carpenter
Patricia A. Carter
Angela P. Clark
Evelyn M. Clingerman
Carol L. Delville
Eileen R. Fowles
Nina M. Fredland
Alexandra A. Garcia
Tracie C. Harrison
Sharon D. Horner
Eun-Ok Im
Regina Johnson
Terry L. Jones
Eileen K. Kintner
Graham J. McDougall Jr.
Donna L. Rew
Roberta J. Ruiz
Cherie E. Simpson
Alex M. Stuifbergen
Gayle M. Timmerman
Deborah L. Volker
Lorraine O. Walker
Gayle M. Timmerman

ADMISSION AND DEGREE REQUIREMENTS

MASTER OF SCIENCE IN NURSING

The entering student normally holds a bachelor’s degree from a program accredited by the National League for Nursing or the Commission on Collegiate Nursing Education. Registered nurses with nonnursing baccalaureate degrees may also apply; if admitted, these students must complete four bridge courses in nursing research, upper-division statistics, public health nursing, and nursing management before beginning work for the master’s degree. Bridge courses may not be counted toward degree requirements. Applicants who wish to pursue the family or pediatric nurse practitioner track must have at least one to two years of clinical practice experience to be considered for admission.

Factors considered in the admission decision include satisfactory scores on the Graduate Record Examinations General Test, with attention given to the relative balance between verbal and quantitative scores; a grade point average of at least 3.00 in upper-division and graduate coursework; information derived from academic and professional references; professional background and goals; and proficiency in the English language. An interview may also be required. The composite picture presented by these factors is an important part of the admission review and decision.

All students are expected to complete an approved statistics course prior to or during the first semester of enrollment. Since all courses are not offered each semester, the student who waits to complete the statistics requirement after enrolling may find that his or her course sequence is altered. As a result, the student may need more time to complete the degree program.

The clinical nurse specialist and nurse practitioner tracks both require at least forty-eight semester hours of coursework.

The requirements for the concentrations are as follows:

<table>
<thead>
<tr>
<th>Concentrations</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>child health nursing</td>
<td>at least 40</td>
</tr>
<tr>
<td>holistic adult health nursing</td>
<td>at least 39</td>
</tr>
<tr>
<td>maternity nursing</td>
<td>at least 42</td>
</tr>
<tr>
<td>nursing administration and health care systems management</td>
<td>at least 42</td>
</tr>
<tr>
<td>public health nursing</td>
<td>at least 39</td>
</tr>
</tbody>
</table>

Preparation of a thesis is optional; when this option is chosen, an additional three to six semester hours are required.

Program components are (1) core courses that provide advanced theoretical and research knowledge and a deeper understanding of professional issues; (2) courses in the student’s concentration; (3) courses in a selected focus (required only for students in the holistic adult health, maternity, and child health nursing concentrations); (4) supporting courses; and (5) electives, which include courses from outside nursing.

MASTER OF SCIENCE IN NURSING: ALTERNATE ENTRY

The alternate entry program is designed for the student who has no previous degrees in nursing, who desires a career in specialized nursing practice, and who holds at least a bachelor’s degree in a discipline other than nursing. It is fully approved by the Texas Board of Nursing and is nationally accredited. Alternate-entry students may choose from concentrations in child health nursing, holistic adult health nursing, maternity nursing, nursing administration and health care systems management, and public health nursing. Students may also choose the clinical nurse specialist track with a concentration in holistic adult health nursing or family psychiatric mental health.

Admission requirements include at least a bachelor’s degree in a discipline other than nursing; satisfactory scores on the Graduate Record Examinations General Test, with attention given to the relative balance...
between verbal and quantitative scores; a grade point average of at least 3.00 in upper-division and graduate coursework; satisfactory academic and/or professional references; personal and professional goals compatible with the purpose of the program; and proficiency in the English language. An interview may also be required. The composite picture presented by these factors is an important part of the admission review and decision.

Prerequisite courses in statistics and the natural and behavioral sciences must be completed prior to enrollment. Of the required prerequisites, the courses in anatomy, chemistry, and microbiology must be completed prior to application.

The alternate-entry student is eligible to take the licensure examination to become a registered nurse (NCLEX-RN) in the state of Texas after completing thirty-eight semester hours of foundation courses. The student must pass Nursing 290S in order to enroll in the first semester of courses following the foundation courses. In all future semesters, the student must be a registered nurse in order to enroll in graduate nursing courses, with the exception of electives. Depending on the chosen concentration, students must complete a minimum of seventy-four to eighty-three semester hours of coursework. Preparation of a thesis is optional; when this option is chosen, an additional three to six semester hours are required.

Program components are (1) accelerated foundation courses in all major clinical areas of nursing; (2) core courses that provide advanced theoretical and research knowledge and a deeper understanding of professional issues; (3) courses in one of the nursing concentrations available to the alternate-entry student; (4) courses in a selected focus (required only for students in the holistic adult health, maternity, and child health nursing concentrations); (5) supporting courses; and (6) electives, some of which are from outside nursing.

DOCTOR OF PHILOSOPHY

The entering student must be a registered nurse who holds either a bachelor’s or a master’s degree in nursing from a program accredited by the National League for Nursing or the Commission on Collegiate Nursing Education. The occasional student who holds no master’s degree or a master’s degree in another discipline will be required to complete prescribed graduate bridge courses in nursing as a condition of admission. Bridge courses may not be counted toward degree requirements. These students may also choose to complete a master of science in nursing degree en route to the PhD.

Factors considered in the admission decision include satisfactory scores on the Graduate Record Examinations General Test, with attention given to the relative balance between verbal and quantitative scores; a grade point average of at least 3.00 in upper-division and graduate coursework; information derived from academic and professional references; professional background; congruence of the student’s research goals with the expertise of the nursing faculty; a satisfactory interview; and proficiency in the English language. The composite picture presented by these factors is an important part of the admission review and decision.

All students are expected to complete an approved statistics course prior to or during the first semester of enrollment. In addition, all students must pass a qualifying examination before entering candidacy for the degree. Students must complete at least fifty-one semester hours of coursework.

The degree program requires completion of the following coursework: (i) core courses focused on advanced theoretical, analytical, and research method skills; (ii) seminars and related supporting courses in a focused area of study; (iii) research practicum courses; and (iv) dissertation courses.

DOCTOR OF PHILOSOPHY: ALTERNATE ENTRY

The alternate entry program is designed for the student who has no previous degrees in nursing, who desires a career as a nurse scientist, and who holds at least a bachelor’s degree in a discipline other than nursing. The program is fully approved by the Texas Board of Nursing. Alternate-entry PhD students may choose to complete a Master of Science in Nursing degree en route to the PhD if desired.

Factors considered in the admission decision include at least a bachelor’s degree in a discipline other than nursing; satisfactory scores on the Graduate Record Examinations General Test, with attention given to the relative balance between verbal and quantitative scores; a grade point average of at least 3.00 in upper-division and graduate coursework; information derived from academic and professional references; professional background; congruence of the student’s research goals with the expertise of the nursing faculty; a satisfactory interview; and proficiency in the English language. The composite picture presented by these factors is an important part of the admission review and decision.

Prerequisite courses in upper-division statistics and the natural and behavioral sciences must also
be completed prior to enrollment. Of the required prerequisites, the courses in anatomy, chemistry, and microbiology must be completed prior to application.

The alternate-entry PhD student is eligible to take the licensure examination to become a registered nurse (NCLEX-RN) in the state of Texas after completing thirty-eight semester hours of foundation courses. The student must pass Nursing 290S in order to enroll in the first semester of courses following the foundation courses. In all future semesters, the student must be a registered nurse in order to enroll in graduate nursing courses, with the exception of electives. The student must pass a qualifying examination before entering candidacy for the doctoral degree. Students must complete at least 101 semester hours of coursework.

Program components are (1) accelerated foundation courses in all major clinical areas of nursing; (2) master’s level bridge courses, which provide advanced theoretical and research knowledge and a deeper understanding of professional issues; (3) doctoral core courses focused on advanced theoretical, analytical, and research method skills; (4) seminars and related supporting courses in a focused area of study; (5) research practicum courses; and (6) dissertation courses.

PREPARATION FOR ADVANCED PRACTICE CERTIFICATION

The post-master’s preparation for advanced practice certification is designed for students who already hold a master’s degree in nursing from a program accredited by the National League for Nursing or the Commission on Collegiate Nursing Education. Students complete the didactic and clinical hours necessary to take the national certification exam in their specialty area. They do not, however, earn a second master’s degree. Students complete the concentration in family, pediatric, or family psychiatric mental health care. Applicants must have at least one to two years of clinical practice experience to be considered for admission.

Factors considered in the admission decision include a grade point average of at least 3.00 in upper-division and graduate coursework; information derived from academic and professional references; professional background and goals; and proficiency in the English language. An interview may also be required. The composite picture presented by these factors is an important part of the admission review and decision.

DUAL DEGREE PROGRAM

The School of Nursing offers the following dual degree program in cooperation with the McCombs School of Business. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
</tbody>
</table>

LEGAL REQUIREMENTS

In the interest of public safety, there are legal restrictions on enrollment in some nursing courses and on eligibility for RN licensure. Factors that may make an individual ineligible for licensure in Texas include prior denial of a license by a licensing authority; disciplinary action by a licensing/certifying authority; conviction for a crime other than a minor traffic violation; diagnosis/treatment/hospitalization in the past five years for schizophrenia or other psychotic disorders, bipolar disorder, paranoid personality disorder, antisocial personality disorder, or borderline personality disorder; addiction or treatment for addiction to alcohol or any other drug during the previous five years; and having been issued an order concerning eligibility for examination or licensure or having received a proposal of ineligibility.

To avoid delay in course enrollment, delay or denial of licensure, or possible disciplinary action and criminal prosecution for later discovery of falsified records, those with a history of any of the factors listed above are strongly urged to apply for a determination of eligibility for licensure. Request for a determination should be made as early as possible, prior to or upon enrolling in the nursing program. Such a determination, called a Declaratory Order, is issued by the Board of Nursing. More information is available on the Texas Board of Nursing Web site at http://www.bon.state.tx.us/. Issuance of a Declaratory Order takes a minimum of three to six months.
COMPLIANCE

Prior to enrollment, all PhD or non-degree-seeking students who register for clinical courses, and all master’s and post-master’s certificate students, must provide evidence showing that the following health, CPR, liability insurance, and licensure requirements and paperwork are current throughout the given semester or program:

- Measles, mumps, rubella (MMR) vaccinations
- Hepatitis B vaccination (the second shot by the first day of class, and the third shot by the beginning of the second semester; titer required after ten years)
- Tuberculosis skin test
- Tuberculosis screening form (required annually)
- Proof of immunity to varicella (chicken pox)
- CPR certification (Basic Life Support for Health Care Providers, offered by the American Heart Association)
- Basic first aid certification (Heartsaver First Aid, offered by the American Heart Association through Emergency Medical Services) (alternate-entry students only)
- Professional liability insurance (purchased each year through the School of Nursing)
- Background check (required of registered nurses who received initial licensure prior to 2003 only)
- Completion of School of Nursing orientation training modules
- Completion of School of Nursing scholastic dishonesty and professional integrity and honor code forms
- Licensure as a registered nurse in Texas (except for alternate-entry students in foundation courses)
- Employment verification

FOR MORE INFORMATION

Campus address: School of Nursing (NUR) 2.414, phone (512) 232-4701, fax (512) 232-4777; campus mail code: D0100
Mailing address: The University of Texas at Austin, Graduate Student Affairs Office, School of Nursing, 1700 Red River Street, Austin TX 78701-1499
E-mail: nugrad@uts.cc.utexas.edu
URL: http://www.utexas.edu/nursing/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

380D. Family Care Concepts in Psychiatric and Mental Health Nursing. Covers health promotion and psychiatric care involving families with complex relational problems in a variety of clinical settings. Students apply knowledge from theoretical, ethical, and evidence-based practices to provide culturally sensitive care within the community context. Emphasis is on recommended practices, treatment protocols, and critical thinking skills. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing in the School of Nursing; and Nursing 392E, 392Q, 395C, 396C, 396J, 196K, 396L, and 296M, or consent of instructor.

NURSING: N

180C. Psychopharmacology for Advanced Practice Nurses. Covers prescribing and monitoring medications commonly used with patients who have psychiatric or mental health problems. One lecture hour a week for one semester. Prerequisite: Graduate standing; and Nursing 395C, 396C, 396J, and 196K, or consent of instructor.

280E. Role of the Family Psychiatric and Mental Health Nurse Practitioner. Focuses on legal, political, and ethical issues affecting the family psychiatric and mental health nurse practitioner. Two lecture hours a week for one semester. Prerequisite: Graduate standing in the School of Nursing.
380F. Advanced Psychiatric and Mental Health Nursing I. Studies the theory and evidence bases for diagnosis and management of a variety of common psychiatric and behavioral disorders. Emphasizes diagnostic reasoning, clinical decision-making, and therapeutic strategies. Considers the sociocultural and community context for patient care. Three lecture hours a week for one semester. Prerequisite: Graduate standing in the School of Nursing, and consent of instructor or one of the following: Nursing 392E, 392Q, 393C, 396C, 396J, 196K, 396L, and 296M; concurrent enrollment in Nursing 380G; credit or registration for Nursing 180C.

380G. Advanced Psychiatric and Mental Health Nursing I: Clinical. Gives students a precepted, clinical environment in which to apply knowledge related to biological and psychosocial theories, pharmacology, health promotion, and ethics to patients and families with common psychiatric and behavioral disorders. Emphasizes standardized procedures and tools that assist in diagnosis, treatment, and developing beginning-level therapy skills in multiple modalities. Twelve laboratory hours a week for one semester. Prerequisite: Graduate standing in the School of Nursing, and consent of instructor or one of the following: Nursing 380D, concurrent enrollment in Nursing 380F, credit or registration for Nursing 180C.

380H. Advanced Psychiatric and Mental Health Nursing II. Theoretical bases for care of complex psychiatric and mental health patients with psychopathology in a variety of settings throughout the life span. Students integrate various biological and psychosocial theories with psychopharmacology, health promotion, and ethical decision making to develop culturally sensitive care. Emphasizes evidenced-based practices, recommended practices and treatment protocols, ethical decision making, and critical thinking strategies. Three lecture hours a week for one semester. Prerequisite: Graduate standing in the School of Nursing; and Nursing 380F and 380G, and concurrent enrollment in Nursing 480J, or consent of instructor.

480J. Advanced Psychiatric and Mental Health Nursing II: Clinical. Studies the role of the advanced psychiatric and mental health nurse in providing care for patients and families with complex psychopathology and psychiatric and mental health problems in a variety of clinical settings. Students apply knowledge from biological and psychosocial theories, psychopharmacology, health promotion, and ethics to develop culturally sensitive care. Emphasizes evidenced-based practices, recommended practices and treatment protocols, ethical decision making, and critical thinking strategies. Sixteen laboratory hours a week for one semester. Prerequisite: Graduate standing in the School of Nursing; and Nursing 380F and 380G, and concurrent enrollment in Nursing 380H, or consent of instructor.

380L. Theory Development in Nursing. Introduction to the nature of scientific explanation and inquiry. Critique of theoretical conceptualization in nursing. Examination of strategies for theory development. Analysis of the role of theory in nursing as a practice discipline. Three lecture hours a week for one semester. Required of all doctoral students. Prerequisite: Graduate standing.

380M. Historical and Philosophical Study of Nursing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

- **Topic 1:** Philosophical Aspects of Nursing. Introduction to the analysis of nursing language: defining terms, detecting logical fallacies, analyzing meanings, and recognizing descriptive and normative aspects of judgments.
- **Topic 2:** Historical Development of Nursing. In-depth study of the history of nursing, with emphasis on influences on the profession and changes that have occurred within it. Review of the association of nursing with related disciplines, its emergence into institutions of higher learning, organizational structure and hierarchy, changes in educational focus resulting from the preparation of educational leaders, and related topics.
- **Topic 3:** Philosophy of Nursing Theory. Advanced seminar in the application of philosophical aspects of nursing theory. Additional prerequisite: Nursing 380L.
- **Topic 4:** Philosophical and Theoretical Bases of Nursing Science. Philosophical principles and theories that contribute to the ongoing evolution of nursing science. Explores the historical development of nursing as a professional discipline in the context of philosophy and science. Prerequisite: Graduate standing and Nursing 397L (Topic 4: Critical Review of the Literature).

381M. Adult Health Nursing. The equivalent of three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

- **Topic 1:** Theoretical Foundations in Adult Health (Adult Health I). Theoretical underpinnings for research in adult health nursing. Analysis of theories related to person, health, and environment for their applicability to adult health nursing. Nursing 381M (Topic 1) and (Topic 9) may not both be counted.
- **Topic 2:** Substantive Areas in Adult Health (Adult Health II). Overview of nursing issues, psychosocial and physiological concepts, and research findings related to health promotion and health care needs of adults. Designed to help students develop the conceptual component of the dissertation research. Nursing 381M (Topic 2) and 397L (Topic 4: Critical Review of the Literature) may not both be counted.
- **Topic 3:** Research in Adult Health (Adult Health III). Application of methodology and theory development to research studies in adult health, with emphasis on analysis and development of methods for research in adult health nursing. Additional prerequisite: Nursing 381M (Topic 1 or Topic 2) and 397L.

Topic 5: Theories of Health Behavior. The theoretical underpinnings for research related to health behaviors and health behavior change for individuals, groups, or systems. Nursing 381M (Topic 1) and 381M (Topic 5) may not both be counted. Additional prerequisite: Nursing 380M (Topic 4: Philosophical and Theoretical Bases of Nursing Science).

381R. Theoretical Foundations of Aging. Theories in gerontology as applied to nursing practice. Two and one-half lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Graduate standing.

381S. Gerontological Nursing. Physiological changes in the elderly, and their implications for nursing practice. Two lecture hours and four and one-half laboratory hours a week for one semester. Prerequisite: Graduate standing and Nursing 381R.

382. Sociocultural Influences on Health. Factors associated with disparities in health status and health care among different social and cultural groups. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382H. Health Care Delivery. Overview of the health care delivery system in the United States—its definition, characteristics, and components. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

284P. Aging and Disability. Examines concepts and theories of aging and disability. Addresses the changing physical, psychological, social, economic, ethical, legal, and spiritual needs, environmental accommodations, and caregiver responsibilities and needs across the life course. Two lecture hours a week for one semester. Prerequisite: Graduate standing and admission to the alternate entry MSN program.

484E. Nursing Responses to Physiological Alterations in Health. Discussion of physiological alterations across the life span and of the nursing measures indicated to restore and maintain health. Four lecture hours a week for one semester. Prerequisite: Graduate standing, admission to the alternate entry MSN program, and Nursing 484C.

484F. Adult Health Nursing I. Discussion and application of concepts and theories necessary to promote and restore the health of adults with biological problems and related physiological and psychological responses. One and one-half lecture hours, two hours of skills laboratory, and eight hours of clinical work a week for one semester. Nursing 484F and 387F may not both be counted. Nursing 484F and 390F may not both be counted. Prerequisite: Graduate standing, admission to the alternate entry MSN program, and Nursing 484C.

484G. Conceptual Bases of Mental Health Nursing. Current perspectives on the etiology, prevention, and treatment of mental disorders in individuals, families, and groups; clinical application of pertinent nursing care. Two and one-half lecture hours and six laboratory hours a week for one semester. Nursing 484G and 287G may not both be counted. Nursing 484G and 290G may not both be counted. Prerequisite: Graduate standing, admission to the alternate entry MSN program, and Nursing 484C.

484H. Nursing Care of Childbearing and Childrearing Families. Concepts, theories, and processes essential to understanding the health concepts and nursing care of families during the childbearing and childrearing years. Four lecture hours a week for one semester. Nursing 484H and 287H may not both be counted. Nursing 484H and 290H may not both be counted. Prerequisite: Graduate standing, admission to the alternate entry MSN program, and Nursing 384D, 484E, 484F, and 484G.

384J. Nursing Care of Childbearing and Childrearing Families Practicum. Clinical application of concepts, theories, processes, and skills pertinent to the care of families during the childbearing and childrearing years. Twelve laboratory hours a week for one semester. Nursing 384J and 287J may not both be counted. Nursing 384J and 290J may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 384D, 484E, 484F, and 484G; and credit or registration for Nursing 484H.

284N. Genomic Applications in Nursing. The ethical, legal, psychological, and social issues involved in the integration of genetic information into nursing practice. Two lecture hours a week for one semester. Prerequisite: Graduate standing and admission to the alternate entry MSN program.

484R. Adult Health Nursing II. Discussion and application of core concepts, including nursing management, jurisprudence, and rehabilitation. Studies theories that can be used to promote and restore health of adults with biological problems and related physiological responses. Two lecture hours and eight laboratory hours a week for one semester. Nursing 484R and 387R may not both be counted. Nursing 484R and 290R may not both be counted. Prerequisite: Graduate standing, admission to the alternate entry MSN program, and Nursing 384D, 484E, 484F, and 484G.
484S. **Integration of Clinical Nursing Knowledge.** Integration of nursing knowledge derived from didactic and clinical courses with application in the care of clients across the life span and in a variety of settings. One lecture hour and twelve laboratory hours a week for one semester. Nursing 484S and 187S may not both be counted. Nursing 484S and 290S may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program, and Nursing 484H, 384J, 484Q, and 484R.

284T. **Professional Nursing Management.** Examines selected concepts and theories of nursing leadership and management in the context of the nursing work environment and professional nursing career development. Two lecture hours a week for one semester. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 284C (or 484C), 284N, 284P, 387F, 387R, 390F; and credit or registration for Nursing 187S, 290G, 290H, 290J, 290Q, and 290R.

385R. **Community Mental Health and Wellness.** Concepts, theories, and research on the mental health and wellness of individuals, groups, and families living and working in communities. Principles of preventive health care form a philosophical framework within which students analyze, evaluate, and synthesize the concepts and theories used to promote the health and welfare of people in the community. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

385S. **Advanced Theory and Research in Mental Health.** Analysis, development, and testing of theories and conceptual models of mental health and illness; examination of relationships among stress, response to traumatic events, and mental health of the individual, family, and groups. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386C. **Computers in Nursing.** Development of competence in computer use and in the application of computer-based techniques to nursing problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386E. **Evidence-Based Practice and Outcomes in Health Care.** Theories of evidence-based practice are used to examine complex nursing decision-making protocols in administrative health care settings. Students appraise the health care literature to evaluate the evidence for implementation of change protocols and apply their learning to clinical and administrative decisions about effecting change to deliver patient-centered care. Review of various methods of dissemination of evidence-based practice and outcomes data. Three lecture hours a week for one semester. Prerequisite: For students in the Master of Science in Nursing program, graduate standing and either Nursing 392 and 392E or consent of instructor; for alternate entry students, graduate standing and either Nursing 384D and 392E or consent of instructor.

386F. **Budget and Finance in Health Care.** Conceptual and practical applications of financial management, cost analyses, and budgeting in the contemporary health care delivery system. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386H. **Overview of Healthcare System.** Designed to provide an extensive overview of the U.S. healthcare system. Topics include historical underpinnings, current trends, contemporary issues, and strategies for delivering healthcare in a variety of settings. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386K. **Management of Complex Systems in Nursing.** Introduction to major concepts and theories of individual, group, and organizational behavior, and their application to the management of complex social systems in health care organizations. Three class hours a week for one semester. Students in the dual MSN/MBA program may substitute this course for the required business core course, Business Administration 389T. Prerequisite: Graduate standing.

386M. **Administrative Decision Making in Nursing Systems.** Theories of nursing, economics, management science, and decision analysis are used to examine strategic and operational decision activities in the administration of nursing systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386P. **Practicum in Administrative Decision Making.** Guided field experience to examine information management and complex decision problems in the administration of nursing systems. Twelve laboratory hours a week for one semester. Prerequisite: Graduate standing and credit or registration for Nursing 386M.

386Q. **Quality and Safety in Healthcare.** Examination of quality and safety in the U.S. healthcare system based on quantitative and qualitative research findings, expert opinions, and cultural surveys. Explores and evaluates strategies for creating and sustaining a culture of safety in healthcare. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386R. **Nursing Systems: Theory and Research.** Advanced study of theories and research related to nursing systems of care and patient aggregates within organized settings. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

386S. **Health Care Systems Outcomes.** Theoretical and methodological issues related to the study of outcomes of nursing systems of care, including patient, staff, organization, and community health outcomes. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

686V. **Internship in Administration of Nursing Systems.** Analysis and implementation of advanced nursing administrative roles. Synthesis of knowledge and skill in designing, implementing, and evaluating nursing system programs. One lecture hour a week for one semester, and twenty hours of fieldwork a week in a health care agency. Prerequisite: Graduate standing and Nursing 386K, 386M, and 386P.

387. **Best Practices in Clinical Teaching.** Designed to prepare nurse educators to manage a group of nursing students in a variety of clinical settings. Applies learning theory to specific teaching strategies designed to prepare students for clinical practice. Explores methods for evaluating learning outcomes. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing, and credit or registration for Nursing 387C or consent of instructor.
387C. Conceptual Foundations of Nursing Education. Designed to introduce the student to the essential elements of nursing education. Critical elements include the theoretical bases of teaching and learning, curriculum development, and assessment and evaluation strategies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

387F. Adult Health Nursing I. Introduction to concepts, theories, and research findings essential for promoting and restoring the health of adults with selected commonly occurring physiological alterations and responses to health and illness. Three lecture hours a week for one semester. Nursing 484P and 387F may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program, and credit or registration for Nursing 284C (or 484C).

387G. Psychiatric-Mental Health Nursing. The biological, environmental, cultural, and interpersonal factors affecting individuals with psychiatric-mental health problems. Four and one-half lecture hours a week for seven weeks. Nursing 484G and 287G may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; and Nursing 284C (or 484C), 284N, 284P, and 387F.

387H. Child Health Nursing. Integrates concepts, theories, and processes essential to understanding the health and illness of children within the context of the family. Four and one-half lecture hours a week for seven weeks. Nursing 484H and 287H may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; and Nursing 284C (or 484C), 284N, 284P, and 387F.

387J. Maternity Nursing. Focuses on the normal processes and physiological alterations that occur before, during, and after pregnancy. Presents concepts, theories, and processes essential for promoting health and addressing health concerns of women, neonates, and their families during the childbearing years. Four and one-half lecture hours a week for seven weeks. Nursing 384J and 287J may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; and Nursing 284C (or 484C), 284N, 284P, and 387F.

387P. 387T, 487P, 587P, 687P. Practicum in Nursing Education. Designed to help the student prepare for a variety of roles in nursing education based on individual professional experience and goals. Practice teaching in clinical settings, simulation laboratories, and distant and live classrooms. Students teach patients, nursing staff members, or students individually or as groups. For each semester hour of credit earned, four laboratory hours a week for one semester. Prerequisite: Graduate standing; and credit or registration for Nursing 387, 387C, or 388, or consent of instructor.

387Q. Public Health Nursing. Integration of nursing, public health, and social science concepts and theories essential for promoting and restoring health and preventing disease and disability in aggregates, populations, and communities. Four and one-half lecture hours a week for seven weeks. Nursing 484Q and 287Q may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; and Nursing 284C (or 484C), 284N, 284P, and 387F.

387R. Adult Health Nursing II. Advanced concepts, theories, and research findings essential for promoting and restoring health of adults with selected complex physiological alterations and responses. Three lecture hours a week for one semester. Nursing 484R and 387R may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 284C (or 484C), 284N, 284P, 387F; and credit or registration for Nursing 390F.

387S. Integration of Nursing Knowledge. Integration of nursing knowledge derived from didactic and clinical courses, with application in case studies and simulated patients across the life span and in a variety of settings. One seminar hour a week for one semester. Nursing 484S and 387S may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 284C (or 484C), 284N, 284P, and 387F.

388. Strategies of Teaching in Nursing. Designed to prepare nurse educators across a spectrum of settings, including patient education, staff development, and college teaching. Explores the application of learning theory to a variety of teaching strategies and methods of evaluating processes and outcomes. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing, and credit or registration for Nursing 387C or consent of instructor.

389C. Clinical Nurse Specialist in Adult Health: Role Dimensions. Survey of the underlying values and the central and core competencies of the clinical nurse specialist in adult health across the spheres of influence (patient, nursing practice, organization/system). Application of theory and research to advanced practice. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and credit or registration for Nursing 389Q or consent of instructor.

389D. Clinical Nurse Specialist in Adult Health: Health Promotion and Illness Prevention. Analysis of physiological, psychosocial, and environmental concepts and testing of assessments and interventions for selected adult clients. Two and one-half lecture hours and two laboratory hours a week for one semester. Prerequisite: Graduate standing, and credit or registration for Nursing 389C, 392E, and 396J.

389E. Clinical Nurse Specialist in Adult Health: Chronic Illness. Analysis of physiological, psychosocial, spiritual, and environmental concepts and testing of assessment and interventions for selected adult health nursing clients. Three lecture hours and eight laboratory hours a week for one semester. Prerequisite: Graduate standing; and Nursing 389C, 389D, 489F, 392E, 395C, 396C, and 396J.
389F, 489F. Clinical Nurse Specialist in Adult Health: Acute Care. Analysis of physiological, psychosocial, and environmental concepts; testing of assessments and interventions for selected adult nursing clients. For 389F, two lecture hours and four laboratory hours a week for one semester; for 489F, two lecture hours and eight laboratory hours a week for one semester. Prerequisite: Graduate standing, and either consent of instructor or the following: Nursing 389C, 396C, and 396J and credit or registration for Nursing 389D, 392E, and 395C.

689G. Clinical Nurse Specialist in Adult Health: Practicum. Guided field experience to apply the clinical nurse specialist practice model in adult populations. Extensive clinical experience to acquire skills in the roles of the clinical nurse specialist. Two lecture hours and sixteen laboratory hours a week for one semester. Prerequisite: Graduate standing and Nursing 389E, 392, 392P, and 392Q.

489H. Diagnosis and Management of Adult Health Problems. Theoretical and clinical content for management of health problems of adult clients. Integration and application of skills and knowledge gained in previous adult health clinical nurse specialist coursework for adult patients in the acute or chronic setting. Pattern recognition, critical thinking, analysis, diagnostic testing, differential diagnosis, and medical management of common adult health problems. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing; Nursing 389C, 389D, 589E, 489F, 396C, and 396J; credit or registration for Nursing 689G; credit or registration for Nursing 395C or the equivalent; completion of all core courses in the adult health concentration; and consent of instructor.

389J. Adult Health Nursing: Health Promotion and Risk Reduction. Analysis of physiological, psychosocial, cultural, and environmental issues related to health promotion. Explores risk reduction assessment, intervention strategies, the dynamics of health promotion, and related advanced nursing roles. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing.

389K. Adult Health Nursing: Chronic and Disabling Conditions. Analysis of physiological, psychosocial, cultural, and environmental issues related to chronic conditions. Includes the dynamics of health promotion and risk reduction, symptom management, acute exacerbations, and related nursing roles within the context of chronic and disabling conditions. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: For students in the holistic adult health nursing concentration, graduate standing; and concurrent enrollment in Nursing 392 and 392E, or consent of instructor; for others, graduate standing; and Nursing 389J and 396C, or consent of instructor.

389L. Adult Health Nursing: Practicum in Adult Health. Guided field experience in which the student applies advanced nursing concepts in a selected area of adult health nursing or role specialty. Specific focus is determined by the needs or interests of the student. One lecture hour and eight laboratory hours a week for one semester. Prerequisite: Graduate standing; and Nursing 389J, 389K, 392Q, 392E, and 392, or consent of instructor.

390C. Health Promotion of High-Risk Populations. Advanced study of health promotion/illness prevention theories and research, with a focus on selected high-risk populations in the community. Emphasis on analyzing community risk factors, research and theory related to health promotion and illness prevention as applied to individuals, families, aggregates, and organizations, and research related to health outcomes for selected population groups, nationally and internationally. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390D. Public Health in a Global Context. Advanced study of theory and research related to public health within a global context. Examines relationships among public health needs and resources, health services, health policy, law, and population health indices. Emphasis is on developing both the knowledge fundamental to population-based health and the research base for optimizing public health through community action. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390F. Adult Health Nursing I Practicum. Application of concepts, theories, processes and skills pertinent to promoting and restoring the health of adults with selected commonly occurring physiological alterations and responses. Twelve laboratory hours a week for one semester. Nursing 484F and 390F may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; and Nursing 284C (or 484C), 284N, 284P, and 387F.

290C. Psychiatric-Mental Health Nursing Practicum. Application of concepts, theories, processes, and skills that are pertinent to promoting mental health and providing nursing care for people with psychiatric and mental illnesses. Seventeen and one-half laboratory hours a week for seven weeks. Nursing 484G and 290G may not both be counted. Prerequisite: Graduate standing; credit or registration for Nursing 287G and 390F.

290H. Child Health Nursing Practicum. Application of concepts, theories, processes, and skills pertinent to the care of children within the context of the family. Seventeen and one-half laboratory hours a week for seven weeks. Nursing 484H and 290H may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 284C (or 484C), 284N, 284P, 387F; and credit or registration for Nursing 287H and 390F.

290J. Maternity Nursing Practicum. Application of concepts, theories, processes, and skills pertinent to the care of women, neonates, and their families during the childbearing years. Seventeen and one-half laboratory hours a week for seven weeks. Nursing 384J and 290J may not both be counted. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 284C (or 484C), 284N, 284P, 387F; and credit or registration for 287J and 390F.
290Q. Public Health Nursing Practicum. Application of public health nursing concepts, theories, and processes pertinent to the care of aggregates, populations, and communities. Seventeen and one-half laboratory hours a week for seven weeks. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 284C (or 484C), 284N, 284P, 387F; and credit or registration for 287Q and 390F.

290R. Adult Health Nursing II Practicum. Application of advanced concepts, theories, processes, and skills essential for promoting and restoring the health of adults with selected complex physiological alterations and responses. Eight laboratory hours a week for one semester. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 284C (or 484C), 284N, 284P, 387F, 390F; and credit or registration for 284T, 387R, 187S.

290S. Integration of Nursing Knowledge Practicum. Designed to assist the student in the application and integration of knowledge from didactic and clinical courses in the care of multiple patients. Forty laboratory hours a week for three weeks. Prerequisite: Graduate standing; admission to the alternate entry MSN program; Nursing 284C, 390F, 290G, 290H, 290J, 290Q, 290R.

391D. Advanced Public Health Nursing: Community and Population Assessment. Theories and methods to assess populations, communities, and aggregates. Students apply appropriate strategies to assess the strengths and needs of a selected population or community and make public health nursing diagnoses of populations or communities as the foundation for planning public health programs for health promotion and disease prevention. One and one-half lecture hours and six laboratory hours a week for one semester. Prerequisite: Graduate standing and credit or registration for Nursing 391H.

391E. Public Health Assurance and Policy. Processes involved in the implementation and evaluation of a population-focused health promotion program based on community data sets and previously collected data; and policy recommendations related to the program. One and one-half lecture hours and six laboratory hours a week for one semester. Prerequisite: Public health 391D.

391F. Epidemiology in Public Health. A theoretical framework for applied public health epidemiology, including the importance of high-quality data, measures of morbidity and mortality in a population, epidemiological investigations, and the use of epidemiological study designs. Two and one-half lecture hours and two laboratory hours a week for one semester. Prerequisite: Public health 391D.

391G. Public Health Program Development. Focus on analyzing and critiquing health promotion and disease prevention initiatives, and obtaining and using relevant community and population-level health data for developing a multi-level health promotion and disease prevention initiative. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Public health 391D or consent of instructor.

391H. Theories and Critical Issues in Public Health. Major concepts and theories that guide public health practice for nurses and other professionals; local, national, and global issues and trends that shape public health. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

691P. Advanced Public Health Nursing Practice. Synthesis of public health nursing knowledge and skills in advanced practice. The multifaceted roles involved in advanced public health nursing practice, with emphasis on the ability to articulate one’s professional roles based on theory and practice. One lecture hour and twenty laboratory hours a week for one semester. Prerequisite: Graduate standing.

392. Nursing Phenomena of Concern. The major phenomena underlying research and advanced practice in nursing. Concepts derived from these phenomena address the wide range of health, health concerns, and populations that nurses treat. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392E. Research Methods. Designed to prepare students to discover, examine, and evaluate knowledge, theories, and creative approaches to health care. Focuses on the skills needed to identify research questions in practice, evaluate existing practice in the light of research findings, and develop strategies to incorporate research findings into the clinical setting. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392J. The Art and Science of Family Health. Open to all graduate students with consent of instructor. Theoretical foundations for advanced practice in nursing and other disciplines concerned with family health: family, parent, and child health and development theories; conceptual basis for understanding the context in which parent and child health and illness exist; interdisciplinary concepts and theoretical perspectives. Three lecture hours a week for one semester. Prerequisite: Graduate standing in nursing, or graduate standing and consent of instructor.

592K. Parent-Child Nursing I: Childbearing Families. Salient concepts and clinical basis for advanced nursing practice with childbearing families, considered from biophysical, psychological, developmental, family, and sociocultural perspectives. Introduction to concepts related to role development as an advanced practice nurse, with emphasis on the promotion of wellness and prevention of illness in pregnant women and their newborns within the context of their families. Students apply these concepts in providing nursing care to childbearing families in a variety of clinical settings under supervision of faculty members and preceptors. Three class hours and eight laboratory hours a week for one semester. Prerequisite: Graduate standing, Nursing 396C and 396J, and credit or registration for Nursing 395C.
592L. Parent-Child Nursing II: Childrearing Families. Salient concepts and clinical basis for advanced nursing practice with childbearing families, considered from biophysical, psychological, developmental, family, and sociocultural perspectives. Legal, ethical, and practice issues affecting the advanced practice nurse. Emphasis on promotion of wellness and prevention of illness in children within the context of their families. Students apply concepts in providing nursing care to childrearing families in a variety of clinical settings under supervision of faculty members and preceptors. Three lecture hours and eight laboratory hours a week for one semester. Prerequisite: Graduate standing and Nursing 592K.

392M. Clinical Project in Parent-Child Nursing. Supervised, individual clinical project. One lecture hour and eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

392P. Health Policy, Program Planning, and Evaluation. Open to all University graduate students. Exploration of multilevel health care policy implementation, program development, and outcome evaluation. Focus on the application of policies from macro-level to micro-level systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Nursing 392E or the equivalent, or consent of instructor.

392Q. Advanced Psychosocial Nursing: Culture, Ethics, and Therapeutic Communication. Current theoretical, research, ethical, and cultural perspectives pertinent to the application of selected advanced psychosocial nursing strategies with diverse populations of individuals, groups, and families. Two and one-half lecture hours and two laboratory hours a week for one semester. Prerequisite: Graduate standing.

492S. Advanced Practicum in Parent-Child Nursing. Culminating preceptorship experience: each student identifies his or her objectives for refining the role of the advanced practice nurse and selects the clinical setting and target population(s) that best support those objectives. One lecture hour and twelve laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and credit or registration for Nursing 592L.

392T. Advanced Assessment in Parent-Child Nursing. Advanced nursing assessment strategies for childbearing and childrearing families. One and one-half lecture hours and six laboratory hours a week for one semester. Prerequisite: Graduate standing.

592U. Parent-Child Nursing III: At-Risk Families. Salient concepts and clinical basis for advanced nursing practice with at-risk families during the childbearing years. Legal, ethical, and practice issues affecting the advanced practice nurse. Emphasis is on assessment and intervention with pregnant women and children with health problems that have a social and biophysical etiology. Students apply concepts in providing nursing care to at-risk families in a variety of clinical settings under supervision of faculty members and preceptors. Three lecture hours and eight laboratory hours a week for one semester. Prerequisite: Graduate standing and Nursing 592L.

192V, 392V. Advanced Pediatric Pathophysiology. Pathophysiology unique to the growth and development of newborns, infants, children, and adolescents. Embryology, genetics, adaptation to extraterine life, congenital anomalies, immunology, and the physiology and pathophysiology of puberty. Pathophysiology is studied from a developmental perspective, to encourage students' in-depth understanding of functional and dysfunctional integration of organ systems in the developing human; the goal is to give students a foundation for assessing and intervening with a variety of childhood health conditions based on pathophysiological changes. For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Graduate standing.

492W. Advanced Practicum in Child Health. Prominent concepts of biophysical, psychological, developmental, family, and sociocultural perspectives, and the clinical basis for master’s-level nursing practice with children and their families. Students use advanced concepts and theories in working with faculty members and preceptors in hospitals, clinics, schools, or homes. Two lecture hours and eight clinical hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

393. Parents, Children, and Family Life. Study of theories on parents, children, and family life; critical review of major research findings, with emphasis on implications for further research. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

293P. Pediatric Diagnostic Reasoning and Advanced Invasive Skills. Interpretation of laboratory and diagnostic testing; and the development of diagnostic and psychomotor skills needed to care for acute or critically ill neonatal and pediatric patients. One and one-half lecture hours and two laboratory hours a week for one semester. Prerequisite: Graduate standing, credit or registration for Nursing 394C or the equivalent, and credit or registration for Nursing 592V or the equivalent.

393Q. Advanced Neonatal Nursing I. Assessment and implementation of advanced nursing care of the high-risk preterm neonate. Development of a critical, analytical approach to clinical decision making; provision of care within a family-centered and developmentally supportive context. Concepts related to advanced role development of nurse practitioners. Three lecture hours a week for one semester. Prerequisite: Graduate standing, credit or registration for Nursing 293P and 395D, concurrent enrollment in Nursing 293R, and consent of instructor.
293R. Advanced Neonatal Nursing I—Clinic. Assessment and implementation of advanced nursing care of the high-risk preterm neonate. Development of a critical, analytical approach to clinical decision making; provision of care within a family-centered and developmentally supportive context. Concepts related to advanced role development of nurse practitioners. Eight clinical hours a week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Nursing 393Q, and consent of instructor.

393S. Advanced Neonatal Nursing II. Knowledge and skills needed to recognize and respond to emerging crises and organ system dysfunction or failure in full-term neonates with complex acute, critical, or chronic health conditions. Stabilizing the patient, minimizing complications, restoring maximum health potential through risk reduction, and providing family-centered care. Current research and evidence, theoretical models, and philosophies of care. Continued development of a critical, analytical approach to clinical decision making. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Nursing 393Q and 293R, concurrent enrollment in Nursing 293T, and consent of instructor.

293T. Advanced Neonatal Nursing II—Clinic. Continued development of advanced clinical skills in the management of high-risk neonates. Students incorporate nursing theory, current research and evidence, and complex skills into the care of full-term neonates with acute, critical, or chronic health conditions. Integration, under supervision of faculty members and preceptors, of the neonatal nurse practitioner role in the care of high-risk neonates in neonatal intensive care, labor and delivery, and intrahospital transport. Eight clinical hours a week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Nursing 393S, and consent of instructor.

393U. Advanced Neonatal Nursing III. Transition to home care and follow-up care for high-risk neonates and infants and their families. Synthesis of current research and evidence and theoretical concepts in nursing and the social and behavioral sciences that are relevant to care from admission to discharge. Continued development of a critical, analytical approach to clinical decision making. Advanced role development; legal, political, and ethical issues affecting nurse practitioner practice. Three lecture hours a week for one semester. Prerequisite: Graduate standing, Nursing 393S and 293T, and concurrent enrollment in Nursing 293V.

293V. Advanced Neonatal Nursing III—Clinic. Continued development of advanced clinical skills in the management of high-risk neonates and infants. Under the supervision of faculty members and preceptors, students incorporate nursing theory, current research and evidence, and complex skills into the care of neonates and infants from hospital admission to discharge to follow-up care in the community. Integration of knowledge and skills needed to care effectively and efficiently for neonates and infants whose life processes are assisted by or dependent on technological devices. Eight clinical hours a week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Nursing 393U, and consent of instructor.

493W. Advanced Neonatal Nursing Practicum. Concentrated and supervised application of knowledge and skills gained in previous courses to the management of high-risk neonates and infants. Evaluation of patients presenting with complex health problems and their families; development of comprehensive evidence-based management plans under the supervision of faculty members and preceptors. Sixteen clinical hours a week for one semester. Prerequisite: Graduate standing, Nursing 393U and 293V, and consent of instructor.

194, 294, 394, 494. Independent Study in Nursing. Detailed or in-depth study in a specific topic area. Topic and mode of study are agreed upon by student and instructor. Hours to be arranged. May be repeated for credit when the topics vary. Some topics are offered on the credit/no credit basis only; these are identified in the Course Schedule. Prerequisite: Graduate standing and consent of instructor.

394C. Advanced Pediatric Health and Developmental Assessment. Advanced developmental and health assessment of children (newborn through adolescent). Emphasis is on theories and skills applicable to the assessment of children. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing, admission to the pediatric nurse practitioner specialization, credit or registration for Nursing 192V and 396C, and consent of instructor.

294D. Primary Health Care of the Adolescent. Study of health promotion, anticipatory guidance, prevention of illness, and the assessment and management of illnesses commonly affecting adolescents. Adolescent health is discussed in a developmental context. Two lecture hours a week for one semester. Prerequisite: Graduate standing, admission to the pediatric nurse practitioner specialization, credit or registration for Nursing 394C or 396J, and consent of instructor.

394E. Pediatric Primary Health Care Concepts I. Study of health promotion, anticipatory guidance, prevention of illness, and the assessment and management of acute illnesses commonly affecting children. Concepts related to advanced role development of nurse practitioners. Three lecture hours a week for one semester. Prerequisite: For students in the pediatric nurse practitioner concentration, graduate standing and concurrent enrollment in Nursing 192V and 396D; for others, graduate standing, Nursing 394C and 392V, concurrent enrollment in Nursing 394F, and consent of instructor.

194F, 394F. Pediatric Primary Health Care Concepts I Clinic. Clinical experience in primary care settings, focusing on health promotion and management of well-child care and acute illnesses commonly encountered in children. For 394F, twelve laboratory hours a week for one semester; for 194F, four laboratory hours a week for one semester. Prerequisite: For students in the pediatric nurse practitioner concentration, graduate standing and concurrent enrollment in Nursing 394E and 395D; for others, graduate standing, Nursing 394C and 392V, concurrent enrollment in Nursing 394F, and consent of instructor.
294J. Pediatric Primary Health Care Concepts III. Primary care management of complex conditions in children. Additional emphasis on advanced role development of the pediatric nurse practitioner. Two lecture hours a week for one semester. Prerequisite: Graduate standing, admission to the pediatric nurse practitioner specialization, Nursing 394E and 394F, concurrent enrollment in Nursing 494K, and consent of instructor.

294K. Pediatric Primary Health Care Concepts III Clinic. Pediatric primary health care practicum in the advanced nursing management of the health of infants, children, and adolescents. Sixteen laboratory hours a week for one semester. Prerequisite: Graduate standing, admission to the pediatric nurse practitioner specialization, Nursing 396U and 396V, concurrent enrollment in Nursing 294J, and consent of instructor.

394L. Advanced Physiologic and Psychosocial Concepts in Maternity Nursing. Analysis of concepts related to the physiological and psychosocial changes resulting from childbirth. Development of skill in interpreting relevant biopsychosocial data. Theories and research related to the biopsychosocial concepts, family, parenting, preconception, systems of care, and cultural perspectives on reproductive health promotion. Serves as a foundation for providing nursing care to the maternal-newborn dyad in the family context. Three lecture hours a week for one semester. Prerequisite: Graduate standing and concurrent enrollment in Nursing 396C.

394M. Health Promotion in Maternity Nursing. Analysis of concepts related to health promotion, illness prevention, health disparities, and systems of care both during and between pregnancies. Students apply theoretical principles and research evidence while caring for women and newborns in a variety of settings under faculty and preceptor supervision. Students use data and resources to identify gaps and opportunities in maternity care. Presentation of theory and practice of maternity care, to prepare students for clinical competence consistent with that of a beginner acute care pediatric nurse practitioner. Two lecture hours and four clinical practicum hours for one semester. Prerequisite: Graduate standing and Nursing 394L and 396C.

394N. High-Risk Maternity Nursing. Significant biopsychosocial concepts that serve as a basis for nursing practice in high-risk maternity care; knowledge needed to identify common maternity complications; assessment and planning of evidence-based maternity care within the family context. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Nursing 394M.

394P. Advanced Practicum in Maternity Nursing. Guided field experience in which the student applies advanced nursing concepts in a selected area of maternity care. Under the direction of a clinical mentor, the student obtains extensive clinical experience to integrate skills relevant to his or her selected professional role. One lecture hour and eight clinical hours a week for one semester. Prerequisite: Graduate standing, Nursing 394M, and credit or registration for Nursing 394N.

394Q. Pediatric Acute Care Management I. Designed to prepare students to recognize, interpret, and respond to emerging health crises and organ system dysfunction or failure in children with complex acute, critical, and chronic health conditions. Emphasizes patient stabilization, minimizing complications, restoring maximal health potential through risk reduction, and providing physical and psychosocial support to the patient and family. Acute, critical, and chronic disorders within selected physiological systems are explored from a developmental and multicultural perspective. Six lecture hours every other week for one semester. Prerequisite: Graduate standing, Nursing 394E and 194F, credit or registration for Nursing 293P and 395D, concurrent enrollment in Nursing 294R, and consent of instructor.

394R. Pediatric Acute Care Management I: Clinical. Provides an opportunity for the beginner acute care pediatric nurse practitioner student to apply advanced knowledge of pathophysiology, pharmacology, current research and evidence, and diagnostic and psychomotor skills to caring for children with complex acute, critical, and chronic health conditions, and their families. Eight laboratory hours a week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Nursing 394Q, and consent of instructor. Students must also have proof of current Pediatric Advanced Life Support (PALS) training from the American Heart Association.

394S. Pediatric Acute Care Management II. Designed to prepare students to recognize, interpret, and respond to emerging health crises and organ system dysfunction or failure of physiological systems in children with complex acute, critical, and chronic health conditions. Emphasizes patient stabilization, minimizing complications, and restoring maximum health potential. Explores core concepts such as transport, complex discharge planning, rehabilitation, home care, and long-term care. Six lecture hours every other week for one semester. Prerequisite: Graduate standing, Nursing 394Q and 294R, concurrent enrollment in Nursing 294T, and consent of instructor.

394T. Pediatric Acute Care Management II: Clinical. Designed to prepare students for clinical competence consistent with that of a beginner acute care pediatric nurse practitioner. Under the supervision of faculty and preceptors, students integrate advanced knowledge of pathophysiology, pharmacology, current research and evidence, and diagnostic and psychomotor skills to create comprehensive management plans for children with complex acute, critical, and chronic health conditions. Eight laboratory hours per week for one semester. Prerequisite: Graduate standing, concurrent enrollment in Nursing 394S, and consent of instructor. Students must also have proof of current Pediatric Advanced Life Support (PALS) training from the American Heart Association.
594U. Pediatric Acute Care Advanced Practicum. Designed to prepare students to demonstrate the clinical competence of an advanced beginner acute care pediatric nurse practitioner. Under the supervision of faculty and preceptors, students have the opportunity to make independent and interdependent decisions in managing emerging health crises and organ system dysfunction in children with a variety of complex acute, critical, and chronic health conditions. Students work in a variety of settings, including emergency departments, intensive care units, inpatient medical and surgical units, and subspecialty clinics. Explores the legal, political, and ethical issues affecting nurse practitioner practice. Twenty laboratory hours a week for one semester. Prerequisite: Graduate standing, Nursing 394S and 294T, and consent of instructor. Students must also have proof of current Pediatric Advanced Life Support (PALS) training from the American Heart Association.

195, 295, 395, 495, 595, 695. Topics in Nursing. Areas of special interest. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing. Some topics also require consent of instructor; these are identified in the Course Schedule.

Topic 2: Community Programs Evaluation.

395C. Clinical Pharmacology and Therapeutics. Application of pharmacologic and pharmacokinetic principles to drug therapy management in family primary care nursing. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

395D. Pediatric Clinical Pharmacology and Therapeutics. The study of pediatric pharmacotherapeutics, with emphasis on pharmacokinetics, pharmacodynamics, administration, and education. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

396C. Advanced Pathophysiology. Pathophysiologic concepts from the cellular level through major body systems and across the life span. Etiological, pathogenic, and presenting patterns. Fundamental concepts of anatomy and physiology. Students are expected to develop an understanding of nursing and medical interventions for common health problems and the ability to apply and design interventions based on pathophysiologic changes. Three lecture hours a week for one semester. Nursing 396C and Pharmacy 395D may not both be counted. Prerequisite: Graduate standing and consent of instructor.

396J. Advanced Health Assessment. Advanced knowledge and skills involved in the assessment of individuals throughout the life span, within the context of the family, to determine their health status. Two lecture hours, three laboratory hours, and one hour of skills laboratory a week for one semester. Prerequisite: Graduate standing, admission to the advanced practice specialization, credit or registration for Nursing 396C, and consent of instructor.

196K, 296K. Advanced Health Assessment Clinic. Application of health assessment concepts and skills under the supervision of family and clinical preceptors in the clinical area. Performance of systematic health assessments of adults leading to the identification of normal and abnormal findings and the development of an initial health status list. Four or eight laboratory hours a week for one semester. Prerequisite: Graduate standing, admission to the advanced practice specialization, credit or registration for Nursing 396C and 396J, and consent of instructor.

396L. Primary Health Care Concepts I. Theoretical and clinical knowledge needed for advanced nursing management within the context of the family and the community of individuals who are essentially well or who have minor health problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing; admission to the family nurse practitioner or the pediatric nurse practitioner specialization; Nursing 396J and 296K; concurrent enrollment in Nursing 196M, 296M, or 396M; and consent of instructor.

196M, 296M, 396M. Primary Health Care Concepts I Clinic. Supervised experience in the nursing management of infants, children, and/or advanced adults and families who are well or who have common acute health problems. For each semester hour of credit earned, four laboratory hours a week for one semester. Prerequisite: Graduate standing; admission to the family nurse practitioner or the pediatric nurse practitioner specialization; Nursing 396C, 396J, and 296K; concurrent enrollment in Nursing 396L; and consent of instructor.

396N. Primary Health Care Concepts II. Theoretical and clinical knowledge needed for the management of complex and chronic health problems of individuals and families. Three lecture hours a week for one semester. Prerequisite: Graduate standing; admission to the family nurse practitioner specialization; Nursing 396L and 396M; concurrent enrollment in Nursing 196P, 296P, or 396P; and consent of instructor.

196P, 296P, 396P. Primary Health Care Concepts II Clinic. Supervised experience in the nursing management of infants, children, adults, and families who have complex or chronic health problems. For each semester hour of credit earned, four laboratory hours a week for one semester. Prerequisite: Graduate standing; admission to the family nurse practitioner specialization; Nursing 396C, 396L, and 396M; concurrent enrollment in Nursing 396N; and consent of instructor.

396Q. Primary Health Care Concepts III. Synergy of concepts and theories from nursing, social sciences, and biological sciences that are related to primary health care management of members of families and communities. Three lecture hours a week for one semester. Prerequisite: Graduate standing; admission to the family nurse practitioner or the pediatric nurse practitioner specialization; Nursing 391E; either Nursing 396N and 396P or 396U and 396V; concurrent enrollment in Nursing 196R, 296R, 396R, or 496R; and consent of instructor.
196R, 296R, 396R, 496R. Primary Health Care Concepts III Clinic. Advanced supervised experience as a direct primary health care giver in family practice clinical settings. For each semester hour of credit earned, four laboratory hours a week for one semester. Prerequisite: Graduate standing; admission to the family nurse practitioner or the pediatric nurse practitioner specialization; Nursing 391E; either Nursing 396N and 396P or 396U and 396V; concurrent enrollment in Nursing 396Q; and consent of instructor.

196S. Special Project in Advanced Practice. Development of a special project in an area of research, policy, or clinical issues relevant to advanced practice. Four laboratory hours a week for one semester. Prerequisite: Graduate standing, admission to the family nurse practitioner or the pediatric nurse practitioner specialization, Nursing 396L and 396M, and consent of instructor.

396T. Ecological Approaches to Child Health. The ecological approach to understanding individual, parental, family, and societal determinants of children's health. Students gain knowledge of developmental and family theories and use epidemiological principles to comprehend the complex dimensions and related conceptual factors that contribute to the health and well-being of children within families. Theoretical foundations for graduate students interested in health promotion and risk reduction for children and families. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

396U. Pediatric Primary Health Care Concepts II. Theoretical knowledge relevant to the management of complex and chronic primary health care problems from infancy through adolescence. Three lecture hours a week for one semester. Prerequisite: Graduate standing; admission to the pediatric nurse practitioner or the parent/child nursing specialization; Nursing 396C, 396L, and 396M; concurrent enrollment in Nursing 396V, 296V, or 396V; and consent of instructor.

396V, 296V, 396V. Pediatric Primary Health Care Concepts II Clinic. Clinical practice in the management of complex or chronic health problems of infants, children, and adolescents. For each semester hour of credit earned, four laboratory hours a week for one semester. Prerequisite: Graduate standing; admission to the pediatric nurse practitioner or the parent/child nursing specialization; Nursing 396C, 396L, and 396M; and concurrent enrollment in Nursing 396U.

396W. Advanced Adult Health Assessment. Introduces advanced knowledge and skills related to assessing the health of adult individuals. Emphasis is on combining nursing, biological, psychological, and sociocultural knowledge with theories of health and aging as they apply to the comprehensive assessment of client concerns and interpretation of clinical data relating to health promotion, health maintenance, and illness care. Two lecture hours, one skills laboratory hour, and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

197C. Doctoral Seminar I. Introduction to nursing science. Explores the history, current priorities, and funding mechanisms of science development in nursing along with established programs of nursing research. Provides a forum for students to develop and exchange ideas regarding research topics. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

197D. Doctoral Seminar II. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, and Nursing 197C or consent of instructor.

397K. Advanced Research in Nursing. Nursing science methods for developing and testing theoretical formulations: experimental, descriptive, qualitative, and historical designs. Three lecture hours a week for one semester, with additional computer laboratory hours to be arranged. Required of all doctoral students. Prerequisite: Graduate standing, Nursing 392E, and consent of instructor.

397L. Nursing Research Methods. Three lecture hours a week for one semester, with additional computer laboratory hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, Nursing 397K, and consent of instructor.

Topic 1: Analysis and Interpretation of Data. Critiquing, interpreting, disseminating, and using research findings.

Topic 2: Instrumentation and Measurement. Theoretical, methodological, and procedural aspects of measurement: norm-referenced and criterion-referenced measurement; data management and instrumentation.

Topic 3: Conceptual Foundations of Research Design and Methods. Theoretical approach to basic statistical and measurement concepts and their importance to research in health-related areas.

Topic 4: Critical Review of the Literature. Designed to assist the novice researcher in conducting a systematic and critical review of the literature in a substantial area of health-related scholarship. Nursing 381M (Topic 2: Substantive Areas in Adult Health [Adult Health II]) and 397L (Topic 4) may not both be counted.

Topic 5: Quantitative Design, Methods, and Analysis. The quantitative research design, methods, and analyses used in health care research. Includes descriptive, correlational, and experimental designs; related methods of analyses using statistical software; and interpretation of data. Additional prerequisite: Nursing 397L (Topic 3) or consent of instructor.

397M. Qualitative Research. Introduction to the theoretical and methodological aspects of qualitative research methods. Qualitative research approaches from a variety of disciplines and philosophical traditions, with emphasis on the application of research designs and data collection and analysis techniques to nursing studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and completion of two doctoral-level research courses or consent of instructor.
197P, 297P. Nursing Research Practicum. Guided experience in conceptual and methodological aspects of research: data management and analysis; critique and interpretation; instrumentation; and measurement. Four or eight laboratory hours a week for one semester. May be repeated for credit. May be repeated twice for credit. Prerequisite: Graduate standing and Nursing 397K.

397Q. Research Practicum I. Examines essential aspects of the responsible conduct of research and beginning skills needed to initiate a research program. Students focus on conceptual, methodological, and practical aspects of research within an ongoing faculty research project. One and one-half lecture hours and six laboratory hours a week for one semester. Prerequisite: Graduate standing; and Nursing 397L (Topic 3: Conceptual Foundations of Research Design and Methods), or credit or registration for Nursing 397L (Topic 5: Quantitative Design, Methods, and Analysis), or consent of instructor.

397R. Research Practicum II. Examines essential procedural aspects of conducting health-related research. Students focus on conceptual, methodological, and practical aspects of research within an ongoing faculty research project. One and one-half lecture hours and six laboratory hours a week for one semester. Prerequisite: Graduate standing; Nursing 397L (Topic 3: Conceptual Foundations of Research Design and Methods), 397L (Topic 5: Quantitative Design, Methods, and Analysis), or consent of instructor; and credit or registration for Nursing 380M (Topic 4: Philosophical and Theoretical Bases of Nursing Science), 382, or consent of instructor.

397S. Research Practicum III. Focuses on essential skills needed to develop a research proposal and plan an independent research program. Students focus on conceptual, methodological, and practical aspects of research within an ongoing faculty research project. One and one-half lecture hours and six laboratory hours a week for one semester. Prerequisite: Graduate standing, and Nursing 397M and 397R.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in nursing and consent of the graduate adviser; for 698B, Nursing 698A.

398T. Supervised Teaching and Learning in Nursing. Designed to introduce the student to the essential elements of nursing education prior to engaging in the role of assistant instructor. Critical elements include the theoretical bases of teaching and learning; teaching strategies for clinical and classroom settings; assessment and evaluation strategies for various educational settings; ethical and legal considerations; and the importance of engaging in the scholarship of teaching. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Graduate standing.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Completion of core doctoral courses and admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Nursing 399R, 699R, or 999R.
College of Pharmacy

PHARMACY

Master of Science in Pharmacy
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

State-of-the-art research facilities are available for graduate education. Laboratories are equipped with the latest instrumentation and specialized support units for research in all of the areas of study mentioned below. Research space on the Austin campus is located in two pharmacy buildings, Biomedical Engineering Building, at the Dell Pediatric Research Institute, and in the Animal Resources Center. In San Antonio, basic laboratory and clinical research space is available in the McDermott Building on the campus of the University of Texas Health Science Center, and affiliated institutions. Laboratories and offices on both campuses are outfitted with wired and wireless connections for Internet and library access. Additional facilities for collaborative research in Austin are available in the College of Natural Sciences, the Cockrell School of Engineering, the Institute for Neuroscience, and the Institute for Cellular and Molecular Biology. Students in both Austin and San Antonio have access to extensive electronic journal holdings through the University Libraries Web site, http://www.lib.utexas.edu/.

Drug Dynamics Institute. The Drug Dynamics Institute is a graduate and postdoctoral research training center where educators, students, scientists, business people, and government officials come together to share common interests in a wide range of biomedical, pharmaceutical, and public health problems. The mission of the institute is the discovery and communication of scientific and technological knowledge in drug development, manufacturing, marketing, and therapy. Projects in pharmacokinetics and drug metabolism, industrial pharmacy and technology, pharmacology and toxicology, and clinical pharmacy are currently under way. Additional information is available at http://www.utexas.edu/pharmacy/research/interdis/ddi/.

Center for Pharmacoeconomic Studies. The center combines the skills of experts in clinical pharmacy, pharmacoeconomics, management, and marketing to examine the impact of pharmaceutical products and pharmacy services on patients’ quality of life and health care outcomes. The center’s researchers and graduate students provide research design, data collection, and data analysis expertise to health care providers, the pharmaceutical industry, health care payers, insurers, and health care institutions and organizations. Center personnel also develop, present, and support educational programs to further public understanding of pharmacoeconomics. Additional information is available at http://www.utexas.edu/pharmacy/research/institutes/pharmacoeconomics/.

Center for Molecular and Cellular Toxicology. The University of Texas at Austin has established an interdisciplinary Center for Molecular and Cellular Toxicology (CMCT). The mission of the CMCT is to provide leadership for the expansion of programs in environmental health sciences education and research. The CMCT is supported by the College of Pharmacy and also involves faculty in the College of Natural Sciences and the University of Texas M.D. Anderson Cancer Center, Department of Carcinogenesis, located in Smithville, Texas, about forty miles east of Austin.

The CMCT fosters interdisciplinary graduate training programs by providing the mechanism by which students can work with a range of faculty interested in toxicology. This includes facilitating interdisciplinary research collaborations and providing ancillary student and research infrastructure support. The center’s faculty represent a wide variety of scientific disciplines, including pharmacology, toxicology, medicinal chemistry, pharmaceutics, neuroscience, nutrition, biochemistry, chemistry, marine biology, and civil and mechanical engineering. Information about CMCT training programs is available at http://www.utexas.edu/pharmacy/cmct/.
Addiction Science Research and Education Center (ASREC). The mission of this center is to communicate the latest findings in addiction science to the public in terms that make the message easy to understand. University researchers in this dynamic area have been trained to communicate the latest findings in the field to a diverse audience, including addiction treatment professionals, medical personnel, social workers, psychologists, law enforcement personnel, teachers, students, and the general public. Additional information about the ASREC is available at http://www.utexas.edu/research/asrec/.

The Center for Advancement of Research and Education in Infectious Diseases (CARE-ID). The mission of this center is to conduct collaborative and interdisciplinary laboratory-based, translational, and clinical research for infectious diseases; foster clinical and graduate research training in infectious diseases; and enhance the knowledge of health care providers and the public about infectious diseases. Researchers include faculty members from UT Austin, the University of Texas Health Science Center at San Antonio, University Health System in San Antonio, and the South Texas Veterans Health Care System. The center serves as the training center in infectious disease research for PharmD students, residents, fellows, and graduate students. Additional information is available at http://www.utexas.edu/pharmacy/careid/.

Additional collaborative research is conducted between pharmacy faculty members and members of research institutes and centers across campus, including the Institute for Cellular and Molecular Biology, the Institute for Neuroscience, and the Waggoner Center for Alcohol and Addiction Research.

AREAS OF STUDY

The College of Pharmacy offers graduate study leading to the Master of Science in Pharmacy and the Doctor of Philosophy with a major in pharmacy. Areas of specialization are medicinal chemistry, including synthetic or bioorganic chemistry and structural molecular biology subspecializations; pharmacology and toxicology; pharmaceutics, including physical pharmacy, biopharmaceutics, drug delivery and pharmaceutics, and industrial pharmacy; pharmacy administration, including pharmacy practice and pharmacoconomics; and pharmacotherapy. Students pursuing either the Master of Science or the Doctor of Philosophy who hold a PharmD degree from a pharmacy program accredited by the Accreditation Council for Pharmacy Education (ACPE) have opportunities for advanced practice training. They may complete a specialty practice residency while pursuing the graduate degree. More information is available from the graduate adviser.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Jamie C. Barner
Shawn B. Bratton
Carolyn M. Brown
David S. Burgess
Henry I. Bussey
Alan B. Combs
M. Lynn Crismon
Maria A. Croyle
Zhengrong Cui
Kevin N. Dalby
Patrick J. Davis
John Digiovanni
Christine L. Duvauchelle
Carlton K. Erickson
Walter L. Fast
Christopher R. Frei
Rueben A. Gonzales
Andrea C. Gore
R.A. Harris
Sean M. Kerwin
Jim M. Koeller
Yui-Wing F. Lam
Kenneth A. Lawson
Seongmin Lee
Steven W. Leslie
Hung-Wen Liu
Jason T. McConvile
James W. McGinity
S. J. Mihic
Edward M. Mills
Richard A. Morriseit
Karen L. Rascati
John H. Richburg
Stephen R. Saklad
Marvin D. Shepherd
Hugh D. Smyth
Salomon A. Stavchansky
Scott A. Strassels
Robert L. Talbert Jr.
Carla L. Vandenber
Christian P. Whitman
Nathan P. Wiederhold
Richard E. Wilcox
Robert O. Williams III
James P. Wilson
Casey W. Wright
Zhiwen Zhang

ADMISSION REQUIREMENTS

The applicant should have a bachelor’s degree in biology, chemistry, or a related field, or a professional pharmacy degree from an accredited institution in the United States or another country. Students are admitted to the program upon recommendation of the Graduate Studies Committee, provided that their undergraduate training includes appropriate work in fields related to the pharmaceutical and health sciences. Applicants without the appropriate background may be required to complete additional coursework after admission. For some areas of study, preference is given to students who have a Doctor of Pharmacy degree from a college accredited by the Accreditation Council for Pharmaceutical Education. Preference is also given to applicants for the doctoral degree.
DEGREE REQUIREMENTS

Pharmacy 196S, Seminar in Pharmacy, is required of all graduate students in pharmacy and is taught every semester in each division. This requirement may be waived for a specific semester by the Graduate Studies Committee for sufficient reason upon petition by the student’s major professor. No more than two semester hours of credit earned in this course are counted toward the number of hours required in master’s degree programs.

Master of Science in Pharmacy. The Master of Science in Pharmacy is offered with a specialization in administration; it is also offered with residency training in pharmacotherapy or pharmacy practice. Consult the pharmacy website for degree requirements and additional information.

Doctor of Philosophy. The student selects a major professor who will supervise the qualifying examinations, act as chair of the dissertation committee, and assist with selection of suitable dissertation committee members. Upon completion of the qualifying examinations, the student meets with the Administrative Subcommittee of the Graduate Studies Committee and the graduate adviser, who then recommends to the graduate dean whether the student should be admitted to doctoral candidacy. After admission to doctoral candidacy, the student must enroll in the dissertation course each fall and spring semester.

FOR MORE INFORMATION

Campus address: Pharmacy Building (PHR) 4.220, phone (512) 471-6590, fax (512) 471-4066; campus mail code: A1900
Mailing address: The University of Texas at Austin, Graduate Program, College of Pharmacy, 1 University Station A1900, Austin TX 78712
E-mail: swcrouch@mail.utexas.edu
URL: http://www.utexas.edu/pharmacy/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

PHARMACY: PHR

480F. Biomedical Pharmacology I. Basic neurotransmission and pharmacological principles. Physiological effects of drugs used in disease states including neurological, cardiovascular, psychiatric disorders, and pain relief. Four lecture hours a week for one semester. Offered on the letter-grade basis only. Neuroscience 380F and Pharmacy 380F, 480F may not both be counted. Prerequisite: Graduate standing, and experience or prior coursework in physiology, biochemistry, or organic chemistry.

180J, 280J, 380J. Advanced Pharmaceutics: Laboratory Research. Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

180M, 280M, 380M. Advanced Pharmaceutics. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

480N. Biomedical Pharmacology II. Fundamental concepts of pharmacology, including molecular mechanisms of drug action, absorption, distribution and elimination, tolerance, dependence, mutagenesis, teratogenesis, and carcinogenesis. Four lecture hours a week for one semester. Offered on the letter-grade basis only. Neuroscience 380N and Pharmacy 380N, 480N may not both be counted. Prerequisite: Graduate standing, and Pharmacy 380F (or 380F) or consent of instructor.

380Q. Advanced Pharmaceutical Processing. Didactic and laboratory exposure to pharmaceutical processes used in the design, development, and optimization of drug delivery systems. Emphasis on equipment and machinery used in pharmaceutical manufacturing of these dosage forms, with discussion of other issues, such as technology transfer and scale-up. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing in pharmacy.

381D. Product Development. Applications of physical-chemical principles to the formulation and development of stable and bioavailable drug delivery systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing in the College of Pharmacy.
381E. Advanced Hospital Pharmacy. An in-depth analysis of the operation and administration of the institutional pharmacy and its relationship to the total functioning of the hospital. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381G. Advanced Manufacturing Pharmacy. Physical-mechanical properties of compacts, drugs, and polymers. Properties of biodegradable and nonbiodegradable polymers in pharmaceutical formulations. Process validation and pilot plant scale-up. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

181J, 281J, 381J. Advanced Pharmacy Administration: Laboratory Research. Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

181M, 281M, 381M. Advanced Pharmacy Administration. One, two, or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

381N. Managed Health Care Systems. Overview of the health care system in the United States and examination of the classic and contemporary literature on managed health care systems, with emphasis on pharmacy-related issues. Studies the advantages, disadvantages, and effects of these systems on patients, providers, and payers. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381P. Health Care Administration. Introduction to the United States health care system and its relationship to pharmacy; comparison with health care in other countries. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

381V. Communication Skills for Translational Scientists. Oral and written communication skills for scientists conducting translational research at the interface of basic and clinical science. Subjects include effective interaction on multidisciplinary research teams and the preparation of translational research proposals. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

381W. Molecular Biology in Translational Research. Molecular biology methods at the interface of clinical and basic pharmaceutical sciences, especially those used in translational research in drug discovery and development, including clinical trials. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

382C. Chemistry of Natural Products. Chemical, biochemical, and stereochemical relationships among polyketide, terpenoid, shikimate, and alkaloid natural products and medicinally important analogs. Three lecture hours a week for one semester. Pharmacy 332C and 382C may not both be counted. Prerequisite: Graduate standing and consent of instructor.

282J. Advanced Pharmacotherapy Seminar. Discussion of advanced pharmacotherapeutics topics, case presentations, and journal clubs at the advanced practitioner level. Two lecture hours a week for two semesters. Prerequisite: Graduate standing and consent of instructor.

382L. Drug Literature Evaluation. Prepares the student for efficient utilization, critical evaluation, and clinical application of the current drug literature. Two lecture hours and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

382N. Computer-Assisted Kinetics. Quantitative and simulation treatment of kinetics through computer technology. Topics include protein binding and utilization of program packages such as NONLIN, RSSL, CSMP, SAAM 23, and AUTOAN. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Pharmacy 252C (or 352C) or the equivalent.

382R. Recent Advances in Pharmaceutics. Presentation of topics of current research interest in physical pharmacy, biopharmaceutics, and pharmacokinetics. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

382S. Advanced Biopharmaceutics. Provides the student with a more comprehensive background in biopharmaceutics and mathematical techniques used in pharmacokinetics. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Pharmacy 252C (or 352C) or the equivalent.

382V. Pharmaceutical Biotechnology. Applications of protein, oligonucleotide, and related molecules as therapeutic agents: stability, formulation, kinetics, dynamics. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and the following coursework: Chemistry 339K, and Pharmacy 342C, 142P, and 252C (or 352C); or the equivalent; or consent of instructor.

182W. Ethics in Science and Clinical Practice. Ethical considerations in the conduct of clinical research, including institutional review boards, adherence to protocol, Food and Drug Administration and related site reviews, protection of human subjects through informed consent and confidentiality, and the use of genetic banks in research. One lecture hour a week for one semester. Prerequisite: Graduate standing and consent of instructor.

183C. Basic Pharmacology Concepts. A systematic presentation of pharmacologic agents based on drug-group classification; emphasis on pharmacological mechanisms of action and toxicity. Covers basic pharmacological principles. One lecture hour a week for one semester. Prerequisite: Graduate standing.
383D. Neuropharmacology. An advanced survey of neurotransmitters and systems in the brain. Covers experimental approaches and pharmacological analysis at behavioral, neurochemical, and neuroanatomical levels to determine mechanisms of actions of drugs that act on the brain. Three lecture hours a week for one semester. Neuroscience 383D and Pharmacy 383D may not both be counted. Prerequisite: Graduate standing and consent of instructor.

283L. Clinical Skills Laboratory. Introduction to patient assessment techniques and to the skills needed to provide innovative patient care services. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

383M. Pharmacogenetics. The study of those combined genetic and pharmacological factors that give rise to many unexpected, untoward, and idiosyncratic drug reactions. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

383N. Solution Theory and Disperse Systems. The theory and technology of solutions and heterogeneous systems; applications of scientific principles to the design of pharmaceutical products; a study of factors influencing physical chemical characteristics, stability, and biopharmaceutical activity of solutions and coarse dispersions; review of recent literature. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

383P. Advanced Pharmacokinetics. Study of the kinetics of absorption, distribution, metabolism, and excretion of drugs in the intact organism. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Pharmacy 252C (or 352C) or an equivalent pharmacokinetics course.

383Q. Statistics in Translational Science. Statistical analysis with a focus on choosing the appropriate statistical test to address both basic science and clinical research hypotheses. Students use the JMP 7 software package to execute statistical analyses on their own pharmaceutical research projects. Two lecture hours and one and one-half laboratory hours a week for one semester. Pharmacy 383Q and 284V may not both be counted. Prerequisite: Graduate standing in the College of Pharmacy, and an introductory statistics course or consent of instructor.

383R. Rate Processes in Pharmaceutical Systems. A study of decomposition and stabilization of drug molecules in solutions and in solid dosage forms; principles of kinetics and diffusion as applied to pharmaceutical systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

283S. Clinical Toxicology. An advanced study of toxicological, pharmaceutical, and pharmacological principles underlying the management of chemical poisoning. Includes analysis of selected cases. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

383V. Research Design and Methods. A practical approach to classical and experimental design. Hypothesis generation, experimental design that uses translational research methods (such as incorporating basic and clinical science), grantsmanship, and protocol development. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

383W. Biopharmaceutical Analysis. Analytical methods for the isolation and identification of drugs and their metabolites, specific genes, and proteins in biological fluids. Three lecture hours a week for one semester. Prerequisite: Graduate standing in pharmacy, completion of a PharmD degree, and concurrent enrollment in Pharmacy 184U.

384K. Fundamentals of Toxicology. An organ system approach to advanced topics in general toxicology. Three lecture hours a week for one semester. Required of pharmacology and toxicology graduate students specializing in toxicology. Prerequisite: Graduate standing, and some background in pharmacology or consent of instructor.

384N. Social Issues in Pharmacy. In-depth analysis of the social and behavioral issues that affect medication use, using the content, theories, and methodologies associated with patient compliance research. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

284R. Advances in Molecular Pharmacology. A molecular pharmacological perspective on recent advances in cloning, sequencing, expression, function, and regulation of cell surface receptors. Two lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Pharmacy 183C or consent of instructor.

384S. Introduction to Epidemiology and Pharmacoepidemiology. Principles of epidemiology; descriptive, analytic, and clinical epidemiology; epidemiologic perspective for health care management; epidemiology and the public policy process; pharmacoepidemiology. Three lecture hours a week for one semester. Prerequisite: Graduate standing; with consent of instructor, may be taken by students in the professional pharmacy curriculum.

184U. Biopharmaceutical Analysis Laboratory. Analytical methods for the isolation and identification of drugs and their metabolites, specific genes, and proteins in biological fluids. One hour of prelaboratory lecture and three laboratory hours a week for one semester. Prerequisite: Graduate standing in pharmacy, completion of a PharmD degree, and concurrent enrollment in Pharmacy 383W.

184W. Behavioral and Neurochemical Analyses of Drug Self-Administration. Behavioral and neurochemical changes associated with the intake of alcohol, cocaine, and other abused substances. Uses classic studies and recent published articles. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.
185D. Responsible Conduct of Science. Ethical considerations in the conduct of science, including issues of animal welfare, data analysis, fraud, publications, misconduct, intellectual property, grants, peer review, and mentor responsibility. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Neuroscience 185D and Pharmacy 185D may not both be counted. Prerequisite: Graduate standing, and admission to the doctoral program in pharmacy or consent of instructor.

185J, 285J, 385J. Advanced Pharmacotherapy Laboratory Research. Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

185L. Clinical Pharmacokinetics. In-depth analysis of pharmacotherapeutic regimens, using complex mathematical models. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

185M. Advanced Pharmacokinetics and Pharmacodynamics. Continuation of Pharmacy 385L. Advanced pharmacokinetic and pharmacodynamic concepts and their application. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing, Pharmacy 385L, and consent of instructor.

185W, 285W, 385W. Advanced Topics in Pharmacotherapy. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor; additional prerequisites vary with the topic.

186J, 286J, 386J. Advanced Medicinal Chemistry; Laboratory Research. Modern laboratory techniques used in medicinal and natural products chemistry. Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

186K, 286K, 386K. Advanced Medicinal Chemistry. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

186M. Pharmaceutical Distribution. An introduction to the discipline of marketing as it applies to the practice of pharmacy and the pharmaceutical industry. Designed to help students develop analytical skills, strategic thinking, and creativity that can be used to accomplish marketing objectives. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

186N, 286N, 386N, 486N. Topics in Pharmacy. Current issues in translational science. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and admission to the Doctor of Philosophy in Translational Science degree program.

188Q. Preclinical and Clinical Drug Development. Principles of preclinical research, including animal handling and experimental design, and clinical considerations for the Food and Drug Administration (FDA) drug approval process. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

188C. Advanced Institutional Pharmacy Management. Management principles, practices, and problems as they apply to the provision of pharmacy products and services within a health care organization. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

188F. Advanced Pharmaceutical Literature Review and Interpretation. Evaluation and critical review of current literature in the pharmaceutical sciences and other relevant fields. Students give presentations and participate in discussions. Two lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

188Q. Communication Skills for Scientists. Designed to enhance written and oral communication skills through lectures and practice. Covers grant writing, journal paper writing, poster presentation writing, and delivery. Four lecture hours a week for one semester. Offered on the letter-grade basis only. May not be counted by students with credit for Pharmacy 280E and 287G. Prerequisite: Graduate standing in pharmacy, neuroscience, or a biological science. Additional prerequisite for international students: Completion of the University’s English Certification Program or consent of instructor.

188C. Introductory Bioorganic Chemistry. Survey of enzymecatalyzed reactions, with emphasis on mechanism, experimental design, and applications in natural products biosynthesis. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and undergraduate courses in organic chemistry and biochemistry or consent of instructor.

188D. Advanced Bioorganic Chemistry. The chemical biology of signaling pathways, protein–protein interactions, and DNA–small molecule interactions. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and undergraduate courses in organic chemistry and biochemistry or consent of instructor.

188J, 288J, 388J. Advanced Pharmacology: Laboratory Research. Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

188K, 288K, 388K. Advanced Pharmacology. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor; additional prerequisites vary with the topic.
389C. **Pharmacy Association Management.** An introduction to the principles involved in managing pharmacy associations. Nine hours of fieldwork a week for one semester. Pharmacy 329C and 389C may not both be counted. Prerequisite: Graduate standing and consent of instructor.

689D. **Pharmacy Association Management Residency.** Experience working in a pharmacy association, including active involvement in some managerial aspect of the association. Twenty hours of fieldwork a week for one semester. Pharmacy 629D and 689D may not both be counted. Prerequisite: Graduate standing and consent of instructor.

389j. **Advanced Pharmacotherapeutics of Cardiovascular Disorders.** Provides the student with a sound knowledge and comprehension of contemporary pharmacotherapeutic regimens used in treating cardiovascular diseases. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

389p. **Advanced Pharmacotherapeutics of Infectious Diseases.** Provides the student with a sound knowledge and comprehension of contemporary therapeutic principles used in treating infectious diseases. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

189Q. **Seminar in Alcohol Studies.** Presentations and discussion of current research topics in alcohol studies. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

389s. **Advanced Pharmacotherapeutics of Hematology/Oncology.** Provides the student with a sound knowledge and comprehension of contemporary therapeutic principles used in treating hematologic and malignant diseases. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

390T. **Pharmacy International Exchange.** Work in an exchange program with international colleges and schools of pharmacy as partners. Examination of similarities and differences between pharmacy education, professional practice, and/or research in the hosting country and in the United States. Forty hours of fieldwork a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy and consent of instructor.

390U. **Advanced Research Methods in Pharmacy Administration.** Advanced methodologies used in pharmacy administration research; designed to build upon the skills covered in Pharmacy 390K. Explores data management issues and statistical procedures, with emphasis on the application of research methodology concepts and principles. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Pharmacy 390K.

390V. **Experimental Design and Research Methodology in Pharmacy Administration.** Principles and procedures of experimental, quasi-experimental, and non-experimental research designs; includes reliability, validity, data collection methods, qualitative study designs, and survey methodologies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

390N. **Biochemical and Molecular Toxicology.** Discussion of the mechanisms of selected drugs and toxicants. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Pharmacy 384K.

190R, 290R, 390R. **Special Problems in Pharmacotherapy.** Individual supervision of research problems in the clinical pharmacy sciences, including pharmacokinetics, pharmacodynamics, efficacy, safety, and pharmaceutical care. For 190R, three laboratory hours a week for one semester; for 290R, five laboratory hours a week for one semester; for 390R, nine laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

390S. **Applied Pharmacokinetics.** Application of pharmacokinetic principles to specific drugs and patient situations. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the PharmD program, and completion of the pharmacotherapeutics sequence or consent of instructor and the dean.

390T. **Pharmacy International Exchange.** Work in an exchange program with international colleges and schools of pharmacy as partners. Examination of similarities and differences between pharmacy education, professional practice, and/or research in the hosting country and in the United States. Forty hours of fieldwork a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy and consent of instructor.

390U. **Advanced Research Methods in Pharmacy Administration.** Advanced methodologies used in pharmacy administration research; designed to build upon the skills covered in Pharmacy 390K. Explores data management issues and statistical procedures, with emphasis on the application of research methodology concepts and principles. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Pharmacy 390K.

491C. **Advanced Hematology and Oncology Seminar.** In-depth discussion of the contemporary pharmacotherapy and patient care relating to hematology, oncology, and bone marrow transplantation. Two lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 491GA, graduate standing and consent of instructor; for 491GB, Pharmacy 491GA.

191H. **Advanced Pharmacy Administration Research Conference.** One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.
391J. Methods in Clinical Psychopharmacology and Mental Health Outcomes Research. Principles of research methodology in clinical psychopharmacology and mental health outcomes research, including both prospective and retrospective research design for effectiveness and outcomes studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

191Q. Pharmacy and Its Disciplines. An overview of pharmacy and its primary disciplines of pharmaceutics, medicinal chemistry, pharmacy administration and practice, pharmacotherapy, and pharmacology/toxicology. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

292E. Clinical Research Methods I. Defining a research question, general study design issues, cross-sectional and case-control studies, and diagnostic test evaluation. Two lecture hours a week for a semester. Prerequisite: Graduate standing.

292F. Clinical Research Methods II. Prospective observational studies; randomized controlled trials; nonrandomized intervention studies; meta-analysis; and data synthesis, evaluation, and application. Two lecture hours a week for a semester. Prerequisite: Graduate standing, and Pharmacy 292E or consent of instructor.

092T. Joint PhD Program with Partner Institutions. Translational Science study at partner Institutions. May not be taken concurrently with another course at the University of Texas at Austin. Prerequisite: Graduate standing and admission to the Doctor of Philosophy in Translational Science degree program.

693. Research in Pharmacy. The equivalent of three lecture hours a week for two semesters. May be repeated for credit when the topics vary. May not be counted toward the master’s degree. Prerequisite: For 693A, graduate standing; for 693B, Pharmacy 693A.

   Topic 1: Research in Medicinal Chemistry.
   Topic 2: Research in Pharmacaceutics.
   Topic 3: Research in Pharmacology.
   Topic 4: Research in Pharmacy.
   Topic 5: Research in Pharmacy Administration.
   Topic 6: Research in Toxicology.

493D. Computer-Assisted Drug Design. Overview of theory and application of methods useful for computer-assisted drug design, such as molecular orbital calculations, molecular mechanics and dynamics, conformational search, CoMFA, and three-dimensional searching. Hands-on experience with professional-level software and hardware. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing, consent of instructor, and an undergraduate course in physical chemistry.

393Q. Health-Related Quality of Life Measurement. Terms, concepts, procedures, methods, problems, and strengths associated with health-related quality of life (HRQOL) research. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

693R, 993R. Postdoctoral Residency Internship. Pharmacy practice, research, and/or administration. At least forty hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, admission to the College of Pharmacy Residency Training Program, and completion of a PharmD degree.

393T. Pharmacoeconomics. Terms, concepts, procedures, methods, problems, and strengths associated with pharmacoeconomics. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Pharmacy 393T and 394T may not both be counted. Prerequisite: Graduate standing and consent of instructor.

193U, 293U, 393U, 693U, 993U. Pharmacotherapy Master’s Mentorship. Experience in pharmacy practice, research, and/or administration. For each semester hour of credit earned, three hours of fieldwork a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

394D. Interface Phenomena in Pharmaceutics. Phase interfaces, monolayers, bilayers, and nonlamellar surfactant assemblies in terms of thermodynamics, dynamic properties, stability, permeability, and measurement methods. Three lecture hours a week for one semester. Prerequisite: Graduate standing and a course in physical chemistry.

395D. Pathophysiology. Structure, function, and mechanisms of disease production in human organ systems. Three lecture hours a week for one semester. Nursing 396C and Pharmacy 395D may not both be counted. Prerequisite: Graduate standing.

195H. Advanced Pharmacotherapy Research Conference. One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

196H. Advanced Medicinal Chemistry Research Conference. One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

396M. Medicinal Chemistry: General Principles, Pharmacological Classification, and Mechanism of Action. Introduction to medicinal chemistry, covering drug classes according to their pharmacological classification, structural class, and mechanism of action. Three lecture hours a week for one semester. Prerequisite: Graduate standing and undergraduate coursework in organic chemistry and biochemistry.

196S. Seminar in Pharmacy. The equivalent of one lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in pharmacy.
196T. Seminar in Toxicology. Presentations and discussion of current research topics in toxicology. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, and admission to the Toxicology Training Program or consent of instructor.

697. Hospital Pharmacy Residency. Not less than 1,920 hours of satisfactorily supervised work in an approved hospital pharmacy. A report of the activities of the internship must meet the approval of the student’s supervisory committee. Prerequisite: For 697A, graduate standing in pharmacy and a Bachelor of Science in Pharmacy; for 697B, Pharmacy 697A.

397C. Pharmacy and Health Care Economics. The economist’s approach to pharmacy and health care issues, its insights and disadvantages. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

397D. Human Resource Management. The elements of supervising pharmacists and technicians in pharmacy environments. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

397E. Financial Management for Pharmacy Managers. Concepts, principles, and theoretical foundations of financial statements, with emphasis on the pharmacy manager’s understanding of accounting procedures and the use of financial statements. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

397F. Analytical Methods in Pharmacy Management. How computers are used to establish a database, analyze the data, and develop managerial projections based on the data analyses. Emphasis on developing budgets, managing inventory, monitoring productivity and workload, and managing the development of projects and systems. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

397G. Advanced Community Pharmacy Management. Management principles, practices, and problems as they apply to the provision of pharmacy products and services in the community pharmacy setting. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

397J. Advanced Problems in Pharmacy Management. The application of problem-solving techniques to a current problem in community or institutional pharmacy management. Students develop a proposal and a report addressing an identified problem. Twelve laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

397K. Communication Skills for Pharmacy Managers. Written and oral communication skills and techniques for pharmacists at the managerial level. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

397M. Drug Design and Synthetic Strategy. A multiperspective approach to modern concepts in drug design and synthetic strategy. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and undergraduate courses in organic chemistry and biochemistry or consent of instructor.

197S. Seminar in Pharmacotherapy: Advanced Topics. The equivalent of one lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

698. Thesis. The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in pharmacy and consent of the graduate adviser; for 698B, Pharmacy 698A.

198H. Advanced Pharmacology Research Conference. One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in pharmacy, admission to the Option II program for the Master of Science in Pharmacy degree, and consent of the graduate adviser.

398T. Supervised Teaching in Pharmacy. Teaching under close supervision of the faculty; weekly group meetings with the appropriate instructor; individual consultations; semester reports. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

399R, 699R, 799R, 899R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

Translational science is an interdisciplinary joint doctoral program offered by the University of Texas Health Science Center at San Antonio, the University of Texas at San Antonio, and the University of Texas at Austin College of Pharmacy, in collaboration with the University of Texas School of Public Health, San Antonio Regional Campus.

FACILITIES FOR GRADUATE WORK

State-of-the-art research facilities are available for graduate education. Laboratories are equipped with the latest instrumentation and specialized support units for research in all of the areas of study mentioned below. Research space on the Austin campus is located in two pharmacy buildings, and in the Biomedical Engineering Building, the Animal Resources Center, and the Dell Pediatric Research Institute. In San Antonio, basic laboratory and clinical research space is available in the McDermott Building on the campus of the University of Texas Health Science Center, and at affiliated institutions. Laboratories and offices on both campuses are outfitted with wired and wireless connections for Internet and library access. Students in both Austin and San Antonio have access to extensive electronic journal holdings through the University Libraries Web site. In addition to these facilities, students will have access to facilities at the partner institutions.

The University of Texas Health Science Center at San Antonio, one of fifteen components in the University of Texas System, consists of five schools: the School of Medicine, Dental School, School of Nursing, School of Health Professions, and Graduate School of Biomedical Sciences. The UT Health Science Center has become the primary training site for health professionals serving the south Texas region.

The University of Texas at San Antonio is the second largest university in the UT System and one of the state’s fastest growing public universities. It is designated by the United States Department of Education as a Hispanic-serving institution.

The University of Texas Health Science Center at Houston is comprised of six schools, including the School of Public Health. The School of Public Health in Houston coordinates programs at regional campuses in Dallas, San Antonio, El Paso, Austin, and Brownsville. This statewide presence makes the School of Public Health a pivotal public health resource for Texas.

AREAS OF STUDY

The College of Pharmacy offers graduate study leading to the Doctor of Philosophy degree with a major in translational science. Students will select a TS1 or TS2 track based on research experience and interest, and in consultation with the graduate adviser from the student’s primary institution and/or the student’s supervising professor. An individualized educational plan will be developed for each student. More information is available from the graduate adviser.

GRADUATE STUDIES COMMITTEE

A Graduate Studies Committee will be announced.

ADMISSION REQUIREMENTS

Prospective students applying to the translational science PhD program must have a master’s or professional degree (MD, DDS, or PharmD) prior to enrollment in the program. Students are admitted to the program upon recommendation of the translational science admission committee, comprised of representatives from each partner institution’s Graduate Studies Committee.

DEGREE REQUIREMENTS

Students must complete at least seventy-two semester hours of graduate coursework. An overall grade point average of 3.00 must be maintained for program continuation and completion. Students are required to take a minimum of twenty-four semester hours of core curriculum; twelve semester hours of prescribed track electives selected from the list of elective courses for this program; six semester hours of free electives selected from any course offered at participating graduate programs; and thirty semester hours of research and dissertation work.

1. Pending final approval.
While there is no prescribed sequence of courses for the program, students and their graduate advisers must develop an individualized education plan that accounts for the varied semester course offerings and prerequisites and that can be completed in three years. Upon completion of the qualifying examinations, the student meets with the appropriate committee and graduate adviser, who then recommend to the graduate dean whether the student should be admitted to doctoral candidacy. After admission to candidacy, the student must enroll in the dissertation course each fall and spring semester.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

PHARMACY: PHR

181M, 281M, 381M. Advanced Pharmacy Administration. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

381W. Molecular Biology in Translational Research. Molecular biology methods at the interface of clinical and basic pharmaceutical sciences, especially those used in translational research in drug discovery and development, including clinical trials. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

383W. Biopharmaceutical Analysis. Analytical methods for the isolation and identification of drugs and their metabolites, specific genes, and proteins in biological fluids. Three lecture hours a week for one semester. Prerequisite: Graduate standing in pharmacy, completion of a PharmD degree, and concurrent enrollment in Pharmacy 385L.

185J, 285J, 385J. Advanced Pharmacotherapy Laboratory Research. Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

385L. Clinical Pharmacokinetics. In-depth analysis of pharmacotherapeutic regimens, using complex mathematical models. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

385M. Advanced Pharmacokinetics and Pharmacodynamics. Continuation of Pharmacy 385L. Advanced pharmacokinetic and pharmacodynamic concepts and their application. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing, Pharmacy 385L, and consent of instructor.

185W, 285W, 385W. Advanced Topics in Pharmacotherapy. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor; additional prerequisites vary with the topic.

186N, 286N, 386N, 486N. Topics in Pharmacy. Current issues in translational science. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and admission to the Doctor of Philosophy in Translational Science degree program.

487Q. Communication Skills for Scientists. Designed to enhance written and oral communication skills through lectures and practice. Covers grant writing, journal paper writing, poster presentation writing, and delivery. Four lecture hours a week for one semester. Offered on the letter-grade basis only. May not be counted by students with credit for Pharmacy 280E and 287G. Prerequisite: Graduate standing in pharmacy, neuroscience, or a biological science. Additional prerequisite for international students: Completion of the University’s English Certification Program or consent of instructor.

FOR MORE INFORMATION

Campus address: Pharmacy Building (PHR) 4.220A, phone (512) 471-6590, fax (512) 471-4066; campus mail code: A1900
Mailing address: The University of Texas at Austin, Graduate Program, College of Pharmacy, 1 University Station A1900, Austin TX 78712
E-mail: swcrouch@mail.utexas.edu
URL: http://www.utexas.edu/pharmacy/
389J. Advanced Pharmacotherapeutics of Cardiovascular Disorders. Provides the student with a sound knowledge and comprehension of contemporary pharmacotherapeutic regimens used in treating cardiovascular diseases. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

389P. Advanced Pharmacotherapeutics of Infectious Diseases. Provides the student with a sound knowledge and comprehension of contemporary therapeutic principles used in treating infectious diseases. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

190R, 290R, 390R. Special Problems in Pharmacotherapy. Individual supervision of research problems in the clinical pharmacy sciences, including pharmacokinetics, pharmacodynamics, efficacy, safety, and pharmaceutical care. For 190R, three laboratory hours a week for one semester; for 290R, five laboratory hours a week for one semester; for 390R, nine laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

391J. Methods in Clinical Psychopharmacology and Mental Health Outcomes Research. Principles of research methodology in clinical psychopharmacology and mental health outcomes research, including both prospective and retrospective research design for effectiveness and outcomes studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

092T. Joint PhD Program with Partner Institutions. Translational Science study at partner institutions. May not be taken concurrently with another course at the University of Texas at Austin. Prerequisite: Graduate standing and admission to the Doctor of Philosophy in Translational Science degree program.

393Q. Health-Related Quality of Life Measurement. Terms, concepts, procedures, methods, problems, and strengths associated with health-related quality of life (HRQOL) research. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

195H. Advanced Pharmacotherapy Research Conference. One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

398T. Supervised Teaching in Pharmacy. Teaching under close supervision of the faculty; weekly group meetings with the appropriate instructor; individual consultations; semester reports. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

399R, 699R, 799R, 899R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

FACILITIES FOR GRADUATE WORK

The Lyndon B. Johnson School of Public Affairs is housed in Sid Richardson Hall, adjacent to the Lyndon Baines Johnson Library and Museum.

The school’s computation center maintains a Microcomputer Laboratory and provides access to the Internet and to the University’s computer infrastructure. The laboratory is reserved for public affairs students and is available twenty-four hours a day.

AREAS OF STUDY

Graduate study in public affairs is interdisciplinary, research oriented, and built around public policy problems.

MASTER OF GLOBAL POLICY STUDIES

This degree program is designed to provide students with the tools and knowledge necessary to be leaders in an increasingly interdependent world. The program offers a multidisciplinary approach to studying the complex economic, political, technological, and social issues of the twenty-first century. Students pursuing the Master of Global Policy Studies select a specialization in security, law, and diplomacy; international trade and finance; development; global governance and international law; international energy, environment, and technology; or regional international policy. Students may also propose their own specialization, which is subject to approval.

MASTER OF PUBLIC AFFAIRS

This degree program aims to provide students with the skills and understanding required for effective professional leadership in developing and implementing public policies. While there is no specific requirement to do so, MPAff students may elect to organize their studies around certain areas of specialization. Depending on his or her qualifications, a student can pursue the Master of Public Affairs degree through the regular program, a dual degree program, or the midcareer option.

DOCTOR OF PHILOSOPHY

The doctoral degree program in public policy is a research-oriented program designed to give the student substantial knowledge of one or more disciplines, an understanding of the policy process, and technical mastery of advanced research skills. It is intended to develop research scholars and university teachers who can make substantive contributions to our understanding of complex public policy problems and who can conduct research in multidisciplinary settings.

GRADUATE STUDIES COMMITTEES

The following faculty members served on the Graduate Studies Committees in the spring semester 2011.

Jacqueline L. Angel  Peter J. Frumkin
Robert D. Auerbach  James K. Galbraith
Leigh B. Boske  Shama Gamkhar
Joshua W. Busby  Francis J. Gavin
Jennifer Lynne Bussell  Charles E. Gholz
Edwin Dorn  Michael H. Granof
David J. Eaton  Charles G. Groat
Kenneth Flamm  Robert L. Hutchings
The curriculum for the Master of Global Policy Studies consists of forty-nine hours of coursework. In addition to required coursework in the student's specialization, the curriculum combines courses in the development of global policy and principles of international relations, microeconomics, analytical methods, international economics, and a crisis management seminar with a practical applications sequence that includes a client-oriented policy research project and a sequence of professional writing courses. A field experience is appropriate in most specializations, and may be satisfied with a formal internship course, a noncredit internship experience, or other international field study. A typical forty-nine-semester-hour program of study includes seven one-semester, three-hour core courses; a one-hour core course; at least one two-semester policy research project; electives; and an individual writing requirement.

The student must fulfill all academic requirements within six years of his or her entrance into the program. Most students are expected to complete the program in two years of full-time study.

MASTERS OF PUBLIC AFFAIRS

The curriculum for the Master of Public Affairs normally consists of forty-eight semester hours of coursework. Up to nine hours in core courses may be waived and substituted with approved electives if a student demonstrates prior training and proficiency substantially equivalent to core courses in introductory quantitative methods, microeconomics, and public financial management. The curriculum combines courses in politics and the policy process, economic analysis, empirical methods, and management with a practical applications sequence that includes client-oriented policy research projects; it also allows the student to develop an area of specialization. A public service internship is required in the absence of relevant prior public service experience. A typical forty-eight-semester-hour program of study includes seven one-semester, three-hour core courses; a one-hour core course; at least one two-semester policy research project; electives; and an individual writing requirement.

The student must fulfill all academic requirements within six years of his or her entrance into the program. Most students are expected to complete the program in two years of full-time study.

ADMISSION REQUIREMENTS

Admission decisions are made by the Admissions Committee. The committee considers an applicant’s academic and employment records, his or her scores on the Graduate Record Examinations General Test, three letters of recommendation from professors or employers, and three essay questions addressing the applicant’s background and interest in public policy. A résumé and transcripts for all college coursework are also required.

While there are no prescribed course prerequisites, students entering the Master of Public Affairs program are expected to have completed coursework in three areas: mathematics and statistics, economics, and American government. Many students find it useful to take a review course in college algebra, calculus, and statistics the summer before entering the program. Students entering the Master of Global Policy Studies program are also expected to have completed undergraduate coursework in statistics. In addition, many students find the following courses to be useful: two semesters of principles of economics, at least one semester of undergraduate international relations or world history, and one semester of calculus. Applicants to the doctoral degree program are expected to have a graduate degree from a policy-related academic or professional program.

Additional information on degree requirements and the application process is available from the Lyndon B. Johnson School of Public Affairs Office of Student and Alumni Programs.

DEGREE REQUIREMENTS

MASTER OF GLOBAL POLICY STUDIES

The curriculum for the Master of Global Policy Studies consists of forty-nine hours of coursework. In addition to required coursework in the student’s specialization,
REGULAR PROGRAM

Most students are admitted to the regular program, which they are generally expected to complete in two years of full-time study. A student who cannot attend full time may choose to complete the regular program on a part-time basis; the applicant must submit a written request for admission on a part-time basis when he or she applies for admission to the regular program. A student enrolled in the regular program full time may be allowed, for good reason, to change to part-time status.

MIDCAREER PROGRAM

Each year a small number of applicants with substantial work experience are admitted to the midcareer program. In general, an applicant should have ten years of public service–related experience, including at least five years in substantive policy-level or administrative positions related to the public sector. The applicant must submit a written request for admission to the midcareer program when he or she applies for admission to the school; the request must be accompanied by supporting material detailing the applicant’s public service and policy-level work experience. The midcareer student must complete twenty-seven hours of core courses, and at least nine hours of relevant electives.

DUAL DEGREE PROGRAMS

The Lyndon B. Johnson School of Public Affairs offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

MASTER OF PUBLIC AFFAIRS

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Asian studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Business administration</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Civil engineering</td>
<td>Master of Science in Engineering</td>
</tr>
<tr>
<td>Communication studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Community and regional planning</td>
<td>Master of Science in Community and Regional Planning</td>
</tr>
<tr>
<td>Energy and earth resources</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Journalism</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Latin American studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Law</td>
<td>Doctor of Jurisprudence</td>
</tr>
<tr>
<td>Middle Eastern studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Public health</td>
<td>Master of Public Health</td>
</tr>
<tr>
<td>Radio-television-film</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Russian, East European, and Eurasian studies</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>Social work</td>
<td>Master of Science in Social Work</td>
</tr>
<tr>
<td>Women’s and gender studies</td>
<td>Master of Arts</td>
</tr>
</tbody>
</table>

DOCTOR OF PHILOSOPHY

The doctoral program in public policy requires at least thirty-six hours of coursework beyond the master's degree (in addition to the dissertation reading and writing courses) and includes supporting work in courses outside public affairs. The supporting work is intended to deepen the student’s understanding of an organized discipline and its application to public affairs.
A doctoral degree candidate must fulfill the following general requirements: (1) complete four core courses in public affairs, Public Affairs 390C, 390E, 392C, and 392D; (2) complete two research methods courses typically taken in the first two years of study; (3) complete three courses in his or her substantive area of research; (4) pass comprehensive qualifying examinations; (5) defend a dissertation proposal; and (6) write and defend a dissertation. A student without a graduate degree from a policy-related academic or professional program may be required to complete supplementary coursework in addition to the number of hours required for the doctoral degree. Additional information on specific requirements and procedures is available from the school.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

PUBLIC AFFAIRS: P A

280L, 380L. Topics in Public Policy and Law. Various aspects of policy making, policy development, and communications at a variety of levels. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

   Topic 1: Policy Development and Law. Examines effective policy making at all levels of government, including consideration of the legal process which provides critical context; the policy development process and its relationship to the rule of law; and key elements of public policy development, including ethics, decision making, leadership, and policy implementation.

   Topic 2: Policy and Law Placement. Thorough examination of ethical issues and professional responsibilities and development of written and oral communication skills that are preparatory for field placement in policy and law.

   Topic 3: Law and Public Policy. Examines the interconnection of public policy and law and how the two disciplines approach related issues; how legal structures and precedent shape and constrain policy choices; and how public policy informs the work of the courts.

680P. Policy Research Project. Interdisciplinary research on a contemporary policy problem involving interaction with sponsoring organizations. Three lecture hours a week for two semesters, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: For 680PA, graduate standing and consent of instructor; for 680PB, Public Affairs 680PA.

882D. Policy Research Project. Interdisciplinary research on a contemporary policy problem involving interaction with an agency of government. Four lecture hours a week for two semesters. May be repeated for credit when the topics vary. Prerequisite: For 882DA, graduate standing and consent of instructor; for 882DB, Public Affairs 882DA.

682G. Policy Research Project on Global Policy Issues. Interdisciplinary research on a contemporary global policy problem involving interaction with sponsoring organizations. Three lecture hours a week for two semesters, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: For 682GA, graduate standing and consent of instructor; for 682GB, Public Affairs 682GA.

383C. Politics and Process. Introduction to how public policy is developed and adopted in government systems. Covers the role of politics and institutions in implementing and managing policy. Normally taken during the first year. Three lecture hours a week for one semester. With consent of the graduate adviser, may be repeated for credit. Prerequisite: Graduate standing.

383D. Politics and Process. Introduction to how public policy develops and is adopted in the American government system. Taught with a videoconference component. Normally taken during the first year. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

383G. Policy Making in a Global Age. History, politics, and organization of how the United States makes and implements foreign policy decisions. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

FOR MORE INFORMATION

Campus address: Sid Richardson Hall (SRH) 3.107, phone (512) 471-4292, fax (512) 471-8455; campus mail code: E2700

Mailing address: The University of Texas at Austin, Lyndon B. Johnson School of Public Affairs, P O Box Y, Austin TX 78713

E-mail: lbjadmit@uts.cc.utexas.edu

URL: http://www.utexas.edu/lbj/
384C. **Public Management.** Covers the development and implementation of policy within an organizational environment, including the role of political and institutional factors, organization and management concepts, and human information resource issues. Normally taken during the first year. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

384D. **Public Management.** Covers the development and implementation of policy within an organization environment, including the role of political and institutional factors, organization and management concepts, and human information resource issues. Normally taken during the first year. Three lecture hours a week for one semester. May have a distance learning component. Prerequisite: Graduate standing.

387G. **The Nature of the International System.** Introduces systematic analysis of global policy, factors that motivate foreign policies and private decisions, and instruments used in the conduct of international relations. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

388D. **Advanced Topics in Public Policy.** Typical topics include issues in political values and ethics and issues in transportation, health, environmental, international, regulatory, urban, and labor and human resources policy. Three lecture hours a week for one semester. Some topics may be taught via Web-based instruction with no class meetings. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

- **Topic 1: Perspectives on Public Policy.** Covers the art and science of policy formulation in the areas of economics, national security, monetary policy, science, technology, and trade. Examines the relationships among policy development processes at the federal, state, and local levels of government.
- **Topic 2: Politics and Policies in an Aging Population.**
- **Topic 3: Texas Health Policy.**

388K. **Advanced Topics in Public Policy.** Typical topics include issues in political values and ethics and in natural resources, transportation, health, environmental, international, regulatory, urban, and labor and human resources policy. Three lecture hours a week for one semester. Some topics may be taught via Web-based instruction with no class meetings. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

388L. **Advanced Topics in Management.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

388S. **Advanced Topics in Public Policy.** Three lecture hours a week for five weeks, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

389. **Conference Course in Policy Analysis.** Individual instruction related to selected aspects of professional theory and practice. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

390C. **Advanced Research Methods.** Study of research methods, with a focus on those needed by doctoral students in public policy. Includes discussions of broad controversies in social science methodology and subjects not commonly covered in other first-year graduate courses. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

390D, 690D, 990D. **Dissertation Proposal Preparation.** Development and preparation of the dissertation proposal. Individual instruction. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, completion of all coursework, and consent of instructor.

390E. **Research Design.** Designed to provide a structured framework in which students can develop and apply methods training and produce a research paper. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

190G. **Writing for Global Policy Studies.** Instruction in the writing styles appropriate for professional careers in international settings. Three lecture hours a week for five weeks, or as required by the topic. May be repeated for credit, but only three semester hours may be counted toward the Master of Global Policy Studies degree. Prerequisite: Graduate standing and consent of the graduate adviser.

391. **Public Financial Management.** The budget process, budgetary methods, governmental accounting analysis of financial statements, government revenues, debt management, and other financial management techniques for public and nonprofit programs. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

392C. **Theory and Philosophy of Public Policy I.** Explores the theoretical foundations of public policy. Includes political philosophy concepts and various theoretical approaches to the policy-making process. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

392D. **Theory and Philosophy of Public Policy II.** Three lecture hours a week for one semester. Prerequisite: Graduate standing, Public Affairs 392C, and consent of the graduate adviser.

393C. **Microeconomics.** Principles of markets and market failures relevant to global policy studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

393H. **International Economics.** Comparative advantage, international trade, international trade institutions, and agreements. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Public Affairs 393G.

393K. **Applied Microeconomics for Policy Analysis.** The use of economic reasoning in the development and implementation of public policy. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
393L. Advanced Policy Economics. Advanced topics in the application of economic reasoning to the development and implementation of policy. Three lecture hours a week for one semester. With consent of the graduate adviser, may be repeated for credit. Prerequisite: Graduate standing and Public Affairs 393K.

095. Public Affairs Colloquium. Guest lectures on topics to be announced. One lecture hour a week for one semester. Prerequisite: Graduate standing and consent of instructor and the graduate adviser.

195C. Supervised Policy Research. Supervised, individual policy research experience on a topic chosen by the supervising faculty member. Conference course. Prerequisite: Graduate standing in public affairs and approval of the research proposal by the supervising faculty member and the graduate adviser.

195G. Global Policy Simulation. Supervised role-playing exercises on global policy. The equivalent of one lecture hour a week for one semester; additional hours may be required. Prerequisite: Graduate standing.

196C. Supervised Public Service. Supervised, individual practical public service experience in an area chosen by the supervising faculty member. Conference course. May not be counted toward the Master of Public Affairs degree. Prerequisite: Graduate standing in public affairs and approval of proposal by the supervising faculty member and the graduate adviser.

196G. Internship in Global Policy Studies. Supervised participation in and observation of international issues as a working member of the staff in an agency of government, a nonprofit organization, or a public policy–related unit in the private sector. At least 400 hours of work over one semester. Prerequisite: Graduate standing, completion of one year in the Lyndon B. Johnson School of Public Affairs, and consent of the associate dean.

396K. Internship in Public Policy. Supervised participation and observation as a working member of the staff in an agency of government, a nonprofit organization, or a public policy–related unit in the private sector. Students work full time for one summer session or long-session semester. Offered on the credit/no credit basis only. Prerequisite: Completion of one year in the Lyndon B. Johnson School of Public Affairs and consent of the associate dean.

397. Introduction to Empirical Methods for Policy Analysis. Survey of the application of a broad range of quantitative models to policy analysis and managerial decision-making: optimization techniques based on calculus and linear programming, probability theory and decision analysis, sampling theory and hypothesis testing, regression analysis, and forecasting. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and either one semester each of college algebra, calculus, and statistics or a passing score on the validation exam offered before the beginning of the semester.

397C. Advanced Empirical Methods for Policy Analysis. Research methods, specialized empirical techniques, and data analysis as used in policy analysis and management. Three lecture hours a week for one semester. Some topics may be taught via Web-based instruction with no class meetings. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and Public Affairs 397.

397D. Applied Quantitative Analysis I. Three lecture hours a week for one semester. Survey of the application of a broad range of quantitative models to policy analysis and managerial decision-making: optimization techniques based on calculus and linear programming, probability and theory and decision analysis, sampling theory and hypothesis testing, regression analysis, and forecasting. Prerequisite: Graduate standing; and either one semester each of college algebra, calculus, and statistics or a passing score on the validation exam offered before the beginning of the semester.

397G. Analytical Methods for Global Policy Studies. Descriptive statistics, inference, multivariate regression, qualitative methods, and case study methods applicable to global policy research. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and an undergraduate statistics course or a passing score on the validation exam.

398R. Master’s Report. Preparation of a report to fulfill the requirement for the master’s degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in public affairs and consent of the graduate adviser.

398T. Supervised Teaching in Public Affairs. Group meetings with the instructor, individual consultations, and reports. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree and consent of the graduate adviser in public affairs.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Public Affairs 399R, 699R, or 999R.
School of Social Work

Master of Science in Social Work
Doctor of Philosophy

FACILITIES FOR GRADUATE WORK

The School of Social Work Building houses classrooms, faculty and administrative offices, a computer classroom, and a student lounge. The building also houses the school’s Learning Resource Center, which contains computer and video laboratories and reading rooms; the center provides an extensive reference library of social work–related journals and other materials.

The school offers students several other services and resources, including the Office of Academic Affairs, which coordinates advising, registration, and other academic matters. Career planning is available through the DiNitto Center for Career Services. The Center for Social Work Research administers faculty-conducted research in such areas as substance abuse and mental health; child welfare; cultural diversity; domestic and community violence; gerontology; families, children, and youth; social work education; and organizational structures.

AREAS OF STUDY

The School of Social Work offers graduate study leading to the Master of Science in Social Work and the Doctor of Philosophy with a major in social work.

The Master of Science in Social Work (MSSW) program prepares students for advanced social work practice with individuals, families, groups, organizations, and communities and for policy-related and administrative positions. Two areas of concentration are available: clinical social work and community and administrative leadership.

Students pursuing the Doctor of Philosophy degree design their own areas of study based on their academic and research interests.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

Jemel P. Aguilar  Michael L. Lauderdale
Marilyn Armour  Kelly S. Mikelson
Noel B. Busch  Yolanda C. Padilla
Namkee Choi  Elizabeth C. Pomeroy
Catherine Cubbin  Michele A. Rountree
King E. Davis  Allen Rubin
Diana M. Dinitto  Arthur J. Schwab Jr.
Michael J. Ferguson  Clayton T. Shorkey
Rowena Fong  David W. Springer
Cynthia G. Franklin  Calvin L. Streeter
Dorie J. Gilbert  Sanna Thompson
Robert R. Greene  Dnika J. Travis
Lori K. Holleran  Mary M. Velasquez
Barbara L. Jones  Kirk L. Von Sternberg
Jane A. Kretzschmar  Barbara W. White

ADMISSION REQUIREMENTS

Approval of the graduate adviser is required for admission to all social work courses.

MASTER OF SCIENCE IN SOCIAL WORK

Applicants for admission to this degree program should have a general liberal arts education with a broad range of studies in the behavioral sciences. All applicants must have completed at least one college-level statistics course that includes inferential applications.

Applicants with a Bachelor of Social Work degree from a school accredited by the Council on Social Work Education may be admitted into a modified program of study.

DOCTOR OF PHILOSOPHY

Applicants to the doctoral degree program must have a master’s degree from an accredited school of social work. Exceptions to this requirement are sometimes made for applicants from countries without an ac-
creditation system or for applicants with exceptionally strong credentials and with experience working in social work settings. Preference is given to individuals with at least two years of professional experience beyond the master’s degree.

DEGREE REQUIREMENTS

MASTER OF SCIENCE IN SOCIAL WORK

Developed in accordance with Council on Social Work Education curriculum standards and policies, the full-time MSSW program requires sixty semester hours of coursework. Experiential learning is provided through internships in selected government, nonprofit, and for-profit agencies. Course content and field experiences are organized and integrated using a systems/developmental framework and a biopsychosocial perspective.

Of the sixty semester hours required for graduation, a maximum of twenty-four may be accepted by waiver from an accredited Bachelor of Social Work or Master of Social Work program. Waivers are awarded only after careful evaluation by the faculty of a student’s training and experience in the areas in which waivers are sought.

Most students enroll in the regular full-time program, which can be completed in two academic years. Extended and part-time programs of work can be completed in two and one-half to three and one-half years. Students accepted into a modified program of study complete a forty-two to forty-eight-semester-hour program in twelve to sixteen months. Each option provides students with opportunities to study independently with individual faculty members, to take elective courses in other University departments, and to waive some required coursework by examination. The school offers required courses during evening hours but cannot guarantee that the degree program can be completed by taking courses only at night.

DOCTOR OF PHILOSOPHY

Students seeking the doctoral degree must meet the following requirements:
1. Completion of a program of courses prescribed by the Graduate Studies Committee.
2. Completion of a written comprehensive examination that tests the student’s knowledge of theory, research design and methodology in social work, and of selected aspects of social work practice.
3. Completion of an acceptable program of original research, including the submission of a dissertation that extends the knowledge base of social work.

Students should consult the graduate adviser for additional requirements.

DUAL DEGREE PROGRAMS

MASTER OF SCIENCE IN SOCIAL WORK/MASTER OF DIVINITY

The graduate program in social work offers a dual degree program with the Austin Presbyterian Theological Seminary (APTS). Applicants must apply separately and be admitted to both the Master of Science in Social Work program at UT Austin and the Master of Divinity program at APTS. Students accepted into the dual degree program spend their first and final years of the four-year program at the UT Austin School of Social Work and the second and third years at APTS. The degrees are conferred separately by each institution. Additional information is available from the director of admissions at the School of Social Work.

MASTER OF SCIENCE IN SOCIAL WORK/MASTER OF PUBLIC HEALTH

The graduate program in social work offers a dual degree program with the University of Texas Health Science Center at Houston School of Public Health (UTSPH). Applicants must apply separately and be admitted to both the Master of Science in Social Work program at UT Austin and the Master of Public Health at UTSPH. Students accepted into the dual degree program complete the three-year program of work in both schools. The degrees are conferred separately by each institution. Additional information is available from the director of admissions at the School of Social Work.

In addition, the School of Social Work offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate adviser in each program.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law</td>
<td>Doctor of Jurisprudence</td>
</tr>
<tr>
<td>Public affairs</td>
<td>Master of Public Affairs</td>
</tr>
</tbody>
</table>
FOR MORE INFORMATION

**Campus address:** School of Social Work Building (SSW) 2.222, phone (512) 471-5457, fax (512) 471-9600; campus mail code: D3500

**Mailing address:** The University of Texas at Austin, School of Social Work, 1 University Station D3500, Austin TX 78712

**E-mail:** utsw@lists.cc.utexas.edu

**URL:** http://www.utexas.edu/ssw/

**GRADUATE COURSES**

Professional liability insurance is required and a criminal background check may be required of all students enrolled in field placement or internship courses. The insurance policy must cover the duration of the course, beginning on or before the first regular class period.

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**SOCIAL WORK: S W**

**381R. Human Behavior and the Social Environment.** Focuses on empirically based theories and conceptual approaches that form the foundation for social work practice and research with individuals and families in social systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.

**381S. Foundations of Social Justice: Values, Diversity, Power, and Oppression.** History, demographics, and cultures of various populations at risk with an emphasis on self-awareness and understanding the impact of discrimination and oppression by individuals and society on people of diverse backgrounds, abilities, and orientations. Three lecture hours a week for one semester. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.

**381T. Dynamics of Organizations and Communities.** The organizational and community context within which social services are delivered and the influence of funding, mandate, and organizational arrangements on service delivery, with attention given to populations at risk. Three lecture hours a week for one semester. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.

**382R. Social Policy Analysis and Social Problems.** Historical perspective on the development of social welfare institutions, programs, and policies. Students study methods of current policy analysis and evaluation of social problems. Three lecture hours a week for one semester. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.

**383R. Social Work Practice I.** Introduction to social work practice methodology and the professional use of self in generalist practice with individuals, families, groups, organizations, and communities. Three lecture hours a week for one semester. Prerequisite: Graduate standing in social work and concurrent enrollment in Social Work 384R, or graduate standing and consent of instructor or the graduate adviser.

**383T. Social Work Practice II.** Students examine, critique, select, and apply social work micro, mezzo, and macro theories and methods in advanced clinical and community practice. Three lecture hours a week for one semester. Prerequisite: Graduate standing in social work and concurrent enrollment in Social Work 384S, or graduate standing and consent of instructor or the graduate adviser.

**384R. Field Instruction I.** Practice course based on supervised assignments designed to develop a social work perspective and skill in working with individuals, families, groups, organizations, and communities. Sixteen to twenty hours a week (a total of at least 240 hours) in field placement and a weekly one-hour integrative seminar in the application of theoretical material to practice problems and to special issues. Social Work 384R and 384S must be taken in consecutive semesters. Prerequisite: Graduate standing in social work and concurrent enrollment in Social Work 383R, or graduate standing and consent of the field director or the graduate adviser.

**384S. Field Instruction II.** Continuation of Social Work 384R. Sixteen to twenty hours a week (a total of at least 240 hours) in field placement and a weekly one-hour integrative seminar that emphasizes advanced application of theory to practice and to consideration of special issues. Social Work 384R and 384S must be taken in consecutive semesters. Prerequisite: Graduate standing in social work and concurrent enrollment in Social Work 383T, or graduate standing and consent of the field director or the graduate adviser.

**385R. Social Work Research Methods.** Study of the scientific method and the use of research as a tool for professional practice. Three lecture hours a week for one semester. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.
385T. Advanced Integrative Capstone in Social Work Knowledge and Practice. Applies knowledge, skills, and theories to values and ethics, diversity, populations at risk, social and economic justice, human behavior and the social environment, social welfare policy, social work practice, research, and field education. Designed to be taken concurrently with Social Work 694R. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

387C. Direct Practice Field Immersion. Students work in a professional agency assisting clients. One weekly seminar hour and at least eight hours of fieldwork a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in social work and consent of instructor or the graduate adviser.

387R. Topics in Special Issues. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.

   Topic 12: Contemporary Issues in Foster Care and Adoption.
   Topic 13: Aging and Disability. Web-based instruction; no class meetings.
   Topic 14: Family Support, Self-Determination, and Disability. Web-based instruction; no class meetings.
   Topic 15: Introduction to Gerontology.
   Topic 16: Developmental Disabilities and Self-Advocacy. Web-based instruction; no class meetings.
   Topic 17: Making Systems Work for People with Disabilities. Web-based instruction; no class meetings.
   Topic 20: Dynamics of Chemical Dependence.
   Topic 23: Social Work Practice with Older Adults.
   Topic 27: Women with Disabilities. Web-based instruction; no class meetings.
   Topic 28: Health and Psychosocial Factors.
   Topic 30: Contemporary Practice with Older Adults.
   Topic 31: Kinship Care: Children and Family Systems.
   Topic 32: Psychosocial Oncology Practice and Research.
   Topic 33: Child and Adult Attachment in Clinical Practice.

388R. Seminar: Advanced Research in Social Work. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in social work and consent of instructor and the graduate adviser.

   Topic 1: Research Methods I. Introduction to the basic elements of research design in the social sciences, with particular attention to social work research. Required of all doctoral students in social work.
   Topic 2: Research Methods II. Quantitative research methods as they are applied in the social and behavioral sciences. Designed to provide students with the knowledge and competence in quantitative research methods required to conduct independent research that will expand the knowledge base of the profession. Focuses on the application of concepts studied in Topic 1 and includes research design, measurement in social science, statistical power analysis, effect size, multivariate data analysis, computer applications for data analysis, proposal writing, and research ethics. Required of all doctoral students in social work.
   Topic 3: Research Methods III. Introduction to qualitative research methodologies, paradigms, epistemologies, and theories. Qualitative methods of inquiry, including research designs, specific data collection methods, and analytic and interpretive procedures. Discussion of several approaches to qualitative data collection and analysis. Required of all doctoral students in social work.
   Topic 6: Data Analysis and Computers I. Introduction to fundamental concepts and statistical procedures used in social work research and to computer applications used for data analysis. Designed to help students develop basic skills in data file construction and manipulation, data definition, and statistical analysis and the conceptual and mathematical understanding of statistics needed for advanced work in research design, model development, model fitting and estimation, hypothesis testing, multivariate techniques, and interpretation of data. Basic statistical concepts through specific parametric and nonparametric statistics. Required of all doctoral students in social work.
   Topic 7: Data Analysis and Computers II. Builds on the concepts and procedures introduced in Topic 6. Designed to enable students to do data analysis using multivariate statistical procedures. Primary focus on using the SPSS statistical software package for calculating multivariate statistics and on using the statistical output in research findings. Required of all doctoral students in social work.

390N. Seminar: Strategies of Intervention. A critical evaluation of social work intervention strategies in human services, using alternative theoretical perspectives. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor and the graduate adviser.
Topic 1: Historical Perspectives on Social Work Practice.
Topic 2: Theories of Clinical Social Work Practice.
Topic 3: Theories of Social Work Practice in Administration, Planning, and Program Policy. Major theories of organization and management as they are applied in human service organizations. Historical development of the major schools of organizational and management theory and the dynamic evolution and contemporary applications of those theories in human service management.
Topic 4: Theories of Clinical Social Work Practice.
Topic 5: Theories of Direct Practice in Social Work. Philosophical, theoretical, and empirical underpinnings of various practice theories. Emphasis on the philosophical assumptions and scientific basis of various theories. Research methodologies such as process/outcome paradigms, experimental designs, and meta-analysis, which are used to develop and investigate the effectiveness of direct practice theories.
Topic 6: Direct Practice Theories.

392R. Topics in Social Welfare Policy Analysis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.

393R. Topics in Advanced Clinical Practice. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.

Topic 1: Clinical Assessment and Differential Diagnosis.
Topic 2: Theories and Methods of Family Intervention.
Topic 3: Health, Mental Health, and Chemical Dependence.
Topic 4: Poverty and Public Policy.
Topic 5: Social Policy for the Aging Population.
Topic 6: Advanced Family Intervention.
Topic 7: Anxiety Disorders.
Topic 8: Assessment and Treatment of Personality Disorders.
Topic 9: Assessment and Treatment of Traumatized Populations.
Topic 10: Brief Solution-Focused Intervention.
Topic 11: Clinical Intervention with Intergenerational Families Giving Care.
Topic 12: Clinical Supervision in Mental Health and Chemical Dependence.
Topic 14: Counseling African American Individuals, Couples, and Families.
Topic 15: Couples Counseling.

393T. Topics in Advanced Macro Practice. The equivalent of three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Graduate standing in social work, or graduate standing and consent of instructor or the graduate adviser.

Topic 1: Social Work Practice with Abused and Neglected Children and Their Families.
Topic 2: Working with Youth Gangs.
Topic 16: Assessment and Treatment of Juvenile Offenders.
Topic 17: Gays and Lesbians in American Society: Policy and Practice.
Topic 18: Restorative Justice.
Topic 20: Cultural Factors in Substance Abuse Treatment for Underserved Populations.
Topic 23: Contemporary Issues and Practice in Sexual Assault.
Topic 25: Historical Cultural Trauma.
Topic 26: Youth, Delinquency, and Juvenile Justice.

393V. Topics in Social Work in Specific Settings. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor or the graduate adviser.

694R. Advanced Field Instruction. Supervised practicum, building on Social Work 384R and 384S, in the continued application of theory to practice at an advanced level within the student’s chosen concentration. Designed to be taken concurrently with Social Work 385T. Social Work 694R and 394S can be taken concurrently in one semester to provide thirty-six hours of work a week (a total of at least 540 hours in one semester) in a social work agency or organization, or they can be taken over two semesters to provide sixteen to twenty hours of work a week (a total of at least 540 hours in two semesters) in the same agency. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in social work, and consent of the field director and the graduate adviser.

394S. Advanced Field Instruction. Supervised practicum, building on Social Work 384R and 384S, in the continued application of theory to practice at an advanced level within the student’s chosen concentration. Social Work 694R and 394S can be taken concurrently in one semester to provide thirty-six hours of work a week (a total of at least 540 hours in one semester) in a social work agency or organization, or they can be taken over two semesters to provide sixteen to twenty hours of work a week (a total of at least 540 hours in two semesters) in the same agency. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in social work, and consent of the field director and the graduate adviser.

195K, 295K, 395K, 495K. Conference Course in Social Work. Individual study in selected aspects of professional theory and practice. May be repeated for credit when the topics vary. Some sections are offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor or the graduate adviser.

395L. Research Practicum. Individually supervised research experience. Required of all doctoral students in social work. Prerequisite: Graduate standing, and consent of instructor or the graduate adviser.

395M. Dissertation Design. Individually supervised development of dissertation proposal. Prerequisite: Graduate standing, and consent of instructor or the graduate adviser.

395S. Area of Specialization Course. Designed to help students demonstrate knowledge in the substantive issues, key research questions, theory, empirical evidence, and implications in their area of specialization. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

395W. Writing Practicum. Individually supervised development of publishable written material. Individual instruction. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

398T. Pedagogy in Social Work. Social work curriculum policy and issues, course development and content, teaching techniques, and classroom management. Emphasis on teaching skills as well as conceptual content and theory. Three lecture hours a week for one semester. Required of all doctoral degree students in social work. Students must complete this course before they may be appointed as assistant instructors in the School of Social Work. Prerequisite: Graduate standing in social work and consent of instructor or the graduate adviser.

399R, 699R, 999R. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. Dissertation. Offered on the credit/no credit basis only. Prerequisite: Social Work 399R, 699R, or 999R.
Intercollegial Programs

Computational Science, Engineering, and Mathematics

Master of Science in Computational Science, Engineering, and Mathematics
Doctor of Philosophy

Facilities for Graduate Work

Support facilities for work in computational science, engineering, and mathematics include the Kuehne Physics Mathematics Astronomy Library, the McKinney Engineering Library, the Mallet Chemistry Library, the Walter Geology Library, the Perry-Castañeda Library, and the Life Science Library. Extensive computing facilities are available, including a scientific visualization laboratory and an Ethernet network supporting more than 250 general-purpose Linux, SGI, IBM, and Apple workstations. Other computational resources include seven parallel supercomputers, each a Linux-based Beowulf cluster of 16 to 256 cores. Shared and distributed parallel computers maintained by the Department of Computer Sciences are also available, as are workstations in several academic departments in the Cockrell School of Engineering and the College of Natural Sciences. Faculty members and graduate students also have access to the resources of the Texas Advanced Computing Center (TACC).

Areas of Study

Graduate study in computational science, engineering, and mathematics comprises three areas: applicable mathematics, numerical analysis and scientific computations, and mathematical modeling and applications. Within these broad areas, the student may take courses and conduct research in numerical analysis and scientific computing, applicable mathematics, computational mechanics and physics, parallel computing and computer architecture, and mathematical modeling, and in supporting areas in engineering and science that involve mathematical modeling of physical phenomena and engineering systems.
ADMISSION REQUIREMENTS

Students entering the program are expected to have undergraduate degrees in engineering, computer sciences, mathematics, or a natural science such as biology, physics, or chemistry.

DEGREE REQUIREMENTS

Each student develops a program of study that includes a substantial component in each of three areas of concentration: applicable mathematics, numerical analysis and scientific computation, and mathematical modeling for applications in a science or engineering discipline. The program must be reviewed and approved by the Graduate Studies Committee. Lists of courses in the three concentrations are available from the graduate adviser.

Master of Science in Computational Science, Engineering, and Mathematics. This program requires completion of thirty semester hours of approved coursework, including a thesis; thirty-three semester hours of approved coursework, including a report; or thirty-six hours of approved coursework. At least twenty-four hours must be chosen from courses in the three concentration areas, with at least six hours from each area. These twenty-four hours of approved coursework must be taken on the letter-grade basis.

Doctor of Philosophy. Before admission to candidacy for the degree, each student develops a program of study that draws courses from each of the three areas of concentration; the program must be approved by the Graduate Studies Subcommittee. The student must also pass an examination in each area. In addition to meeting the area requirements, the student must prepare a written dissertation proposal. Oral presentation of the proposal and an oral examination are required. A dissertation is required of every candidate, followed by a final oral examination covering the dissertation and the general field of the dissertation.

FOR MORE INFORMATION

Campus address: Applied Computational and Engineering Science Building (ACE) 4.102A, phone (512) 232-3356, fax (512) 471-8694; campus mail code: C0200
Mailing address: The University of Texas at Austin, Graduate Program in Computational Science, Engineering, and Mathematics, 1 University Station C0200, Austin TX 78712
E-mail: camgrad@ices.utexas.edu
URL: http://www.ices.utexas.edu/graduate-studies/

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

COMPUTATIONAL SCIENCE, ENGINEERING, AND MATHEMATICS: CSE

380. Tools and Techniques of Computational Science. Advanced introduction to the practical use of high performance computing hardware and software engineering principles for scientific technical computing. Topics include computer architectures, operating systems, programming languages, data structures, interoperability, and software development, management, and performance. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
382G. Computer Graphics. Same as Computer Science 384C. Advanced material in computer graphics, including in-depth treatments of techniques for realistic image synthesis, advanced geometric modeling methods, animation and dynamic simulation, scientific visualization, and high-performance graphics architectures. Three lecture hours a week for one semester. Computational and Applied Mathematics 384G and Computational Science, Engineering, and Mathematics 382G may not both be counted. Prerequisite: Graduate standing; and Computer Sciences 354 or another introductory course in computer graphics, or equivalent background and consent of instructor.


383K. Numerical Analysis: Algebra and Approximation. Same as Mathematics 387C. Advanced introduction to scientific computing, theory and application of numerical linear algebra, solution of nonlinear equations, and numerical approximation of functions. Three lecture hours a week for one semester. Computational Science, Engineering and Mathematics 387K and Computational and Applied Mathematics 386K may not both be counted. Prerequisite: Graduate standing, and consent of instructor or the graduate adviser.

383L. Numerical Analysis: Differential Equations. Same as Mathematics 387D. Advanced introduction to the theory and practice of commonly used numerical algorithms for the solution of ordinary differential equations, and elliptic, parabolic, and hyperbolic partial differential equations. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and Computer Science 383C, Mathematics 387C (or 383G), or consent of instructor.

383M. Statistical and Discrete Methods for Scientific Computing. Studies in probabilistic and statistical inference, statistical model fitting, computational geometry, image processing, computational graph theory, and information theory. Three lecture hours a week for one semester. Only one of the following may be counted: Computational and Applied Mathematics 383M, 395T (Topic: Computational Statistics with Application to Bioinformatics), Computational Science, Engineering, and Mathematics 383M. Prerequisite: Graduate standing.

384K. Theory of Probability. Same as Mathematics 385C. Three lecture hours a week for one semester. Computational and Applied Mathematics 384K and Computational Science, Engineering, and Mathematics 384K may not both be counted. Prerequisite: Graduate standing and consent of instructor.

384L. Theory of Probability. Same as Mathematics 385D. Continuation of Computational Science, Engineering, and Mathematics 384K. Three lecture hours a week for one semester. Computational and Applied Mathematics 384L and Computational Science, Engineering, and Mathematics 384L may not both be counted. Prerequisite: Graduate standing; Computational Science, Engineering, and Mathematics 384K (or Computational and Applied Mathematics 384K) or Mathematics 385C; and consent of instructor.

384R. Mathematical Statistics I. Same as Mathematics 384C and Statistics and Scientific Computation 384 (Topic 2: Mathematical Statistics I). The general theory of mathematical statistics. Includes distributions of functions of random variables, properties of a random sample, principles of data reduction, an overview of hierarchical models, decision theory, Bayesian statistics, and theoretical results relevant to point estimation, interval estimation, and hypothesis testing. Three lecture hours a week for one semester. Computational and Applied Mathematics 384R and Computational Science, Engineering, and Mathematics 384R may not both be counted. Prerequisite: Graduate standing; and Mathematics 362K and 378K, Statistics and Scientific Computation 382, or consent of instructor.

384T. Regression Analysis. Same as Mathematics 384G and Statistics and Scientific Computation 384 (Topic 4: Regression Analysis). Simple and multiple linear regression, inference in regression, prediction of new observations, diagnosis and remedial measures, transformations, and model building. Emphasis on both understanding the theory and applying theory to analyze data. Three lecture hours a week for one semester. Computational and Applied Mathematics 384T and Computational Science, Engineering, and Mathematics 384T may not both be counted. Prerequisite: Graduate standing; and Mathematics 362K and 378K, Statistics and Scientific Computation 382, or consent of instructor.

384U. Design and Analysis of Experiments. Same as Mathematics 384E and Statistics and Scientific Computation 384 (Topic 6: Design and Analysis of Experiments). Design and analysis of experiments, including one-way and two-way layouts; components of variance; factorial experiments; balanced incomplete block designs; crossed and nested classifications; fixed, random, and mixed models; and split plot designs. Three lecture hours a week for one semester. Computational and Applied Mathematics 384U and Computational Science, Engineering, and Mathematics 384U may not both be counted. Prerequisite: Graduate standing; and Mathematics 362K and 378K, Statistics and Scientific Computation 382, or consent of instructor.

385M. Methods of Mathematical Physics. Same as Physics 381M. Theory of analytic functions; linear algebra and vector spaces; orthogonal functions; ordinary differential equations; partial differential equations; Green’s functions; complex variables. Three lecture hours a week for one semester. Computational and Applied Mathematics 381M and Computational Science, Engineering, and Mathematics 385M may not both be counted. Prerequisite: Graduate standing.

385N. Methods of Mathematical Physics. Same as Physics 381N. Continuation of Computational Science, Engineering, and Mathematics 385M. Topology, functional analysis, approximation methods, group theory, differential manifolds. Three lecture hours a week for one semester. Computational and Applied Mathematics 381N and Computational Science, Engineering, and Mathematics 385N may not both be counted. Prerequisite: Graduate standing; and Computational Science, Engineering, and Mathematics 385M or Computational and Applied Mathematics 381M or Physics 381M.

385R. Real Analysis. Same as Mathematics 381C. Measure and integration over abstract spaces; Lebesgue’s theory of integration and differentiation on the real line. Three lecture hours a week for one semester. Computational and Applied Mathematics 381R and Computational Science, Engineering, and Mathematics 385R may not both be counted. Prerequisite: Graduate standing and consent of instructor or the graduate adviser.

385S. Complex Analysis. Same as Mathematics 381D. Introduction to complex analysis. Three lecture hours a week for one semester. Computational and Applied Mathematics 381D and Computational Science, Engineering, and Mathematics 385S may not both be counted. Prerequisite: Graduate standing and consent of instructor or the graduate adviser.

386C. Methods of Applied Mathematics. Same as Mathematics 383C. Topics include basic normed linear space theory; fixed-point theorems and applications to differential and integral equations; Hilbert spaces and the spectral theorem; applications to Sturm-Liouville problems; approximation and computational methods such as the Galerkin, Rayleigh-Ritz, and Newton procedures. Three lecture hours a week for one semester. Computational and Applied Mathematics 383C and Computational Science, Engineering, and Mathematics 386C may not both be counted. Prerequisite: Graduate standing.

386D. Methods of Applied Mathematics. Same as Mathematics 383D. Topics include distributions, fundamental solutions of partial differential equations, the Schwartz space and tempered distributions, Fourier transforms, Plancherel theorem, Green’s functions, Sobolev spaces, weak solutions, differential calculus in normed spaces, implicit function theorems, applications to nonlinear equations, smooth variational problems, applications to classical mechanics, constrained variational problems. Three lecture hours a week for one semester. Computational and Applied Mathematics 383D and Computational Science, Engineering, and Mathematics 386D may not both be counted. Prerequisite: Graduate standing; and Computational Science, Engineering, and Mathematics 383C or Computational and Applied Mathematics 383C or Mathematics 383C.

386L. Mathematical Methods in Science and Engineering. Basic concepts in real and complex analysis, ordinary and partial differential equations, and other areas of applied mathematics with application to engineering and science. Three lecture hours a week for one semester. Computational and Applied Mathematics 386L and Computational Science, Engineering, and Mathematics 386L may not both be counted. Prerequisite: Graduate standing.

386M. Functional Analysis in Theoretical Mechanics. Same as Engineering Mechanics 386M. An introduction to modern concepts in functional analysis and linear operator theory, with emphasis on their application to problems in theoretical mechanics; topological and metric spaces, norm linear spaces, theory of linear operators on Hilbert spaces, applications to boundary value problems in elasticity and dynamical systems. Three lecture hours a week for one semester. Computational and Applied Mathematics 386M and Computational Science, Engineering, and Mathematics 386M may not both be counted. Prerequisite: Graduate standing, Engineering Mechanics 386L, and Mathematics 385C.
389C. Introduction to Mathematical Modeling in Science and Engineering I. First part of a two-part introduction to the elements of classical mechanics, physics, chemistry, and biology needed to begin work in computational engineering and sciences. Develops from first principles the classical mathematical theories underlying many of the models of physical phenomena important in modern applications. Three lecture hours a week for one semester. Only one of the following may be counted: Computational and Applied Mathematics 389C, 397 (Topic: Introduction to Mathematical Modeling), Computational Science, Engineering, and Mathematics 389C. Prerequisite: Graduate standing.

389D. Introduction to Mathematical Modeling in Science and Engineering II. Second part of a two-part introduction to elements of classical mechanics, physics, chemistry, and biology needed to work in computational engineering and sciences. Develops from first principles the classical mathematical theories underlying many of the models of physical phenomena important in modern applications. Three lecture hours a week for one semester. Only one of the following may be counted: Computational and Applied Mathematics 389D, 397 (Topic: Introduction to Mathematical Modeling II), Computational Science, Engineering, and Mathematics 389D. Prerequisite: Graduate standing; and Computational Science, Engineering, and Mathematics 389C (or Computational and Applied Mathematics 389C or the equivalent).

190, 390. Individual Research. Individual study or research in computational science, engineering, and mathematics arranged by mutual agreement between student and supervising faculty member. May be repeated for credit. Some sections are offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

392. Topics in Computer Science. Advanced topics in the theory and application of computer science. Recent topics include geometric modeling and visualization, and high-performance and parallel computing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections may be offered on the credit/no credit basis only. Computational and Applied Mathematics 392F and Computational Science, Engineering, and Mathematics 392F may not both be counted unless the topics vary. Prerequisite: Graduate standing.

393. Topics in Numerical Analysis. Advanced topics in the theory and application of numerical analysis. Recent topics include numerical methods for partial differential equations, computational problems in linear algebra, iterative methods and fast algorithms, numerical methods in functional approximation, and computational and variational methods for inverse problems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections may be offered on the credit/no credit basis only. Computational and Applied Mathematics 393D and Computational Science, Engineering, and Mathematics 393D may not both be counted unless the topics vary. Prerequisite: Graduate standing and consent of instructor.

393F. Finite Element Methods. Same as Aerospace Engineering 394F (Topic: Finite Element Methods) and Engineering Mechanics 394F. Derivation and implementation of the finite element method; basic coding techniques; application to problems of stress and diffusion. Three lecture hours a week for one semester. Computational and Applied Mathematics 394F and Computational Science, Engineering, and Mathematics 394F may not both be counted. Prerequisite: Graduate standing and consent of instructor.

393H. Advanced Theory of Finite Element Methods. Contemporary topics in the theory and application of finite element methods. Three lecture hours a week for one semester. Computational and Applied Mathematics 393H and Computational Science, Engineering, and Mathematics 393H may not both be counted. Prerequisite: Graduate standing; Computational Science, Engineering, and Mathematics 393F (or Computational and Applied Mathematics 394F) or the equivalent; and Engineering Mechanics 386L or the equivalent.


394. Topics in Probability and Statistics. Advanced topics in the theory and application of probability and statistics. Recent topics include nonparametric statistics and advanced probability. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections may be offered on the credit/no credit basis only. Computational and Applied Mathematics 394C and Computational Science, Engineering, and Mathematics 394 may not both be counted unless the topics vary. Prerequisite: Graduate standing and consent of instructor.

396. Topics in Applied Mathematics. Advanced topics in the theory and application of applied mathematics. Recent topics have included partial differential equations, dynamical systems, kinetic theory, quantum mechanics, ergodic theory, statistical mechanics, Hamiltonian dynamics, nonlinear functional analysis, Euler and Navier-Stokes equations, microlocal calculus and spectral asymptotics, calculus of variations, and nonlinear partial differential equations. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections may be offered on the credit/no credit basis only. Computational and Applied Mathematics 396C and Computational Science, Engineering, and Mathematics 396 may not both be counted unless the topics vary. Prerequisite: Graduate standing and consent of instructor.
397. **Topics in Computational Science and Engineering.** Advanced topics in the theory and application of computational science and engineering. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections may be offered on the credit/no credit basis only. Computational and Applied Mathematics 397 and Computational Science, Engineering, and Mathematics 397 may not both be counted unless the topics vary. Prerequisite: Graduate standing and consent of instructor.

698. **Thesis.** The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in computational science, engineering, and mathematics and consent of the graduate adviser; for 698B, Computational Science, Engineering, and Mathematics 698A.

398R. **Master’s Report.** Preparation of a report to fulfill the requirement for the master’s degree under the report option. Independent study. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in computational science, engineering, and mathematics and consent of the graduate adviser.

399R, 699R, 999R. **Dissertation.** Independent study. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

399W, 699W, 999W. **Dissertation.** Independent study. Offered on the credit/no credit basis only. Prerequisite: Computational Science, Engineering, and Mathematics 399R, 699R, or 999R.

**GRADUATE STUDIES**

Students enrolling in Graduate School courses associated with The University of Texas System’s Archer Center must be admitted to the summer program in public policy at the Archer Center in Washington, DC. Coursework will take place at the Archer Center, 1901 Pennsylvania Ave., Washington, DC.

The program provides an opportunity to live and work in Washington, DC, and is a unique educational experience for graduate students interested in American government. The curriculum consists of an internship with a federal government-related agency or organization and coursework to complement the internship experience.

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**GRADUATE STUDIES: GRS**

382. **Inside View of the Federal Policy Making Process.** Restricted to students participating in the Archer Center graduate program in public policy. On-the-ground and behind-the-scenes study of the federal policy making process and the institutions and people that comprise the federal government. Sampling of literature on federal government dynamic and face-to-face interaction with individuals from the major institutions that participate in federal governance. Discussion and analysis of information gathered from meetings with officials from Congress, the White House, executive branch agencies, lobbying firms, nongovernmental organizations, think tanks, interest groups, and the media. The equivalent of three lecture hours a week for one semester. Taught in Washington, DC, during the summer session. Prerequisite: Graduate standing.

692. **Archer Center Washington Internship.** Restricted to students participating in the Archer Center program in public policy. Internship with a federal government-related agency or organization in Washington, DC, facilitated through the Archer Center’s program in public policy. Students select their internships and are supervised by a UT Austin faculty member. The equivalent of six lecture hours a week for one semester. Taught in Washington, DC, during the summer session. Prerequisite: Graduate standing.
WRITING

Master of Fine Arts

FACILITIES FOR GRADUATE WORK

The James A. Michener Center for Writers offers a cross-disciplinary Master of Fine Arts program that draws on strong programs in English (fiction and poetry), radio-television-film (screenwriting), and theatre (playwriting). The University Libraries, including the Fine Arts Library, provide rich resources for students interested in the creative process. The Harry Ransom Humanities Research Center houses a number of noted book collections as well as manuscripts, edited drafts, and early editions of creative works. The Jesse H. Jones Communication Center has extensive film and video production facilities, and the Performing Arts Center offers outstanding theatrical production facilities.

Students admitted to the program are offered James A. Michener Fellowships to support their study.

AREAS OF STUDY

Students seeking the MFA are expected to develop professional skills in at least two of the following fields of creative work: fiction, poetry, screenwriting, and playwriting. The curriculum requires students to work across disciplines; for example, the student might study fiction as a primary field and screenwriting as a secondary field. Each candidate must write a thesis in his or her primary field.

GRADUATE STUDIES COMMITTEE

The following faculty members served on the Graduate Studies Committee in the spring semester 2011.

- Michael W. Adams
- Charles E. Berg
- Oscar H. Casares
- Steven Dietz
- Kurt O. Heinzelman
- R. Roland Hinojosa Smith
- Stuart D. Kelban
- Judith Kroll
- Peter N. La Salle
- Richard M. Lewis
- James L. Magnuson
- Elizabeth McCracken
- Thomas G. Schatz
- Thomas B. Whitbread
- Dean H. Young
- Suzan L. Zeder

DEGREE REQUIREMENTS

The student must complete at least fifty-four semester hours of coursework, including a three-hour first-year seminar; nine hours of creative work and six hours of studies courses in the primary field; six hours of creative work and three hours of studies courses in the secondary field; twenty-one hours of supporting coursework; and the six-hour thesis course. Reviews conducted each semester determine the student’s eligibility to continue in the program. Further information about degree requirements is available from the graduate adviser.

FOR MORE INFORMATION

Campus address: J. Frank Dobie House (FDH), 702 East Dean Keeton Street, phone (512) 471-1601, fax (512) 471-9997; campus mail code: A3400

Mailing address: The University of Texas at Austin, MFA in Writing, James A. Michener Center for Writers, 702 East Dean Keeton Street, Austin TX 78705-3201

E-mail: mcw@www.utexas.edu

URL: http://www.utexas.edu/academic/mcw/

495
Courses offered by the Departments of English, Radio-Television-Film, and Theatre and Dance make up the core of the MFA degree program, supplemented by courses in writing offered by the Michener Center.

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

**WRITING: WRT**

380. **First-Year Seminar.** Restricted to first-year candidates for the Master of Fine Arts in Writing. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing in writing.

380S. **Studies in Creative Writing.** Subjects include the study of literature, creative theory, and criticism in the genres of fiction, nonfiction, poetry, playwriting, and screenwriting. Three lecture hours a week for one semester. Prerequisite: Graduate standing in writing, or graduate standing and consent of the graduate adviser.

380W. **Workshop in Creative Writing.** Subjects include writing fiction, writing poetry, playwriting, and screenwriting. Three lecture hours a week for one semester. Prerequisite: Graduate standing in writing, or graduate standing and consent of the graduate adviser.

182, 282, 382. **Independent Projects.** Restricted to advanced MFA candidates. Conference work and independent study. May be repeated for credit. Prerequisite: Graduate standing in writing, or graduate standing and consent of the graduate adviser.

698. **Thesis.** Individual instruction. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in writing and consent of the graduate adviser; for 698B, Writing 698A.
English as a Second Language

English as a second language (ESL) courses are offered as a requirement of the Office of Graduate Studies under the supervision of the Office of the Executive Vice President and Provost and the International Office. The courses are designed for international graduate students who have a below-passing score on certain assessment tests. The courses are graded on the credit/no credit basis only. In order to register for an ESL course, a student must also register for at least three semester hours of coursework at the University. These three hours must be taken on the letter-grade basis.

English as a second language courses may not be counted toward any degree, but are included in determining if a student's course load satisfies requirements for issues such as immigration, employment, housing, and financial aid.

More information is available from the International Office.

GRADUATE COURSES

The faculty has approval to offer the following courses in the academic years 2011–2012 and 2012–2013; however, not all courses are taught each semester or summer session. Students should consult the Course Schedule to determine which courses and topics will be offered during a particular semester or summer session. The Course Schedule may also reflect changes made to the course inventory after the publication of this catalog.

ENGLISH AS A SECOND LANGUAGE: ESL

388S. Oral Communication. Restricted to international students. Practicum in speaking skills. Focuses on pronunciation, fluency, grammatical accuracy, vocabulary development, formal presentations, and graduate-level discussions. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of instructor, may be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

388T. Basic Speaking Skills. Restricted to international students. Preparation for the International Teaching Assistant Oral English Proficiency Assessment. Practice focuses on the five tasks required in the assessment: summary, vocabulary list, reading, concept and graph explanations, and personal introduction. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of instructor, may be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

388W. Academic Writing. Restricted to international students. Practicum in writing skills. Focuses on basic syntax and sentence structure, paragraph and essay writing, and basic research writing. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of instructor, may be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

389S. Advanced Oral Communication. Restricted to international students. Focuses on pronunciation, summarizing key points, and extending topics in intercultural communication. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of instructor, may be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

389T. Communication and Teaching Culture. Restricted to international students. Focuses on pronunciation, presenting and summarizing information, and relevant topics in intercultural communication. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of instructor, may be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

389W. Advanced Academic Writing. Restricted to international students. Focuses on the writing skills needed for qualifying exams, research, and conference papers. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. With consent of instructor, may be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.
5. Members of Graduate Studies Committees

The faculty members and research scientists listed here were members of Graduate Studies Committees during the spring semester 2011; the titles shown are for that period.

Peter F. Abboud, Professor, Center for Middle Eastern Studies and Department of Middle Eastern Studies
BS, London, 1956; MA, The American University in Cairo, 1960; PhD, Texas, 1964

Itty Abraham, Associate Professor, Department of Government, Department of Asian Studies
BA, Loyola College, 1982; MS, University of Illinois at Urbana-Champaign, 1986; PhD, University of Illinois at Urbana-Champaign, 1993

Jacob A. Abraham, Cockrell Family Regents Chair in Engineering #8, Professor, Department of Electrical & Computer Engineering
MSEE, Stanford University, 1971; PhD, Stanford University, 1974

Lawrence D. Abraham, Associate Dean, School of Undergraduate Studies, Professor, Department of Kinesiology and Health Education
AB, Oberlin College, 1971; MS, Emporia State University, 1975; EdD, Teachers College, Columbia University, 1975

Lee E. Abraham, Associate Professor, Department of Theatre and Dance
MFA, California Institute of the Arts, 1977

Jeffrey Bruce Abramson, Professor, School of Law, Department of Government
BA, Amherst College, 1965; JD, Harvard University, 1978; PhD, Harvard University, 1977

Jason Abrevaya, Professor, Department of Economics, Department Chair, Department of Economics
AB, Harvard University, 1992; PhD, Massachusetts Institute of Technology, 1996

Robert H. Abzug, Oliver H. Radkey Regents Professorship in History, Director, Academic Program, Schusterman Center, Professor, Department of American Studies, Department of History
BA, Harvard University, 1967; PhD, University of California-Berkeley, 1977

Gayle J. Acton, Assistant Dean, School of Nursing, Associate Professor, School of Nursing
PhD, University of Texas at Austin, 1993

Jennifer Keys Adair, Assistant Professor, Department of Curriculum and Instruction
BA, Brigham Young University, 1999; MA, Arizona State University Main, 2004; PhD, Arizona State University Main, 2009

Michael W. Adams, Associate Professor, Department of English, The James A Michener Center for Writers, Director, Office of Graduate Studies
BA, Texas Tech University, 1968; MA, University of Texas at Austin, 1970; PhD, University of Texas at Austin, 1973

Paul C. Adams, Associate Professor, Department of Geography and the Environment
BA, University of Colorado at Boulder, 1984; MS, University of Wisconsin-Madison, 1990; PhD, University of Wisconsin-Madison, 1993

Christopher O. Adejumo, Associate Professor, Department of Art and Art History, Center for African and African American Studies
BA, University of Benin, Benin City, Nigeria, 1983; MFA, University of Massachusetts Dartmouth, 1993; PhD, Ohio State University Main Campus, 1997

David E. Adelman, Harry M. Reasoner Regents Chair in Law, Professor, School of Law
BA, Reed College, 1988; PhD, Stanford University, 1991; JD, Stanford University, 1996

Ari Adut, Associate Professor, Department of Sociology
BA, Bogazici University, 1993; BA, Bogazici University, 1993; Diploma (Foreign), L’Ecole des Hautes Etudes en Sciences Sociales, 1994; PhD, University of Chicago, 2004

Omoyi Afolabi, Assistant Professor, Department of Spanish and Portuguese, Department of African and African Diaspora Studies
BA, Obafemi Awolowo University, 1984; MA, University of Wisconsin-Madison, 1993; PhD, University of Wisconsin-Madison, 1997

Ashish Agarwal, Assistant Professor, Department of Information, Risk, and Operations Management
BTEch, Indian Institute of Technology, 1996; MS, Massachusetts Institute of Technology, 1998; PhD, Carnegie Mellon University, 2009

Seema Agarwala, Associate Professor, Section of Molecular Cell and Developmental Biology
BS, University of Calcutta, 1983; PhD, State University of New York at Stony Brook, 1990

J. K. Aggarwal, Cullen Trust for Higher Education Endowed Professorship in Engineering #2, Professor, Department of Computer Science, Department of Electrical & Computer Engineering
PhD, University of Illinois at Urbana-Champaign, 1964

Kamran S. Aghaie, Director, Academic Program, Center for Middle Eastern Studies, Associate Professor, Department of Middle Eastern Studies, Center for Women’s and Gender Studies, Center for Middle Eastern Studies, Department of History
BA, University of Tennessee, 1991; BA, University of Tennessee, 1991; MA, University of California-Los Angeles, 1995; PhD, University of California-Los Angeles, 1999

Jemel P. Aguilar, Assistant Professor, School of Social Work, Center for Women’s and Gender Studies
BA, State University of New York Empire State College, 1998; MSW, University of Minnesota-Twin Cities, 2006; PhD, University of Minnesota-Twin Cities, 2006

Ricardo C. Ainslie, Professor, Department of Educational Psychology
MA, University of Michigan-Ann Arbor, 1975; PhD, University of Michigan-Ann Arbor, 1979

Maruthi R. Akella, Associate Professor, Department of Aerospace Engineering and Engineering Mechanics
PhD, Texas A & M University, 1998
Deji Akinwande, Assistant Professor, Department of Electrical & Computer Engineering
MSc, Case Western Reserve University, 2000; BSc, Case Western Reserve University, 2000; PhD, Stanford University, 2010

Mahmoud M. Al-Batal, Director, Omer-PI-Al-Batal, Associate Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies, BA, Lebanese University, 1977; MA, University of Michigan-Ann Arbor, 1981; PhD, University of Michigan-Ann Arbor, 1985

Bethany L. Albertson, Assistant Professor, Department of Government
BA, Loyola Marymount University, 1999; MA, University of Chicago, 2001; PhD, University of Chicago, 2006

Richard W. Aldrich, Karl Fokkers Chair in Interdisciplinary Biomedical Research II, Professor, Section of Neurobiology, College of Natural Sciences, Department Chair, Section of Neurobiology
BS, University of Arizona, 1975; PhD, Stanford University, 1980

Kamran Ali, Associate Professor, Department of Anthropology, Department of Asian Studies, Center for Middle Eastern Studies, Department of Middle Eastern Studies
BS, University of Karachi, 1987; MA, Johns Hopkins University, 1991; PhD, Johns Hopkins University, 1998

Samer M. Ali, Associate Professor, Center for Middle Eastern Studies, Department of Middle Eastern Studies
BA, University of Chicago, 1990; MA, University of Utah, 1997; PhD, Indiana University at Bloomington, 2002

Edwin B. Allaire, Professor, Department of Philosophy, Professor Emeritus, Department of Philosophy
PhD, University of Iowa, 1960

Daniel J. Allcock, Professor, Department of Mathematics
BS, University of Texas at Austin, 1991; BS, University of Texas at Austin, 1991; PhD, University of California-Berkeley, 1996

David T. Allen, Melvin H. Gertz Regents Chair in Chemical Engineering, Professor, Department of Chemical Engineering
PhD, California Institute of Technology, 1983

Greg Allen, Associate Professor, Department of Educational Psychology
BA, American University, 1992; PhD, San Diego State University, 2000

Gregory D. Allen, Professor, School of Music
MM, Peabody Institute of Johns Hopkins University, 1972

Mead A. Allison, Senior Research Scientist, Institute for Geophysics
BS, College of William and Mary, 1985; MS, East Carolina University, 1988; PhD, State University of New York at Stony Brook, 1993

Andres Almazan, Associate Professor, Department of Economics, Red McCombs School of Business, Department of Finance
BA, Universidad de Malaga, 1989; MS, Cemfi, Madrid, Spain, 1991; PhD, Massachusetts Institute of Technology, 1996

Byron P. Almen, Associate Professor, School of Music
MMus, Indiana University at Bloomington, 1992; PhD, Indiana University at Bloomington, 1998

Dean J. Almy, Associate Professor, School of Architecture
BArch, Cornell University, 1983; MArch, University of Texas at Austin, 1989

Anthony Alofsin, Roland Gommel Roessner Centennial Professorship in Architecture, Professor, Department of Art and Art History, School of Architecture
PhD, Columbia University in the City of New York, 1987

Hal S. Alpert, Assistant Professor, Department of Chemical Engineering
BS, University of Maryland College Park, 2002; PhD, Massachusetts Institute of Technology, 2006

Mark I. Alpert, Foley’s Professorship in Retailing, Professor, Department of Marketing Administration
DBA, University of Southern California, 1968

Megan Alrutz, Assistant Professor, Department of Theatre and Dance
PhD, Arizona State University Main, 2004

Kevin S. Alter, The Sid W. Richardson Centennial Professorship in Architecture, Associate Dean, School of Architecture, Professor, School of Architecture
MArch, Harvard University, 1990

Orly Alter, Adjunct Associate Professor, Department of Mathematics
BS, Tel Aviv University, 1983; PhD, Stanford University, 1999

Aydogan Ali, Associate Professor, Department of Finance
BA, Istanbul University, 1996; MS, Carnegie Mellon University, 1998; PhD, Carnegie Mellon University, 2002

Andrea Alu, Assistant Professor, Department of Electrical & Computer Engineering
Laurea, Universita degli Studi Roma Tre, 2001; MS, Universita degli Studi Roma Tre, 2004; PhD, Universita degli Studi Roma Tre, 2007

Rosental C. Alves, Knight Chair in Journalism, Professor, School of Journalism
BA, Universidade Federal do Rio de Janeiro, 1976

Lorenzo Alvaii, Professor, Department of Computer Science
MS, Cornell University, 1994; PhD, Cornell University, 1996

Emily Amanatullah, Assistant Professor, Department of Management
BS, Duke University, 2002; BA, Duke University, 2002; MPH, Columbia University in the City of New York, 2004; PhD, Columbia University in the City of New York, 2007

Catherine G. Ambrose, Adjunct Associate Professor, Biomedical Engineering
BS, Washington University in St Louis, 1987; MS, University of Texas at Austin, 1989; MSE, University of Texas at Austin, 1989; PhD, University of Texas at Austin, 1992

David A. Anderson, Fred and Emily Marshall Wulff Centennial Chair in Law, Professor, School of Law
AB, Harvard University, 1962; JD, University of Texas at Austin, 1971

Edward G. Anderson Jr, Associate Professor, Department of Information, Risk, and Operations Management, Department of Management, IC2 Institute
BA, Stanford University, 1988; BS, Stanford University, 1988; PhD, Massachusetts Institute of Technology, 1997

Edward R. Anderson, Associate Professor, Human Dev & Family Sci
MA, University of Virginia, 1987; PhD, University of Virginia, 1989

Ronald B. Anderson, Associate Professor, Department of Advertising
PhD, Michigan State University, East Lansing, 1988

Urton L. Anderson, Clark W. Thompson, Jr. Professorship in Accounting Education, Department Chair, Department of Accounting, Professor, Department of Accounting
MA, University of Minnesota-Twin Cities, 1977; PhD, University of Minnesota-Twin Cities, 1985

Jeffrey G. Andrews, Associate Professor, Department of Electrical & Computer Engineering
BS, Harvey Mudd College, 1995; MS, Stanford University, 1999; PhD, Stanford University, 2002

Jacqueline L. Angel, Professor, Lyndon B Johnson School of Public Affairs, Department of Sociology
PhD, Rutgers the State University of New Jersey New Brunswick Campus, 1989

Ronald J. Angel, Professor, Department of Sociology
MS, University of Wisconsin-Madison, 1977; PhD, University of Wisconsin-Madison, 1981

Ignazio A. Angelelli, Professor, Department of Philosophy
Doctorat, Université de Fribourg, 1965

Fernando Antonio Nunes Dionisio Anjos, Assistant Professor, Department of Finance
Licenciatura, Universidade Catolica Portuguesa, 1998; MSc, Instituto Superior Tecnico, 2004; PhD, Carnegie Mellon University, 2008
Ananth Annapragnada, Adjunct Associate Professor, Biomedical Engineering
BTech, Anna University, 1985; MS, University of Michigan-Ann Arbor, 1989; PhD, University of Minnesota-Twin Cities, 1989
Eric V. Anslyn, Norman Hackerman Professorship in Chemistry, Professor, Department of Chemistry and Biochemistry
PhD, California Institute of Technology, 1988
Elliott M. Antokoletz, Professor, School of Music
PhD, City University of New York Graduate Center, 1975
Peter R. Antoniewicz, Professor, Department of Physics
PhD, Purdue University Main Campus, 1965
Dean R. Appling, Lester J. Reed Professorship in Biochemistry, Professor, Department of Chemistry and Biochemistry
PhD, Vanderbilt University, 1981
Aristotle Arapostathis, Professor, Department of Electrical & Computer Engineering
MS, University of California-Berkeley, 1978; PhD, University of California-Berkeley, 1982
Todd J. Arbogast, Professor, Institute for Computational Engineering and Science, Department of Mathematics
PhD, University of Chicago, 1987
Katherine M. Arens, Professor, Center for Women’s and Gender Studies, Department of Germanic Studies
BA, Northwestern University, 1975; AM, Stanford University, 1976; PhD, Stanford University, 1981
Arturo Arias, Professor, Department of Spanish and Portuguese
BA, Boston University, 1973; MA, Boston University, 1974; PhD, L’Ecole des Hautes Etudes en Sciences Sociales, 1978
Efraim P. Arredamar, Professor, Department of Mathematics
PhD, University of Nebraska - Lincoln, 1976
Marilyn Armour, Associate Professor, School of Social Work
BA, Bard College, 1965; MSW, University of Minnesota-Twin Cities, 1968; PhD, University of Minnesota-Twin Cities, 2000
Neal E. Armstrong, Zarrow Centennial Professorship in Engineering, Vice Provost, Executive Vice President & Provost, Professor, Department of Civil, Architectural and Environmental Engineering
BA, University of Texas at Austin, 1962; MA, University of Texas at Austin, 1966; PhD, University of Texas at Austin, 1968
Josnianna Arroyo Martinez, Associate Professor, Department of Spanish and Portuguese, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, University of Puerto Rico-Rio Piedras Campus, 1989; PhD, University of California-Berkeley, 1998
Mark L. Acher, Joseph D. Jamail Centennial Chair in Law, Professor, School of Law
BA, Marquette University, 1975; MA, Kansas State University, 1977; LL.M., New York University, 1981; JD, Harvard University, 1978
Nicholas M. Asher, Professor, Department of Philosophy, Department of Linguistics
PhD, Yale University, 1982
William F. Aspray Jr., Bill and Lewis Suit Professorship, Professor, Department of Computer Science, School of Information
MA, Wesleyan University, 1973; BA, Wesleyan University, 1973; MA, University of Wisconsin Colleges, 1975; PhD, University of Wisconsin Colleges, 1980
Rowland Atiase, Professor, Department of Accounting
MBA, University of California-Berkeley, 1975; MA, University of California-Berkeley, 1979; PhD, University of California-Berkeley, 1980
Lucinda Jane Atkinson, Assistant Professor, Department of Advertising
BA, McGill University, 1997; MA, New York University, 1998; PhD, University of Wisconsin-Madison, 2009
Nigel S. Atkinson, Professor, Section of Neurobiology
PhD, Pennsylvania State University Main Campus, 1986
Simon D. Atkinson, Mike Hogg Professorship in Community and Regional Planning, Professor, School of Architecture
PhD, University of Sheffield, 1989
Robert D. Auerbach, Professor, Lyndon B Johnson School of Public Affairs
PhD, University of Chicago, 1969
James A. Austin Jr., Senior Research Scientist, Institute for Geophysics
Javier Ayuero, Joe R. & Teresa Lozano Long Endowed Professorship #3, Professor, Department of Sociology
Ronen Avraham, Thomas Shelton Moxey Professorship, Professor, School of Law
MBA, Bar-Ilan University, 1998; LLB, Bar-Ilan University, 1996; LLM, University of Michigan-Ann Arbor, 1999; SJD, University of Michigan-Ann Arbor, 2003
Germaine H. Awad, Assistant Professor, Department of Educational Psychology, Center for Middle Eastern Studies, Department of African and African Diaspora Studies
BS, John Carroll University, 1999; MA, Southern Illinois University Carbondale, 2002; PhD, Southern Illinois University Carbondale, 2005
Hina Azam, Assistant Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies
BA, Loyola University Chicago, 1992; BA, Loyola University Chicago, 1992; MA, Duke University, 2000; PhD, Duke University, 2007
Adnan Aziz, Associate Professor, Department of Electrical & Computer Engineering
PhD, University of California-Berkeley, 1996
Marina Azimonti Renzo, Assistant Professor, Department of Economics
BA, Universidad de San Andres, 1999; PhD, University of Rochester, 2004
Ivo M. Babuska, Robert B. Trull Chair in Engineering, Research Professor, Ices-PI-Babuska, Professor, Department of Aerospace Engineering and Engineering Mechanics, Department of Mathematics
PhD, Academy of Sciences, 1955
Uttarayan Bagchi, Professor, Department of Information, Risk, and Operations Management, ICA Institute
BS, Indian Institute of Technology, 1974; MS, Indian Institute of Technology, 1976; PhD, Pennsylvania State University Main Campus, 1985
Diane E. Bailey, Assistant Professor, School of Information
BS, University of California-Berkeley, 1988; MS, University of California-Berkeley, 1990; PhD, University of California-Berkeley, 1994
Chandrajit L. Bajaj, CAM Chair in Visualization, Professor, Department of Computer Science
MS, Cornell University, 1985; PhD, Cornell University, 1984
Aaron Blair Baker, Assistant Professor, Biomedical Engineering
MSE, University of Washington - Seattle, 1999; BSE, University of Washington - Seattle, 1999; SM, Massachusetts Institute of Technology, 2002; PhD, Harvard University, 2006
Lynn A. Baker, Frederick M. Baron Chair in Law, Professor, School of Law
BA, Yale University, 1978; BA, University of Oxford, 1982; JD, Yale University, 1985
Samuel Baker, Associate Professor, Department of English
BA, Columbia University in the City of New York, 1991; MA, University of Chicago, 1994; PhD, University of Chicago, 2001
Anantaram Balakrishnan, Kenneth M. and Susan T. Jastrow II Chair in Business, Associate Dean for Research, Red McCombs School of Business, Professor, Department of Information, Risk, and Operations Management
BS, Indian Institute of Technology, 1976; MBA, Indian Institute of Management, 1978; PhD, Massachusetts Institute of Technology, 1985
Ross Baldick, Professor, Department of Electrical & Computer Engineering
PhD, University of California-Berkeley, 1990
Jason M. Baldridge, Assistant Professor, Department of Linguistics
BA, University of Toledo, 1996; MSE, University of Pennsylvania, 1998; PhD, University of Edinburgh, 2002
Matthew T. Balhoff, Assistant Professor, Department of Petroleum and Geosystems Engineering
BS, Louisiana State University and Agricultural and Mechanical College, 2000; PhD, Louisiana State University and Agricultural and Mechanical College, 2005

Dana H. Ballard, Professor, Department of Computer Science, Department of Psychology
BS, Massachusetts Institute of Technology, 1967; MS, University of Michigan-Ann Arbor, 1970; PhD, University of California-Irvine, 1974

Dana H. Ballard, Associate Professor, Department of Communication Studies
BA, Howard University, 1994; MA, University of California-Santa Barbara, 1997; PhD, University of California-Santa Barbara, 2002

Sanjay K. Banerjee, Cockrell Family Regents Chair in Engineering #4, Professor, Department of Electrical & Computer Engineering
PhD, University of Illinois at Urbana-Champaign, 1983

Nathan L. Bangs, Senior Research Scientist, Institute for Geophysics, Lecturer, Department of Geological Sciences
BA, Williams College, 1983; MA, Columbia University in the City of New York, 1986; MPhil, Columbia University in the City of New York, 1987; PhD, Columbia University in the City of New York, 1991

Seth R. Bank, Assistant Professor, Department of Electrical & Computer Engineering
BS, University of Illinois at Urbana-Champaign, 2000; MS, Stanford University, 2003; PhD, Stanford University, 2006

James A. Bankson, Adjunct Assistant Professor, Biomedical Engineering
BS, Texas A & M University, 1994; PhD, Texas A & M University, 2001

Colin James Bannard, Assistant Professor, Department of Linguistics
BS, University of London, 2000; MPhil, University of Birmingham, 2001; MSc, University of Edinburgh, 2002; PhD, University of Edinburgh, 2006

Jay L. Banner, Professor, Department of Geological Sciences
PhD, State University of New York at Stony Brook, 1986

Aaron Bar-Adon, Professor, Department of Linguistics, Center for Middle Eastern Studies, Department of Middle Eastern Studies
PhD, The Hebrew University of Jerusalem, 1959

Zoltan D. Barany, Frank C. Erwin, Jr. Centennial Professorship in Government, Professor, Department of Government, Department of Slavic Languages and Literature
BA, Carleton University, 1986; MA, University of Nebraska at Omaha, 1988; PhD, University of Virginia (Old Code), 1991

Suzanne Barber, AT&T Foundation Endowed Professorship in Engineering, Professor, Department of Electrical & Computer Engineering, Applied Research Laboratories
PhD, University of Texas at Arlington, 1992

Janine Barchas, Associate Professor, Department of English
AB, Stanford University, 1989; MA, University of Chicago, 1990; PhD, University of Chicago, 1995

Allen J. Bard, Norman Hackerman - Welch Regents Chair in Chemistry, Professor, Department of Chemistry and Biochemistry
BS, University of Manitoba, 1977; PhD, University of Chicago, 1980

Jonathan F. Bard, Professor, Department of Mechanical Engineering
MS, George Washington University, 1979

Lecia J. Barker, Research Associate Professor, School of Information, Research Associate Professor (Affiliated), School of Information
BS, University of Iowa, 1981; MBA, San Diego State University, 1987; PhD, University of Colorado at Boulder, 1998

Jamie C. Barner, Associate Professor, College of Pharmacy
MS, Purdue University Main Campus, 1994; PhD, Purdue University Main Campus, 1998

Jaime D. Barnes, Assistant Professor, Department of Geological Sciences
BS, University of Texas at Austin, 2000; BA, University of Texas at Austin, 2000; MS, University of New Mexico Main Campus, 2002; PhD, University of New Mexico Main Campus, 2006

John W. Barnes, Cullen Trust for Higher Education Endowed Professorship in Engineering #6, Professor, Department of Mechanical Engineering
BS, University of Arkansas Main Campus, 1969; PhD, University of Arkansas Main Campus, 1971

Ronald E. Barr, Professor, Department of Mechanical Engineering
PhD, Marquette University, 1975

Jennifer-Kate Barrett, Assistant Professor, Department of English
BA, University of Pennsylvania, 1998; PhD, Princeton University, 2008

Michael E. Barrett, Research Associate Professor, Center for Research in Water Resources, Research Associate Professor (Affiliated), Department of Civil, Architectural and Environmental Engineering
BS, University of Texas at Austin, 1975; MA, University of Texas at Austin, 1979; MS, University of Texas at Austin, 1992; PhD, University of Texas at Austin, 1996

Jeffrey E. Barrick, Assistant Professor, Department of Chemistry and Biochemistry
BS, California Institute of Technology, 2001; PhD, Yale University, 2006

Phillip J. Barrish, Associate Professor, Department of English
MA, Cornell University, 1989; PhD, Cornell University, 1991

Caroline A. Bartel, Associate Professor, Department of Management
BA, State University of New York at Stony Brook, 1992; MA, University of Michigan-Ann Arbor, 1996; PhD, University of Michigan-Ann Arbor, 1998

John Bartholomew, Professor, Department of Kinesiology and Health Education
PhD, Arizona State University Main, 1996

Anitesh Barua, Mr. and Mrs. William F. Wright, Jr. Centennial Professorship for Management of Innovative Technology, Professor, Department of Information, Risk, and Operations Management
PhD, Carnegie Mellon University, 1990

James P. Barufaldi, Ruben E. Hinojosa Regents Professorship in Education, Director, Science Education Center, Professor, Department of Curriculum and Instruction
PhD, University of Maryland College Park, 1972

Adina K. Baitnitzky, Assistant Professor, Department of Geography and the Environment, Center for Middle Eastern Studies
BA, Barnard College, 1998; MA, Brown University, 2002; PhD, Brown University, 2005

Don S. Batory, David Bruton, Jr. Centennial Professorship in Computer Sciences #1, Professor, Department of Computer Science, Department of Electrical & Computer Engineering
BS, Case Institute Of Technology, 1975; MSc, Case Institute Of Technology, 1976; PhD, University of Toronto, 1981

Oguzhan Bayrak, Associate Professor, Department of Civil, Architectural and Environmental Engineering
BS, Middle East Technical University, 1992; MS, University of Toronto, 1995; PhD, University of Toronto, 1999

Joseph J. Beaman Jr., Earnest F. Gloyne Regents Chair in Engineering, Cockrell Family Chair for Departmental Leadership #4, Professor, Department of Mechanical Engineering, Department Chair, Department of Mechanical Engineering
BS, University of Texas at Austin, 1972; MS, University of Texas at Austin, 1975; ScD, Massachusetts Institute of Technology, 1979

Michael L. Beaman, Assistant Professor, School of Architecture
BEnvironD, North Carolina State University, 1998; BArch, North Carolina State University, 1999; MArch, Harvard University, 2003

David I. Beaver, Associate Professor, Department of Linguistics
BS, University of Bristol, 1988; MSc, University of Edinburgh, 1989; PhD, University of Edinburgh, 1995
John T. Beavers, Assistant Professor, Department of Linguistics  
BA, University of Texas at Austin, 2000; BS, University of Texas at Austin, 2000; MA, Stanford University, 2002; PhD, Stanford University, 2006

Deborah Beck, Assistant Professor, Department of Classics  
PhD, Harvard University, 1997

Heather A. Becker, Research Scientist, School of Nursing  
MED, University of Texas at Austin, 1975; PhD, University of Texas at Austin, 1981

Michael F. Becker, Professor, Department of Electrical & Computer Engineering  
MSEE, Stanford University, 1970; PhD, Stanford University, 1974

William Beckner, Paul V. Montgomery Centennial Memorial Professorship in Mathematics, Professor, Department of Mathematics, Department Chair, Department of Mathematics  
PhD, Princeton University, 1975

Lisa M. Bedore, Associate Professor, Department of Communication Sciences and Disorders  
PhD, Purdue University Main Campus, 1998

Jennifer S. Beer, Assistant Professor, Department of Psychology  
BA, University of California-Berkeley, 1996; PhD, University of California-Berkeley, 2002

Christopher G. Beever, Associate Professor, Department of Psychology  
BA, University of Texas at San Antonio, 1995; MS, University of Texas at San Antonio, 1999; PhD, University of Miami, 2002

Kirsten L. Belgum, Associate Professor, Department of Geomorphology  
MA, University of Wisconsin-Madison, 1983; PhD, University of Wisconsin-Madison, 1989

Mikhail A. Belkin, Assistant Professor, Department of Electrical & Computer Engineering  
BS, Moscow Institute of Physics and Technology, 1998; PhD, University of California-Berkeley, 2004

Christopher J. Bell, Professor, Department of Geological Sciences  
PhD, University of California-Berkeley, 1997

Adela Ben-Yakar, Associate Professor, Department of Mechanical Engineering  
BS, Technion-Israel Institute of Technology, 1992; MS, Technion-Israel Institute of Technology, 1995; PhD, Stanford University, 2001

David D. Ben-Zvi, Associate Professor, Department of Mathematics  
BA, Princeton University, 1954; AM, Harvard University, 1956; PhD, Harvard University, 1999

Michael L. Benedikt, Hal Box Endowed Chair in Urbanism, Professor, School of Architecture, MENvironD, Yale University, 1975

Miroslava M. Benes, Associate Professor, School of Architecture  
BA, Princeton University, 1974; MA, Yale University, 1976; MPhil, Yale University, 1977; PhD, Yale University, 1989

Roger D. Bengtson, Professor, Department of Physics  
PhD, University of Maryland College Park, 1968

Philip C. Bennett, Associate Dean, Jackson School of Geosciences, Professor, Department of Geological Sciences  
PhD, Syracuse University Main Campus, 1989

Jeffrey K. Benninghoff, Professor, Department of Aerospace Engineering and Engineering Mechanics, Applied Research Laboratories  
BS, Virginia Polytechnic Institute and State University, 1982; MS, Virginia Polytechnic Institute and State University, 1984; PhD, Virginia Polytechnic Institute and State University, 1986

Keisha L. Bentley, Assistant Professor, Department of Educational Psychology, Center for African and African American Studies, Department of African and African Diaspora Studies  
BS, Howard University, 1997; MA, Columbia University in the City of New York, 2000; PhD, University of Pennsylvania, 2009

Hall Berberoglu, Assistant Professor, Department of Mechanical Engineering  
BS, Purdue University Main Campus, 2000; MS, Purdue University Main Campus, 2003; PhD, University of California-Los Angeles, 2006

Susan N. Beretvas, Associate Professor, Department of Educational Psychology  
BS, Duke University, 1989; MED, University of Washington - Seattle, 1997; PhD, University of Washington, 2000

Charles E. Berg, Joe M. Osiey, Sr. Professorship in Transportation Engineering, Professor, Department of Civil, Architectural and Environmental Engineering  
PhD, Northwestern University, 1991

Randolph G. Bias, Associate Professor, School of Information  
BS, Florida State University, 1973; PhD, University of Texas at Austin, 1978

Klaus R. Bichteler, Professor, Department of Mathematics  
PhD, University of Hamburg, 1965

J. Eric Bickel, Assistant Professor, Department of Mechanical Engineering, Department of Petroleum and Geosystems Engineering  
BS, New Mexico State University Main Campus, 1992; MS, Stanford University, 1994; PhD, Stanford University, 1999

Steven R. Bielanski, Director, Academic Program, Nuclear Engineering Teaching Laboratory, Associate Professor, Department of Mechanical Engineering  
BS, University of Maryland College Park, 2009; MS, University of Florida, 1992; PhD, University of Illinois at Urbana-Champaign, 1996

Christopher W. Bielawski, Professor, Department of Chemistry and Biochemistry  
BS, University of Illinois at Urbana-Champaign, 1997; PhD, California Institute of Technology, 2003

Rebecca Bigler, Professor, Center for Women’s and Gender Studies, Department of Psychology  
BA, Oberlin College, 1986; MS, Penn State University Park, 1988; PhD, Penn State University Park, 1991
Svetlana Boyarchenko, Associate Professor, Department of Economics
MA, Rostov State University, 1978; MA, Central European University, 1997; PhD, University of Pennsylvania, 2001; PhD, Rostov State University, 1983

Oren Bracha, Howrey LLP and Arnold, White & Durkee Centennial Professorship in Law, Professor, School of Law
LLB, Tel Aviv University, 1998; SJD, Harvard University, 2005

Jerry L. Brand, Jack S. Josey Professorship in Energy Studies, Professor, Section of Molecular Cell and Developmental Biology
PhD, Purdue University Main Campus, 1971

Henry W. Brands, The Raymond Dickson, Alton C. Allen and Dillon Anderson Centennial Professorship, Professor, Department of History
AB, Stanford University, 1973; MA, Reed College, 1979; MS, Portland State University, 1981; PhD, University of Texas at Austin, 1985

Shawn B. Bratton, Associate Professor, College of Pharmacy
BS, University of Texas at Austin, 1991; BS, University of Texas Medical Branch, 1992; PhD, University of Texas at Austin, 1999

Troy D. Braunfult, Associate Professor, Department of Art and Art History
BFA, California Institute of the Arts, 1975

David Braybrooke, Professor Emeritus, Department of Government
Cornell University, 1953

Daniel O. Breecker, Assistant Professor, Department of Geological Sciences
BA, Amherst College, 2001; MS, University of New Mexico Main Campus, 2004; PhD, University of New Mexico Main Campus, 2008

John E. Breen, Professor, Department of Civil, Architectural and Environmental Engineering, Professor Emeritus, Department of Civil, Architectural and Environmental Engineering
PhD, University of Texas at Austin, 1962

Boris Breizman, Senior Research Scientist, Institute for Fusion Studies, Senior Lecturer, Department of Physics
PhD, Budker Institute of Nuclear Physics, 1971

Brian A. Bremen, Associate Professor, Department of English
BA, Princeton University, 1975; PhD, Princeton University, 1989

Joel P. Breton, Department Chair, Department of Asian Studies, Associate Professor, Department of Asian Studies, Department of Religious Studies
BA, Kenyon College, 1970; MPhil, Yale University, 1973; PhD, Yale University, 1975

Nathaniel O. Brickens, Professor, School of Music
BMus, Southern U A&M C Main Cam, 1974; MMus, University of Michigan-Ann Arbor, 1975; DMA, University of Texas at Austin, 1989

Margaret E. Briley, Professor, Department of Nutritional Sciences
MSHE, Texas Tech University, 1969; PhD, Texas Tech University, 1973

Daniel M. Brinks, Associate Professor, Department of Government
AB, Calvin College, 1984; JD, University of Michigan-Ann Arbor, 1987; PhD, University of Notre Dame, 2004

Danelle I. Briscoe, Assistant Professor, School of Architecture
BArch, University of Texas at Austin, 1995; MArch, Yale University, 2002

Philip M. Broadbent, Assistant Professor, Department of Germanic Studies
BA, Oxford Graduate School, 1999; MA, University College London, 2000; PhD, University College London, 2005

Patrick L. Brockett, Gus Wortham Memorial Chair in Risk Management and Insurance, Professor, Department of Risk Management and Insurance, Professor, Department of Risk Management and Insurance
PhD, University of California-Irvine, 1975

Jennifer S. Brodhet, William H. Wade Endowed Professorship in Chemistry, Professor, Department of Chemistry and Biochemistry
PhD, Purdue University Main Campus, 1988

Volker Bromm, Associate Professor, Department of Astronomy
BSc, Christian Albrecht University of Kiel, 1989; MSc, Heidelberg University, 1993; PhD, Yale University, 2000

Susan M. Broniarczyk, Sam Barshop Centennial Professorship in Marketing Administration, Professor, Department of Marketing Administration
PhD, University of Florida, 1992

Franklin H. Bronson, Professor, Section of Integrative Biology
BS, Kansas State University, 1956; MS, Kansas State University, 1957; PhD, Pennsylvania State University Main Campus, 1961

Robert Matthew Brothers, Assistant Professor, Department of Kinesiology and Health Education
PhD, University of North Texas, 2007

James B. Brow, Professor Emeritus, Department of Asian Studies, Department of Anthropology
BA, University of Oxford, 1960; MA, University of Oxford, 1964; PhD, University of Washington - Seattle, 1974

Benjamin C. Brower, Assistant Professor, Department of History, Center for Middle Eastern Studies
BA, University of Idaho, 1991; MA, University of Colorado at Boulder, 1994; PhD, Cornell University, 2005

Anthony L. Brown, Assistant Professor, Department of Curriculum and Instruction, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, California State University-Long Beach, 1993; MA, California State University-Long Beach, 1997; PhD, University of Wisconsin-Madison, 2006

Carolyn M. Brown, Professor, Center for African and African American Studies, College of Pharmacy
BS, Xavier University of Louisiana, 1989; PhD, University of Florida, 1994

Christopher P. Brown, Associate Professor, Department of Curriculum and Instruction
BA, The University of the South, 1993; MA, University of New Mexico Main Campus, 1997; PhD, University of Wisconsin-Madison, 2004

Jonathan C. Brown, Professor, Teresa Lozano Long Institute of Latin American Studies, Department of History
BA, University of Wisconsin Colleges, 1966; MA, University of Arizona, 1968; PhD, University of Texas at Austin, 1976

Keffrey Dun, Assistant Professor, Department of Curriculum and Instruction, Center for Women’s and Gender Studies, Center for African and African American Studies, Department of African and African Diaspora Studies
BS, University of Houston, 1993; MEd, Harvard University, 1999; PhD, University of Wisconsin-Madison, 2006

Keith C. Brown, Professor, Department of Finance
MS, Purdue University Main Campus, 1978; PhD, Purdue University Main Campus, 1981

R. Malcolm Brown Jr., Johnson & Johnson Centennial Chair in Plant Cell Biology, Professor, Molecular Genetics and Microbiology
BA, University of Texas at Austin, 1961; PhD, University of Texas at Austin, 1964

Sharon A. Brown, Dolores V. Sands Chair in Nursing Research, Associate Dean, School of Nursing, Professor, School of Nursing
PhD, University of Texas at Austin, 1987

James C. Browne, Professor, Department of Electrical & Computer Engineering, Department of Computer Science, Research Professor, Ices-Pi-Brown, Professor Emeritus, Department of Computer Science
PhD, University of Texas at Austin, 1960

Simone A. Browne, Assistant Professor, Department of Sociology, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, University of Toronto, 1997; BEd, York University, 1998; MA, University of Toronto, 2001; PhD, University of Toronto, 2007

Karen S. Browning, Associate Professor, Department of Chemistry and Biochemistry
PhD, University of Illinois at Urbana-Champaign, 1980

Larry D. Browning, Professor, Department Communication Studies
PhD, Ohio State U Main Campus, 1973

Jason M. Brownlee, Associate Professor, Center for Middle Eastern Studies, Department of Middle Eastern Studies, Department of Government
BA, Emory University, 1997; MA, Princeton University, 2000; PhD, Princeton University, 2004

504 Members of Graduate Studies Committees
Matthew I. Campbell, Associate Professor, Department of Mechanical Engineering  
BS, Carnegie Mellon University, 1995; MS, Carnegie Mellon University, 1997; PhD, Carnegie Mellon University, 2000

Alan Campion, Dow Chemical Company Endowed Professor of Chemistry and Biochemistry  
BS, Georgia Institute of Technology, 1999; PhD, University of North Carolina at Chapel Hill; MPP, Emory University, 2001

Jessica Duncan Cance, Assistant Professor, Department of Kinesiology and Health Education  
BS, Georgia Tech, 1999; PhD, University of California-Los Angeles, 1997

Alan Campion, Associate Professor, School of Music  
BS, Oberlin College, 1995; MPhil, Yale University, 1998; PhD, Yale University, 2005

Jorge Caneiras, Alice Jane Drysdale Sheffield Regents Professor in History, Professor, Department of History  
BA, Univ of Southwestern Louisiana, 1976; MA, University of Kansas Main Campus, 1981; PhD, University of Kansas Main Campus, 1986

Charlotte Canning, Professor, Department of Theatre and Dance, Center for Women and Gender Studies  
BA, Amherst College, 1986; PhD, University of Washington - Seattle, 1991

Sarah A. Canright, Senior Lecturer, Department of Art and Art History  
BFA, School of the Art Institute of Chicago, 1964

Norma V. Cantu, Ken McIntyre Professorship for Excellence in School Leadership, Professor, Department of Educational Administration, Department Chair, Department of Educational Administration  
BA, University of Texas - Austin, 1971; MA, Pennsylvania State University, 1973; PhD, University of Southern California, 1981

Constantine Caramanos, Assistant Professor, Department of Electrical & Computer Engineering  
AB, Harvard University, 1999; MS, Massachusetts Institute of Technology, 2001; PhD, Massachusetts Institute of Technology, 2006

Luis E. Caramo-Huechante, Assistant Professor, Department of Spanish and Portuguese  
BA, Universidad Austral de Chile, 1985; MA, University of Oregon, 1997; PhD, Cornell College, 2001

Meinhard B. Cardenas, Assistant Professor, Department of Geology  
BS, University of the Philippines, Diliman, 1999; MS, University of Nebraska - Lincoln, 2002; PhD, New Mexico Institute of Mining and Technology, 2006

V. R. Cardoza, Professor, Department of Educational Administration, Professor Emeritus, Department of Educational Administration  
BS, Louisiana State University and Agricultural and Mechanical College, 1947; MS, Louisiana State University and Agricultural and Mechanical College, 1950; PhD, Ohio State U Main Campus, 1952

Graham F. Carey, Richard B. Curran Centennial Chair in Engineering, Professor, Department of Aerospace Engineering and Engineering Mechanics  
MS, University of Washington - Seattle, 1970; PhD, University of Washington - Seattle, 1974

Caryn L. Carlson, Professor, Department of Psychology  
MS, University of Georgia, 1982; PhD, University of Georgia, 1984

Cindy I. Carlson, Margie Gurley Seay Centennial Professorship in Education, Professor, Department of Educational Psychology, Department Chair, Department of Educational Psychology BA, 1971; MS, Indiana University at Bloomington, 1972; PhD, Indiana University at Bloomington, 1982

William D. Carlson, Peter T. Flawn Centennial Chair in Geology, Professor, Department of Geological Sciences  
PhD, University of California-Los Angeles, 1978

Guadalupe D. Carmona-Dominguez, Assistant Professor, Department of Curriculum and Instruction  
BS, Instituto Tecnologico Autonomo de Mexico, 1995; MS, Research/Higher Ed Ct @ Ntl Polytechnic Institute, 2000; PhD, Purdue University Main Campus, 2004

Robert M. Carnochan, Director, Longhorn Band, Associate Professor, School of Music  
BA, Towson University, 1986; MM, University of Colorado at Boulder, 1993; DMA, University of Texas at Austin, 1999

Linda J. Carpenter, Associate Professor of Clinical Nursing, School of Nursing, Assistant Dean, School of Nursing  
PhD, University of Arizona, 1993

Ben Carrington, Associate Professor, Department of Sociology, Center for Women's and Gender Studies, Center for African and African American Studies, Department of African and African Diaspora Studies  
BS, Loughborough University, 1994; PhD, Leeds Metropolitan University, 2004

Lofus C. Carson II, Ronald D. Krist Professorship in Law, Professor, School of Law  
BS, Cornell University, 1968; M Pub Affrs, Princeton University, 1970; MBA, University of Pennsylvania, 1980; JD, Harvard University, 1973

Joseph C. Carter, Centennial Professorship in Classical Archaeology, Professor, Department of Classics  
MA, Princeton University, 1967; PhD, Princeton University, 1971

Mia E. Carter, Associate Professor, Department of English  
MA, University of Wisconsin-Milwaukee, 1987; PhD, University of Wisconsin-Milwaukee, 1992

Patricia A. Carter, Associate Professor, School of Nursing  
ASN, Cypress College, 1982; BSN, California State University-Fullerton, 1992; MSN, University of California-Los Angeles, 1994; PhD, University of California-Los Angeles, 1999

Evan B. Carton, Joan Negley Kelleher Centennial Professorship in Rhetoric and Composition, Professor, Department of English  
BA, Columbia University in the City of New York, 1974; MA, Johns Hopkins University, 1976; PhD, Johns Hopkins University, 1979

Carlos Marinho Carvalho, Assistant Professor, Department of Information, Risk, and Operations Management  
BS, Unidade Ibimec Rio de Janeiro, 1999; MS, Universidade Federal do Rio de Janeiro, 2002; PhD, Duke University, 2006

Larry D. Carver, Doyle Professorship in Western Civilization, Frank C. Erwin, Jr. Centennial Honors Professorship, Director, Academic Program, Liberal Arts Honors Program, Humanities Honors Program, Professor, Department of Rhetoric & Writing, Department of English  
PhD, University of Rochester, 1973

Oscar H. Casares, Associate Professor, Department of English  
BS, University of Texas at Austin, 1987; MFA, University of Iowa, 2001

Jason P. Casillas, Assistant Professor, Center for Mexican American Studies, Department of Government  
BA, Loyola University New Orleans, 1999; MA, Princeton University, 2003; PhD, Princeton University, 2008

Darla M. Castelli, Associate Professor, Department of Mathematics  
BA, Boston College, 1989; MS, Northern Illinois University, 1991; PhD, University of South Carolina - Columbia, 2002

Ginny A. Catania, Assistant Professor, Department of Geological Sciences, Institute for Geophysics  
BS, University of Western Ontario, 1994; MS, University of Minnesota-Crookston, 1998; PhD, University of Washington - Seattle, 2004

Elizabeth J. Callos, Associate Professor, Department of Geological Sciences  
BS, University of California-San Diego, 1994; PhD, University of California-Los Angeles, 2000

Kate Catterall, Associate Professor, Department of Art and Art History  
BA, Glasgow School of Art, 1989; MA, Glasgow School of Art, 1992

Robert L. Causey, Professor, Department of Philosophy, Professor Emeritus, Department of Philosophy  
PhD, University of California-Berkeley, 1967
Jean-Pierre B. Cauvin, Professor, Department of French and Italian
PhD, Princeton University, 1968

Shannon E. Cavanagh, Assistant Professor, Department of Sociology, Center for Women’s and Gender Studies
BA, University of Maryland College Park, 1992; MA, University of North Carolina at Chapel Hill, 2001; PhD, University of North Carolina at Chapel Hill, 2003

Claudio Cavasotto, Adjunct Associate Professor, Biomedical Engineering
BS, University of Buenos Aires, 1988; PhD, University of Buenos Aires, 2000

Stephanie W. Cawthon, Assistant Professor, Department of Educational Psychology
BA, Stanford University, 1994; MA, Stanford University, 1995; PhD, University of Wisconsin-Madison, 2000

Laurence H. Chalip, Professor, Department of Kinesiology and Health Education
AB, University of California-Berkeley, 1972; MS, University of Waikato, 1979; AM, University of Chicago, 1983; PhD, University of Chicago, 1988

Edward Chambers, Assistant Professor, Department of Art and Art History
PhD, University of London, 1998

Craig A. Champlin, Lillie Hage Jamal Centennial Professorship, Professor, Department of Communication Sciences and Disorders, Department Chair, Department of Communication Sciences and Disorders
MA, University of Kansas Main Campus, 1982; PhD, University of Kansas Main Campus, 1987

Clarence Shiu Man Chan, Associate Professor, Molecular Genetics and Microbiology, Section of Molecular Cell and Developmental Biology
BA, Vassar College, 1977; PhD, Cornell University, 1985

B. G. Chandler, Florence Thelma Hall Centennial Chair in Music, Professor, School of Music, Department Chair, School of Music
BA, Samford University, 1962; MM, The Southern Baptist Theological Seminary, 1966; PhD, Indiana University at Bloomington, 1979, 1988

Bharath Chandrasekaran, Assistant Professor, Department of Communication Sciences and Disorders
BS, Sri Ramachandra University, 2002; MS, Purdue University Main Campus, 2004; PhD, Purdue University Main Campus, 2008

Sung-Sheng Yvonne Chang, Professor, Department of Asian Studies
PhD, Stanford University, 1985

Terrence L. Chapman, Assistant Professor, Department of Government
BA, Illinois Wesleyan University, 2001; PhD, Emory University, 2007

Randall J. Charbeneau, Jewel McAlister Smith Professorship in Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, Stanford University, 1978

Michael Ray Charles, Professor, Department of Art and Art History, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, McNeese State University, 1989; MFA, University of Houston, 1993

Michael J. Charlesworth, Professor, Department of Art and Art History
PhD, The University of Kent, 1990

David H. Charney, Professor, Department of English, Department of Rhetoric & Writing
PhD, Carnegie Mellon University, 1985

Mounira M. Charrad, Associate Professor, Center for Women’s and Gender Studies, Center for Middle Eastern Studies, Department of Middle Eastern Studies, Department of Sociology
BA, University of Paris IV, Sorbonne, 1964; MA, Ecole Pratique des Hautes Etudes, 1965; PhD, Harvard University, 1980

Rurumisa Charumbira, Assistant Professor, Department of History
BA, Saint Mary’s University, 1998; MA, University of Toronto, 2001; PhD, Yale University, 2006

Craig M. Chase, Associate Professor, Department of Electrical & Computer Engineering, Applied Research Laboratories
BS, Cornell University, 1986; PhD, Cornell University, 1993

Ipsita Chatterjee, Assistant Professor, Department of Geography and the Environment
BS, University of Calcutta, 1958; MA, Jawaharlal Nehru University, 2000; MS, Jawaharlal Nehru University, 2002; PhD, Clark University, 2007

James R. Cheikhroukos, W. A. “Tex” Moncrief, Jr. Chair in Computational Materials, Professor, Department of Physics, Department of Chemistry and Biochemistry, Institute for Computational Engineering and Science, Department of Chemical Engineering
BS, Kansas State University, 1970; PhD, University of California-Berkeley, 1975

Dongmei Chen, Assistant Professor, Department of Mechanical Engineering
BE, Tsinghua University, 1990; MS, Eastern Michigan University, 1995; MS, University of Michigan-Ann Arbor, 2001; PhD, University of Michigan-Ann Arbor, 2006

Jonathan Yan Chen, Professor, Department of Textiles and Apparel, School of Human Ecology
BS, Southern Yangtze University, 1982; PhD, University of Leeds, 1995

Ray T. Chen, Cullen Trust for Higher Education Endowed Professorship in Engineering #3, Professor, Department of Electrical & Computer Engineering
PhD, University of California-Irvine, 1991

Shaochen Chen, Adjunct Professor, Department of Mechanical Engineering
BE, Tsinghua University, 1989; MS, The University of Akron, Main Campus, 1995; PhD, University of California-Berkeley, 1999

Shuping Chen, Associate Professor, Department of Accounting
BA, Sichuan International University, 1987; MA, Zhongshan University (ZHUI), 1990; PhD, University of Southern California, 2003

Thomas Chen, Assistant Professor, Department of Mathematics
MS, Swiss Federal Institute of Technology, 1992; MS, Swiss Federal Institute of Technology, 1996; PhD, Swiss Federal Institute of Technology, 1999; PhD, Swiss Federal Institute of Technology, 2001

Wenhong Chen, Assistant Professor, Department of Radio Television Film
BA, University of International Business and Economics, 1995; MA, University of Toronto, 2001; PhD, University of Toronto, 2007

Zengjian Chen, D. J. Sibley Centennial Professorship in Plant Molecular Genetics, Professor, Section of Molecular Cell and Developmental Biology
BS, Zhejiang University, 1984; MS, Nanjing Agricultural University, 1987; PhD, Texas A & M University, 1993

Elliott W. Cheney, Professor, Department of Mathematics, Professor Emeritus, Department of Mathematics
PhD, University of Kansas Main Campus, 1957

George Edward Cheney, John T. Jones, Jr. Centennial Professorship in Communication, Professor, Department Communication Studies, Adjunct Professor, Department Communication Studies
BA, Youngstown State University, 1980; MA, Purdue University Main Campus, 1982; PhD, Purdue University Main Campus, 1985

Julian Cheng, Cockrell Family Regents Chair in Engineering #3, Professor, Department of Electrical & Computer Engineering
BS, Massachusetts Institute of Technology, 1967; MS, Massachusetts Institute of Technology, 1968; MA, Harvard University, 1969; PhD, Harvard University, 1973

Richard A. Cherwitz, Professor, Department Communication Studies, Department of Rhetoric & Writing
BA, University of Iowa, 1974; MA, University of Iowa, 1975; PhD, University of Iowa, 1978

Lee R. Chesney III, Associate Professor, Department of Art and Art History
MFA, Indiana University at Bloomington, 1972

Robert M. Chesney, Charles I. Francis Professorship in Law, Professor, School of Law
BS, Texas Christian University, 1994; JD, Harvard University, 1997

Richard C. Chibiris, Assistant Professor, Department of Economics
MS, Harvard University, 2002; BA, Harvard University, 2002; MA, Princeton University, 2006; PhD, Princeton University, 2009
Derek Chiu, Assistant Professor, Department of Electrical & Computer Engineering  
BA, Massachusetts Institute of Technology, 1989; MS, Massachusetts Institute of Technology, 1992; PhD, Massachusetts Institute of Technology, 1999

Charles B. Chiu, Professor, Department of Physics  
PhD, University of California-Berkeley, 1966

Namkee Choi, Professor, School of Social Work  
BA, Ewha Women's University, 1976; MA, Ewha Women's University, 1980; MSW, University of Minnesota-Twin Cities, 1983; PhD, University of California-Berkeley, 1987

Se Jung M. Choi, Associate Professor, Department of Advertising  
BA, Ewha Women's University, 1994; MA, Michigan State University, East Lansing, 1998; PhD, Michigan State University, East Lansing, 2002

Pamela D. Christian, Associate Professor, Department of Theatre and Dance  
BA, Princeton University, 1982; MFA, University of Texas at Austin, 1995; PhD, Southern Illinois University, 2000

Michael J. Churgin, Raymond Thompson Centennial Professorship in Law, Professor, School of Law  
AB, Brown University, 1970; JD, Yale University, 1973

Hsiang I. Chyi, Assistant Professor, School of Journalism  
BA, National Taiwan University, 1994; MA, Stanford University, 1995; PhD, University of Texas at Austin, 1999

Vincent Joseph Cicchirillo, Assistant Professor, Department of Advertising  
BA, West Virginia University, 2003; MA, West Virginia University, 2004; PhD, The Ohio State University Main Campus, 2009

Henry P. Colino, Assistant Professor, School of Human Ecology and Department of Nutritional Sciences  
BA, New Orleans, 1976; PhD, Louisiana State (Medical Center [New Orleans]), 1990

Mirela Ciperiani, Assistant Professor, Department of Mathematics  
BA, Smith College, 2000; MA, Princeton University, 2002; PhD, Princeton University, 2006

Angela P. Clark, Associate Professor, School of Nursing  
PhD, Texas Woman's University, 1983

John R. Clarke, Annie Laurie Howard Regents Professorship in Fine Arts, Professor, Department of Art and Art History, College of Fine Arts  
PhD, Yale University, 1973

Julia A. Clarke, Associate Professor, Department of Geological Sciences  
BA, Brown University, 1995; MPhil, Yale University, 1998; PhD, Yale University, 2002

Sally H. Clarke, Professor, Department of History  
PhD, Brown University, 1987

Richard L. Cleary, Professor, School of Architecture  
PhD, Columbia University in the City of New York, 1986

Harry M. Cleaver Jr., Associate Professor, Department of Economics  
PhD, Stanford University, 1975

Noel T. Clemens, Bob R. Dorsay Professorship in Engineering, Professor, Department of Aerospace Engineering and Engineering Mechanics  
MS, Stanford University, 1986; PhD, Stanford University, 1991

Michael B. Clement, Associate Professor, Department of Accounting  
PhD, Stanford University, 1997

Alan K. Cline, David Bruton Jr. Centennial Professorship in Computer Sciences #2, Professor, Department of Computer Science, Department of Mathematics  
BS, University of Michigan-Ann Arbor, 1967; MA, University of Michigan-Ann Arbor, 1968; PhD, University of Michigan-Ann Arbor, 1970

Evelyn M. Clingerman, Assistant Professor, School of Nursing, Center for Women's and Gender Studies  
BSN, Old Dominion University, 1986; MSN, Old Dominion University, 1989; PhD, The Catholic University of America, 2001

Mark P. Cloos, Getty Oil Company Centennial Chair in Geological Sciences, Professor, Department of Geological Sciences  
PhD, University of California-Los Angeles, 1981

Dana L. Cloud, Associate Professor, Communication Studies, Department of Rhetoric & Writing  
MA, University of Iowa, 1991; PhD, University of Iowa, 1993

Judith G. Coffin, Associate Professor, Department of History, Center for Women's and Gender Studies  
BA, Trinity College, 1976; PhD, Yale University, 1985

Jane M. Cohen, Edward Clark Centennial Professorship in Law, Professor, School of Law  
BA, Wellesley College, 1967; JD, Yale University, 1971

Matthew Cohen, Associate Professor, Department of English  
BA, Oberlin College, 1992; MA, College of William and Mary, 1995; PhD, College of William and Mary, 2002

Jonathan B. Cohn, Assistant Professor, Department of Finance  
BS, University of Alabama at Birmingham, 1997; MBA, Washington University in St Louis, 2002; PhD, University of Michigan-Ann Arbor, 2008

William R. Coker, Professor, Department of Physics  
PhD, University of Georgia, 1966

Kevin O. Cokley, Associate Professor, Department of Educational Psychology, Department of African and African Diaspora Studies  
BA, Wake Forest University, 1991; MEd, North Carolina Agricultural and Technical State University, 1993; PhD, Georgia State University, 1998

Renita B. Coleman, Associate Professor, School of Journalism  
BS, University of Florida, 1979; MA, University of Missouri - Columbia, 1997; PhD, University of Missouri - Columbia, 2001

Thelma R. Coles, Professor, Department of Art and Art History  
BA, San Diego State University, 1975; MA, San Diego State University, 1978

Laura Lee Colgin, Assistant Professor, Section of Neurobiology  
BS, University of New Orleans, 1994; PhD, University of California-Irvine, 2003

Alan B. Combs, Professor, College of Pharmacy  
PhD, University of California-Davis, 1970

Lydia M. Contreras-Martin, Assistant Professor, Department of Chemical Engineering  
BS, Princeton University, 2003; PhD, Cornell University, 2008

Jodie L. Connors, Adjunct Assistant Professor, Biomedical Engineering  
BS, Trinity University, 1995; PhD, University of Utah, 2002

Kerry H. Cook, Professor, Department of Geologic Sciences  
BS, Villanova University, 1975; MS, Rice University, 1977; PhD, North Carolina State University, 1984

William R. Cook, Associate Professor, Department of Computer Science  
BSc, Tulane University, 1984; MSc, Brown University, 1986; PhD, Brown University, 1989

Andrew M. Cooper, Associate Professor, Department of English  
PhD, Columbia University in the City of New York, 1982

Russell W. Cooper, Fred Hofheinz Regents Professorship in Economics, Professor, Department of Economics  
BA, Clark University, 1977; MA, University of Pennsylvania, 1979; PhD, University of Pennsylvania, 1982

Philip D. Corbae, Rex A. and Dorothy B. Sebastian Centennial Professorship in Business Administration, Professor, Red McCombs School of Business, Department of Finance, Department of Economics  
BA, Colgate University, 1982; PhD, Yale University, 1996

Cary Cordova, Assistant Professor, Department of American Studies  
MA, University of Texas at Austin, 1999; PhD, University of Texas at Austin, 2005

Lawrence K. Cormack, Associate Professor, Department of Psychology  
PhD, University of California-Berkeley, 1992

Carlos Corona, Assistant Professor, Department of Accounting  
BSIndE, University Ramon Llull, 1989; MBA, Universidad de Navarra, 1995; PhD, Stanford University, 2006
Richard L. Corsi, E. C. H. Bantel Professorship for Professional Practice, Professor, Department of Chemical Engineering
MS, University of California-Davis, 1985; PhD, University of California-Davis, 1989
Eugenia Costa-Giomi, Professor, School of Music BA, Natl Cons'Tory Of Buenos Aires, 1980; MA, Natl Cons'Tory Of Buenos Aires, 1984; PhD, Ohio State U Main Campus, 1991
Alan H. Cowley, The Robert A. Welch Chair in Chemistry, Professor, Department of Chemistry and Biochemistry
PhD, University of Manchester, 1958
Eli P. Cox, Jr, LA Quinta Motor Inn, Inc. Centennial Professorship in Business, Professor, Department of Marketing Administration
DBA, Indiana University at Bloomington, 1973
James H. Cox, Associate Professor, Department of English, Center for Mexican American Studies
BA, Denison University, 1991; MA, University of New Mexico Main Campus, 1994; PhD, University of Nebraska - Lincoln, 1999
Edward F. Coyle, Professor, Department of Kinesiology and Health Education
PhD, University of Arizona, 1979
Richard H. Crawford, Professor, Department of Mechanical Engineering
MS, Purdue University Main Campus, 1985; PhD, Purdue University Main Campus, 1989
Darrell G. Creel, Associate Professor, Department of Anthropology
BA, University of Texas at Austin, 1979; MA, University of Texas at Austin, 1977; PhD, University of Arizona, 1986
David F. Crew, Professor, Department of History
MA, Cornell University, 1970; PhD, Cornell University, 1975
David P. Crews, Professor, Section of Integrative Biology, Department of Psychology, College of Pharmacy
PhD, Rutgers the State University of New Jersey Newark Campus, 1973
Kelley A. Crews, Associate Professor, Department of Geography and the Environment
BS, University of South Carolina - Columbia, 1992; MA, University of South Carolina - Columbia, 1995; MA, University of North Carolina at Chapel Hill, 1996; PhD, University of North Carolina at Chapel Hill, 2000
M. Lynn Crismon, James T. Doluisio Regents Chair in Pharmacy, The Hoechst-Roussel Centennial Endowed Professorship in Pharmacy, Dean, Phr-Deans Office, Professor, College of Pharmacy
PharmD, University of Texas at Austin, 1979
Richard M. Crooks, The Robert A. Welch Chair in Chemistry (Materials Chemistry), Professor, Department of Chemistry and Biochemistry
BS, University of Illinois at Urbana-Champaign, 1981; PhD, University of Texas at Austin, 1987
Robert Crossnoe, Elsie and Stanley E. (Skinny) Adams, Sr Centennial Professorship in Liberal Arts, Professor, Department of Sociology, Department of Psychology
BA, University of Texas at Austin, 1994; MA, Stanford University, 1995; PhD, Stanford University, 1999
Frank B. Cross, Herbert D. Kelleher Centennial Professorship in Business Law, Professor, Business, Government and Society, School of Law
BA, University of Kansas Main Campus, 1977; JD, Harvard University, 1980
Craig Richard Crossland, Assistant Professor, Department of Management
BA, University of Queensland, 1995; MBA, University College Dublin, 2001; PhD, Penn State University Park, 2008
Megan J. Crowhurst, Associate Professor, Department of Linguistics
MA, University of Arizona, 1989; PhD, University of Arizona, 1991
Maria A. Croyle, Associate Professor, College of Pharmacy
BS, University of Pittsburgh, Pittsburgh Campus, 1987; MS, University of Michigan-Ann Arbor, 1994; PhD, University of Michigan-Ann Arbor, 1997
Catherine Cubbin, Associate Professor, School of Social Work
BA, University of Pennsylvania, 1991; PhD, Johns Hopkins University, 1998
Zhengrong Cui, Associate Professor, College of Pharmacy
BS, Beijing University, 1995; MS, University of Wisconsin Colleges, 1999; PhD, University of Kentucky, 2002
Elizabeth Culliford, Jane and Roland Blumberg Centennial Professorship in English, Department Chair, Department of English, Professor, Department of English, Center for Women’s and Gender Studies
Molly E. Cummings, Associate Professor, Section of Integrative Biology
BA, Stanford University, 1990; Post-grad diploma, James Cook University, 1993; PhD, University of California-Santa Barbara, 2001
Isabella C. Cunningham, Ernest A. Sharpe Centennial Professorship in Communication, Professor, Department of Advertising, IC2 Institute, Department Chair, Department of Advertising, MBA
University of Texas at Austin, 1969; PhD, Michigan State University, East Lansing, 1972
William H. Cunningham, James L. Bayless Chair for Free Enterprise, Professor, Department of Marketing Administration, IC2 Institute
BA, Michigan State University, East Lansing, 1966; MBA, Michigan State University, East Lansing, 1967; PhD, Michigan State University, East Lansing, 1971
Ann Cvetkovich, Ellen Clayton Garwood Centennial Professorship in Creative Writing #2, Professor, Department of English, Center for Women’s and Gender Studies
BA, Reed College, 1980; MA, Cornell University, 1983; PhD, Cornell University, 1988
Alexandre K. Da Silva, Assistant Professor, Department of Mechanical Engineering
BS, Universidade Federal de Santa Catarina, 1998; MS, Universidade Federal de Santa Catarina, 2000; PhD, Duke University, 2005
Douglas C. Dacy, Professor, Department of Economics
PhD, Harvard University, 1963
Tracy S. Dahlby, Frank A. Bennack, Jr. Chair in Journalism, Professor, School of Journalism
BA, University of Washington - Seattle, 1972; AM, Harvard University, 1976
Michael D. Dahlen, Professor, Department of Computer Science
MS, University of California-Berkeley, 1993; PhD, University of California-Berkeley, 1995
Rene M. Dailey, Assistant Professor, Department Communication Studies
BA, Grinnell College, 1996; MA, University of Wyoming, 1998; PhD, University of California-Santa Barbara, 2005
Kevin N. Dalby, Associate Professor, College of Pharmacy
PhD, University of Cambridge, 1997
John A. Daly, Texas Commerce Bancshares, Inc. Centennial Professorship in Business Communication, Frank A. Liddell, Sr. Centennial Professorship in Communication, Professor, Department of Management, Department Communication Studies, IC2 Institute
BA, University of Maryland College Park, 1973; MA, West Virginia University, 1974; PhD, Purdue University Main Campus, 1977
Ian W. Dalziel, Professor, Department of Geophysical Sciences, Research Professor, Institute for Geophysics
PhD, University of Edinburgh, 1963
Paul Damien, B. M. (Mack) Rankin, Jr. Professorship in Business Administration, Professor, Department of Information, Risk, and Operations Management, Department of Finance
BA, Osmania University, India, 1981; MS, Oklahoma State University Main Campus, 1984; PhD, University of London, 1994
Jens C. Dammann, William Siemon Parish Professorship in Law, Professor, School of Law
JD, Johann Wolfgang Goethe University, 1997; LLM, Yale University, 2001; DrJur, Johann Wolfgang Goethe University, 2004; JD, Yale University, 2003
Jonathan Dancy, Professor, Department of Philosophy

Ulrich C. Dangel, Assistant Professor, School of Architecture
Diplominginieur, University of Stuttgart, 2000; MArch, University of Oregon, 1999

Elizabeth A. Danze, Associate Professor, School of Architecture
BArch, University of Texas at Austin, 1981; MArch, Yale University, 1990

Dennis C. Darling, Professor, School of Journalism
MFA, School of the Art Institute of Chicago, 1973

Penelope J. Davies, Associate Professor, Department of Art and Art History
PhD, Yale University, 1994

Barbara L. Davis, Houston Harte Centennial Professor in Communication, Professor, Department of Communication Sciences and Disorders
BSSpe, University of Texas at Austin, 1968; MA, University of Texas at Austin, 1970; PhD, University of Texas at Austin, 1986

D. D. Davis, Associate Professor, Department of Rhetoric & Writing, Department Communication Studies, Department of English
BA, Midwestern State University, 1986; MA, Indiana University-Purdue University Fort Wayne, 1989; PhD, University of Texas at Arlington, 1995

Janet M. Davis, Associate Professor, Center for Women’s and Gender Studies, Department of History, Department of American Studies
BA, Carleton College, 1986; MA, University of Wisconsin-Madison, 1992; PhD, University of Wisconsin-Madison, 1998

John H. Davis, Associate Professor, Department of Electrical & Computer Engineering
BS, University of Texas at Austin, 1967; MS, University of Texas at Austin, 1968; PhD, University of Texas at Austin, 1970

Katherine M. Davis, Associate Professor, Department of Mathematics
PhD, Cornell University, 1974

King E. Davis, The Robert Lee Sutherland Chair in Mental Health and Social Policy, Professor, School of Social Work, Center for African and African American Studies
BSW, California State University-Fresno, 1964; MSW, California State University-Fresno, 1966; PhD, Brandeis University, 1972

Patrick J. Davis, Ecker Centennial Professorship in Pharmacy, Associate Dean, Pharm-Dean’s Office, Professor, College of Pharmacy
MS, University of Iowa, 1973; PhD, University of Iowa, 1976

Clinton N. Dawson, The Joe King Professorship, Professor, Department of Aerospace Engineering and Engineering Mechanics
PhD, Rice University, 1988

Donna De Cesare, Associate Professor, School of Journalism
BA, State University of New York at Buffalo, 1976; MPhil, University of Essex, 1979

Rafael De La Llave, Professor, Department of Mathematics
PhD, Princeton University, 1983

Noah De Lissovoy, Assistant Professor, Department of Curriculum and Instruction
BA, Harvard University, 1991; PhD, University of California-Los Angeles, 2005

Alejandro L. De Lozanne, Professor, Department of Physics
PhD, Stanford University, 1982

Arturo De Lozanne, Associate Professor, Section of Molecular Cell and Developmental Biology
PhD, University of Texas Southwestern Medical Center at Dallas, 1988; PhD, Stanford University, 1988

Mercedes L. De Uriarte, Associate Professor, School of Journalism, Teresa Lozano Long Institute of Latin American Studies, Center for Women’s and Gender Studies
BA, California State University-Fullerton, 1972; BA, California State University-Fullerton, 1972; MA, Yale University, 1974; PhD, Yale University, 1996

Gustavo A. De Veciana, Professor, Department of Electrical & Computer Engineering
PhD, University of California-Berkeley, 1993

Lesley A. Dean-Jones, Associate Professor, Department of Classics
MA, Stanford University, 1985; PhD, Stanford University, 1987

Susan Deans-Smith, Associate Professor, Department of History
BA, University of Warwick, 1978; MPhil, University of Cambridge, 1979; PhD, University of Cambridge, 1984

Linda A. Degraffenried, Associate Professor, Department of Nutritional Sciences
BA, Colgate University, 1985; PhD, University of Texas Health Science Center at San Antonio, 2001

John Deigh, Professor, Department of Philosophy, School of Law
BA, University of California-Los Angeles, 1971; MA, University of California-Los Angeles, 1973; PhD, University of California-Los Angeles, 1979

Mark Deinert, Assistant Professor, Department of Mechanical Engineering
ME, Cornell University, 1997; BS, Cornell University, 2001; PhD, Cornell University, 2003

James W. Deitrick, Professor, Department of Accounting
DBA, University of Tennessee, 1977

Jade S. Dekinder, Assistant Professor, Department of Marketing Administration
BA, Emory University, 2002; PhD, Emory University, 2007

Cesar Delgado, Assistant Professor, Department of Curriculum and Instruction
BS, University of California-Los Angeles, 1984; Diploma (Foreign), Universidad Iberoamericana, 2001; MA, The University of Alabama, 2003; MA, University of Michigan-Ann Arbor, 2008; MS, University of Michigan-Ann Arbor, 2008; PhD, University of Michigan-Ann Arbor, 2009

Andrew F. Dell’Antonio, William David Blank Memorial Professorship, Professor, School of Music
PhD, University of California-Berkeley, 1991

Mojdeh Delshad, Research Associate Professor, Department of Petroleum and Geosystems Engineering
BS, Sharif University of Technology, 1981; MS, University of Texas at Austin, 1981; PhD, University of Texas at Austin, 1986

Carol L. Delville, Assistant Professor, School of Nursing
ADN, Albany Medical Center School of Nursing, 1980; BSN, University of Texas at Austin, 2001; MSN, University of Texas at Austin, 2003; PhD, University of Texas at Austin, 2008

Yvon Delville, Professor, Department of Psychology
PhD, University of Massachusetts, 1992

Alexander A. Demkov, Associate Professor, Department of Physics
Diploma, Moscow Institute of Steel and Alloys, Moscow, USSR, 1986; PhD, Arizona State University Main, 1995

Leszek F. Demkowski, J. H. Herring Centennial Professorship in Engineering, Professor, Department of Aerospace Engineering and Engineering Mechanics
MS, Cracow Univ of Technology, 1976; MS, Jagiellonian University of Cracow, 1978; PhD, Cracow Univ of Technology, 1982

Douglas J. Dempster, Effie Marie Cain Regents Chair in Fine Arts, The Marie and Joseph D. Jamiel, Sr. Regents Professorship in Fine Arts, Dean, College of Fine Arts, Professor, Department of Theatre and Dance
BA, St Lawrence University, 1977; MA, University of North Carolina at Chapel Hill, 1980; PhD, University of North Carolina at Chapel Hill, 1983

James R. Denbow, Associate Professor, Department of Anthropology
MA, Indiana University at Bloomington, 1976; PhD, Indiana University at Bloomington, 1983

Robert A. Desimone, Sarah and Ernest Butler Professorship in Opera, Professor, School of Music
DMA, University of Washington - Seattle, 1981

Joshua Devor, Associate Professor, Department of Philosophy
PhD, University of California-Berkeley, 1998

Inderjit S. Dhillion, Professor, Department of Computer Science
PhD, University of California-Berkeley, 1997

Yoav Di-Capua, Assistant Professor, Center for Middle Eastern Studies, Department of Middle Eastern Studies, Department of History
BA, Hebrew University, 1996; Masters, Tel Aviv University, 1999; PhD, Princeton University, 2004

Rasha Diab, Assistant Professor, Department of Rhetoric & Writing, Department of Middle Eastern Studies, Department of English
BA, Ain Shams University, 1994; MA, Ain Shams University, 2002; PhD, University of Wisconsin-Madison, 2009
Michael W. Downer, Professor, Department of Physics
PhD, Harvard University, 1983

Michael Drew, Assistant Professor, Section of Neurobiology
BA, University of Richmond, 1996; MS, Villanova University, 1999; PhD, Columbia University in the City of New York, 2004

Alejandro Herman Drexlter, Assistant Professor, Department of Finance
BA, Universidad de Chile, 1999; MA, University of California, 2001; PhD, Massachusetts Institute of Technology, 2009

Mircea D. Driga, Professor, Department of Electrical & Computer Engineering
PhD, University of Kentucky, 1990

Justin Driver, Assistant Professor, School of Law
BA, Brown University, 1997; MA, Duke University, 1998; MA, University of Oxford, 2000; JD, Harvard University, 2004

Eric A. Drott, Assistant Professor, School of Music
BA, University of Pennsylvania, 1995; PhD, Yale University, 2001

David J. Drum, Professor, Department of Educational Psychology
MA, American University, 1966; PhD, American University, 1969

Minette E. Drumwright, Associate Professor, Department of Advertising
PhD, University of North Carolina at Chapel Hill, 1986

Jun A. Duan, Assistant Professor, Department of Marketing Administration
BS, Nanjing University, 1999; MA, Duke University, 2005; PhD, Duke University, 2006

Jaquelin P. Dudley, Professor, Molecular Genetics and Microbiology
PhD, Baylor College of Medicine, 1978

Robert A. Duke, Markle and Morton Meyerson Centennial Professorship in Music, Professor, School of Music
PhD, Florida State University, 1983

Janet M. Dukerich, Harkins & Company Centennial Chair, Professor, Department of Management
PhD, University of Minnesota-Twin Cities, 1981

Robert A. Dull, Assistant Professor, Department of Geography and the Environment
BA, University of California-Santa Barbara, 1992; MA, San Francisco State University, 1995; PhD, University of California-Berkeley, 2001

Raynor L. Duncombe, Professor, Department of Aerospace Engineering and Engineering Mechanics, Professor Emeritus, Department of Aerospace Engineering and Engineering Mechanics
BA, Wesleyan University, 1940; MA, Iowa State University, 1941; PhD, Yale University, 1956

Andrew K. Dunn, Assistant Professor, Biomedical Engineering
BS, Bates College, 1992; MS, Northeastern University, 1994; PhD, University of Texas at Austin, 1997

Kenneth H. Dunton, Professor, Department of Marine Science
PhD, University of Alaska Fairbanks, 1985

Richard Dusansky, Richard J. Gonzalez Regents Chair in Economic Progress Based on Freedom and Private Enterprise, Professor, Department of Economics
PhD, Brown University, 1969

Christine L. Duvauchelle, Associate Professor, Department of Psychology, College of Pharmacy
PhD, University of California-Santa Barbara, 1991

James S. Dyer, The Fondren Foundation Centennial Chair in Business, Professor, Department of Information, Risk, and Operations Management, Department of Management
BA, University of Texas at Austin, 1965; PhD, University of Texas at Austin, 1969

John S. Dziemkowski, Dean John F. Sutton, Jr. Chair in Lawyering and the Legal Process, Professor, School of Law
BBA, University of Miami, 1980; JD, University of Texas at Austin, 1983

Charles F. Earhart, Professor, Molecular Genetics and Microbiology, Professor Emeritus, Molecular Genetics and Microbiology
PhD, Purdue University Main Campus, 1967

Matthew Eastin, Associate Professor, Department of Advertising
BA, University of Nebraska - Lincoln, 1994; MA, University of Nebraska - Lincoln, 1997; PhD, Michigan State University, East Lansing, 2001

Carolyn Eastman, Assistant Professor, Department of History, Center for Women's and Gender Studies
BA, University of California-Santa Cruz, 1988; MA, University of New Hampshire, 1998; PhD, Johns Hopkins University, 2001

David J. Eaton, Bess Harris Jones Centennial Professor in Natural Resource Policy Studies, Professor, Center for Middle Eastern Studies, Department of Middle Eastern Studies, IC2 Institute, Lyndon B Johnson School of Public Affairs, Research Affiliate - Research Fellow, Department of Geography and the Environment
BA, Oberlin College, 1971; MSc, University of Pittsburgh, Pittsburgh Campus, 1972; MA, University of Pittsburgh, Pittsburgh Campus, 1972; PhD, Johns Hopkins University, 1977

Jennifer V. Ebbele, Associate Professor, Department of Classics
BA, Brigham Young University, 1994; MA, University of Pennsylvania, 1996; MA, University of Pennsylvania, 1999; PhD, University of Pennsylvania, 2001

John K. Eberhart, Assistant Professor, Section of Molecular Cell and Developmental Biology
BA, Bethel College, 1993; MS, Wichita State University, 1997; PhD, University of Missouri - Columbia, 2002

Catherine H. Echols, Associate Professor, Department of Psychology
MA, University of Illinois at Urbana-Champaign, 1984; PhD, University of Illinois at Urbana-Champaign, 1987

Thomas F. Edgar, George T. and Gladys H. Abell endowed Chair of Engineering, Professor, Department of Chemical Engineering
MA, Princeton University, 1968; PhD, Princeton University, 1971

Mary E. Edgerton, Associate Professor, University of Texas M.D. Anderson Cancer Center
BSPhy, Texas (Austin), 1976; PhD, East Anglia, 1979; MD, Medical College of Pennsylvania, 1994

David V. Edwards, Professor, Department of Government
PhD, Harvard University, 1996

Lauren Ilyse Richie Ehrlich, Assistant Professor, Molecular Genetics and Microbiology
BS, Yale University, 1997; PhD, Stanford University, 2002

Peter Eichhubl, Research Scientist, Beg-PI-Kipper Center
PhD, University of Vienna, 1989; PhD, University of California-Santa Barbara, 1997

John G. Ekrdt, Dick Rutwell endowed Chair in Chemical Engineering, Associate Dean, Cockrell School of Engineering, Professor, Department of Chemical Engineering, Department of Petroleum and Geosystems Engineering
PhD, University of California-Berkeley, 1979

Shelton Ekland-olson, Amy Johnson Mclaughlin administrative Chair in Human Ecology, Rapport Centennial Professorship of Liberal Arts, Professor, Department of Sociology, Lyndon B Johnson School of Public Affairs, Director, Academic Program, Division of Statistics and Scientific Computation, School of Human Ecology, Department of Textiles and Apparel, School of Human Ecology
MA, University of Washington - Seattle, 1968; PhD, University of Washington - Seattle, 1971

Chadi Said El Mohtar, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
BCE, Beirut Arab University, 2001; MCE, Michigan State University, East Lansing, 2003; PhD, Purdue University Main Campus, 2008
Tarek Adnan El-Ariss, Assistant Professor, Center for Middle Eastern Studies, Department of Middle Eastern Studies  
BA, American University of Beirut, 1991;  
MA, University of Rochester, 1997; PhD, Cornell University, 2004

Ron Elber, W. A. “Tex” Moncrief, Jr. Chair in Com-  
putational Life Sciences and Biology, Professor,  
Institute for Computational Engineering and Science, Department of Chemistry and Biochemistry  
BS, Hebrew University, 1981; PhD, Hebrew University, 1985

Zachary S. Elkins, Assistant Professor, Department of  
Government  
BA, Yale University, 1992; MA, University of Texas at Austin, 1996; PhD, University of California-Berkeley, 2003

Andrew Ellington, Wilson M. and Kathryn Fraser Research Professorship in Biochemistry, Professor,  
Department of Chemistry and Biochemistry, Applied Research Laboratories, Research Professor, Department of Chemistry and Biochemistry  
BS, Michigan State University, East Lansing, 1981; PhD, Harvard University, 1988

Christopher J. Ellison, Assistant Professor, Depart-  
ment of Chemical Engineering  
BS, Iowa State University, 2000; PhD, Northwestern University, 2005

Janet L. Elzey, Vice Provost, Executive Vice  
President & Provost, Department of Mechanical Engineering  
PhD, University of California-Berkeley, 1985

Stanislav Emelianov, Associate Professor, Biomedical  
Engineering  
BS, University of Moscow, 1986; MS, University of Moscow, 1989; PhD, University of Moscow, 1992

E. Allen Emerson, Regents Chair in Computer Sci-  
ences #2, Professor, Department of Computer Science  
PhD, Harvard University, 1981

Edmund T. Emmer, Professor, Department of  
Educational Psychology  
BAEd, University of Michigan-Ann Arbor, 1962; MA, University of Michigan-Ann Arbor, 1965; PhD, University of Michigan-Ann Arbor, 1967

Susan B. Empson, Associate Professor, Department of  
Curriculum and Instruction  
PhD, University of Wisconsin-Madison, 1994

James M. Enelow, Professor, Department of  
Government  
PhD, University of Rochester, 1977

Elizabeth Engelhardt, Associate Professor, Depart-  
ment of American Studies, Center for Women's and Gender Studies  
BA, Duke University, 1992; MA, Emory University, 1997; PhD, Emory University, 1999

Michael D. Engelhardt, Distinguished C. Reer Centennial  
Professorship in Transportation Engineering, Professor, Department of Civil, Architectural and Environmental Engineering  
PhD, University of California-Berkeley, 1989

Nora C. England, Dallas TACA Centennial  
Professorship in the Humanities, Professor, Department of Linguistics, Department of Anthropology, Teresa Lozano Long Institute of Latin American Studies  
BA, Bryn Mawr College, 1967; MA, University of Florida, 1971; PhD, University of Florida, 1975

Karen L. Engle, Cecil D. Redford Professorship in Law, Professor, School of Law  
BA, Baylor University, 1984; JD, Harvard University, 1985

Bjorn Engquist, CAM Chair I, Professor, Depart-  
ment of Mathematics  
BS, Uppsala University, 1966; PhD, Uppsala University, 1969

Anne E. Epperson, Priscilla Pond Flawn Regents  
Professorship in Organ or Piano Performance, Professor, School of Music  
BA, Notre Dame de Namur University, 1971; MM, Louisiana State University and Agricultural and Mechanical College, 1975

Patience L. Epps, Associate Professor, Department of  
Linguistics  
BA, College of William and Mary, 1994; MA, University of Virginia, 2000; PhD, University of Virginia, 2005

Deana L. Erdner, Assistant Professor, Department of  
Marine Science  
BS, Carnegie Mellon University, 1991; PhD, Massachusetts Institute of Technology, 1997

Mattan Erez, Assistant Professor, Department of  
Electrical & Computer Engineering  
BSc, Technion-Israel Institute of Technology, 1999; MS, Stanford University, 2002; PhD, Stanford University, 2006

Carlton K. Erickson, Pfizer Centennial Professorship in  
Pharmacy, Associate Dean for Research, Pharmaceutics Office, Professor, College of Pharmacy  
PhD, Purdue University Main Campus, 1965

Katrin E. Erk, Assistant Professor, Department of  
Linguistics  
Diploma (Foreign), Universitat Koblenz-Landau, 1998; PhD, Saarland University, 2002

Veli F. Erman, History of Music Chair, Professor,  
School of Music, Department of Anthropology  
PhD, Foreign Institution, 1978

James L. Erskine, Trull Centennial Professorship in  
Physics #2, Professor, Department of Physics  
BS, University of Washington - Seattle, 1964; MS, University of Washington - Seattle, 1967; PhD, University of Washington - Seattle, 1972

Nolan Estes, Professor, Department of Educational  
Administration, Professor Emeritus, Department of Educational Administration  
BS, University of Corpus Christi, 1950; MEd, University of Texas at Austin, 1954; EdD, Harvard University, 1959

Brian L. Evans, Engineering Foundation Professor-  
sorship, Professor, Department of Electrical & Computer Engineering, Applied Research Laboratories  
MS, Georgia Institute of Technology, 1988; PhD, Georgia Institute of Technology, 1993

Neal J. Evans, Jr., M.D. Centennial  
Professorship in Astronomy, Department Chair, Department of Astronomy, Professor, Department of Astronomy  
PhD, University of California-Berkeley, 1973

Oofide E. Ezekoye, Professor, Department of  
Mechanical Engineering, Applied Research Laboratories  
MS, University of California-Berkeley, 1989; PhD, University of California-Berkeley, 1991

Eric P. Fahrenthold, Professor, Department of  
Mechanical Engineering  
PhD, Rice University, 1984

Lester L. Faigel, Robert Aldger Law and Thos. H.  
Low Centennial Professorship in Humanities, Professor, Department of Rhetoric & Writing, Department of English  
BA, North Carolina State University, 1969; MA, Miami University Main Cam, 1972; PhD, University of Washington - Seattle, 1976

Matthew L. Fajkus, Assistant Professor, School of  
Architecture  
BS, University of Texas at Arlington, 2000; MArch, Harvard University, 2005

Toni L. Falbo, Professor, Department of Educational  
Psychology, Department of Sociology  
PhD, University of California-Los Angeles, 1973

Terry S. Falcomata, Assistant Professor, Depart-  
ment of Special Education  
BS, Illinois State University, 1997; MS, Southern Illinois University Carbondale, 2002; PhD, University of Iowa, 2008

Oloruntoyin O. Falola, Frances Higginbotham  
Nalle Centennial Professorship in History, Profes-  
sor, Center for African and African-American Studies, Department of History, Department of African and African Diaspora Studies  
BA, Obafemi Awolowo University, 1976; PhD, Obafemi Awolowo University, 1981

Yonglei Fan, Assistant Professor, Department of  
Mechanical Engineering  
BS, Nanjing University, 1999; MS, Johns Hopkins University, 2003; MS, Johns Hopkins University, 2005; PhD, Johns Hopkins University, 2007

Roger P. Farrar, Professor, College of Pharmacy, De-  
partment of Kinesiology and Health Education  
PhD, University of Massachusetts, 1976

Walter L. Fast, Associate Professor, College of  
Pharmacy  
BS, Wheaton College, 1992; PhD, Northwestern University, 1998
Melanie Diane Feinberg, Assistant Professor, School of Information
BA, Stanford University, 1992; MS, University of California-Berkeley, 2004; PhD, University of Washington - Seattle, 2008

Qi Feng, Assistant Professor, Department of Information, Risk, and Operations Management
BEng, Shanghai Jiao Tong University, 1999; BEng, Shanghai Jiao Tong University, 1999; PhD, University of Texas at Dallas, 2006

Gregory L. Fenves, Dean’s Chair for Excellence in Engineering, Jack and Beverly Randall Dean’s Chair for Excellence in Engineering, Dean, Cockrell School of Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
BS, Cornell University, 1979; MS, University of California-Berkeley, 1980; PhD, University of California-Berkeley, 1984

Michael J. Ferguson, Associate Professor, School of Social Work
PhD, University of Washington - Seattle, 1999

Benito Fernandez, Associate Professor, Department of Mechanical Engineering
MS, Massachusetts Institute of Technology, 1985; PhD, Massachusetts Institute of Technology, 1988

Sandra Fernandez, Assistant Professor, Department of Art and Art History
BS, University of Wisconsin-Madison, 1991; MFA, University of Wisconsin-Madison, 1995

Linda Ferreira-Buckley, Associate Professor, Department of Rhetoric & Writing, Department of English
PhD, University of Pennsylvania, 1990

Paulo J. Ferreira, Associate Professor, Department of Mechanical Engineering
BS, Universidade do Porto, 1988; PhD, University of Illinois at Urbana-Champaign, 1996

Raissa Patricia Ferron, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
BES, Howard University, 2002; MSE, Northwestern University, 2004; PhD, Northwestern University, 2008

Sherry L. Field, Catherine Mac Parker Centennial Professorship in Education, Associate Dean, College of Education, Professor, Department of Curriculum and Instruction
BSED, Texas Tech University, 1973; MEd, Stephen F Austin State University, 1978; PhD, University of Texas at Austin, 1991

Enrique H. Fierro, Associate Professor, Department of Spanish and Portuguese
BEd, Instituto de Profesores Artigas, 1973

Gregory A. Fiete, Assistant Professor, Department of Physics
BS, Purdue University Main Campus, 1997; AM, Harvard University, 1999; PhD, Harvard University, 2003

Ila P. Fiete, Assistant Professor, Section of Neurobiology
BS, University of Michigan-Ann Arbor, 1997; BS, University of Michigan-Ann Arbor, 1997; AM, Harvard University, 2000; PhD, Harvard University, 2004

Alessio Figalli, Associate Professor, Department of Mathematics
Laurea in Mathematics, Scuola Normale di Pisa, 2004; Laurea in Mathematics, Scuola Normale di Pisa, 2006; PhD, Scuola Normale di Pisa, 2007

Manfred Fink, Professor, Department of Physics
PhD, University Fridericiana Karlsruhe, 1966

Richard H. Finnell, Professor, Department of Chemistry and Biochemistry, Department of Nutritional Sciences
BS, University of Oregon, 1975; MS, University of British Columbia, 1978; PhD, Oregon Health and Science University, 1980

Janice A. Fischer, Professor, Section of Molecular Cell and Developmental Biology, Extension Instructor, University Extension &_0_
PhD, Harvard University, 1988

Kirsten C. Fischer, Assistant Professor, Department of Asian Studies
BA, Connecticut College, 1991; Masters, University of California-Berkeley, 1998; PhD, University of California-Berkeley, 2004

Willy Fischler, Jane and Roland Blumberg Centennial Professorship in Physics, Professor, Department of Physics
PhD, Vrije Universiteit Brussel, 1976

William L. Fisher, Leonidas T. Barrow Centennial Chair in Mineral Resources, Professor, Department of Geological Sciences, Bureau of Economic Geology
MS, University of Kansas Main Campus, 1971; PhD, University of Kansas Main Campus, 1979

Joseph R. Fishkin, Assistant Professor, School of Law
BA, Yale University, 2000; MPhil, University of Oxford, 2002; DPhil, University of Oxford, 2005; JD, Yale University, 2007

Richard Fitzpatrick, Professor, Department of Physics
PhD, University of Sussex, 1988

Robert H. Flake, Professor, Department of Electrical & Computer Engineering
MA, Washington University in St Louis, 1960; DSc, Washington University in St Louis, 1962

Kenneth Flamm, Dean Rusk Chair in the Lyndon Baines Johnson School of Public Affairs, Professor, Lyndon B Johnson School of Public Affairs
PhD, Massachusetts Institute of Technology, 1979

Peter B. Flemings, John A. and Katherine G. Jackson Chair in Geosystems, Professor, Department of Geological Sciences, Bureau of Economic Geology, Institute for Geophysics
BA, Dartmouth College, 1984; MS, Cornell University, 1987; PhD, Cornell University, 1990

Richard R. Flores, C. B. Smith, Sr. Centennial Chair in United States-Mexico Relations &#3, Associate Dean for Academic Affairs, College of Liberal Arts, Professor, Department of Anthropology, Center for Mexican American Studies, Director, Academic Program, Utech-Liberal Arts Program
BA, University of Notre Dame, 1978; MA, University of the Incarnate Word, 1984; PhD, University of Texas at Austin, 1989

Ernst-Ludwig Florin, Associate Professor, Department of Physics, Center for Nonlinear Dynamics
MS, Technischen Universitat Munchen/ Munich, 1990; PhD, Technischen Universitat Munchen/Munich, 1995

Andrea Lynn Flower, Assistant Professor, Department of Special Education
BA, University of California-San Diego, 1998; MA, San Diego State University, 2001; PhD, University of Washington - Seattle, 2008

Douglas E. Foley, Professor, Department of Curriculum and Instruction, Department of Anthropology
BA, University of Northern Iowa, 1961; MA, Stanford University, 1967; PhD, Stanford University, 1970

Neil F. Foley, Associate Professor, Department of History, Department of American Studies
BA, University of Virginia (Old Code), 1971; MA, Georgetown University, 1975; MA, University of Michigan-Ann Arbor, 1985; PhD, University of Michigan-Ann Arbor, 1990

Kevin J. Folliard, Professor, Department of Civil, Architectural and Environmental Engineering
MS, University of California-Berkeley, 1991; PhD, University of California-Berkeley, 1995

Sergey B. Fomel, Associate Professor, Department of Geophysical Sciences
BS, Novosibirsk State University, 1990; PhD, Stanford University, 2001

Rowena Fong, Ruby Lee Pieter Centennial Professorship in Services to Children and Families, Professor, School of Social Work
BA, Wellesley College, 1974; MSW, University of California-Berkeley, 1977; EdD, Harvard University, 1990; EdD, Harvard University, 1990

William E. Forbath, Lloyd M. Bentsen Chair in Law, Professor, School of Law, Department of History
AB, Harvard University, 1974; BA, University of Cambridge, 1976; PhD, Yale University, 1992; JD, Yale University, 1983

George B. Forgie, Associate Professor, Department of History
PhD, Stanford University, 1972
Kevin M. Foster, Assistant Professor, Department of Educational Administration, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, College of William and Mary, 1991; BA, College of William and Mary, 1991; MA, University of Texas at Austin, 1994; PhD, University of Texas at Austin, 2001

David W. Fowler, Joe J. King Chair of Engineering No. 2, T. U. Taylor Professorship in Engineering, Hussein M. Alhathr Centennial Professorship in Civil Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, University of Colorado at Boulder, 1965

Norma L. Fowler, Professor, Section of Integrative Biology
PhD, Duke University, 1978

Wallace T. Fowler, Paul D. and Betty Robertson Meek Centennial Professorship in Engineering, Professor, Department of Aerospace Engineering and Engineering Mechanics
BA, University of Texas at Austin, 1960; MS, University of Texas at Austin, 1961; PhD, University of Texas at Austin, 1965

Eileen Fowles, Assistant Professor, School of Nursing
BSN, Elmhurst College, 1980; MSN, Loyola University Chicago, 1988; PhD, Loyola University Chicago, 1994

Cesare Fracassi, Assistant Professor, Department of Finance
Laurea, Politecnico di Milano, 1997; MBA, University of California-Los Angeles, 2004; PhD, University of California-Los Angeles, 2009

Luis Francisco-Revilla, Assistant Professor, School of Information
BE, Ibero-American University, 1992; MS, Texas A & M University, 1998; PhD, Texas A & M University, 2004

Karl H. Frank, Professor, Department of Civil, Architectural and Environmental Engineering, Professor Emeritus, Department of Civil, Architectural and Environmental Engineering
MS, Lehigh University, 1969; PhD, Lehigh University, 1972

Glenn Charles Frankel, G. B. Dealey Regents Professorship in Journalism, Department Chair, School of Journalism, Professor, School of Journalism
BA, Columbia University in the City of New York, 1971

Cary C. Franklin, Assistant Professor, School of Law
BA, Yale University, 1998; MST, University of Oxford, 2000; DPhil, University of Oxford, 2005; JD, Yale University, 2005

Cynthia G. Franklin, Sternberg/Spencer Family Professorship in Mental Health, Professor, School of Social Work
PhD, University of Texas at Arlington, 1989

Maria Franklin, Associate Professor, School of Law, Department of Anthropology, Department of African and African Diaspora Studies
BA, Auburn University, 1989; MA, University of California-Berkeley, 1991; PhD, University of California-Berkeley, 1997

Maria E. Franquiz, Associate Professor, Department of Curriculum and Instruction
BA, University of California-Santa Barbara, 1991; MA, University of California-Santa Barbara, 1993; PhD, University of California-Santa Barbara, 1995

Alison K. Frazier, Associate Professor, Department of Religious Studies, Department of History
PhD, Columbia University in the City of New York, 1996

Nina M. Fredland, Assistant Professor, School of Nursing
BSN, Niagara University, 1970; MSN, University of Pennsylvania, 1976; PhD, Johns Hopkins University, 2006

James W. Fredrickson, Tom E. Nelson, Jr. Regents Professorship in Business, Professor, Department of Management, Chair, Department of Management
PhD, University of Washington - Seattle, 1980

Daniel S. Freed, Professor, Department of Mathematics
PhD, University of California-Berkeley, 1983

Jeanne H. Freedland-Gavros, Bass Heflin Centennial Professorship in Nutritional Sciences, Professor, Department of Nutritional Sciences
MS, Rutgers the State University of New Jersey New Brunswick Campus, 1974; MPhil, Rutgers the State University of New Jersey New Brunswick Campus, 1974; PhD, Rutgers the State University of New Jersey New Brunswick Campus, 1975

Benny D. Freeman, Kenneth A. Kobe Professorship in Chemical Engineering, Professor, Department of Chemical Engineering
BA, North Carolina State University, 1983; PhD, University of California-Berkeley, 1988

Gary P. Freeman, Department Chair, Department of Government, Professor of Government
MA, University of Wisconsin-Madison, 1968; PhD, University of Wisconsin-Madison, 1975

Robert Freeman, Professor, School of Music
AB, Harvard University, 1957; MFA, Princeton University, 1960; PhD, Princeton University, 1967

Robert N. Freeman, Arthur Andersen & Co. Alumni Centennial Professorship in Accounting, Professor, Department of Accounting
PhD, University of Texas at Austin, 1977

Christopher R. Frei, Assistant Professor, College of Pharmacy
MS, University of Texas at Austin, 2003; PharmD, University of Texas at Austin, 2001

Oliver Freiberger, Associate Professor, Department of Asian Studies, Department of Religious Studies
MA, Georg-August Universitat Gottingen, 1994; PhD, Georg-August Universitat Gottingen, 1999

Kripa M. Freitas, Assistant Professor, Department of Economics
BS, University of Mumbai, 2000; MA, Northwestern University, 2002; PhD, Northwestern University, 2008

John M. Fremgen, Associate Professor, School of Music
BMus, Millikin University, 1991; MMus, University of Southern California, 1993

Caroline J. Frick, Assistant Professor, Department of Radio Television Film
BA, Miami University Main Camp, 1993; MA, University of East Anglia, 1995; PhD, University of Texas at Austin, 2005

Alan W. Friedman, Arthur J. Thaman and Wilhelmina Dore Thaman Endowed Professorship in English #3, Professor, Department of English
PhD, University of Rochester, 1966

Steven J. Friesen, The Louise Farmer Boyer Chair in Biblical Studies, Professor, Department of Religious Studies, Department of Classics
BA, Fresno Pacific University, 1976; MDiv, Fuller Theological Seminary, 1979; AM, Harvard University, 1986; PhD, Harvard University, 1990

William P. Frisbie, Professor, Department of Sociology, Professor Emeritus, Department of Sociology
PhD, University of North Carolina at Chapel Hill, 1972

Clifford A. Frohlich, Associate Director, Institute for Geophysics
BA, Grinnell College, 1969; MS, Cornell College, 1973; PhD, Cornell College, 1976

Kim Fromme, Professor, Department of Psychology
BS, University of Washington - Seattle, 1982; PhD, University of Washington - Seattle, 1988

Peter J. Frumkin, Director, Lyndon B Johnson School of Public Affairs, Professor, Lyndon B Johnson School of Public Affairs
BS, Oberlin College, 1984; MPP, George-town University, 1988; PhD, University of Chicago, 1997

Rong Fu, Professor, Department of Geological Sciences
BS, Beijing University, 1985; PhD, University of Michigan-Ann Arbor, 1993

Lee A. Fuentes, Nancy Lee and Perry R. Bass Regents Chair in Marine Science, Professor, Department of Marine Science, Section of Integrative Biology, Department Chair, Department of Marine Science, Director, Marine Science Institute
PhD, University of Michigan-Ann Arbor, 1983
Jennifer Fuller, Assistant Professor, Department of Radio Television Film
BA, University of South Carolina - Columbia, 1994; MA, University of Wisconsin-Madison, 2000; PhD, University of Wisconsin-Madison, 2004
Craig S. Fulthorpe, Senior Research Scientist, Institute for Geophysics
Laura J. Furman, Susan Taylor McDaniel Regents Professorship in Creative Writing #1
BA, Bennington College, 1968
Donald S. Fussell, Trammell Crow Regents Professorship in Computer Science, Professor, Department of Computer Science, Department of Electrical & Computer Engineering
BA, Dartmouth College, 1973; MS, University of Texas at Dallas, 1977; PhD, University of Texas at Dallas, 1980
Michael Gagarin, Professor Emeritus, Department of Classics
PhD, Yale University, 1968
Anna Gal, Associate Professor, Department of Computer Science
PhD, University of Chicago, 1995
James K. Galbraith, Lloyd M. Bentsen, Jr. Chair in Government/Business Relations, Professor, Department of Government, Lyndon B Johnson School of Public Affairs
PhD, Yale University, 1981
Karl Galinsky, Floyd A. Cailloux Centennial Professorship, Professor, Department of Classics
MA, Princeton University, 1965; PhD, Princeton University, 1966
Patricia K. Galloway, Associate Professor, School of Information
BA, Millsaps College, 1966; MA, University of North Carolina at Chapel Hill, 1968; PhD, University of North Carolina at Chapel Hill, 1973; PhD, University of North Carolina at Chapel Hill, 2004
Irene M. Gamba, Professor, Department of Mathematics
PhD, University of Chicago, 1989
Shama Ganhkar, Associate Professor, Lyndon B Johnson School of Public Affairs
PhD, University of Maryland College Park, 1996
Venkat Ganesan, Associate Professor, Department of Chemical Engineering
BS, Indian Institute of Technology, 1995; MS, Massachusetts Institute of Technology, 1999; PhD, Massachusetts Institute of Technology, 1999
Mira Ganor, Assistant Professor, School of Law
BA, Tel Aviv University, 1992; MBA, Tel Aviv University, 1996; LLB, Tel Aviv University, 1998; LLM, University of California-Berkeley, 2003; JSD, University of California-Berkeley, 2008
Alexandra A. Garcia, Associate Professor, School of Nursing
BS, College of Notre Dame of Maryland, 1990; MS, College of Notre Dame of Maryland, 1993; PhD, University of Texas at Austin, 2002
Sherna B. Garcia, Associate Professor, Department of Special Education
PhD, University of Texas at Austin, 1984
James E. Gardner, Associate Professor, Department of Geological Sciences
BS, Southern Methodist University, 1985; MA, Washington University in St Louis, 1987; PhD, University of Rhode Island, 1993
Wayne S. Gardner, Professor, Department of Marine Science
MS, University of Wisconsin-Madison, 1964; PhD, University of Wisconsin Colleges, 1972
Seth W. Garfield, Associate Professor, Teresa Lozano Long Institute of Latin American Studies, Department of History
BA, Yale University, 1988; MA, Yale University, 1992; PhD, Yale University, 1996
Vijay K. Garg, Cullen Trust for Higher Education Endowed Professorship in Engineering #1, Professor, Department of Electrical & Computer Engineering
MS, University of California-Berkeley, 1985; PhD, University of California-Berkeley, 1988
Nancy B. Ganett, Professor, School of Music
MM, University of Texas at Austin, 1966
Andrew S. Garrison, Associate Professor, Department of Radio Television Film
BA, Antioch University, 1974
James D. Garrison, Archibald A. Hill Regents Professorship in American and English Literature, Professor, Department of English
MA, University of North Carolina at Chapel Hill, 1967; PhD, University of California-Berkeley, 1972
Michael L. Garrison, Professor, School of Architecture
MArch, Rice University, 1971
Thomas J. Garza, Associate Professor, Department of Slavic Languages and Literature
EdD, Harvard University, 1987
Peter R. Gascoyne, Adjunct Professor, Biomedical Engineering
BS, Bangor University, 1973; PhD, Bangor University, 1979
Jennifer E. Gates-Foster, Assistant Professor, Center for Middle Eastern Studies, Department of Classics
BA, University of Virginia, 1997; MA, University of Michigan-Ann Arbor, 2001; MA, University of Michigan-Ann Arbor, 2004; PhD, University of Michigan-Ann Arbor, 2005
George W. Gau, George S. Watson Centennial Professorship in Real Estate, J. Ludwig Mosle Centennial Memorial Professorship in Investments and Money Management, Professor, Department of Finance, Red McCombs School of Business
BS, University of Illinois at Urbana-Champaign, 1969; MS, University of Texas at Austin, 1971; PhD, University of Illinois at Urbana-Champaign, 1975
Francis J. Gavin, Director, Lyndon B Johnson School of Public Affairs, Associate Professor, Lyndon B Johnson School of Public Affairs, Department of History
BA, University of Chicago, 1988; MSt, University of Oxford, 1991; MA, University of Pennsylvania, 1997; PhD, University of Pennsylvania, 1997
Karl Gebhardt, Herman and Joan Suit Professorship in Astrophysics, Professor, Department of Astronomy
BS, University of Rochester, 1986; MS, Michigan State University, East Lansing, 1990; PhD, Rutgers the State University of New Jersey New Brunswick Campus, 1994; PhD, Rutgers the State University of New Jersey New Brunswick Campus, 1994
Marianne Cedigan, Sarah and Ernest Butler Professorship in Music, Professor, School of Music
BM, Boston University, 1986
Gary Geisler, Assistant Professor, School of Information
BA, University of California-San Diego, 1986; MS, University of North Carolina at Chapel Hill, 1998; PhD, University of North Carolina at Chapel Hill, 2003
Wilson S. Geisler III, David Wechsler Regents Chair in Psychology, Professor, Department of Psychology
PhD, Indiana University at Bloomington, 1975
Yongjian Geng, Adjunct Professor, Biomedical Engineering
MSc, Xuzhou Medical College, 1987; PhD, Gothenburgs Universitet, 1994; MD, Xuzhou Medical College, 1982
Kenneth W. Gentle, Professor, Department of Physics
BS, Massachusetts Institute of Technology, 1962; PhD, Massachusetts Institute of Technology, 1966
George Georgiou, Cockrell Family Regents Chair in Engineering #9, Professor, Department of Chemical Engineering, Molecular Genetics and Microbiology, Biomedical Engineering
BS, University of Manchester, 1981; MS, Cornell University, 1983; PhD, Cornell University, 1987
Stephen T. Gerald, Associate Professor, Department of Theatre and Dance
MFA, Rutgers the State University of New Jersey Camden Campus, 1977
Andrew D. Gershoff, Associate Professor, Department of Marketing Administration
AA, Berkshire Community College, 1988;
BA, University of Massachusetts, 1989;
MBA, University of Texas at Austin, 1995;
PhD, University of Texas at Austin, 1999

Elizabeth Thompson Gershoff, Associate Professor, Human Dev & Family Sci
BA, University of Virginia, 1992; MA, University of Texas at Austin, 1995; PhD, University of Texas at Austin, 1998

Andreas M. Gerstlauer, Assistant Professor, Department of Electrical & Computer Engineering
BS, University of Stuttgart, 1992; MS, University of California-Irvine, 1998; PhD, University of California-Irvine, 2004

Julius G. Getman, Earl E. Sheffield Regents Chair, Professor, School of Law
BA, City University of New York The City College, 1953; LLB, Harvard University, 1958; LLM, Harvard University, 1963

Wassim M. Channoum, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
BE, McGill University, 1996; ME, McGill University, 1999; PhD, University of California-Berkeley, 2007

Mohammad Ghanoonparvar, Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies
PhD, University of Texas at Austin, 1979

Ranjit Gharpurey, Associate Professor, Department of Electrical & Computer Engineering
BS, Indian Inst of Tech, 1990; MS, University of California-Berkeley, 1992; PhD, University of California-Berkeley, 1995

Omar Ghazzal, John A. and Katherine C. Jackson Chair in Computational Geosciences, Professor, Biomedical Engineering, Department of Computer Science, Department of Geological Sciences, Department of Mechanical Engineering
BSE, Duke University, 1984; MS, Duke University, 1986; PhD, Duke University, 1988

Charles E. Gholz, Associate Professor, Lyndon B Johnson School of Public Affairs
BS, Massachusetts Institute of Technology, 1992; PhD, Massachusetts Institute of Technology, 2000

Joydeep Ghosh, Schlumberger Centennial Chair in Electrical Engineering, Professor, Department of Electrical & Computer Engineering
MS, University of Southern California, 1984; PhD, University of Southern California, 1988

Kaushik Ghosh, Assistant Professor, Department of Anthropology, Department of Asian Studies
BA, Brandeis University, 1988; MA, Princeton University, 1991; PhD, Princeton University, 2006

Homero Gil De Zuniga, Assistant Professor, School of Journalism
BA, Complutense University of Madrid, 1999; MA, University of Wisconsin-Madison, 2003; PhD, European University of Madrid, 2006; PhD, University of Wisconsin-Madison, 2005

Dorie J. Gilbert, Associate Professor, Center for Women’s and Gender Studies, Center for African and African American Studies, School of Social Work, Department of African and Diaspora Studies
BBA, University of Texas at Austin, 1983; MSSW, University of Texas at Austin, 1992; PhD, University of Texas at Austin, 1996

John E. Gilbert, Professor, Department of Mathematics
PhD, University of Oxford, 1963

Lawrence E. Gilbert, Professor, Section of Integrative Biology
PhD, Stanford University, 1971

Robert B. Gilbert, Brunswick-Abernathy Regents Professorship in Soil Dynamics and Geotechnical Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, University of Illinois at Urbana-Champaign, 1993

Stephen M. Gilbert, Sam P. Woodson, Jr. Centennial Memorial Professorship in Business, Professor, Department of Management, Department of Information, Risk, and Operations Management
PhD, Massachusetts Institute of Technology, 1992

David L. Gilden, Professor, Department of Psychology
MA, University of Texas at Austin, 1979; PhD, University of Texas at Austin, 1982

Tiffany M. Gill, Associate Professor, Department of History, Center for Women’s and Gender Studies, Center for African and African American Studies, Department of African and Diaspora Studies
BA, Georgetown University, 1996; PhD, Rutgers the State University of New Jersey New Brunswick Campus, 2003

Ann Gillenwater, Assistant Professor, University of Texas M. D. Anderson Cancer Center
BA, Brown, 1983; MD, Virginia, 1987

Kate Gillespie, Associate Professor, Department of Marketing Administration, Center for Middle Eastern Studies, Department of Middle Eastern Studies
BA, Harvard University, 1974; MBA, University of Virginia, 1976; PhD, University of London, 1983

Thomas W. Gilligan, Centennial Chair in Business Education Leadership, Dean, Red McCombs School of Business, Professor, Department of Finance
BA, University of Oklahoma Norman Campus, 1979; PhD, Washington University in St Louis, 1984

Sophia Gilmson, Associate Professor, School of Music
MM, Foreign Institution, 1973

Andrea Giunta, Professor, Department of Art and Art History
MA, University of Buenos Aires, 1983; PhD, University of Buenos Aires, 1999

Terri E. Givens, Associate Professor, Department of Government, Center for African and African American Studies, European Studies
BA, Stanford University, 1982; MA, San Francisco State University, 1983; MA, University of California-Los Angeles, 1996; PhD, University of California-Los Angeles, 1999

Tomie Michele Glass, Assistant Professor, School of Architecture
BENVironD, Texas A & M University, 1998; MArch, University of Oregon, 2001

James L. Glavan, David Bruton, Jr. Regents Professorship in Fine Arts, Professor, Department of Theatre and Dance
BA, Kent State University Main Campus, 1972; MA, Kent State University Main Campus, 1984

Marcia Elizabeth Joy Gleason, Assistant Professor, Human Dev & Family Sci
BS, Penn State University Park, 1998; PhD, New York University, 2004

Austin M. Gleeson, Professor, Department of Physics
PhD, University of Pennsylvania, 1965

Norval D. Glenn, Stiles Professorship in American Studies
PhD, University of Texas at Austin, 1962

John A. Goff, Senior Research Scientist, Institute for Geophysics
BS, Brown University, 1990; PhD, Massachusetts Institute of Technology, 1990

John M. Golden, Loomer Family Professorship in Law, Professor, School of Law
AB, Harvard University, 1992; JD, Harvard University, 2000; PhD, Harvard University, 1997

Linda L. Golden, Marlene and Morton Meyerson Centennial Professorship in Business, Professor, ICAS Institute, Department of Marketing Administration
PhD, University of Florida, 1975

Nance L. Golding, Associate Professor, Section of Neurobiology
BS, University of Connecticut, 1989; PhD, University of Wisconsin-Madison, 1996

David B. Goldstein, Professor, Department of Aerospace Engineering and Engineering Mechanics
PhD, California Institute of Technology, 1990

Francisco H. Gomez, Assistant Professor, School of Architecture
BS, University of Virginia, 1990; MArch, Harvard University, 1995
Robert E. Campf, Jane and Roland Blumberg Centennial Professorship in Mathematics, Professor, Department of Mathematics
PhD, University of California-Berkeley, 1984

Rueben A. Gonzales, Jacques P. Servier Regents Professorship in Pharmacy, Professor, College of Pharmacy, Department of Psychology
BSc, University of Texas at Austin, 1977; PhD, University of Texas at Austin, 1983

F. Gonzalez-Lima, George I. Sanchez Centennial Professorship in Liberal Arts, Professor, Department of Psychology, College of Pharmacy
PhD, University of Pittsburgh Medical School, 1981

Gloria Gonzalez-Lopez, Associate Professor, Department of Sociology, Center for Mexican American Studies
BA, Universidad Reamontana, 1981; MA, University of Southern California, 1997;
MA, University of Southern California, 1997; PhD, University of Southern California, 2000

John M. Gonzalez, Associate Professor, Center for Mexican American Studies, Department of English
AB, Princeton University, 1988; MA, Stanford University, 1991; PhD, Stanford University, 1998

Juan C. Gonzalez, Vice President for Student Affairs, Office of the Vice-President for Student Affairs, Senior Lecturer, Department of Educational Administration
BA, Texas Tech University, 1974; MA, University of Texas at San Antonio, 1980; PhD, University of Illinois at Urbana-Champaign, 1981

Oscar Gonzalez, Associate Professor, Department of Mathematics
BS, University of Texas at Austin, 1991; MS, Stanford University, 1992; MS, Stanford University, 1996; PhD, Stanford University, 1996

Steven Goode, W. James Kronzer Chair in Trial and Appellate Advocacy, Professor, School of Law
BA, Williams College, 1972; JD, Yale University, 1975

Mark Anthony Gooden, Associate Professor, Department of Educational Administration
BA, Albany State University, 1999; MA, Ohio State U Main Campus, 1994; MA, Ohio State U Main Campus, 2001; PhD, The Ohio State University Main Campus, 2003

John B. Goodenough, Virginia H. Cockrell Centennial Chair in Engineering, Professor, Department of Electrical & Computer Engineering, Department of Mechanical Engineering
PhD, University of Chicago, 1952

Mark K. Goodman, Professor, Department of Art and Art History
BA, Boston University, 1970

Lalitha Gopalan, Associate Professor, Department of Radio Television Film, Department of Asian Studies
BA, Madras Christian College, 1982; MA, University of Delhi, 1984; MA, University of Rochester, 1987; PhD, University of Rochester, 1993

Cameron M. Gordon, Sid W. Richardson Foundation Regents Chair in Mathematics #2, Professor, Department of Mathematics
PhD, University of Cambridge, 1971

Edmund T. Gordon, Associate Professor, Center for African and African American Studies, Department of African and African Diaspora Studies, Department of Anthropology
BA, Swarthmore College, 1974; MA, Stanford University, 1975; MA, University of Miami, 1981; PhD, Stanford University, 1981

Vernita Gordon, Assistant Professor, Department of Physics
BSc, Vanderbilt University, 1997; AM, Harvard University, 2001; PhD, Harvard University, 2003

Andrea C. Gore, Professor, Department of Psychology, College of Pharmacy
AB, Princeton University, 1985; PhD, University of Wisconsin-Madison, 1990

Samuel D. Gosling, Professor, Department of Psychology
PhD, University of California-Berkeley, 1998

Ellen Gottlieb, Assistant Professor, Molecular Genetics and Microbiology
PhD, Yale University, 1987

Nell H. Gottlieb, Research Professor, Department of Kinesiology and Health Education, Research Professor (Affiliated), Department of Kinesiology and Health Education
PhD, Boston University, 1981

Mohamed G. Gouda, Mike A. Myers Centennial Professorship in Computer Sciences, Professor, Department of Computer Science
PhD, Foreign Institution, 1977

David B. Gracy II, Governor Bill Daniel Professorship in Archival Enterprise, Professor, School of Information
PhD, Texas Tech University, 1971

Mack Grady, Josey Centennial Professorship in Energy Resources, Professor, Department of Electrical & Computer Engineering
MS, Purdue University Main Campus, 1973; PhD, Purdue University Main Campus, 1983

Melissa E. Graebner, Associate Professor, Department of Management
BA, Stanford University, 1993; MS, Stanford University, 1996; MBA, Stanford University, 1998; PhD, Stanford University, 2001

Lino A. Greglia, A. Dalton Cross Professorship at Law, Professor, School of Law
BA, City University of New York The City College, 1952; LLB, Columbia University in the City of New York, 1954

Don B. Graham, Frank Dobie Regents Professorship in American and English Literature, Professor, Department of English
PhD, University of Texas at Austin, 1971

Stephen P. Grand, Dave P. Carlson Centennial Professorship in Geophysics, Professor, Department of Geological Sciences, Department Chair, Department of Geological Sciences, Institute for Geophysics
PhD, California Institute of Technology, 1986

Michael H. Granof, Ernst % Young Distinguished Centennial Professorship of Accounting, Professor, Department of Accounting, Lyndon B Johnson School of Public Affairs
BA, Hamilton College, 1963; MBA, Columbia University in the City of New York, 1965; PhD, University of Michigan-Ann Arbor, 1972

Darlene Grant, Associate Professor, Center for African and African American Studies, School of Social Work
BA, Wittenberg University, 1982; MSSA, Case Western Reserve University, 1984; PhD, University of Tennessee, 1993

Donald J. Grantham, Frank C. Erwin, Jr. Centennial Professorship in Music, Professor, School of Music
DMA, University of Southern California, 1980

Eugene A. Gratovich, Associate Professor, School of Music
DMA, Boston University, 1968

Kristen L. Grauman, Assistant Professor, Department of Computer Science
BA, Boston College, 2001; SM, Massachusetts Institute of Technology, 2003; PhD, Massachusetts Institute of Technology, 2006

Kenneth E. Gray, Professor, Department of Petroleum and Geosystems Engineering
PhD, University of Texas at Austin, 1963

B. C. Green, Associate Professor, Department of Kinesiology and Health Education
BS, George Washington University, 1985;
MA, University of Maryland College Park, 1994; PhD, University of Maryland College Park, 1996

Laurie B. Green, Associate Professor, Center for Women’s and Gender Studies, Department of History
BA, Wesleyan University, 1979; MA, New York University, 1980; PhD, University of Chicago, 1999

Betsy S. Greenberg, Associate Professor, Department of Information, Risk, and Operations Management
PhD, University of California-Berkeley, 1986

Jenny E. Greene, Assistant Professor, Department of Astronomy
BS, Yale University, 2000; AM, Harvard University, 2003; PhD, Harvard University, 2006
Kenneth F. Greene, Associate Professor, Department of Government
BA, University of California-Santa Cruz, 1991; MA, University of California-Berkeley, 1996; PhD, University of California-Berkeley, 2002

Roberta R. Greene, Louis and Ann Wolens Centennial Chair in Ceratology, Professor, School of Social Work
BA, Michigan State University, East Lansing, 1960; MSW, Michigan State University, East Lansing, 1962; PhD, University of Maryland College Park, 1986

Benjamin G. Gregg, Associate Professor, Department of Government
BA, Yale University, 1980; PhD, Free University of Berlin, 1985; MA, Princeton University, 1991; PhD, Princeton University, 1996

Sue A. Greninger, Associate Professor, Human Developmental Family Science, Secretary to General Faculty, Office of the General Faculty
MS, University of Illinois at Urbana-Champaign, 1970; PhD, University of Illinois at Urbana-Champaign, 1973

John M. Griffin, Professor, Department of Finance
BA, Baylor University, 1992; MS, Texas A&M University, 1993; PhD, Ohio State University, 1997

Lisa Griffin, Associate Professor, Department of Kinesiology and Health Education
BS, University of Guelph, 1993; MS, University of Western Ontario, 1995; PhD, University of Western Ontario, 1999

Zeni M. Griffin, Professor, Department of Psychology, Department of Communication Sciences and Disorders, Department of Linguistics
BA, Michigan State University, East Lansing, 1993; MA, University of Illinois at Urbana-Champaign, 1996; PhD, University of Illinois at Urbana-Champaign, 1998

Charles G. Groat, John A. and Katherine G. Jackson Chair in Energy and Mineral Resources, Professor, Department of Geological Sciences, Department of Petroleum and Geosystems Engineering, Lyndon B. Johnson School of Public Affairs, Director, Academic Program, Energy and Resources Graduate Program
BA, University of Rochester, 1962; MS, University of Massachusetts, 1967; PhD, University of Texas at Austin, 1970

Jeffrey M. Gross, Assistant Professor, Section of Molecular Cell and Developmental Biology
BS, University of Maryland Baltimore County, 1996; PhD, Duke University, 2002

Karen Grumbach, Assistant Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies
BA, University of Texas at Austin, 1997; BA, University of Texas at Austin, 1997; MA, University of California-Los Angeles, 1997; PhD, University of California-Los Angeles, 2004

Bin Gu, Assistant Professor, Department of Information Risk, and Operations Management
BS, Shanghai Jiao Tong University, 1995; BS, Shanghai Jiao Tong University, 1995; MA, University of Pennsylvania, 2001; PhD, University of Pennsylvania, 2002

Julia E. Guerney, Associate Professor, Department of Art and Art History
BS, Marquette University, 1986; MA, University of Wisconsin-Milwaukee, 1992; PhD, University of Texas at Austin, 1997

Sean S. Gullick, Research Scientist, Institute for Geophysics, Lecturer, Department of Geophysical Sciences
BS, University of North Carolina at Chapel Hill, 1993; PhD, Lehigh University, 2000

Joshua G. Gunn, Associate Professor, Department of Communication Studies, Department of Rhetoric and Writing
BA, George Washington University, 1996; MA, University of Minnesota-Twin Cities, 1998; PhD, University of Minnesota-Twin Cities, 2002

Frank A. Guridy, Associate Professor, Department of History, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, Syracuse University Main Campus, 1993; MA, University of Illinois at Chicago, 1996; PhD, University of Michigan-Ann Arbor, 2002

Robin Gutell, Professor, Section of Integrative Biology
PhD, University of California-Santa Cruz, 1985

Genaro J. Gutierrez, Associate Professor, Department of Information Risk, and Operations Management, Department of Management
PhD, Stanford University, 1988

Michele R. Guzman, Clinical Associate Professor, Department of Educational Psychology, Program Coordinator, Hogg Foundation
BA, Vassar College, 1992; PhD, State University of New York at Albany, 2000

Michelle Habek, Assistant Professor, Department of Theatre and Dance
BFA, Salem State College, 1993; MFA, Northwestern University, 1996

Marvin L. Hackert, William Shive Centennial Professorship in Biochemistry, Associate Dean, Office of Graduate Studies, Professor, Department of Chemistry and Biochemistry
PhD, Iowa State University, 1970

Jo Ann Hackett, Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies, Department of Religious Studies
BA, DePauw University, 1970; MA, Indiana University at Bloomington, 1975; PhD, Harvard University, 1980

Ronny Hadani, Assistant Professor, Department of Mathematics
BA, Open University, 1996; MSc, Weizmann Institute of Science, 1998; PhD, Tel Aviv University, 2006

Beverly L. Hadaway, Associate Professor, Department of Finance
MA, The University of Alabama, 1970; PhD, The University of Alabama, 1981

Sabine Hake, Texas Chair of German Literature and Culture, Professor, Center for Women’s and Gender Studies, Department of German Studies, Department of Geography and the Environment
BA, Universität Hannover, 1977; MA, Universität Hannover, 1982; PhD, Universität Hannover, 1984

Charles R. Hall, Chair for Western Hemispheric Trade Studies, Director, Academic Program, Teresa Lozano Long Institute of Latin American Studies, Director, Teresa Lozano Long Institute of Latin American Studies, Professor, Department of Anthropology, Department of African and African Diaspora Studies
MA, Stanford University, 1984; PhD, Stanford University, 1990

Kenneth J. Hale, Marguerite Fairchild Centennial Professorship, Associate Dean, College of Fine Arts, Professor, Department of Art and Art History
MFA, University of Illinois at Urbana-Champaign, 1973

Andrea P. Haley, Assistant Professor, Department of Psychology
BA, Concord University, 1996; MA, University of Virginia, 2001; PhD, University of Virginia, 2005

Matthew J. Hall, Professor, Department of Mechanical Engineering
MA, Princeton University, 1984; PhD, Princeton University, 1987

Neal A. Hall, Assistant Professor, Department of Electrical and Computer Engineering
BS, University of Texas at Austin, 2000; MS, Georgia Institute of Technology, 2002; PhD, Georgia Institute of Technology, 2004

Gary A. Hallock, Professor, Department of Electrical and Computer Engineering
MEE, Rensselaer Polytechnic Institute, 1977; PhD, Rensselaer Polytechnic Institute, 1982

Daniel S. Hamermesh, Sue Killam Professorship in the Foundations of Economics, Professor, Department of Economics, Center for Women’s and Gender Studies
PhD, Yale University, 1969

Mark F. Hamilton, Harry L. Kent, Jr. Professorship in Mechanical Engineering, Professor, Department of Mechanical Engineering, Applied Research Laboratories
PhD, Pennsylvania State University Main Campus, 1983

Barney Hammond, Associate Professor, Department of Theatre and Dance
BA, Baylor University, 1967; MA, University of Houston, 1977
Bing Han, Associate Professor, Department of Finance
MS, University of Chicago, 1992; PhD, University of Chicago, 1997; MS, University of California-Los Angeles, 2002

Gerre E. Hancock, Professor, School of Music
BMus, University of Texas at Austin, 1955; SMM, Union Theological Seminary, 1961

Ian F. Hancock, Harold C. and Alice T. Naulin Regents Professor in Liberal Arts, Professor, Department of English, Department of Linguistics
PhD, University of London, 1971

Robert J. Hankinson, Professor, Department of Philosophy, Department of Classics
BA, University of Cambridge, 1980; MA, University of Cambridge, 1982; PhD, University of Cambridge, 1985

William F. Hanks, C. B. Smith, Sr. Centennial Chair in United States-Mexico Relations #2
BS, Georgetown University, 1975; MA, University of Chicago, 1979; PhD, University of Chicago, 1983

Kathryn G. Hansen, Professor, Department of Asian Studies
AB, Harvard University, 1968; MA, University of California-Berkeley, 1970; PhD, University of California-Berkeley, 1978

Patricia I. Hansen, J. Waddy Bullon Professorship in Law, Professor, School of Law
AB, Harvard University, 1982; MPA, Princeton University, 1987; JD, Yale University, 1987

Bob A. Hardage, Senior Research Scientist, Beg-Pi-Kiper
PhD, Oklahoma State University Main Campus, 1967

Kathryn Paige Harden, Assistant Professor, Department of Psychology
BS, Furman University, 2003; MA, University of Virginia, 2005; PhD, University of Virginia, 2009

Sharon E. Jarvis, Associate Professor, Department Communication Studies
BA, University of California-Davis, 1991; MA, University of Arizona, 1995; PhD, University of Texas at Austin, 2000

Julie Hardwick, Professor, Department of History
BA, University of Nottingham, 1984; MA, University of Wisconsin-Milwaukee, 1986; MA, Johns Hopkins University, 1988; PhD, Johns Hopkins University, 1991

Barbara J. Harlow, Louann and Larry Temple Centennial Professorship in English Literature, Thomas Malby Crainfill Lectureship in English, Professor, Department of English, Center for Women’s and Gender Studies, Center for Middle Eastern Studies, Department of Middle Eastern Studies
BA, Simmons College, 1970; MA, University of Chicago, 1972; PhD, State University of New York at Buffalo, 1977

E. Glynn Harmon, Professor, School of Information
MS, Case Western Reserve University, 1965; PhD, Case Western Reserve University, 1970

Michael P. Harney, Associate Professor, Department of Spanish and Portuguese
PhD, University of California-Berkeley, 1983

Dustin M. Harp, Assistant Professor, School of Journalism, Music Accompanist, School of Music
BA, University of Texas at Austin, 1992; MA, University of Texas at Austin, 1997; PhD, University of Wisconsin-Madison, 2002

Louise Harpman, Associate Professor, School of Architecture
AB, Harvard University, 1986; MS, University of Cambridge, 1988; MArch, Yale University, 1993

Benjamin M. Harris, Professor, Department of Educational Administration, Professor Emeritus, Department of Educational Administration
AA, Glendale Community College, 1943; BA, University of California-Los Angeles, 1948; MED, University of California-Los Angeles, 1951; PhD, University of California-Berkeley, 1958

Joyce L. Harris, Associate Professor, Department of Communication Sciences and Disorders
BA, University of Texas at El Paso, 1973; MA, University of Texas at El Paso, 1974; PhD, University of Texas at Austin, 1992

Kristen M. Harris, Professor, Section of Neurology
BS, Minnesota State University Moorhead, 1976; MS, University of Illinois at Urbana-Champaign, 1979; PhD, Northeastern Ohio Universities College of Medicine, 1982

R. A. Harris, M. June and J. Virgil Waggoner Chair in Molecular Biology, Professor, College of Pharmacy, Section of Neurobiology
PhD, University of North Carolina at Chapel Hill, 1973

David A. Harrison, Charles and Elizabeth Prothro Regents Chair in Business Administration, Professor, Department of Management
BS, Bowling Green State University, 1983; MS, University of Illinois at Urbana-Champaign, 1985; MA, University of Illinois at Urbana-Champaign, 1986; PhD, University of Illinois at Urbana-Champaign, 1988

Louis Harrison, Professor, Center for African and African American Studies, Department of Curriculum and Instruction, Department of African and African Diaspora Studies
BS, University of New Orleans, 1979; MED, University of New Orleans, 1982; PhD, Louisiana State University and Agricultural and Mechanical College, 1997

Tracie C. Harrison, Associate Professor, School of Nursing
BSN, University of Texas at Austin, 1993; MSN, Texas A&M University at Galveston, 1999; PhD, University of Texas at Austin, 2004

Rasika M. Harshay, Professor, Molecular Genetics and Microbiology
PhD, Indian Institute of Science, 1977

Roderick P. Hart, Allan Shivers Centennial Chair in Communication, Walter Cronkle Regents Chair in Communication, Dean, College of Communication, Professor, Department Communication Studies, Department of Government
BA, University of Massachusetts, 1966; MA, Penn State University Park, 1968; PhD, Pennsylvania State University Park, 1970

Roger Hart, Assistant Professor, Department of History, Department of Asian Studies
BS, Massachusetts Institute of Technology, 1979; MS, Stanford University, 1982; MA, University of California-Los Angeles, 1991; PhD, University of California-Los Angeles, 1997

John Hartigan, Professor, Department of Anthropology, Director, Academic Program, Americo Paredes Center for Cultural Studies
BA, University of Michigan-Ann Arbor, 1987; PhD, University of California-Santa Cruz, 1995

Jay C. Hartzell, Associate Professor, Department Finance, Department Chair, Department of Finance
BS, Trinity University, 1991; PhD, University of Texas at Austin, 1998

Hope Hasbrouck, Assistant Professor, School of Architecture
BA, Washington University in St Louis, 1987; MArch, University of Virginia, 1991; MArch, Harvard University, 1996

John J. Hasenbein, Associate Professor, Department Mechanical Engineering
MS, Georgia Institute of Technology, 1995; PhD, Georgia Institute of Technology, 1999

Arjang Hassibi, Assistant Professor, Department Electrical & Computer Engineering
BS, University of Tehran, 1997; MS, Stanford University, 2001; PhD, Stanford University, 2005

Pamela R. Haunschild, Jack R. Crosby Regents Chair in Business Administration, Professor, Department of Management, IC2 Institute
BS, Northern Illinois University, 1984; MS, Carnegie Mellon University, 1990; PhD, Carnegie Mellon University, 1992

Christine V. Hawkes, Assistant Professor, Section Integrative Biology
BA, Bucknell University, 1993; PhD, University of Pennsylvania, 2000

Takashi Hayashi, Assistant Professor, Department Economics
MA, Osaka University, 1998; MA, University of Rochester, 2003; PhD, University of Rochester, 2004

Linda J. Hayes, Professor, Department Aerospace Engineering and Engineering Mechanics
MA, University of Texas at Austin, 1974; MSE, University of Texas at Austin, 1981; PhD, University of Texas at Austin, 1977
Mary M. Hayhoe, Professor, Department of Psychology
BA, University of Queensland, 1970; PhD, University of California-San Diego, 1979

Mark D. Hayward, Professor, Center for Women's and Gender Studies, Director, Population Research Center, Department of Sociology
BA, Washington State University, 1975; MA, Indiana University at Bloomington, 1978; PhD, Indiana University at Bloomington, 1981

Richard D. Hazeltine, Professor, Department of Physics, Department Chair, Department of Physics
MS, University of Michigan-Ann Arbor, 1968; PhD, University of Michigan-Ann Arbor, 1968

Nancy L. Hazen-Swann, Associate Professor, Human Dev & Family Sci
PhD, University of Minnesota-Twin Cities, 1979

John D. Hazle, Professor, University of Texas M. D. Anderson Cancer Center
BS, Kentucky, 1981; MS, 1983; PhD, Texas (Graduate School of Biomedical Sciences), 1989

Robert W. Heath Jr., Associate Professor, Department of Electrical & Computer Engineering
BS, University of Virginia (Old Code), 1996; MS, University of Virginia (Old Code), 1997; PhD, Stanford University, 2002

Elizabeth A. Hedrick, Associate Professor, Department of English
PhD, Columbia University in the City of New York, 1986

Bob Heere, Assistant Professor, Department of Kinesiology and Health Education
MA, University of Amsterdam, 2001; PhD, Florida State University, 2005

Julian V. Heilig, Assistant Professor, Department of Educational Administration, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, University of Michigan-Ann Arbor, 1997; MA, University of Michigan-Ann Arbor, 1999; MA, Stanford University, 2004; PhD, Stanford University, 2006

Kurt O. Heinzelman, Professor, Department of English
PhD, University of Massachusetts, 1978

Susan S. Heinzelman, Director, Academic Program, Center for Women’s and Gender Studies, Associate Professor, Department of English, Center for Women’s and Gender Studies
BA, University of London, 1968; MA, University of Western Ontario, 1971; PhD, University of Western Ontario, 1978

Daniel J. Heinzen, The Fondren Foundation Centennial Chair in Physics, Professor, Department of Physics
BS, Massachusetts Institute of Technology, 1981; PhD, Massachusetts Institute of Technology, 1988

Raymond C. Heilmann, Professor, Department of Mathematics
PhD, University of Wisconsin-Madison, 1974

Adam Heller, Research Professor, Department of Chemical Engineering, Professor, Department of Chemical Engineering, Professor Emeritus, Department of Chemical Engineering
PhD, The Hebrew University of Jerusalem, 1961

Jeffrey L. Hellmer, Professor, School of Music
MM, University of Rochester, 1983

David Helm, Assistant Professor, Department of Mathematics
AB, Harvard University, 1995; PhD, University of California-Berkeley, 2003

Todd A. Helwig, Associate Professor, Department of Civil, Architectural and Environmental Engineering
BS, University of Texas at Austin, 1987; MSE, University of Texas at Austin, 1989; PhD, University of Texas at Austin, 1994

Andrew D. Henderson, Associate Professor, Department of Management
MBA, University of Texas at Austin, 1990; PhD, University of Texas at Austin, 1996

Geraldine R. Henderson, Associate Professor, Department of Advertising, Department of African and African Diaspora Studies
BSEE, Purdue University Main Campus, 1983; MBA, Northwestern University, 1991; PhD, Northwestern University, 1995

Linda D. Henderson, David Bruton, Jr. Centennial Professorship in Art History, Professor, Department of Art and Art History
PhD, Yale University, 1975

Marlene D. Henderson, Assistant Professor, Department of Psychology
BS, Michigan State University, East Lansing, 1999; PhD, New York University, 2006

Rebecca Henderson, Professor, School of Music
Bmus, Oberlin College, 1982; MM, University of Rochester, 1986

Ty Henderson, Assistant Professor, Department of Marketing Administration
BS, Iowa State University, 1997; BA, Iowa State University, 1998; MBA, University of Iowa, 2002; PhD, University of Wisconsin-Madison, 2006

Dean Hendrickson, Curator, Texas Memorial Museum
BS, Arizona State University Main, 1973; PhD, Arizona State University Main, 1987

Geraldine Heng, Perceval Professorship in Medieval Romance, Historiography, and Culture, Associate Professor, Department of English, Center for Women’s and Gender Studies, Center for Middle Eastern Studies
BA, University Of Singapore, 1979; MA, National University of Singapore, 1980; MA, Cornell University, 1986; PhD, Cornell University, 1990

Jacqueline M. Henkel, Associate Professor, Department of English
MA, University of Minnesota-Twin Cities, 1984; PhD, University of Minnesota-Twin Cities, 1985

Graeme A. Henkelman, Associate Professor, Department of Chemistry and Biochemistry
BS, Queens University, 1996; PhD, University of Washington - Seattle, 2001

Jacqueline C. Henninger, Assistant Professor, School of Music
Bmus, University of Texas at Austin, 1992; MMus, University of Texas at Austin, 1998; PhD, University of Texas at Austin, 2000

Frederick G. Hensley, Professor, Department of Spanish and Portuguese
PhD, University of Texas at Austin, 1967

David L. Herrin, Professor, Section of Molecular Cell and Developmental Biology
MA, University of South Florida, 1980; PhD, University of South Florida, 1986

Donald D. Herron, Associate Professor, Department of Art and Art History
MFA, Tulane University, 1973

Peter Hess, Department Chair, Department of German Studies, Associate Professor, European Studies, Department of Germanic Studies
MA, University of Michigan-Ann Arbor, 1980; PhD, University of Michigan-Ann Arbor, 1984

Marc A. Hesse, Assistant Professor, Department of Geological Sciences
BS, University of Edinburgh, 2000; MS, Massachusetts Institute of Technology, 2002; MPhil, University of Cambridge, 2003; PhD, Stanford University, 2008

Thomas R. Hester, Professor Emeritus, Department of Anthropology
PhD, University of California-Berkeley, 1972

David D. Heymann, Martin S. Kermack Centennial Professorship in Architecture, Professor, School of Architecture
MArch, Harvard University, 1988

Carlos H. Hidrovo Chavez, Assistant Professor, Department of Mechanical Engineering
BS, Massachusetts Institute of Technology, 1995; MS, University of Illinois at Urbana-Champaign, 1996; PhD, Massachusetts Institute of Technology, 2001

Kathleen M. Higgins, Professor, Department of Philosophy
PhD, Yale University, 1982

Timothy G. High, Associate Professor, Department of Art and Art History
MFA, University of Wisconsin-Madison, 1976
John C. Higley, Jack S. Blanton, Sr. Chair in Australian Studies, James Voss-Texas Instruments Regents Professorship in Australian Studies, Caltech Professorship in Australian Studies, Professor, Department of Government, Department of Sociology
PhD, University of Connecticut, 1968

Martha F. Hilley, Professor, School of Music
BM, Sam Houston State University, 1967; MA, Sam Houston State University, 1971

David M. Hillis, Alfred W. Roark Centennial Professorship in Natural Sciences, Professor, Section of Integrative Biology
MA, University of Kansas Main Campus, 1983; PhD, University of Kansas Main Campus, 1985

Michael C. Hillmann, Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies
PhD, University of Chicago, 1974

Heather Hindman, Assistant Professor, Department of Asian Studies
BA, Reed College, 1993; MA, University of Chicago, 1995; PhD, University of Chicago, 2003

R. Roland Hinojassmith, Ellen Clayton Carowood Centennial Professorship in Creative Writing #1, Professor, Department of English, Department of Spanish and Portuguese
PhD, University of Illinois at Urbana-Champaign, 1969

Lars Hinrichs, Assistant Professor, Department of English
MA, Albert Ludwig University Freiburg im Breisgau, 2001; PhD, Albert Ludwig University Freiburg im Breisgau, 2006

D. E. Hirst, The John Arch White Professorship in Business, Associate Dean, Graduate School of Business, Professor, Department of Accounting
PhD, University of Minnesota-Twin Cities, 1992

Paul S. Ho, Cockrell Family Regents Chair in Engineering #5, Professor, Department of Mechanical Engineering
PhD, Rensselaer Polytechnic Institute, 1965

Neville Hoad, Associate Professor, Center for Women’s and Gender Studies, Department of English
BA, University of the Witwatersrand, 1987; MA, University of the Witwatersrand, 1991; MA, Columbia University in the City of New York, 1992; MPhil, Columbia University in the City of New York, 1995; PhD, Columbia University in the City of New York, 1998

John M. Hoberman, Professor, Department of Germanic Studies
PhD, University of California Berkeley, 1975

Herbert I. Hochberg, Professor, Department of Philosophy
BA, Wayne State, 1950; MA, 1951; PhD, Iowa, 1954

Ben R. Hodges, Associate Professor, Department of Civil, Architectural and Environmental Engineering
BS, United States Merchant Marine Academy, 1984; MS, George Washington University, 1991; PhD, Stanford University, 1997

Justin D. Hodgson, Assistant Professor, Department of Rhetoric & Writing, Department of English
BA, Illinois College, 2003; MA, Southern Illinois University Edwardsville, 2005; PhD, Clemson University, 2009

Steven D. Hoelscher, Professor, Department of American Studies, Department of Geography and the Environment
BA, Gustavus Adolphus College, 1986; MA, University of Toronto, 1989; PhD, University of Wisconsin-Madison, 1995

David W. Hoffman, Associate Professor, Department of Chemistry and Biochemistry
PhD, Duke University, 1986

James V. Hoffman, Professor, Department of Curriculum and Instruction, College of Education
PhD, University of Missouri-Kansas City, 1977

Gerald W. Hofmann, Professor, Department of Physics
PhD, University of California-Los Angeles, 1971

Johann Hofmann, Associate Professor, Section of Integrative Biology
MS, University of Tubingen, Germany, 1993; PhD, Universitat Leipzig, 1997

Carole K. Holahan, Professor, Department of Psychology, Department of Kinesiology and Health Education
BS, Duquesne University, 1967; MEd, University of Massachusetts, 1971; PhD, University of Texas at Austin, 1976

Charles J. Holahan, Professor, Department of Psychology
PhD, University of Massachusetts, 1971

James A. Holcombe, Professor, Department of Chemistry and Biochemistry
MS, University of Michigan-Ann Arbor, 1972; PhD, University of Michigan-Ann Arbor, 1974

Joan A. Holladay, Professor, Department of Art and Art History
PhD, Brown University, 1982

Lori K. Holleran, Assistant Dean, School of Social Work, Associate Professor, School of Social Work
BA, Duke University, 1987; MSW, University of Pennsylvania, 1989; PhD, Arizona State University Main, 2000

Michael Holleran, Associate Professor, School of Architecture
AB, Brown University, 1979; MCityP, Massachusetts Institute of Technology, 1985; PhD, Massachusetts Institute of Technology, 1991

Bradley J. Holliday, Assistant Professor, Department of Chemistry and Biochemistry
BS, Allegheny College, 1997; MS, Northwestern University, 1998; PhD, Northwestern University, 2003

Vance R. Holloway, Associate Professor, Department of Spanish and Portuguese
BA, University of California Berkeley, 1975; PhD, University of California-Berkeley, 1990

Jennifer J. Holme, Assistant Professor, Department of Educational Administration
BA, University of California-Los Angeles, 1993; MED, Harvard University, 1995; PhD, University of California-Los Angeles, 2000

Gloria J. Holt, Perry R. Bass Chair in Fisheries and Mariculture, Professor, Department of Marine Science, Associate Director, Marine Science Institute
PhD, Texas A & M University, 1976

John W. Holt, Research Scientist, Institute for Geophysics
BS, Rice University, 1988; MS, California Institute of Technology, 1993; PhD, California Institute of Technology, 1997

Adam Holzman, Parker C. Fielder Regents Professorship in Music, Professor, School of Music
MM, Florida State University, 1984

Dorothee Honhon, Assistant Professor, Department of Information, Risk, and Operations Management
BA, State University of Liege, 1998; MA, State University of Liege, 2000; PhD, New York University, 2006

Juliet A. Hooker, Associate Professor, Department of Government, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, Williams College, 1994; MA, Cornell University, 1998; PhD, Cornell University, 2001

Antony C. Hopkins, Walter Prescott Webb Chair in History, Professor, Department of History
BA, University of London, 1960; PhD, University of London, 1964

Deborah A. Horan, Assistant Professor, Department of Curriculum and Instruction
BA, University of Colorado at Denver, 1986; MA, University of Colorado at Denver, 1997; PhD, Boston College, 2007

Sharon D. Horner, Lee and Joseph D. Jamail Endowed Professorship in Nursing, Professor, School of Nursing
PhD, Medical College of Georgia, 1992

Brian K. Horton, Associate Professor, Department of Geological Sciences, Institute for Geophysics
BS, University of New Mexico Main Campus, 1992; MS, Montana State University-Bozeman, 1994; PhD, University of Arizona, 1998
Elaine K. Horwitz, Professor, Department of Curriculum and Instruction
MA, University of Illinois at Urbana-Champaign, 1975; PhD, University of Illinois at Urbana-Champaign, 1980

Donald W. Howard, Assistant Professor, Department of Radio Television Film
BA, Baylor University, 1979; MA, University of Texas at Austin, 1988

John R. Howell, Professor, Department of Mechanical Engineering, Professor Emeritus, Department of Mechanical Engineering
BS, Case Western Reserve University, 1958; MS, Case Western Reserve University, 1960; PhD, Case Western Reserve University, 1962

Wayne D. Hoyer, James L. Bayless/W. S. Farish Fund Chair for Free Enterprise, Professor, Department of Marketing Administration, Department Chair, Department of Marketing Administration
BA, Purdue University Main Campus, 1976; MS, Purdue University Main Campus, 1979; PhD, Purdue University Main Campus, 1980

Madeline Y. Hsu, Associate Professor, Center for Asian American Studies, Director, Academic Program, Center for Asian American Studies, Department of History
BA, Pomona College, 1989; MA, Yale University, 1991; PhD, Yale University, 1996

Henry T. Hu, Allan Shivers Chair in the Law of Banking and Finance, Professor, School of Law
BS, Yale University, 1975; MA, Yale University, 1976; JD, Yale University, 1979

Jennifer Huang, Associate Professor, Department of Finance
BA, University of Science and Technology of China, 1992; MS, Massachusetts Institute of Technology, 1995; PhD, Massachusetts Institute of Technology, 2003

Rui Huang, Associate Professor, Department of Aerospace Engineering and Engineering Mechanics
BS, University of Science and Technology of China, 1994; MS, University of Science and Technology of China, 1996; MA, Princeton University, 1998; PhD, Princeton University, 2001

Teresa Hubbard, Associate Professor, Department of Art and Art History
BFA, University of Texas at Austin, 1988; MFA, Nova Scotia College of Art and Design, 1992

Thomas K. Hubbard, Professor, Department of Classics
PhD, Yale University, 1980

Paul F. Hudson, Associate Professor, Department of Geography and the Environment
PhD, Louisiana State University and Agricultural and Mechanical College, 1998

John Huehnergard, Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies
BA, Wilfrid Laurier University, 1974; PhD, Harvard University, 1979

Joan Hughes, Associate Professor, Department of Curriculum and Instruction
BA, Pomona College, 1992; PhD, Michigan State University, East Lansing, 2000

Patrick Hughes, Associate Professor, School of Music
BA, Saint Olaf College, 1984; DMA, University of Iowa; MMus, University of Wisconsin-Madison, 1988

Thomas J. Hughes, CAM Chair III, Professor, Institute for Computational Engineering and Science, Department of Aerospace Engineering and Engineering Mechanics
BE, Pratt Institute, 1965; ME, Pratt Institute, 1967; MS, University of California-Berkeley, 1974; PhD, University of California-Berkeley, 1974

Jon M. Hulbregtse, Professor, Molecular Genetics and Microbiology
BS, University of Michigan-Ann Arbor, 1983; PhD, University of Michigan-Ann Arbor, 1989

Alexander C. Huk, Associate Professor, Section of Neurobiology, Department of Psychology
BA, Swarthmore College, 1996; PhD, Stanford University, 2001

David G. Hull, M. J. Thompson Regents Professorship in Aerospace Engineering and Engineering Mechanics, Professor, Department of Aerospace Engineering and Engineering Mechanics
PhD, Rice University, 1967

Robert A. Hummer, Centennial Commission Professorship in the Liberal Arts #1, Professor, Department of Sociology
MS, Florida State University, 1990; PhD, Florida State University, 1993

Simon M. Humphrey, Assistant Professor, Department of Chemistry and Biochemistry
MChem, University of East Anglia, 2002; PhD, University of Cambridge, 2006

Todd E. Humphreys, Assistant Professor, Department of Aerospace Engineering and Engineering Mechanics, Applied Research Laboratories
BS, Utah State University, 2000; MS, Utah State University, 2003; PhD, Cornell University, 2008

Bruce J. Hunt, Associate Professor, Department of History
PhD, Johns Hopkins University, 1984

Thomas M. Hunt, Assistant Professor, Department of Kinesiology and Health Education
BA, University of Texas at Austin, 2000; JD, Baylor University, 2003; PhD, University of Texas at Austin, 2007

Warren A. Hunt Jr., Professor, Department of Computer Science
BS, Rice University, 1980; PhD, University of Texas at Austin, 1985

Wendy A. Hunter, Associate Professor, Department of Government
BA, Cornell University, 1982; MA, University of California-Berkeley, 1985; PhD, University of California-Berkeley, 1992

Enamul Huq, Associate Professor, Section of Molecular Cell and Developmental Biology
BS, University of Dhaka, 1987; MS, University of Dhaka, 1988; PhD, Purdue University Main Campus, 1997

William J. Hurst, Assistant Professor, Department of Government
AB, University of Chicago, 1998; AM, University of Chicago, 1998; PhD, University of California-Berkeley, 2005

Stephen D. Hursting, Margaret McKeen Love Chair in Nutrition, Cellular and Molecular Sciences, Professor, College of Pharmacy, Department Chair, Department of Nutritional Sciences
BA, Earlham College and Earlham School of Religion, 1980; MS, University of North Carolina at Chapel Hill, 1984; PhD, University of North Carolina at Chapel Hill, 1992

Aletha C. Huston, Priscilla Pond Flawn Regents Professorship in Child Development, Professor, Human Dev & Family Sci, Department of Psychology
PhD, University of Minnesota-Twin Cities, 1996

Ted L. Huston, Amy Johnson McLaughlin Centennial Professorship in Home Economics, Professor, Department of Psychology, Human Dev & Family Sci
PhD, State University of New York at Albany, 1972

Robert L. Hutchings, Dean, Lyndon B Johnson School of Public Affairs, Professor, Lyndon B Johnson School of Public Affairs
BS, United States Naval Academy, 1968; MA, College of William and Mary, 1975; PhD, University of Virginia, 1979

Coleman Hutchison, Assistant Professor, Department of English
BS, Vanderbilt University, 1999; MA, Northwestern University, 2002; PhD, Northwestern University, 2006

Gyong S. Hwang, Associate Professor, Department of Chemical Engineering
BS, Seoul National University, 1991; MS, Seoul National University, 1993; MS, California Institute of Technology, 1998; PhD, California Institute of Technology, 1999

Syed A. Hyder, Associate Professor, Department of Asian Studies, Center for Middle Eastern Studies
BA, Texas A & M University, 1992; MA, University of Texas at Austin, 1994; PhD, Harvard University, 2000
Eun-Ok Im. LA Quinta Motor Inns, Inc. Centennial Professorship in Nursing, Professor, School of Nursing, Center for Women’s and Gender Studies
BSN, Seoul National University, 1989; MPH, Seoul National University, 1993; MSN, University of California-San Francisco, 1995; PhD, University of California-San Francisco, 1997

Barbara F. Immroth, Professor, School of Information
PhD, University of Pittsburgh, Pittsburgh Campus, 1980

William Inboden, Assistant Professor, Lyndon B Johnson School of Public Affairs
AB, Stanford University, 1994; MA, Yale University, 2001; PhD, Yale University, 2003

Bobby R. Inman, Lyndon B. Johnson Centennial Chair in National Policy, Professor, Lyndon B Johnson School of Public Affairs
BA, University of Texas at Austin, 1950

Julie R. Irwin, Professor, Department of Marketing Administration
PhD, University of Colorado at Boulder, 1992

Richard M. Isaacs, Joanne Sharp Crosby Regents Chair in Design and Technology, Professor, Department of Theatre and Dance
MFA, Carnegie Mellon University, 1975

Brent L. Iverson, Warren J. and Viola Mae Rayner Professorship, Professor, Department of Chemistry and Biochemistry
PhD, California Institute of Technology, 1988

John L. Ivy, Teresa Lozano Long Endowed Chair in Kinesiology and Health Education, Professor, Department of Kinesiology and Health Education, College of Pharmacy, Department Chair, Department of Kinesiology and Health Education
MA, University of Maryland College Park, 1974; PhD, University of Maryland College Park, 1976

Vishwanath R. Iyer, Associate Professor, Molecular Genetics and Microbiology
BS, University of Mumbai, 1987; MS, The Maharaja Sayajirao University of Baroda, 1989; PhD, Harvard University, 1996

Christopher J. Jablonowski, Assistant Professor, Department of Petroleum and Geosystems Engineering
BS, Virginia Polytechnic Institute University, 1991; MS, Tulane University, 1996; PhD, Penn State University, 2002

Martin P. Jackson, Senior Research Scientist, Beg-Pi-Kipper
GB, Harvard University, 1997

Gary J. Jacobsboh, H. Malcolm Macdonald Chair in Constitutional and Comparative Law, Professor, Department of Government
BA, City University of New York The City College, 1967; MA, Cornell University, 1971; PhD, Cornell University, 1972

Deborah B. Jacobowitz, Department Chair, Human Dev & Family Sci, Professor, Human Dev & Family Sci
PhD, University of Minnesota-Twin Cities, 1987

Daniel T. Jaffe, Professor, Department of Astronomy
PhD, Harvard University, 1981

Robert K. Jansen, Sidney F. and Doris Blake Centennial Professorship in Systematic Botany and the Blake Collection, Department Chair, Section of Integrative Biology, Professor, Section of Integrative Biology
PhD, Ohio State U Main Campus, 1982

Xavier Janson, Research Scientist, Beg-Pi-Kipper, Lecturer, Department of Geological Sciences
MS, Ecole Nationale d’Administration, 1997; PhD, University of Miami, 2002

Sirkka L. Jarvenpaa, James L. Bayless/Rauscher Pierce Refines, Inc. Chair in Business Administration, Professor, Department of Information, Risk, and Operations Management
MBA, University of Minnesota-Twin Cities, 1982; PhD, University of Minnesota-Twin Cities, 1986

Makkuni Jayaram, Professor, Molecular Genetics and Microbiology
PhD, Indian Institute of Science, 1977

Judith A. Jellison, Mary D. Bold Regents Professorship of Music, Professor, School of Music
PhD, Florida State University, 1972

David B. Jensen, Foster Parker Centennial Professorship of Finance and Management, Professor, Department of Management
PhD, University of Washington - Seattle, 1978

Coleman A. Jennings, Jesse H. Jones Regents Professorship in Fine Arts, Professor, Department of Theatre and Dance
EdD, New York University, 1974

Ross G. Jennings, Professor, Department of Accounting
PhD, University of California-Berkeley, 1987

Jody Jensen, Professor, Department of Kinesiology and Health Education, Department of Psychology
BA, Drake University, 1973; MS, University of Massachusetts, 1978; PhD, University of Maryland College Park, 1989

Kristin Wolfe Jensen, Professor, School of Music
MM, The Juilliard School, 1991

Robert W. Jensen, Professor, School of Journalism, Center for Women’s and Gender Studies
BS, Minnesota State University Moorhead, 1981; MA, American University, 1985; PhD, University of Minnesota-Twin Cities, 1992

Stephen A. Jessee, Assistant Professor, Department of Government
BA, University of Texas at Austin, 2002; BS, University of Texas at Austin, 2002; PhD, Stanford University, 2007

Su-Hyun Jin, Assistant Professor, Department of Communication Sciences and Disorders
BS, Ewha Women’s University, 1991; MA, University of Minnesota-Twin Cities, 2001; PhD, University of Minnesota-Twin Cities, 2003

Derek P. Jinks, The Marrs McLean Professorship in Law, Professor, School of Law
BA, University of Texas at Austin, 1991; MA, Yale University, 1998; JD, Yale University, 1998

James O. Jirsa, Janet S. Cockrell Centennial Chair in Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, University of Illinois at Urbana-Champaign, 1963

Shardha Jogee, Associate Professor, Department of Astronomy
BA, University of Cambridge, 1992; MPhil, Yale University, 1994; MS, Yale University, 1994; MA, University of Cambridge, 1995; PhD, Yale University, 1999

Stanley M. Johanson, James A. Elkins Centennial Chair in Law, Professor, School of Law
BA, Yale University, 1955; LLB, University of Washington - Seattle, 1958; LLM, Harvard University, 1963

Lizy K. John, B. N. Gafford Professorship in Electrical Engineering, Professor, Department of Electrical & Computer Engineering
PhD, Pennsylvania State University, Main Campus, 1993

Arlen W. Johnson, Professor, Molecular Genetics and Microbiology
PhD, Harvard University, 1988

Calvin H. Johnson, Andrews & Kurth Centennial Professorship in Law, Professor, School of Law
BA, Columbia University in the City of New York, 1966; JD, Stanford University, 1971

Joel Peterson Johnson, Assistant Professor, Department of Geological Sciences
BS, Massachusetts Institute of Technology, 1997; PhD, Massachusetts Institute of Technology, 2007

Kenneth Johnson, Roger J. Williams Centennial Professorship in Biochemistry, Professor, Department of Chemistry and Biochemistry
PhD, University of Wisconsin-Madison, 1975

Michael Johnson, Assistant Professor, Department of French and Italian
BA, The American University in Paris, 1998; PhD, Emory University, 2005

Regina Johnson, Associate Professor, School of Nursing
LVN, Dallas Vocational Nursing, 1970; ADN, Valencia Community College, 1982; BSN, University of Texas at Arlington, 1991; MSN, University of Texas at Arlington, 1995; DPH, University of Texas Health Science Center at Houston, 2002
Thomas Jerrold Johnson, Amon G. Carter, Jr.
Centennial Professorship in Communication, Professor, School of Journalism
BS, California Polytechnic State University-San Luis Obispo, 1982; MS, Iowa State University, 1985; PhD, University of Washington, 1974

Daniel Johnston, Karl Folkers Chair in Interdisciplinary Biomedical Research, Professor, Section of Neurobiology, Director, Institute for Neuroscience
BS, University of Virginia, 1970; PhD, Duke University, 1974

Keith P. Johnston, M. C. (Bud) and Mary Beth Baird Endowed Chair, Professor, Department of Chemical Engineering
PhD, University of Illinois at Urbana-Champaign, 1981

Christopher A. Jolly, Associate Professor, Department of Nutritional Sciences
AA, Blinn College, 1990; BS, Texas A & M University, 1992; PhD, Texas A & M University, 1996

Barbara L. Jones, Associate Professor, Center for Women’s and Gender Studies, School of Social Work
BA, State University of New York at Albany, 1989; MSW, State University of New York at Albany, 1993; PhD, State University of New York at Albany, 2004

Bryan D. Jones, J. J. “Jake” Pickle Regents Chair in Congressional Studies, Professor, Department of Government, Lyndon B Johnson School of Public Affairs
BA, The University of Alabama, 1966; PhD, University of Texas at Austin, 1970

Jacqueline Jones, Walter Prescott Webb Chair in History and Ideas, Mastin Gentry White Professorship in Southern History, Professor, Department of History
BA, University of Delaware, 1970; MA, University of Wisconsin-Madison, 1972; PhD, University of Wisconsin-Madison, 1976

Meta D. Jones, Assistant Professor, Department of English, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, Princeton University, 1995; MA, Stanford University, 1996; PhD, Stanford University, 2001

Omi OsonJoni L. Jones, Director, Academic Program, Center for African and African American Studies, Associate Professor, Center for African and African American Studies, Department of African and African Diaspora Studies
BS, MacMurray College, 1977; MA, Northwestern University, 1978; PhD, New York University, 1993

Richard A. Jones, Professor, Department of Chemistry and Biochemistry
PhD, University of London, 1978

Terry L. Jones, Assistant Professor, School of Nursing
BSN, Marycrest College, 1985; MSN, Texas Woman's University, 1990; PhD, University of Texas at Austin, 2004

Theresa A. Jones, Professor, Department of Psychology
BA, University of Texas at Austin, 1987; PhD, University of Texas at Austin, 1992

Richard M. Jordan, Associate Professor, Department of Art and Art History
MFA, Syracuse University Main Campus, 1964

Robert A. Josephs, Professor, Department of Psychology
PhD, University of Michigan-Ann Arbor, 1990

Esbelt M. Jowers, Research Associate, Khei-Phu Bartholomew, Lecturer, Department of Kinesiology and Health Education
PhD, University of Texas at Austin, 1999

Maria G. Juenger, Associate Professor, Department of Civil, Architectural and Environmental Engineering
BS, Duke University, 1994; BA, Duke University, 1994; PhD, Northwestern University, 1999

Thomas E. Juenger, Associate Professor, Section of Integrative Biology
BS, University of Illinois at Urbana-Champaign, 1991; PhD, University of Chicago, 1999

Cory F. Juhl, Professor, Department of Philosophy, Department Chair, Department of Philosophy
PhD, University of Pittsburgh, Pittsburgh Campus, 1992

Christine L. Julian, Associate Professor, Department of Electrical & Computer Engineering
BS, Washington University in St Louis, 2000; MS, Washington University in St Louis, 2003; DSc, Washington University in St Louis, 2004

Jerry F. Junkin, Director, School of Music, Professor, School of Music
BM, University of Texas at Austin, 1978; MMus, University of Texas at Austin, 1979

David Justin, Professor, Department of Theatre and Dance
MA, University of Birmingham, 2000

Manuel J. Justiz, Lee Hage Jamalil Regents Chair in Education, Dean, College of Education, Professor, Department of Educational Administration
PhD, Southern Illinois University Carbondale, 1977

Steven J. Kachelmeier, Randal B. McDonald Chair in Accounting, Professor, Department of Accounting
PhD, University of Florida, 1988

Michael S. Kackman, Assistant Professor, Department of Radio Television Film
BA, Emerson College, 1994; MA, University of Wisconsin-Madison, 1995; PhD, University of Wisconsin-Madison, 2000

Emily E. Kadens, Baker and Botts Professorship in Law, Professor, School of Law
BA, University of Chicago, 1992; MA, University of Chicago, 1993; Diploma (Foreign), Universite Catholique de Louvain, 1995; MA, Princeton University, 1997; PhD, Princeton University, 2001; JD, University of Chicago, 2004

Leeann Kahlor, Associate Professor, Department of Advertising, Center for Women’s and Gender Studies
BA, University of Wisconsin-Madison, 1991; MA, Marquette University, 1995; PhD, University of Wisconsin-Madison, 2003

Terry D. Kahn, David Bruton, Jr. Centennial Professorship in Urban Design, Associate Dean, Office of Graduate Studies, Professor, School of Architecture
PhD, University of California-Berkeley, 1970

Loukas F. Kallivokas, Associate Professor, Department of Civil, Architectural and Environmental Engineering
PhD, Carnegie Mellon University, 1995

Klaus O. Kalthoff, Professor, Section of Molecular Cell and Developmental Biology
PhD, Albert Ludwig University Freiburg im Breisgau, 1971

Marilynn C. Kameen, M. K. Hage Centennial Professorship in Education, Associate Dean, College of Education, Professor, Department of Educational Administration, College of Education EdD, University of Virginia (Old Code), 1974

Neil D. Kamil, Associate Professor, Department of History
PhD, Johns Hopkins University, 1989

Robert H. Kane, Professor, Department of Philosophy, School of Law, Professor Emeritus, Department of Philosophy, School of Law
PhD, Yale University, 1964

Vadim Kaplunovsky, Professor, Department of Physics
PhD, Tel Aviv University, 1984

John W. Kappelman Jr., Professor, Department of Anthropology
PhD, Harvard University, 1987; PhD, Harvard University, 1987

Ethan B. Kapstein, Dennis O’Connor Regents Professorship in Business, Professor, Lyndon B Johnson School of Public Affairs, Department of Information, Risk, and Operations Management
AB, Brown University, 1976; MA, University of Toronto, 1977; PhD, Tufts University, 1986

Janet E. Kastner, Associate Professor, Department of Art and Art History
BA, Kansas City Art Institute, 1977; MFA, Alfred, 1979

Lynn E. Katz, Bettie Margaret Smith Professorship in Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
MS, University of Michigan-Ann Arbor, 1984; MS, University of Michigan-Ann Arbor, 1990; PhD, University of Michigan-Ann Arbor, 1993
Ernest N. Kaulbach, Professor, Department of English
PhD, Cornell University, 1970

Mary C. Kearney, Associate Professor, Department of Radio Television Film, Center for Women’s and Gender Studies
BA, University of San Diego, 1984; MA, California State University, Hayward, 1995; PhD, University of California-San Francisco, 1999

Elizabeth E. Keating, Professor, Department of Anthropology, Department of Linguistics
BA, University of California-Berkeley, 1988; MA, University of California-Los Angeles, 1990; PhD, University of California-Los Angeles, 1994

Xiaofen Keating, Associate Professor, Department of Curriculum and Instruction
BE, Beijing Sport University, 1984; ME, Beijing Sport University, 1987; PhD, University of Illinois at Urbana-Champaign, 2000

Adrian T. Keating-Clay, Assistant Professor, Department of Chemistry and Biochemistry
BS, Stanford University, 1999; BS, Stanford University, 1999; PhD, University of California-San Francisco, 2004

Stephen W. Keckler, Professor, Department of Computer Science, Department of Electrical & Computer Engineering
BS, Stanford University, 1990; MS, Massachusetts Institute of Technology, 1992; PhD, Massachusetts Institute of Technology, 1998

Sean M. Keel, Professor, Department of Mathematics
PhD, University of Chicago, 1989

Ward W. Keeler, Associate Professor, Department of Anthropology, Center for Women’s and Gender Studies
AB, Cornell University, 1970; MA, University of Chicago, 1977; PhD, University of Chicago, 1982

Timothy Z. Keith, Professor, Department of Educational Psychology
BA, University of North Carolina at Chapel Hill, 1974; MA, East Carolina University, 1978; PhD, Duke University, 1982

Timothy H. Keitt, Associate Professor, Section of Integrative Biology
BA, University of Florida, 1987; MS, University of Florida, 1992; PhD, University of New Mexico Main Campus, 1995

Stuart D. Kelban, Associate Professor, Department of Radio Television Film
BA, Harvard University, 1986; MFA, University of Virginia, 1989

William R. Kelly, Professor, Department of Sociology
BA, Indiana University at Bloomington, 1974; MA, Indiana University at Bloomington, 1977; PhD, Indiana University at Bloomington, 1979

Orlando R. Kelm, Associate Professor, Department of Spanish and Portuguese, Department of Marketing Administration
BA, Brigham Young University, 1983; MA, Brigham Young University, 1985; PhD, University of California-Berkeley, 1989

David A. Kendrick, Ralph W. Yarborough Centennial Professorship of Liberal Arts, Professor, Department of Economics
PhD, Massachusetts Institute of Technology, 1999

Charles Kerans, Professor, Department of Geological Sciences, Bureau of Economic Geology
BS, St Lawrence University, 1977; PhD, Carleton University, 1982

Sean M. Kerwin, Associate Professor, College of Pharmacy
PhD, University of California-Berkeley, 1989

Richard A. Ketcham, Associate Professor, Department of Geological Sciences
BA, Williams College, 1987; PhD, University of Texas at Austin, 1995

John W. Keto, Professor, Department of Physics
PhD, University of Wisconsin-Madison, 1972

Martin W. Kevorkian, Associate Professor, Department of English
BS, Stanford University, 1990; MA, Stanford University, 1995; PhD, University of California-Los Angeles, 2000

Romana Khan, Assistant Professor, Department of Marketing Administration
BA, Swarthmore College, 1994; MS, Iowa State University, 1997; PhD, Northwestern University, 2004

Sarfaraz Khurshid, Associate Professor, Department of Electrical & Computer Engineering
BS, Imperial College London, 1993; MS, Massachusetts Institute of Technology, 1999; PhD, Massachusetts Institute of Technology, 2000

Miryung Kim, Assistant Professor, Department of Electrical & Computer Engineering
BS, Seoul National University, 1999; MS, Korea Advanced Institute of Science and Technology, 2002; PhD, University of California-Berkeley, 2004

Su Yeong Kim, Assistant Professor, Center for Women’s and Gender Studies, Human Dev & Family Sci
BA, University of Southern California, 1995; BS, University of Southern California, 1995; PhD, University of California-Davis, 2003

Wonuck Kim, Assistant Professor, Department of Geosciences
BS, Yonsei University, 1998; MS, Yonsei University, 2000; PhD, University of Minnesota-Twin Cities, 2007

Sara E. Kimball, Associate Professor, Department of English
PhD, University of Pennsylvania, 1983

Robert D. King, Audrey and Bernard Rapoport Regents Chair of Jewish Studies, Other University Affiliate, Schusterman Center, Professor Emeritus, Department of Linguistics
MA, University of Wisconsin-Madison, 1962; PhD, University of Wisconsin-Madison, 1965

Spyridon A. Kinnas, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, Massachusetts Institute of Technology, 1985

Kerry A. Kinney, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, University of California-Davis, 1996

William R. Kinney Jr., Charles and Elizabeth Prothro Regents Chair in Business, Professor, Department of Accounting
PhD, Michigan State University, East Lansing, 1968

Eileen K. Kintner, Associate Professor, School of Nursing
BSN, Northern Michigan University, 1979; PhD, University of Arizona, 1996

Mary Jo Krisits, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
BS, State University of New York at Buffalo, 1995; MS, University of Illinois at Urbana-Champaign, 1997; PhD, University of Illinois at Urbana-Champaign, 2000

David S. Kirk, Assistant Professor, Department of Sociology
BA, Vanderbilt University, 1996; MA, University of Chicago, 2002; PhD, University of Chicago, 2006

Edward C. Kirk, Associate Professor, Department of Anthropology
BA, University of Texas at Austin, 1995; PhD, Duke University, 2003

Mark A. Kirkpatrick, T. S. Painter Centennial Professorship in Genetics, Professor, Section of Integrative Biology
PhD, University of Washington - Seattle, 1983

Karol A. Kitt, Associate Professor, Human Dev & Family Sci
PhD, Purdue University Main Campus, 1978

George B. Kitto, Professor, Department of Chemistry and Biochemistry
PhD, Brandeis University, 1966

Dale E. Klein, Professor, Department of Mechanical Engineering, Mechanic/Technician, Division of Housing & Food Service, Associate Director, Energy Institute
PhD, University of Missouri - Columbia, 1977

Susan R. Klein, Alice McKeen Young Regents Chair in Law, Professor, School of Law
BA, Wellesley College, 1984; JD, University of California-Berkeley, 1989
Nancy P. Kwallek, Gene Edward Mikska Endowed Chair for Interior Design, Professor, School of Architecture
PhD, Purdue University Main Campus, 1978

Alexis Kwansinski, Assistant Professor, Department of Electrical & Computer Engineering
BS, Buenos Aires Institute of Technology, 1993; MS, University of Illinois at Urbana-Champaign, 2005; PhD, University of Illinois at Urbana-Champaign, 2007

J. Richard Kyle, The Third Mr. and Mrs. Charles E. Yager Professorship, Professor, Department of Geological Sciences, Bureau of Economic Geology
PhD, University of Western Ontario, 1977

Stelios Kyriakides, Cockrell Family Chair in Engineering No. 10, Professor, Department of Aerospace Engineering and Engineering Mechanics
PhD, California Institute of Technology, 1980

John W. La Claire II, Professor, Section of Molecular Cell and Developmental Biology
PhD, University of California-Berkeley, 1979

John H. Lacy, Professor, Department of Astronomy
PhD, University of California-Berkeley, 1979

François P. Lagarde, Associate Professor, Department of French and Italian
PhD, Stanford University, 1985

Jeanne M. Lagowski, Professor, Section of Neurobiology, Professor Emeritus, Section of Neurobiology
PhD, University of Michigan-Ann Arbor, 1957

Guoming Lai, Assistant Professor, Department of Information, Risk, and Operations Management
BS, Tsinghua University, 2000; MS, Tsinghua University, 2003; MS, Carnegie Mellon University, 2005; PhD, Carnegie Mellon University, 2009

Larry W. Lake, W. A. “Monty” Moncrief Centennial Chair in Petroleum Engineering, Professor, Department of Petroleum and Geosystems Engineering
PhD, Rice University, 1973

Simon S. Lam, Regents Chair in Computer Sciences #1, Professor, Department of Computer Science, Department of Electrical & Computer Engineering
BS, Washington State University, 1969; MS, University of California-Los Angeles, 1970; PhD, University of California-Los Angeles, 1974

Yui-Wing F. Lam, Clinical Associate Professor, College of Pharmacy
BS, University of Minnesota-Twin Cities, 1983; PharmD, University of Minnesota-Twin Cities, 1984

David L. Lambert, Isabel McCutcheon Harte Centennial Chair in Astronomy, Director, McDonald Observatory, Professor, Department of Astronomy
DPhil, University of Oxford, 1995

Alan Lambowitz, Mr. and Mrs. A. Frank Smith, Jr. Regents Chair in Molecular Biology, Nancy Lee and Perry R. Bass Regents Chair in Molecular Biology, Professor, Department of Chemistry and Biochemistry, Molecular Genetics and Microbiology, Director, Institute for Cellular and Molecular Biology
PhD, Yale University, 1972

Chad M. Landis, Associate Professor, Department of Aerospace Engineering and Engineering Mechanics
BSME, University of Pennsylvania, 1994; BS, University of Pennsylvania, 1994; MS, University of California-Santa Barbara, 1997; PhD, University of California-Santa Barbara, 1999

Sheldon Landsberger, Hayden Head Centennial Professorship, Professor, Department of Mechanical Engineering, Applied Research Laboratories
PhD, University of Toronto, 1982

Karol Lang, Professor, Department of Physics
PhD, University of Rochester, 1985

Judith H. Langlois, Charles and Sarah Seay Regents Professorship in Developmental Psychology, Vice Provost, Executive Vice President & Provost, Professor, Department of Psychology, Human Dev & Family Sci
BA, Louisiana State University and Agricultural and Mechanical College, 1969; MA, Louisiana State University and Agricultural and Mechanical College, 1971; PhD, Louisiana State University and Agricultural and Mechanical College, 1973

Fernando Luiz Lara, Assistant Professor, School of Architecture
BArch, Universidade Federal de Minas Gerais, 1993; MA, Universidade Federal de Minas Gerais, 1996; MS, University of Michigan-Ann Arbor, 1998; PhD, University of Michigan-Ann Arbor, 2001

James L. Latin, PhD, Duke, 1958

Peter N. Lasalle, Susan Taylor McDaniel Regents Professorship in Creative Writing #2, Professor, Department of English
MA, University of Chicago, 1972

Leon S. Lasdon, David Brurton, Jr. Centennial Chair in Business Decision Support Systems, Professor, Department of Information, Risk, and Operations Management
MSEE, Case Western Reserve University, 1964; PhD, Case Western Reserve University, 1964

Dominic L. Lasorsa, Associate Professor, School of Journalism
PhD, Stanford University, 1986

John C. Lassiter, Associate Professor, Department of Geological Sciences
BA, Brown University, 1989; PhD, University of California-Berkeley, 1995

Edgardo M. Latrubesse, Associate Professor, Department of Geography and the Environment
BSc, National University of San Luis, 1989; PhD, National University of San Luis, 1992

Stephen E. Laubach, Senior Research Scientist, Beg-Pi-Kipper

David A. Laude, Associate Dean, DNS Undergraduate Education, Professor, Department of Chemistry and Biochemistry
PhD, University of California-Riverside, 1984

Michael L. Lauderdale, Clara Pope Willoughby Centennial Professorship in Criminal Justice, Professor, School of Social Work
PhD, University of Oklahoma Norman Campus, 1967

Jennifer E. Laurin, Assistant Professor, School of Law
BA, Earlham College and Earlham School of Religion, 1999; JD, Columbia University in the City of New York, 2003

Volker Laux, Assistant Professor, Department of Accounting
Diploma (Foreign), Johann Wolfgang Goethe University, 1999; PhD, Johann Wolfgang Goethe University, 2003

Luc L. Lavier, Assistant Professor, Department of Geological Sciences, Institute for Geophysics
BA, Universite de Franche-Comte, Besancon, 1990; MSc, Universite Montpellier I, 1991; MA, Columbia University in the City of New York, 1996; MPhil, Columbia University in the City of New York, 1998, PhD, Columbia University in the City of New York, 1999

Desmond F. Lawler, Nasser I. Al-Rashid Chair in Civil Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
MS, University of North Carolina at Chapel Hill, 1975; PhD, University of North Carolina at Chapel Hill, 1980

Mark A. Lawrence, Associate Professor, Department of History
BA, Stanford University, 1988; MA, Stanford University, 1989; MA, Yale University, 1994; PhD, Yale University, 1998

Kenneth A. Lawson, Associate Professor, College of Pharmacy
BSPhr, University of Texas at Austin, 1975; MSPhr, University of Texas at Austin, 1985; PhD, University of Texas at Austin, 1992

Joan Lazarus, Associate Professor, Department of Theatre and Dance
MFA, Arizona State University Main, 1982

David L. Leal, Associate Professor, Department of Government, Center for Mexican American Studies
BA, Stanford University, 1990; MA, Harvard University, 1995; PhD, Stanford University, 1998

Matthew A. Lease, Assistant Professor, School of Information, Department of Computer Science
BS, University of Washington - Seattle, 1999; MS, Brown University, 2004; PhD, Brown University, 2009

Gloria J. Lee, Associate Professor, Department of Art and Art History
MFA, Yale University, 1991
Hongju J. Lee, Assistant Professor, Department of Psychology
BS, State University of New York at Binghamton, 1997; MS, Yale University, 1999; MPH, Yale University, 2001; PhD, Yale University, 2002

Hyun-Hwa Lee, Assistant Professor, Department of Textiles and Apparel
BS, Inha University, 1995; MS, Inha University, 1997; PhD, Iowa State University, 2004

Jack C. Lee, Cullen Trust for Higher Education Endowed Professorship in Engineering #4, Professor, Department of Electrical & Computer Engineering
PhD, University of California-Berkeley, 1988

Julia Lee, Assistant Professor, Department of English
BA, Amherst College, 1995; MA, University of North Carolina at Chapel Hill, 1999; PhD, University of California-Los Angeles, 2005

Ming-Chun Lee, Assistant Professor, School of Architecture
BS, National Cheng Kung University, 1991; MS, National Cheng Kung University, 1993; M.Arch, University of Washington - Seattle, 2001; PhD, University of Washington - Seattle, 2008

Seongmin Lee, Assistant Professor, College of Pharmacy
BS, Seoul National University, 1992; MS, Seoul National University, 1994; PhD, Purdue University Main Campus, 2004

Wei-Na Lee, Professor, Department of Advertising
MS, University of Illinois at Urbana-Champaign, 1985; PhD, University of Illinois at Urbana-Champaign, 1988

Kristine H. Legare, Associate Professor, Department of Psychology
MA, University of Michigan-Ann Arbor, 2005; PhD, University of Michigan-Ann Arbor, 2008

Mathew A. Leibold, Harold C. and Mary D. Bold Regents Professorship of Cryptogamic Botany (Phycology), Professor, Section of Integrative Biology
BS, University of Arizona, 1980; MS, University of Arizona, 1981; PhD, Michigan State University, East Lansing, 1988

Fernanda L. Leite, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
B.Arch, Universidade Federal do Ceará, 2002; MCE, Federal University of Rio Grande do Sul, 2005; DPhil, Carnegie Mellon University, 2009

Janice Leoshko, Associate Professor, Department of Art and Art History, Department of Asian Studies
BA, Ohio State U Main Campus, 1975; MA, Ohio State U Main Campus, 1977; PhD, Ohio State U Main Campus, 1987

Steven W. Leslie, James E. Bauerle Centennial Professorship in Drug Dynamics, Executive Vice-President and Provost, Executive Vice President & Provost, Professor, College of Pharmacy
PhD, Purdue University Main Campus, 1974

Wayne Lesser, Associate Professor, Department of English, Extension Instructor, University Extension & O.,
PhD, University of Chicago, 1975

Lorraine Leu, Associate Professor, Department of Spanish and Portuguese
BA, King’s College, University of London, 1992; MA, University of London, 1995; PhD, King’s College, University of London, 2000

Brian P. Levack, John E. Green Regents Professorsship in History, Professor, Department of History
PhD, Yale University, 1969

Donald A. Levin, Professor, Section of Integrative Biology
PhD, University of Illinois at Urbana-Champaign, 1964

Philippa Judith Levine, Mary Helen Thompson Centennial Professorship in the Humanities, Professor, Department of History
BA, University of Cambridge, 1979; MA, University of Cambridge, 1983; PhD, University of Oxford, 1984

Sanford V. Levinson, W. St. John Garwood and Mary Helen Thompson Chairs in String Performance and Pedagogy, Professor, School of Music

Kyle Lewis, Associate Professor, Department of Management
PhD, University of Maryland College Park, 1999

Marc S. Lewis, Associate Professor, Department of Psychology
PhD, University of Cincinnati Main Campus, 1973

Randolph R. Lewis, Associate Professor, Department of American Studies, Department Chair, Department of American Studies
BA, University of Texas at Austin, 1988; MA, University of Texas at Austin, 1990; PhD, University of Texas at Austin, 1994

Rebecca J. Lewis, Assistant Professor, Department of Anthropology
BA, Duke University, 1994; BA, Duke University, 1994; PhD, Duke University, 2004

Richard M. Lewis, Associate Professor, Department of Radio Television Film
MFA, University of Texas at Austin, 1994

William L. Lewis, Frank C. Erwin, Jr. Centennial Professorship in Opera, Professor, School of Music
BM, Texas Christian University, 1967

Huaqin Li, Associate Professor, Department of Asian Studies, Department of History
BA, Soochow University, 1984; MA, Chinese Academy of Social Sciences, 1987; PhD, University of California-Los Angeles, 2000

Wei Li, Associate Professor, Department of Mechanical Engineering
BS, Tsinghua University, 1990; PhD, University of Michigan-Ann Arbor, 1999

Xiaoqin E. Li, Assistant Professor, Department of Physics
BA, Beijing University, 1997; MS, University of Michigan-Ann Arbor, 2002; PhD, University of Michigan-Ann Arbor, 2003

Taljana Lichtenstein, Assistant Professor, Department of History
BA, University of Copenhagen, 1997; MA, Brandeis University, 1999; MA, University of Copenhagen, 2000; PhD, University of Toronto, 2009

Harold A. Liebowitz, Professor, Center for Middle Eastern Studies and Department of Middle Eastern Studies
BA, Yeshiva, 1955; MA, New York, 1965; PhD, Pennsylvania, 1972

Kenneth M. Liechti, E. P. Schoch Professorship in Engineering, Professor, Department of Aerospace Engineering and Engineering Mechanics
PhD, California Institute of Technology, 1980

Nhi T. Lieu, Assistant Professor, Department of American Studies, Center for Asian American Studies, Center for Women’s and Gender Studies
BA, University of California-San Diego, 1995; BA, University of California-San Diego, 1995; MA, University of Michigan-Ann Arbor, 1997; PhD, University of Michigan-Ann Arbor, 2004

Vladimir Lifschitz, Professorship in Computer Science #2, Professor, Department of Philosophy, Department of Computer Science
PhD, Steklov Mathematical Institute, 1969

Glenn Lightsey, Professor, Department of Aerospace Engineering and Engineering Mechanics, Applied Research Laboratories
PhD, Stanford University, 1997

Howard M. Liljestrand, Gerard A. Rohlik Regents Professorship in Civil Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, California Institute of Technology, 1980

Sang-Hyun Lim, Assistant Professor, Department of Chemistry and Biochemistry
BS, Seoul National University, 1994; MS, Seoul National University, 1998; PhD, University of Illinois at Urbana-Champaign, 2003

Stephen T. Limberg, PricewaterhouseCoopers Centennial Professorship in Accounting, Professor, Department of Accounting, Director, Department of Accounting
PhD, Arizona State University Main, 1982
Jose E. Limon, Moody C. Boatsright Regents Professor in American and English Literature
BA, University of Texas at Austin, 1966;
MA, University of Texas at Austin, 1969;
PhD, University of Texas at Austin, 1978

Calvin Lin, Professor, Department of Computer Science
MS, University of Washington - Seattle, 1988; PhD, University of Washington - Seattle, 1992

Jung-Fu Lin, Assistant Professor, Department of Geological Sciences
BS, National Cheng Kung University, 1992;
MS, National Cheng Kung University, 1994;
PhD, University of Chicago, 2002

Tse-Min Lin, Associate Professor, Department of Computer Science
PhD, University of Minnesota-Twin Cities, 1990

Jane Lincove, Assistant Professor, Lyndon B. Johnson School of Public Affairs
BS, Northwestern University, 1995; MA, University of California-Los Angeles, 2000;
PhD, University of Southern California, 2005

Craig R. Linder, Associate Professor, Section of Integrative Biology
PhD, Brown University, 1984

Stefanie A. Lindquist, A. W. Walker Centennial Chair in Law, Professor, School of Law, Department of Government
BA, Ursinus College, 1985; JD, Temple University, 1988; PhD, University of South Carolina - Columbia, 1996

Naomi E. Lindstrom, Professor, Department of Spanish and Portuguese
MA, Arizona State University Main, 1972;
PhD, Arizona State University Main, 1974

Hao Ling, L. B. (Preach) Meaders Professorship in Engineering, Professor, Department of Electrical & Computer Engineering
PhD, University of Illinois at Urbana-Champaign, 1986

Amanda L. Little, Assistant Professor, Department of Special Education
BA, University of Missouri - Columbia, 2000; MEd, University of Missouri - Columbia, 2002; PhD, University of Kansas Main Campus, 2009

Angela R. Littwin, Assistant Professor, School of Law
BA, Brown University, 1996; JD, Harvard University, 2002

Bei Li, Assistant Professor, Department of Art and Art History
BA, University of Tennessee, 2001; MFA, University of Michigan-Ann Arbor, 2003

Chang Liu, Assistant Professor, Department of Communication Sciences and Disorders
BS, Peking University, 1997; PhD, Indiana University at Bloomington, 2002

Hung-Wen Liu, George H. Hitchings Regents Chair in Drug Design, Professor, College of Pharmacy, Department of Chemistry and Biochemistry
BS, Tunghai University, 1974; MA, Columbia University in the City of New York, 1978;
MPHil, Columbia University in the City of New York, 1981

Min Liu, Professor, Department of Curriculum and Instruction
EDd, West Virginia University, 1992

Yin Liu, Adjunct Assistant Professor, Biomedical Engineering
BS, University of Science and Technology of China, 1998; MS, University of Texas Medical Branch, 2000; MS, University of Houston, 2002; PhD, Yale University, 2007

Zhanfei Liu, Assistant Professor, Department of Marine Science
BS, Xiamen University, 1997; MS, Xiamen University, 2000; PhD, State University of New York at Stony Brook, 2006

Keith A. Livers, Associate Professor, Department of Slavic Languages and Literature
BA, University of Michigan-Ann Arbor, 1983; PhD, University of Michigan-Ann Arbor, 1995

Alan M. Lloyd, Professor, Section of Molecular Cell and Developmental Biology
PhD, Stanford University, 1993

Douglas R. Lloyd, Henry Beekman Professorship in Chemical Engineering, Professor, Department of Chemical Engineering
PhD, University of Waterloo, 1977

James N. Loehlin, Shakespeare at Winedale Regents Professorship, Professor, Department of English
PhD, Stanford University, 1993

Jeffrey Loewenstein, Assistant Professor, Department of Management
BS, University of Michigan-Ann Arbor, 1995; MA, Northwestern University, 1998;
PhD, Northwestern University, 2000

Christopher A. Long, Professor, School of Architecture
BA, University of Texas at San Antonio, 1978; MA, University of Texas at Austin, 1982;
PhD, University of Texas at Austin, 1993

Leon E. Long, The Second Mr. and Mrs. Charles E. Yager Professorship, Professor, Department of Geological Sciences
MA, Columbia University in the City of New York, 1958; PhD, Columbia University in the City of New York, 1959

Mark C. Longaker, Associate Professor, Department Communication Studies, Department of English, Department of Rhetoric & Writing
BA, University of Louisiana at Lafayette, 1996; MA, Pennsylvania State University Main Campus, 1999; PhD, Pennsylvania State University Main Campus, 2003

Raul G. Longoria, Professor, Department of Mechanical Engineering, Applied Research Laboratories
BSME, University of Texas at Austin, 1985;
PhD, University of Texas at Austin, 1989

Roseann Loop, Professor, Department of Nutritional Sciences
PhD, University of Texas at Austin, 1968

Robert G. Loucks, Senior Research Scientist, Beg-PI-Kipper
AA, Onondaga Community College, 1964;
BA, State University of New York at Bing hamton, 1967; PhD, University of Texas at Austin, 1976

William R. Louis, Mildred Caldwell and Baine Perkins Kerr Centennial Chair in English History and Culture, Jo Anne Christian Centennial Professorship in British Studies, Professor, Center for Middle Eastern Studies, Department of History
BA, University of Oklahoma Norman Campus, 1959; MA, Harvard University, 1960;
PhD, University of Oxford, 1962

Alexandra Loukas, Associate Professor, Department of Kinesiology and Health Education
MA, Michigan State University, East Lansing, 1995; PhD, Michigan State University, East Lansing, 1997

Brad Love, Assistant Professor, Department of Advertising
BS, University of Florida, 1998; PhD, Michigan State University, East Lansing, 2007

Bradley C. Love, Professor, Department of Psychology
BS, Brown University, 1993; MA, Northwestern University, 1997; PhD, Northwestern University, 1999

Timothy J. Loving, Associate Professor, Human Development and Family Science, Associate Professor, Department of Psychology
BA, University of Texas at Austin, 1995; MS, Purdue University Main Campus, 1997;
PhD, Purdue University Main Campus, 2001

James R. Lowe, Assistant Professor, School of Music
BM, University of Rochester, 1989; MM, University of Michigan-Ann Arbor, 1991

James Richard Lowery Jr., Assistant Professor, Department of Finance
BA, Amherst College, 2001; MS, Carnegie Mellon University, 2006; PhD, Carnegie Mellon University, 2009

Amarante L. Lucero, Professor, Department of Theatre and Dance
MFA, Southern Methodist University, 1976

John E. Luecke, Professor, Department of Mathematics
PhD, University of Texas at Austin, 1985

William A. Lundberg, Marlene and Morton Meyerson Centennial Professorship in Art and Art History, Professor, Department of Art and Art History
MA, University of California-Berkeley, 1965

Ayelet H. Lustikov, Assistant Professor, Department of Classics
BA, Tel Aviv University, 2001; PhD, Yale University; MPhil, Yale University, 2006

Robert C. Lukin, Associate Professor, Department of Government
PhD, University of Michigan-Ann Arbor, 1983
Abigail J. Lustig, Assistant Professor, Department of History
BA, University of California-Berkeley, 1990; MA, University of California-Berkeley, 1993; PhD, University of California-Berkeley, 1997
Allan H. Macdonald, Sid W. Richardson Foundation Regents Chair in Physics #1, Professor, Department of Physics
BA, St Francis Xavier University, 1973; MA, University of Toronto, 1974; PhD, University of Toronto, 1978
Paul M. Macdonald, Mr. and Mrs. Robert P. Doherty, Jr. Regents Chair in Molecular Biology, Department Chair, Section of Molecular Cell and Developmental Biology, Professor, Section of Molecular Cell and Developmental Biology PhD, Vanderbilt University, 1983
Richard L. Macdowell, Associate Professor, School of Music
MMus, Northwestern University, 1983
Edward A. Macduffie III, Assistant Professor, Department of English
BA, Georgetown University, 1997; AM, Harvard University, 2001; PhD, Harvard University, 2006
Randy B. Machemehl, Nasser I. Al-Rashid Centennial Professor in Transportation Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
BS, University of Texas at Austin, 1970; MS, University of Texas at Austin, 1973; PhD, University of Texas at Austin, 1975
Carol H. Mackay, Professor, Center for Women's and Gender Studies, Department of English
BA, Stanford University, 1966; MA, Stanford University, 1967; PhD, University of California-Los Angeles, 1979
Michael S. Mackert, Assistant Professor, Department of Advertising
BS, Michigan State University, East Lansing, 2001; MA, Michigan State University, East Lansing, 2005; PhD, Michigan State University, East Lansing, 2006
Patricia MacLachlan, Associate Professor, Department of Government, Department of Asian Studies
BA, University of British Columbia, 1986; MA, Columbia University in the City of New York, 1992; PhD, Columbia University in the City of New York, 1996
Peter F. MacNeillage, Professor, Department of Linguistics and Department of Psychology
BA, Canterbury, 1957; MA, 1959; PhD, McGill, 1962
W. T. Maddox, Professor, Department of Psychology
MA, University of California-Santa Barbara, 1991; PhD, University of California-Santa Barbara, 1992
Raul L. Madrid, Associate Professor, Department of Government
MA, Stanford University, 1995; PhD, Stanford University, 1999
Stephen P. Magee, James L. Bayless/Enstar Corp. Chair in Business Administration, Professor, Department of Finance, Department of Economics
BA, Texas Tech University, 1965; MA, Texas Tech University, 1966; PhD, Massachusetts Institute of Technology, 1969
Philip D. Magnus, R. P. Doherty, Jr. Welch Regents Chair in Chemistry, Professor, Department of Chemistry and Biochemistry
PhD, University of London, 1968
James L. Magnuson, Director, Academic Program, The James A Michener Center for Writers, Director, The James A Michener Center for Writers, Professor, Department of English
BS, University of Wisconsin-Madison, 1963; MS, University of Wisconsin-Madison, 1964
Lori A. Magruder, Research Assistant Professor [Adjunct], Department of Aerospace Engineering and Engineering Mechanics, Research Assistant Professor, Applied Research Laboratories
BS, University of Southern California, 1994; MS, Princeton University, 1997; PhD, University of Texas at Austin, 2001
Vijay Mahajan, John P. Harbin Centennial Chair in Business, Professor, Department of Marketing Administration
MSCHE, University of Texas at Austin, 1972; PhD, University of Texas at Austin, 1975
David R. Maidment, Hussein M. Alkhayr Centennial Chair in Civil Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, University of Illinois at Urbana-Champaign, 1976
Dmitri E. Makarov, Associate Professor, Department of Chemistry and Biochemistry
BS, Moscow Inst Of Phys & Tech., 1990; PhD, Inst. Of Chem. Physics, Moscow, 1992
Krishnan A. Malik, Adjunct Professor, Department of Petroleum and Geological Engineering
BS, University of Punjab, Lahore, 1965; MSc, University of Punjab, Lahore, 1966; MS, University of Texas at Austin, 1972; PhD, University of Texas at Austin, 1987
Joseph F. Malina Jr., C. W. Cook Professorship in Environmental Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
MS, University of Wisconsin-Madison, 1959; PhD, University of Wisconsin-Madison, 1960
Madhavi Mallapragada, Assistant Professor, Department of Radio Television Film, Center for Asian American Studies, Department of Asian Studies
BA, University of Madras, 1989; MA, University of Madras, 1999; MPhil, Jawaharlal Nehru University, 1995; MA, University of Wisconsin-Madison, 1999; PhD, University of Wisconsin-Madison, 2003
Betty P. Mallard, Associate Professor, School of Music
DMA, University of Texas at Austin, 1979
Eric S. Mallin, Associate Professor, Department of English
PhD, Stanford University, 1986
Anna-Sara Malmgren, Assistant Professor, Department of Philosophy
BA, King’s College, University of London, 1993; BPhil, Magdalen College, University of Oxford, 2001; PhD, New York University, 2009
Anna E. Maloch, Associate Professor, Department of Curriculum and Instruction
BS, Ouachita Baptist University, 1991; MEd, Vanderbilt University, 1995; PhD, Vanderbilt University, 2000
William P. Mann, Senior Research Scientist, Institute for Geophysics
BA, Oberlin College, 1983; PhD, State University of New York at Albany, 1983
Arumugam Manthiram, Joe C. Walter, Jr. Chair in Engineering, Professor, Department of Mechanical Engineering
PhD, Indian Institute of Technology, 1980
Lance Manuel, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, Stanford University, 1993
Hunter C. March, Associate Dean, College of Fine Arts, Professor, School of Music
MMus, University of Michigan-Ann Arbor, 1970; PhD, University of Michigan-Ann Arbor, 1980
Belinda Marchand, Assistant Professor, Department of Aerospace Engineering and Engineering Mechanics
BS, Purdue University Main Campus, 1997; MS, Purdue University Main Campus, 2000; PhD, Purdue University Main Campus, 2004
Edward M. Marcotte, William and Gwyn Shive Endowed Professorship, Professor, College of Natural Sciences, Department of Chemistry and Biochemistry
BS, University of Texas at Austin, 1990; PhD, University of Texas at Austin, 1995
Abraham Marcus, Associate Professor, Department of History, Center for Middle Eastern Studies, Department of Middle Eastern Studies
BA, Tel Aviv University, 1973; CERTIFICATE, Columbia University in the City of New York, 1977; MA, Columbia University in the City of New York, 1978; PhD, Columbia University in the City of New York, 1979
Michael P. Marder, Associate Dean, UTeach Science Program, Professor, Department of Physics, Director, Academic Program, UTeach Science Program
PhD, University of California-Santa Barbara, 1986
Vincent A. Mariani, Professor, Department of Art and Art History
BFA, Yale University, 1959
Hans M. Mark, John J. McKetta Centennial Energy Chair in Engineering, Professor, Department of Aerospace Engineering and Engineering Mechanics, Lyndon B Johnson School of Public Affairs, Research Professor, Institute for Advanced Technology, Applied Research Laboratories, PhD, Massachusetts Institute of Technology, 1954.

Christina Markert, Assistant Professor, Department of Physics Diploma (Foreign), Johann Wolfgang Goethe University, 1996; PhD, Johann Wolfgang Goethe University, 2001.

John T. Markert, Marian Harris Thornbrey Centennial Professorship in Mathematics or Physics, Professor, Department of Physics MS, Cornell University, 1984; PhD, Cornell University, 1987.


Mia K. Markey, Associate Professor, Biomedical Engineering BS, Carnegie Mellon University, 1998; PhD, Duke University, 2001.

Arthur B. Markman, Annabel Irion Worsham Centennial Professorship in Liberal Arts, Professor, Department of Marketing Administration, ICS Institute BS, Brown University, 1988; MA, Illinois State University, 1990; PhD, University of Illinois at Urbana-Champaign, 1992.

Inga Markovits, “The Friends of Joe Jailam” Regents Chair in Law, Professor, School of Law LLM, Yale University, 1969.

Richard S. Markovits, The John B. Connally Chair in Law, Professor, School of Law BA, Cornell University, 1965; LLB, Yale University, 1968; PhD, University of London, 1966.

Thomas P. Marquardt, Ben F. Love Regents Professorship in Communication, Professor, Department of Communication Sciences and Disorders PhD, University of Washington - Seattle, 1973.

Randall A. Marrett, Professor, Department of Geological Sciences, Bureau of Economic Geology PhD, Cornell University, 1990.

Jill A. Marshall, Associate Professor, Department of Curriculum and Instruction BS, Stanford University, 1980; PhD, University of Texas at Austin, 1984.

Stephen H. Marshall, Assistant Professor, Department of African and African Diaspora Studies, Department of American Studies BA, University of Louisville, 1992; MA, University of Oxford, 1994; PhD, Harvard University, 2002.

Susan E. Marshall, Professor, Department of Sociology PhD, University of Massachusetts, 1980.

Leticia J. Martelete, Assistant Professor, Department of Sociology BA, Universidade Federal de Minas Gerais, 1995; MA, Bowling Green State University, 1997; MA, University of Michigan-Ann Arbor, 2000; PhD, University of Michigan-Ann Arbor, 2001.

Helen Taylor Martin, Associate Professor, Department of Curriculum and Instruction BA, Dartmouth College, 1992; MS, Vanderbilt University, 2000; PhD, Stanford University, 2003.

Jeffrey A. Martin, Assistant Professor, Department of Management BS, Brigham Young, 1984; MBA, Michigan (Ann Arbor), 1995; PhD, Stanford, 2002.

Stephen F. Martin, M. June and J. Virgil Waggoner Regents Chair in Chemistry, Professor, Department of Chemistry and Biochemistry MA, Princeton University, 1970; PhD, Princeton University, 1972.

Carmen M. Martinez-Roldan, Associate Professor, Department of Curriculum and Instruction BA, University of Puerto Rico-Rio Piedras Campus, 1979; MA, University of Puerto Rico-Rio Piedras Campus, 1995; PhD, University of Arizona, 2000.

Alberto A. Martinez, Associate Professor, Department of History BA, University of Puerto Rico at Utuado, 1992; MA, New York University, 1995; PhD, University of Minnesota-Twin Cities, 2000.

Anne M. Martinez, Assistant Professor, Department of History, Center for Mexican American Studies BA, University of Michigan-Ann Arbor, 1992; PhD, University of Minnesota-Twin Cities, 2003.

Ramon Antonio Martinez, Assistant Professor, Department of Curriculum and Instruction BA, University of California-San Diego, 1994; MED, University of California-Los Angeles, 1997; PhD, University of California-Los Angeles, 2009.

Aloyius P. Martinch, Roy Allan Vaughan Centennial Professorship in Philosophy, Professor, Department of Philosophy, Department of Government, Department of History BA, University of Windsor, 1969; MA, University of California-Los Angeles, 1971; PhD, University of California-Los Angeles, 1973.

Lucas D. Martinis, Associate Professor, Department of Management BS, Baratullah University, 1986; MS, Baratullah University, 1988; MPHil, New York University, 1995; PhD, New York University, 1997.

Paul V. Martorana, Assistant Professor, Department of Management BA, University of California-Berkeley, 1996; PhD, Northwestern University, 2005.

Glenn Y. Masada, Professor, Department of Mechanical Engineering ScD, Massachusetts Institute of Technology, 1980.

Laurent Alexandre Mathew, Assistant Professor, Department of Economics BS, Universite Jean Monnet, Saint-Etienne, 2003; MS, California Institute of Technology, 2005; PhD, California Institute of Technology, 2008.

Anshu Mathur, Assistant Professor, University of Texas M. D. Anderson Cancer Center BS, North Carolina State, 1993; BS, 1994; MS, 1995; MS, Duke, 1999; PhD, 2001.

Carl Matthews, Associate Professor, School of Architecture BS, Oklahoma State University Main Campus, 1981; MS, Pratt Institute, 1993.

Ronald D. Matthews, Professor, Department of Mechanical Engineering MPH, University of California-Berkeley, 1977; PhD, University of California-Berkeley, 1977.

Tracie M. Matsakis, Associate Professor, Department of History BA, University of Washington - Seattle, 1994; MA, Cornell University, 1997; PhD, Cornell University, 2001.

Mikhail V. Matz, Assistant Professor, Section of Integrative Biology BS, Moscow State University, 1985; MS, Moscow State University, 1991; PhD, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, 1999.

Richard A. Matzner, Professor, Department of Physics PhD, University of Maryland College Park, 1967.

Michael Mauk, Professor, Section of Neurobiology BS, University of New Orleans, 1979; PhD, Stanford University, 1985.

James D. Mauseth, Professor, Section of Integrative Biology PhD, University of Washington - Seattle, 1975.

Madeline M. Maxwell, Professor, Department Communication Studies MEd, University of Arizona, 1972; PhD, University of Arizona, 1980.

Robert G. May, KPMG Centennial Professorship, Professor, Department of Accounting BA, Michigan State University, East Lansing, 1965; PhD, Michigan State University, East Lansing, 1970.

Melinda M. Mayer, Assistant Professor, Department of Art and Art History BA, Principia College, 1976; MA, Southern Methodist University, 1981; PhD, Penn State University Park, 1999.

Jennifer A. Maynard, Assistant Professor, Department of Chemical Engineering BA, Stanford University, 1996; PhD, University of Texas at Austin, 2002.

Leigh M. McAlister, Ed and Molly Smith Chair in Business Administration, Professor, Department of Marketing Administration PhD, Stanford University, 1978.

Christopher J. McCarthy, Professor, Department of Educational Psychology PhD, Georgia State University, 1995.
James W. McClelland, Assistant Professor, Department of Marine Science
BS, University of Washington - Seattle, 1991; PhD, Boston University, 1998

Maxwell E. McCombs, Jesse H. Jones Centennial Chair in Communication, Professor, School of Journalism, Department of Government
PhD, Stanford University, 1966

Jason T. McConville, Assistant Professor, College of Pharmacy
BSch, Coventry University, 1994; PhD, University of Strathclyde, 2002

Elizabeth McCracken, James A. Michener Endowed Chair in Writing, Professor, Department of English
MA, Boston University, 1988; BA, Boston University, 1988; MS, Drew University, 1993; MFA, University of Iowa, 1990

Talia M. McCray, Assistant Professor, School of Architecture, Department of Civil, Architectural and Environmental Engineering, School of Social Work, Department of African and African Diaspora Studies
BS, Bennett College, 1990; BS, North Carolina Agricultural and Technical State University, 1990; MS, Northwestern University, 1992; PhD, University of Michigan-Ann Arbor, 2001

Robert E. McColloch, Century Club Professorship, Professor, Department of Information, Risk, and Operations Management
BS, University of Toronto, 1981; MS, University of Minnesota-Twin Cities, 1984; PhD, University of Minnesota-Twin Cities, 1985

Eric L. McDaniel, Associate Professor, Department of Government
BA, Wilberforce University, 1998; MA, University of Illinois at Urbana-Champaign, 2000; PhD, University of Illinois at Urbana-Champaign, 2004

Reuben R. McDaniel Jr., Charles and Elizabeth Prothro Regents Chair in Health Care Management, Professor, Department of Information, Risk, and Operations Management, IC Institute
EdD, Indiana University at Bloomington, 1971

Elena C. McDonald-Buller, Research Associate Professor, Center for Energy and Environmental Resources, Research Associate Professor (Affiliated), Department of Civil, Architectural and Environmental Engineering
BS, Michigan State University, East Lansing, 1990; MS, Florida Institute of Technology, 1992; PhD, University of Texas at Austin, 1996

Patrick J. McDonald, Associate Professor, Department of Government
BA, University of Minnesota-Twin Cities, 1996; MA, Ohio State U Main Campus, 2000; PhD, Ohio State U Main Campus, 2002

Graham J. McDougall Jr., Professor, School of Nursing
PhD, University of Texas at Austin, 1991

Dennis McFadden, Professor Emeritus, Department of Psychology, Professor, Department of Psychology
PhD, Indiana University at Bloomington, 1967

Lawrence D. McFarland, William and Bettye Nowlin Endowed Professor in Photography, Professor, Department of Art and Art History
MFA, University of Nebraska - Lincoln, 1976

Thomas O. McGrady, Jr., Associate Professor, School of Law
BA, Rice University, 1971; JD, University of Texas at Austin, 1974

James W. McGinity, Johnson & Johnson Centennial Chair in Pharmacy, Professor, College of Pharmacy
PhD, University of Iowa, 1972

Matthew S. McGone, Associate Professor, Department Communication Studies, Center for Women's and Gender Studies
BA, Louisiana State University and Agricultural and Mechanical College, 1988; MA, Princeton University, 1991; PhD, Princeton University, 1994

John M. McInnis, Assistant Professor, Department of Accounting
BBA, University of Texas at Austin, 2002; MPA, University of Texas at Austin, 2002; PhD, University of Iowa, 2008

John McKiernan-Gonzalez, Assistant Professor, Department of History, Center for Mexican American Studies
BA, Oberlin College, 1991; BA, Oberlin College, 1991; MA, University of Michigan-Ann Arbor, 1995; PhD, University of Michigan-Ann Arbor, 2002

Kathryn S. McKinley, Professorship in Computer Sciences #5, Professor, Department of Computer Science
BA, Rice University, 1985; MS, Rice University, 1990; PhD, Rice University, 1992

Daeene C. McKinney, W.A. (Bill) Cunningham Professorship, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, Cornell University, 1990

Mark E. Mear, Professor, Department of Aerospace Engineering and Engineering Mechanics
PhD, Harvard University, 1986

Mona Mehdy, Associate Professor, Section of Molecular Cell and Developmental Biology
PhD, University of California-San Diego, 1984

Richard P. Meier, Robert D. King Centennial Professorship of Liberal Arts, Department Chair, Department of Linguistics, Professor, Department of Psychology, Department of Linguistics
PhD, University of California-San Diego, 1982

Jeffrey L. Meikle, Professor, Department of American Studies, Department of Art and Art History
PhD, University of Texas at Austin, 1977

Martha Menchaca, Professor, Department of Anthropology, Center for Women's and Gender Studies, Center for Mexican American Studies
BA, University of California-Santa Barbara, 1978; MA, Stanford University, 1984; PhD, Stanford University, 1987

Rafael Menocal-Arriaga, Assistant Professor, Department of Information, Risk, and Operations Management
BS, Instituto Tecnologico y de Estudios Superiores de Monterrey, 1999; MSc, University of Toronto, 2002; MSc, Northwestern University, 2005; PhD, Northwestern University, 2009

Sofian Merabet, Assistant Professor, Department of Anthropology, Center for Middle Eastern Studies, Department of Middle Eastern Studies
BA, Universitat Bayreuth, 1996; MA, State University of New York at Binghamton, 1998; MA, Columbia University in the City of New York, 1999; MPhil, Columbia University in the City of New York, 2004; PhD, Columbia University in the City of New York, 2009

Cindy M. Meston, Professor, Department of Psychology
PhD, University of British Columbia, 1995

Robert Melancon Metcalfe, Director, Cockrell School of Engineering, Professor, Department of Electrical & Computer Engineering
BS, Massachusetts Institute of Technology, 1969; BS, Massachusetts Institute of Technology, 1969; MS, Harvard University, 1970; PhD, Harvard University, 1973

Mark Metzler, Associate Professor, Department of History, Department of Asian Studies
AB, Stanford University, 1980; MA, University of California-Santa Cruz, 1989; PhD, University of California-Berkeley, 1998

Richard J. Meyer, Professor, Molecular Genetics and Microbiology
PhD, University of Pennsylvania, 1972

Anne A. Meyers
Diploma (Artist), The Juilliard School, 1990

Jeremy P. Meyers, Assistant Professor, Department of Mechanical Engineering
BS, Stanford University, 1993; PhD, University of California-Berkeley, 1998

Lauren A. Meyers, Associate Director, Division of Statistics and Scientific Computation, Associate Professor, Section of Integrative Biology, Harrington Faculty Fellow, Section of Integrative Biology
BA, Harvard University, 1996; PhD, Stanford University, 2000

Julia L. Mickenberg, Associate Professor, Department of American Studies
BA, Brown University, 1990; PhD, University of Minnesota-Twin Cities, 2000

Susan E. Mickey, Professor, Department of Theatre and Dance
BFA, University of North Carolina at Greensboro, 1977; MFA, The University of Alabama, 1979
S. J. Mihic, Associate Professor, Section of Neurobiology, College of Pharmacy
BSc, University of Toronto, 1984; MSc, University of Toronto, 1988; PhD, University of Toronto, 1992

Risto P. Mikkalainen, Professor, Department of Computer Science
PhD, University of California-Los Angeles, 1990

Kelly S. Mikelson, Assistant Professor, School of Social Work
AB, Harvard University, 1993; MPP, Harvard University, 1998; PhD, University of Texas at Austin, 2008

Dianna M. Milewicz, Associate Professor, University of Texas Health Science Center at Houston
BA, Rice, 1978; MD, PhD, Texas (Southwestern Medical Center at Dallas), 1984

C. Howard Miller, Distinguished Teaching Associate Professor, Department of History and Department of Religious Studies
BA, North Texas State, 1964; MA, 1966; PhD, Michigan, 1970

Jennifer A. Miller, Assistant Professor, Department of Geography and the Environment
BA, University of Miami, 1993; MA, The Ohio State University Main Campus, 1997; PhD, San Diego State University, 2003

Karl H. Miller, Associate Professor, School of Music, Department of History
BA, MacKesler College, 1990; PhD, New York University, 2002

Melissa W. Miller, Associate Professor, Department of Art and Art History
BA, New Mexico State University Main Campus, 1974

Kitty L. Milliken, Senior Research Scientist, Beg-Pi-Kipper
BA, Vanderbilt University, 1975; MA, University of Texas at Austin, 1977; PhD, University of Texas at Austin, 1985

Edward M. Mills, Associate Professor, College of Pharmacy
BA, Franklin College of Indiana, 1991; PhD, Purdue University Main Campus, 1997

John R. Mills, Associate Professor, School of Music
BA, University of Texas at Austin, 1975; MMus, Texas State University-San Marcos, 1992; DMA, University of Texas at Austin, 1998

Lillian F. Mills, Professor, Department of Accounting, Department Chair, Department of Accounting
BAcc, University of Florida, 1980; MAcc, University of Florida, 1981; PhD, University of Michigan Ann Arbor, 1996

Thomas E. Milner, Marion E. Forsman Centennial Chair in Engineering, Professor, Biomedical Engineering, Department of Electrical & Computer Engineering
BS, Colorado School of Mines, 1981; MS, Colorado School of Mines, 1986; PhD, University of Arizona, 1991

Milos Milosavljevic, Assistant Professor, Department of Astronomy
AB, Harvard University, 1999; PhD, Rutgers the State University of New Jersey New Brunswick Campus, 2002

S. Milovanovic-Bertram, Associate Professor, School of Architecture
BA, Rice University, 1970; BArch, Rice University, 1972; MArch, Harvard University, 1974

Dong-Ha Min, Assistant Professor, Department of Marine Science
BSc, Seoul National University, 1987; MSc, Seoul National University, 1989; PhD, University of California-San Diego, 1999

Gail Minault, Professor, Department of Asian Studies, Center for Women's and Gender Studies, Center for Middle Eastern Studies, Department of History
BA, Smith College, 1961; MA, University of Pennsylvania, 1966; PhD, University of Pennsylvania, 1972

Daniel P. Miranker, Professor, Department of Computer Science
PhD, Columbia University in the City of New York, 1987

Eugenio J. Miravete, Associate Professor, Department of Economics
BA, Universidad Politecnica de Valencia, 1987; MA, Universidad Politecnica de Valencia, 1992; PhD, Northwestern University, 1996

Juan Miro, Professor, School of Architecture
MArch, Yale University, 1991

John Mirovsky, Professor, Department of Sociology
BA, University of South Florida, 1975; MA, Yale University, 1978; PhD, Yale University, 1981

Jayadev Misra, Schlumberger Centennial Chair in Computer Sciences, Professor, Department of Computer Science
PhD, Johns Hopkins University, 1973

Michael J. Mogavero, Associate Professor, Department of Art and Art History
MFA, Maryland Institute College of Art, 1975

Mohammad A. Mohammad, Associate Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies
BA, University of Damascus, 1971; MA, University of Southern California, 1985; PhD, University of Southern California, 1989

Kishore Mohanty, H. B. (Burt) Harksin, Jr. Professorship of Petroleum Engineering, Professor, Department of Petroleum and Geosystems Engineering
BS, Indian Institute of Technology, 1976; PhD, University of Minnesota-Duluth, 1981

David Mohrig, Associate Professor, Department of Geological Sciences
BA, Pomona College, 1983; MS, University of Washington - Seattle, 1987; PhD, University of Washington - Seattle, 1994

Aloysius K. Mol, Quincy Lee Centennial Professorship in Computer Science, Professor, Department of Computer Science
BS, Massachusetts Institute of Technology, 1977; MS, Massachusetts Institute of Technology, 1977; PhD, Massachusetts Institute of Technology, 1985

Ian J. Molineux, Professor, Molecular Genetics and Microbiology
DPhil, University of Oxford, 1969

Marie H. Monfils, Assistant Professor, Department of Psychology
BS, University of California, 2000; MS, University of Calgary, 2002; PhD, University of Lethbridge, 2005

Stephen A. Monti, Assistant Professor, Department of Psychology
BS, University of California, 2000; MS, University of Calgary, 2002; PhD, University of Lethbridge, 2005

Jean-Pierre Montreuil, Professor, Department of Mechanical Engineering
BS, Grove City College, 1983; MS, University of Illinois at Urbana-Champaign, 1986; PhD, University of Illinois at Urbana-Champaign, 1989

Raymond J. Mooney, Professorship in Computer Sciences #3, Professor, Department of Computer Science
PhD, University of Illinois at Urbana-Champaign, 1987

J. S. Moore II, Admiral B. R. Inman Centennial Chair in Computer Theory, Professor, Department of Computer Science, Department of Mathematics, Department of Electrical & Computer Engineering
BS, Massachusetts Institute of Technology, 1970; PhD, University of Edinburgh, 1973

Leonard N. Moore, Professor, Department of History, Associate Vice President, DICE AVP
BA, Queens University, 1986; MA, Cornell University, 1989; PhD, Cornell University, 1991

Robin D. Moore, Professor, School of Music, Department of African and African Diaspora Studies
BA, University of California-Santa Barbara, 1987; MA, University of California-Santa Barbara, 1990; PhD, University of Texas at Austin, 1995
Luisa Nardini, Assistant Professor, School of Music
Diploma (Foreign), Conservatorio di Musica, 1991; Laurea, Università degli Studi di Napoli, Federico II, 1995; PhD, Università degli Studi di Roma “La Sapienza”, 2001

A. Rebecca Neal-Beever, Assistant Professor, Department of Psychology
BA, Johns Hopkins University, 1993; MS, University of Miami, 1997; PhD, University of Miami, 2002

James A. Neely, Professor Emeritus, Department of Anthropology
PhD, University of Arizona, 1974

Kristin Neff, Associate Professor, Department of Educational Psychology
PhD, University of California-Berkeley, 1997

Lisa Ann Neff, Assistant Professor, Human Development & Family Science
BA, University of Dayton, 1996; MA, Wake Forest University, 1998, PhD, University of Florida, 2002

Neil R. Nehring, Associate Professor, Department of English
PhD, University of Michigan-Ann Arbor, 1985

Dean P. Neikirk, Cullen Trust for Higher Education Endowed Professorship in Engineering #3, Professor, Department of Electrical & Computer Engineering
PhD, California Institute of Technology, 1984

Andrew M. Neitzke, Assistant Professor, Department of Mathematics
AB, Princeton University, 1998; PhD, Harvard University, 2005

Anton Nel, Joe R. & Teresa Lozano Long Chair in Piano, Professor, School of Music
BMus, University of the Witwatersrand, 1983; MMus, University of Cincinnati Main Campus, 1984

Richard R. Neptune, Associate Professor, Department of Mechanical Engineering
BS, University of California-Davis, 1991; MS, University of California-Davis, 1993; PhD, University of California-Davis, 1996

William R. Nethercutt, Professor, Department of Classics, Center for Middle Eastern Studies
BA, Columbia University in the City of New York, 1958; MA, Columbia University in the City of New York, 1960; PhD, Columbia University in the City of New York, 1965

Scott Nettles, Associate Professor, Department of Electrical & Computer Engineering
BS, Michigan State University, East Lansing, 1981; MS, Carnegie Mellon University, 1993; PhD, Carnegie Mellon University, 1996

Joan H. Neuberger, Professor, Department of Slavic Languages and Literature, Department of History
BA, Grinnell College, 1975; MA, Stanford University, 1977; PhD, Stanford University, 1985

B. David Neubert, Professor, School of Music
DMA, University of Texas at Austin, 1982

Mary C. Neuburger, Associate Professor, Center for Middle Eastern Studies, Department of Slavic Languages and Literature, Department of History, Department Chair, Department of Slavic Languages and Literature, Director, Academic Program, Center for Russian, East European, and Eurasian Studies
BA, University of Oregon, 1990; MA, University of Washington - Seattle, 1993; PhD, University of Washington - Seattle, 1997

David P. Neumeyer, Leslie Waggener Professorship in the College of Fine Arts, Professor, School of Music
BMus, Michigan State University, East Lansing, 1972; MPhil, Yale University, 1975; PhD, Yale University, 1976

Donald P. Newman, Clark W. Thompson, Jr. Chair in Accounting, Professor, Department of Accounting, Associate Dean for Academic Affairs, Red McCombs School of Business
PhD, University of Texas at Austin, 1977

Martha G. Newman, Department Chair, Department of Religious Studies, Associate Professor, Department of Religious Studies, Department of History
BA, Harvard University, 1980; MA, Stanford University, 1982; PhD, Stanford University, 1988

Quoc P. Nguyen, Assistant Professor, Department of Petroleum and Geosystems Engineering
BS, National University of Technology (Vietnam), 1996; MS, Wagenigen University (The Netherlands), 1999; PhD, Delft University of Technology, 2004

Steven P. Nichols, Annis and Jack Bowen Endowed Professorship in Engineering, Professor, Department of Mechanical Engineering, IC2 Institute BSME, University of Texas at Austin, 1972; MSME, University of Texas at Austin, 1974; JD, University of Texas at Austin, 1983; PhD, University of Texas at Austin, 1975

Chiyoko Nishida, Associate Professor, Department of Spanish and Portuguese
PhD, University of Arizona, 1987

Hiroshi Nishiyama, Assistant Professor, Section of Neurobiology
BS, Kyoto University, 1996; MSc, Kyoto University, 1998; PhD, Kyoto University, 2002

Qian Niu, Trull Centennial Professorship in Physics #1, Professor, Department of Physics
PhD, University of Washington - Seattle, 1985

Angela M. Nonaka, Assistant Professor, Department of Anthropology
BA, University of Kansas Main Campus, 1990; MA, National Universities Corporation Tsukuba University of Technoogy, 1994; MA, Indiana University at Bloomington, 1995; PhD, University of California-Los Angeles, 2007

Alfred L. Normal, Professor, Department of Economics
AB, Harvard University, 1958; MA, University of California-Los Angeles, 1956; PhD, University of Minnesota-Twin Cities, 1971

Norvell W. Northcutt, Senior Lecturer, Department of Educational Administration
PhD, University of Texas at Austin, 1968

Gordon S. Novak Jr., Professor, Department of Computer Science
BSEE, University of Texas at Austin, 1969; MA, University of Texas at Austin, 1971; PhD, University of Texas at Austin, 1976

Atilla Novoselac, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
BS, University of Belgrade, 1974; MS, University of Belgrade, 2000; PhD, Pennsylvania State University Main Campus, 2004

Nomi P. Nunez, Assistant Professor, Department of Nutritional Sciences
BA, University of California-Santa Cruz, 1992; MPH, Johns Hopkins University, 2002; PhD, Washington State University, 2009

William J. O’Brien, Associate Professor, Department of Civil, Architectural and Environmental Engineering
BS, Columbia University in the City of New York, 1991; MS, Stanford University, 1992; MS, Stanford University, 1994; PhD, Stanford University, 1998

James T. O’Connor, C. T. Wells Professorship in Project Management, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, University of Texas at Austin, 1983

Theresa J. O’Halloran, Associate Professor, Section of Molecular Cell and Developmental Biology
PhD, University of North Carolina at Chapel Hill, 1986

Caroline P. O’Meara, Assistant Professor, School of Music
AB, Princeton University, 1998; MA, University of California-Los Angeles, 2002; PhD, University of California-Los Angeles, 2006

Mark F. O’Reilly, Maille Villettaz Davis Professorship in Learning Disabilities, Professor, Department of Special Education
BA, University College Dublin, 1986; MA, Southern Illinois University, 1989; PhD, University of Illinois at Urbana-Champaign, 1992

Kathryn Marie Obenchain, Assistant Professor, Department of Curriculum and Instruction
BA, Hanover College, 1982; MS, Purdue University Main Campus, 1994; PhD, Purdue University Main Campus, 1997

Cesar A. Ocampo, Associate Professor, Department of Aerospace Engineering and Engineering Mechanics
BS, University of Kansas Main Campus, 1990; MS, University of Colorado at Boulder, 1991; PhD, University of Colorado at Boulder, 1996

Edward W. Odell, John T. Stuart III Centennial Professorship in Mathematics, Professor, Department of Mathematics
PhD, Massachusetts Institute of Technology, 1975
J. T. Oden, Cockrell Family Regents Chair in Engineering #2; Peter O'Donnell, Jr. Centennial Chair in Computing Systems, Associate Vice-President For Research, Vice-President for Research, Professor, Department of Aerospace Engineering and Engineering Mechanics, Department of Mathematics, Director, Institute for Computational Engineering and Science MS, Oklahoma State University Main Campus, 1960; PhD, Oklahoma State University Main Campus, 1962

Michael Oden, Associate Professor, School of Architecture
PhD, New Sch for Soc Research, 1992

Gerald S. Oettinger, Associate Professor, Department of Economics
PhD, Massachusetts Institute of Technology, 1993

Moyseore Benjamin Oediji, Associate Professor, Department of Art and Art History, Department of African and African Diaspora Studies
BA, Obafemi Awolowo University, 1977; MFA, University of Benin, 1982; PhD, University of Wisconsin Colleges, 1994

Ruben D. Olivarez, L. D. Haslouw Centennial Professor in Public School Administration, Professor, Department of Educational Administration
BS, University of Texas - Pan American, 1970; MA, University of Texas at Austin, 1972; PhD, University of Texas at Austin, 1976

J. P. Olivelle, Jacob and Frances Sanger Mossiker Chair in the Humanities #1; Professor, Department of Asian Studies, Department of Religious Studies
BA, University of Oxford, 1972; MA, University of Oxford, 1974; PhD, University of Pennsylvania, 1974

Daniel M. Olsen, Associate Professor, Department of Art and Art History
MFA, Cranbrook Academy of Art, 1990

John E. Olson, Associate Professor, Department of Petroleum and Geosystems Engineering, Bureau of Economic Geology
PhD, Stanford University, 1991

Robert A. Ollwell, Associate Professor, Department of History
BS, Johns Hopkins University, 1991

Robert M. Oppenheim, Associate Professor, Department of Asian Studies
AB, Princeton University, 1991; MA, University of Chicago, 1995; PhD, University of Chicago, 2003

Dr Raymond L. Orbach, Cockrell Family Chair in Engineering No. 12, Director, Energy Institute, Professor, Department of Mechanical Engineering, Department of Geological Sciences, Department of Physics
BS, California Institute of Technology, 1956; PhD, University of California-Berkeley, 1960

Michael E. Orshansky, Associate Professor, Department of Electrical & Computer Engineering
BS, University of California-Berkeley, 1995; MS, University of California-Berkeley, 1998; PhD, University of California-Berkeley, 2000

Alba A. Ortiz, Director, Office of Bilingual Education, Professor, Department of Special Education
PhD, University of Texas at Austin, 1976

Cynthia Osborne, Associate Professor, Lyndon B Johnson School of Public Affairs, Center for Women’s and Gender Studies
BA, Claremont McKenna College, 1991; MA, Claremont Graduate University, 1995; MPP, Harvard University, 1999; PhD, Princeton University, 2003

David M. Oshinsky, Jack S. Blanton, Sr. Chair in History, Professor, Department of History
BS, Cornell University, 1965; MA, Cornell University, 1967; PhD, Brandeis University, 1971

Francie Ostrower, Professor, Lyndon B Johnson School of Public Affairs, Department of Theatre and Dance
BA, Swarthmore College, 1981; MA, Yale University, 1982; MPhil, Yale University, 1985; PhD, Yale University, 1991

Ray Charles Otto, Associate Professor, Department of Theatre and Dance
BA, University of Virginia, 1978; MFA, University of Southern California, 1995

Martha N. Ovando, Professor, Department of Educational Administration
PhD, University of Utah, 1981

Deborah J. Overdorff
BA, University of the South, 1985; PhD, Duke, 1991

Sonia Paban, Associate Professor, Department of Physics
BA, University of Barcelona, 1984; MS, University of Barcelona, 1985; PhD, University of Barcelona, 1988

Yolanda C. Padilla, Professor, Center for Women’s and Gender Studies, School of Social Work
BSW, University of Texas at Austin, 1979; BA, University of Texas at Austin, 1979; MSSW, University of Texas at Austin, 1980; MA, University of Michigan-Ann Arbor, 1990; PhD, University of Michigan-Ann Arbor, 1993

Karen A. Pagani, Assistant Professor, Department of French and Italian
BA, Cornell University, 2001; MA, University of Chicago, 2002; PhD, University of Chicago, 2008

Angela N. Paik, Assistant Professor, Center for Asian American Studies, Department of American Studies
BA, Columbia University in the City of New York, 2001; MA, Yale University, 2005; PhD, Yale University, 2009

Thomas G. Palaima, Raymond Dickson Centennial Professorship #2, Professor, Department of Classics, Center for Middle Eastern Studies
BA, Boston College, 1973; BA, Boston College, 1973; MA, University of Wisconsin-Madison, 1974; PhD, University of Wisconsin-Madison, 1980

Deborah K. Palmer, Assistant Professor, Department of Curriculum and Instruction
BA, Stanford University, 1991; MA, University of California-Berkeley, 2000; PhD, University of California-Berkeley, 2004

Zhigang Pan, Associate Professor, Department of Electrical & Computer Engineering
BS, Peking University, 1992; MS, University of California-Los Angeles, 1994; MS, University of California-Los Angeles, 1998; PhD, University of California-Los Angeles, 2000

Jose L. Panero, Associate Professor, Section of Integrative Biology
PhD, University of Tennessee, 1990

Lorraine S. Pangle, Associate Professor, Department of Government
BA, Yale University, 1981; BEd, University of Toronto, 1985; MA, University of Chicago, 1985; PhD, University of Chicago, 1999

Thomas L. Pangle, Joe R. Long Endowed Chair in Democratic Studies, Director, Academic Program, Center for the Study of Core Texts and Ideas, Professor, Department of Government
AB, Cornell University, 1966; PhD, University of Chicago, 1972

Athanasio Papalexandrou, Associate Professor, Department of Art and Art History, Center for Middle Eastern Studies
BA, National and Kapodistrian University of Athens, 1988; MA, Princeton University, 1993; PhD, Princeton University, 1998

Deborah A. Paredes, Associate Professor, Department of Theatre and Dance, Center for African and African American Studies, Department of African and African Diaspora Studies, Director, Academic Program, Center for Mexican American Studies
BA, Trinity University, 1993; PhD, Northwestern University, 2002

Randall M. Parker, Melissa Elizabeth Stuart Centennial Professorship in Education, Professor, Department of Special Education
PhD, University of Missouri - Columbia, 1970

Camille Parmesan, Associate Professor, Section of Integrative Biology
BS, University of Texas at Austin, 1984; PhD, University of Texas at Austin, 1995

Robert Parrino, Lamar Savings Centennial Professorship in Finance, Professor, Department of Finance
PhD, University of Rochester, 1992

Keryn Elizabeth Pasch, Assistant Professor, Department of Kinesiology and Health Education
BA, University of Illinois at Chicago, 1998; MPH, University of North Carolina at Chapel Hill, 2003; PhD, University of Minnesota-Twin Cities, 2007

Paola Passalacqua, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
BS, Universita degli Studi di Genova/Genoa, 2002; MSc, University of Minnesota-Twin Cities, 2005; PhD, University of Minnesota-Twin Cities, 2009

Members of Graduate Studies Committees
Na’ama Pat-El, Assistant Professor, Department of Middle Eastern Studies, Center for Middle Eastern Studies
BA, Hebrew University, 2000; MA, Hebrew University, 2002; PhD, Harvard University, 2008
Erika M.asha Patall, Assistant Professor, Department of Educational Psychology
BA, McGill University, 2003; MA, Duke University, 2007; PhD, Duke University, 2009
Robert G. Paterson, Associate Professor, School of Architecture
PhD, University of North Carolina at Chapel Hill, 1993
Yale N. Patt, Ernest Cockrell, Jr. Centennial Chair in Engineering, Professor, Department of Electrical & Computer Engineering, Department of Computer Science
BS, Northeastern University, 1962; MS, Stanford University, 1963; PhD, Stanford University, 1966
Tadeusz W. Patzek, Cockrell Family Chair in Engineering No. 11, Lois K. and Richard D. Folger Leadership Chair in Petroleum and Geosystems Engineering, Professor, Department of Petroleum and Geosystems Engineering, Department Chair, Department of Petroleum and Geosystems Engineering
MS, Silesian University of Technology, 1974; PhD, Silesian University of Technology, 1979
Donald R. Paul, Ernest Cockrell, Sr. Chair in Engineering, Professor, Department of Chemical Engineering
MS, University of Wisconsin-Madison, 1961; PhD, University of Wisconsin-Madison, 1965
Tanya T. Paul, Professor, Molecular Genetics and Microbiology
BS, Stanford University, 1991; MS, Stanford University, 1991; PhD, University of California-Los Angeles, 1996
Adam Pautz, Assistant Professor, Department of Philosophy
BA, University of Minnesota-Morris, 1998; BA, University of Minnesota-Morris, 1998; PhD, New York University, 2004
Natasa Pavlovic, Assistant Professor, Department of Mathematics
BS, University of Belgrade, 1996; MS, University of Illinois at Chicago, 1998; PhD, University of Illinois at Chicago, 2002
Pamela Marie Paxton, Centennial Commission Professorship in the Liberal Arts #4, Professor, Department of Sociology
BA, University of Michigan-Ann Arbor, 1992; MA, University of North Carolina at Chapel Hill, 1994; PhD, University of North Carolina at Chapel Hill, 1998
Shelley M. Payne, Professor, Molecular Genetics and Microbiology
PhD, Texas A&M University, 1977
Barbara L. Payzey, Assistant Professor, Department of Special Education
BM, Muskingum College, 1973; MA, Ohio State University Main Campus, 1975; PhD, University of Texas at Austin, 1996
John A. Pearce, Temple Foundation Endowed Professorship No. 3, Professor, Department of Electrical & Computer Engineering
MS, Purdue University Main Campus, 1977; PhD, Purdue University Main Campus, 1980
Edward R. Pearse, Associate Professor, School of Music
PhD, University of Wisconsin-Madison, 1994
Ami Pedahzur, Professor, Department of Government, Center for Middle Eastern Studies, Department of Middle Eastern Studies
BA, University of Haifa, Israel, 1994; MA, University of Haifa, Israel, 1996; PhD, University of Haifa, 1999
Glenn A. Peers, Professor, Department of Art and Art History, Center for Middle Eastern Studies
BA, Acadia University, 1984; MA, McGill University, 1986; PhD, Johns Hopkins University, 1996
Richard H. Pells
PhD, Harvard, 1969
Elizabeth D. Pena, Professor, Department of Communication Sciences and Disorders
PhD, Temple University, 1993
Jorge Pena, Assistant Professor, Department of Communication Studies
BA, Universidad de Chile, 2001; MS, Cornell University, 2004; PhD, Cornell University, 2007
Suzanne M. Pence, Associate Professor, School of Music
DMA, University of Missouri-Kansas City, 1992
James W. Pennebaker, Liberal Arts Foundation Centennial Professorship, Professor, Department of Psychology, Department Chair, Department of Psychology
BA, Eckerd College, 1972; PhD, University of Texas at Austin, 1977
Bruce W. Pennycook, Professor, Department of Radio Television Film, School of Music
BM, University of Toronto, 1973; MM, University of Toronto, 1974; DMA, Stanford University, 1978
Nicholas A. Peppas, Fletcher Stacey Pratt Chair in Engineering, Cockrell Family Chair for Departmental Leadership #1, Professor, College of Pharmacy, Department Chair, Biomedical Engineering, Biomedical Engineering, Department of Chemical Engineering
DIPL ENGR, National Technical University of Athens, 1971; ScD, Massachusetts Institute of Technology, 1973
Domino R. Perez, Associate Professor, Center for Mexican American Studies, Department of English
BA, Texas State University-San Marcos, 1991; MA, Texas State University-San Marcos, 1994; PhD, Nebraska (Lincoln), 1998
Francisco L. Perez, Professor, Department of Geography and the Environment
PhD, University of California-Berkeley, 1985
Paula J. Perlman, Professor, Department of Classics
PhD, University of California-Berkeley, 1983
Robert J. Peroni, The Fondren Foundation Centennial Chair for Faculty Excellence, Professor
BSc, DePaul University, 1973; LLM, New York University, 1980; JD, Northwestern University, 1976
Dewayne E. Perry, Motorola Regents Chair in Electrical and Computer Engineering, Professor, Department of Electrical & Computer Engineering
BA, Westmont College, 1962; MS, Stevens Institute of Technology, 1977; PhD, Stevens Institute of Technology, 1978
H. W. Perry Jr., Associate Professor, School of Law, Department of Government
BA, Southern Methodist University, 1974; MA, University of Michigan-Ann Arbor, 1980; PhD, University of Michigan-Ann Arbor, 1987
Timothy Perutz, Assistant Professor, Department of Mathematics
BA, University of Cambridge, 2000; PhD, University of London, 2005
Bogdan P. Perzynski, Professor, Department of Art and Art History
MFA, Poznan Academy of Fine Arts, 1979
Michael A. Pesenson, Assistant Professor, Department of Slavic Languages and Literature
PhD, Yale University, 2001
Marcin Peski, Assistant Professor, Department of Economics
MA, Warsaw School of Economics, 2000; BA, Warsaw University, 2000; MA, Northwestern University, 2001; PhD, Northwestern University, 2005
Ekwere J. Peters, Frank W. Jessen Professorship in Petroleum Engineering, George H. Fancher Professorship in Petroleum Engineering, Professor, Department of Petroleum and Geosystems Engineering
BS, University of Leicester, 1971; MS, University of Alberta, 1975; PhD, University of Alberta, 1979
Bradley R. Petersen, Associate Professor, Department of Art and Art History
MFA, University of Georgia, 1975
Fred L. Peterson Jr., Associate Professor, Department of Kinesiology and Health Education
PhD, University of Illinois at Urbana-Champaign, 1981
Robert A. Peterson, John T. Stuart III Centennial Chair in Business, Deputy Director, IC3 Institute, Professor, Department of Marketing Administration, IC3 Institute, Associate Vice-President For Research, Vice-President for Research
BS, University of Minnesota-Twin Cities, 1966; MS, University of Minnesota-Twin Cities, 1968; PhD, University of Minnesota-Twin Cities, 1970
Anthony J. Petrosino, Associate Professor, Department of Curriculum and Instruction, College of Education
PhD, Vanderbilt University, 1998

Steven M. Phelps, Associate Professor, Section of Integrative Biology
BS, University of Illinois at Urbana-Champaign, 1992; MS, University of Illinois at Urbana-Champaign, 1994; PhD, University of Texas at Austin, 1999

Stephen H. Phillips, Professor, Department of Philosophy, Department of Asian Studies
PhD, Harvard University, 1982; PhD, Harvard University, 1982

Tasha S. Philpot, Associate Professor, Department of Government, Center for African and African American Studies
BA, Marquette University, 1996; MA, University of Michigan-Ann Arbor, 1998; PhD, University of Michigan-Ann Arbor, 2003

Eric R. Pianka, Denton A. Cooley Centennial Professorship in Zoology, Professor, Section of Integrative Biology
PhD, University of Washington - Seattle, 1990

Jonathan T. Pierce-Shimomura, Assistant Professor, Section of Neurobiology, Waggoner Center for Alcohol and Addiction Research
BS, State University of New York at Binghamton, 1994; PhD, University of Oregon, 2000

Marc Pierce, Assistant Professor, Department of Germanic Studies
BA, University of Massachusetts, 1992; MA, University of California-Los Angeles, 1995; PhD, University of Michigan-Ann Arbor, 2002

Suzanne A. Pierce, Research Assistant Professor, Department of Geological Sciences, Research Assistant Professor (Affiliated), Department of Geological Sciences
BS, University of Arkansas Main Campus, 1991; PhD, University of Texas at Austin, 2006

Jemima Pierre, Assistant Professor, John L. Warfield Center for African and African American Studies, Department of Anthropology, and Department of Classics
BA, Tulane, 1995; MA, Texas (Austin), 1998; PhD, 2002

Jonathan William Pillow, Assistant Professor, Department of Psychology, Section of Neurobiology
BA, University of Arizona, 1997; PhD, New York University, 2005

Keshav K. Pingali, W. A. "Tex" Moncrief, Jr. Chair in Distributed and Grid Computing, Professor, Department of Computer Science
Btech, Indian Institute of Technology, 1978; EE, Massachusetts Institute of Technology, 1983; MS, Massachusetts Institute of Technology, 1983; ScD, Massachusetts Institute of Technology, 1986

Russell F. Pinkston, Professor, School of Music
DMA, Columbia University in the City of New York, 1984

Harvey C. Pittel, Professor, School of Music
MM, Northwestern University, 1967

Keenan A. Pituch, Associate Professor, Department of Educational Psychology
BA, Bowling Green State University, 1984; MA, University of South Florida, 1987; MS, Florida State University, 1993; PhD, Florida State University, 1997

Sally Kay Planalp, Professor, Department Communication Studies, Adjunct Professor, Department Communication Studies
BS, University of Missouri - Columbia, 1972; MA, University of Colorado at Denver, 1977; PhD, University of Wisconsin-Madison, 1983

C. Greg Plaxton, Professor, Department of Computer Science
PhD, Stanford University, 1989

Augusto L. Podo
PhD, Texas (Austin), 1968

Martin Poenie, Associate Professor, Section of Molecular Cell and Developmental Biology
PhD, Stanford University, 1986

Paula M. Poindexter, Associate Professor, School of Journalism
PhD, Syracuse University Main Campus, 1980

Russell A. Poldrack, Director, Imaging Research Center, Professor, Department of Psychology, Section of Neurobiology
BA, Baylor University, 1988; MA, University of Illinois at Urbana-Champaign, 1991; PhD, University of Illinois at Urbana-Champaign, 1995

Francisco Polidoro Jr., Assistant Professor, Department of Management
BA, Aeronautics Technological Institute, 1987; MBA, Henley Management College, 1997; PhD, University of Michigan-Ann Arbor, 2006

Gabriela Pollit, Assistant Professor, Department of Spanish and Portuguese
BPhil, Pontificia Universidad Catolica de Ecuador, 1990; MA, New Sch for Soc Research, 1996; PhD, New York University, 2002

George D. Pollak, Professor, Section of Neurobiology
PhD, University of Maryland College Park, 1970

Elizabeth C. Pomeroy, Professor, School of Social Work
PhD, University of Texas at Austin, 1994

Brant Pope, Z. T. Scott Family Chair in Drama, Department Chair, Department of Theatre and Dance, Professor, Department of Theatre and Dance
PhD, Michigan State University, East Lansing, 2003

Gary A. Pope, Texaco Centennial Chair in Petroleum Engineering, Professor, Department of Petroleum and Geosystems Engineering
PhD, Rice University, 1972

Elmina Popova, Professor, Department of Mechanical Engineering
PhD, Case Western Reserve University, 1995

Bruce W. Porter, Professor, Department of Computer Science, Department Chair, Department of Computer Science
PhD, University of California-Irvine, 1984

Joseph E. Potter, Professor, Department of Sociology
PhD, Princeton University, 1975

Lucas A. Powe Jr., Anne Green Regents Chair, Professor, School of Law, Department of Government
BA, Yale University, 1965; JD, University of Washington - Seattle, 1968

Daniel A. Powers, Associate Professor, Department of Sociology
BA, University of Wisconsin-Madison, 1976; MS, University of Wisconsin-Madison, 1984; PhD, University of Wisconsin-Madison, 1991

Edward J. Powers Jr., Texas Atomic Energy Research Foundation Professorship in Engineering, Professor, Department of Electrical & Computer Engineering
PhD, Stanford University, 1965

William C. Powers Jr., Hines H. Baker and Thelma Kelley Baker Chair in Law, Regents Chair in Higher Education Leadership, Professor, School of Law, President, Office of the President
BA, University of California-Berkeley, 1967; JD, Harvard University, 1973

William H. Press, Warren J. and Viola Mae Raymer Chair, Professor, Department of Computer Science, Section of Integrative Biology
AB, Harvard University, 1969; MS, California Institute of Technology, 1971; PhD, California Institute of Technology, 1972

Alison R. Preston, Assistant Professor, Department of Psychology, Section of Neurobiology
BA, University of Pennsylvania, 1997; MA, Stanford University, 2001; PhD, Stanford University, 2004

Dreta Price-Dennis, Assistant Professor, Department of Curriculum and Instruction, Center for African and African American Studies
BS, Ohio State U Main Campus, 1996; MED, Ohio State U Main Campus, 1997; PhD, Ohio State U Main Campus, 2009

Nicholas J. Pribe, Assistant Professor, Section of Neurobiology
BS, University of California-San Diego, 1994; BA, University of California-San Diego, 1994; PhD, University of California-San Francisco, 2001

David F. Prindle, Professor, Department of Government
PhD, Massachusetts Institute of Technology, 1979

Eric Damell Pritchard, Assistant Professor, Department of Rhetoric & Writing, Department of English, Department of African and African Diaspora Studies
BA, Lincoln University; 2002; MA, University of Wisconsin-Madison, 2004; PhD, University of Wisconsin-Madison, 2006
Masa Prodanovic, Assistant Professor, Department of Petroleum and Geosystems Engineering, BS, University of Zagreb, 1999; MS, New York University, 2002; PhD, New York University, 2005

Ian N. Proops, Associate Professor, Department of Philosophy, BPhil, University of Oxford, 1989; BA, University of Oxford, 1989; PhD, Harvard University, 1998

Jorge A. Prozi, Associate Professor, Department of Civil, Architectural and Environmental Engineering, BS, Universidad Nacional del Sur, 1989; University of Pretoria, 1996; MS, University of California-Berkeley, 1980; PhD, University of California-Berkeley, 1983

Adam T. Rabinowitz, Assistant Professor, Department of Classics, BA, Swarthmore College, 1995; MA, University of Michigan-Ann Arbor, 2000; PhD, University of Michigan-Ann Arbor, 2004

Charles L. Radin, Professor, Department of Mathematics, PhD, University of Rochester, 1971

Edward Akira Radtke, Associate Professor, Department of Japanese Language and Literature, MA, Indiana University at Bloomington, 1986; PhD, Indiana University at Bloomington, 1991

Rajagopal Raghunathan, Associate Professor, Department of Marketing Administration, BS, Birla Institute of Technology and Science, Pilani, 1994; MS, Stanford University, 1998; PhD, Stanford University, 2002

Varun Rai, Assistant Professor, Lyndon B Johnson School of Public Affairs, BTech, Indian Institute of Technology, 2002; MS, Stanford University, 2004; PhD, Stanford University, 2008

Esther L. Raizen, Associate Professor, Center for Higher Education Studies, Department of Middle Eastern Studies, Associate Dean for Research, College of Liberal Arts, PhD, University of Texas at Austin, 1987

Mark G. Raizen, Sid W. Richardson Foundation Regents Chair in Physics, PhD, University of Texas at Austin, 1989

Laxminarayan L. Raja, Associate Professor, Department of Aerospace Engineering and Engineering Mechanics, BTech, Indian Inst Of Tech, 1990; MS, Texas A & M University, 1992; PhD, University of Texas at Austin, 1996

Kelly Raley, Professor, Department of Sociology, MS, University of Wisconsin-Madison, 1991; PhD, University of Wisconsin-Madison, 1994

Kenneth M. Ralls, Professor, Department of Mechanical Engineering, MS, Massachusetts Institute of Technology, 1962; ScD, Massachusetts Institute of Technology, 1964

Vijaya Ramachandran, William B. Blassingame II Regents Professorship in Computer Sciences, Professor, Department of Computer Science, PhD, Princeton University, 1983

Venkatramanan Raman, Assistant Professor, Department of Aerospace Engineering and Engineering Mechanics, BS, Central Electrochemical Research Institute, India, 1998; PhD, Iowa State University, 2003

Manuel Ramirez III, Professor, Department of Psychology, BA, University of Texas at Austin, 1960; PhD, University of Texas at Austin, 1963

Mary A. Rankin, Robert E. Boyer Chair in Natural Sciences, Dean, College of Natural Sciences, Professor, Section of Integrative Biology, PhD, University of Iowa, 1972

Raghunath S. Rao, Assistant Professor, Department of Marketing Administration, MBA, Indian Institute of Foreign Trade, 1998; MS, University of Minnesota-Twin Cities, 2007; PhD, University of Minnesota-Twin Cities, 2007

Ramesh K. Rao, The Margaret and Eugene McDermott Centennial Professorship of Banking and Finance, Professor, Department of Finance, MBA, Indiana University at Bloomington, 1997; DBA, Indiana University at Bloomington, 1997

Gilbert C. Rappaport, Professor, Department of Linguistics, Department of Slavic Languages and Literature, SB, Massachusetts Institute of Technology, 1973; MA, University of California-Los Angeles, 1975; PhD, University of California-Los Angeles, 1979

Theodore S. Rappaport, William and Bettye Nowlin Chair in Engineering, Professor, Department of Electrical & Computer Engineering, ICS Institute, Applied Research Laboratories, BSEE, Purdue University Main Campus, 1982; MSE, Purdue University Main Campus, 1984; PhD, Purdue University Main Campus, 1987

Karen L. Rascati, Stewart Turley/Ecker Corporation Centennial Endowed Professorship in Pharmacy, Professor, College of Pharmacy, PhD, University of Florida, 1986

Susan W. Rather, Associate Professor, Department of Art and Art History, PhD, University of Delaware, 1986

Ellen M. Rahije, Warren S. Bellows Centennial Professorship in Civil Engineering, Professor, Department of Civil, Architectural and Environmental Engineering, MS, University of California-Berkeley, 1994; PhD, University of California Berkeley, 1997

Alan S. Rau, Mark C. and Judy G. Yudof Chair in Law, Professor, School of Law, BA, Harvard University, 1963; LLB, Harvard University, 1967

Krishnaswa Ravi-Chandar, Temple Foundation Endowed Professorship No. 1, Professor, Department of Aerospace Engineering and Engineering Mechanics, BS, Bangalore University, 1973; BSAE, Anna University, 1976; MS, California Institute of Technology, 1977; PhD, California Institute of Technology, 1982
Pradeep Ravikumar, Assistant Professor, Department of Computer Science, Division of Statistics and Scientific Computation

Soncia Reagins-Lilly, Senior Associate Vice President and Dean of Students, Office of the Dean of Students, Clinical Assistant Professor, Department of Educational Administration
BA, University of California-Irvine, 1986; MA, California State University-San Bernardino, 1991; EdD, University of Southern California, 1999

Wayne A. Rebhorn Jr., Celanese Centennial Professorship, Professor, Department of English
PhD, Yale University, 1968

Richard J. Reddick, Assistant Professor, Department of Educational Administration, Department of African and African Diaspora Studies
BA, University of Texas at Austin, 1995; MED, Harvard University, 1998; EdD, Harvard University, 2007

Gregory P. Reece, Professor, University of Texas M. D. Anderson Cancer Center
BS, McNeese State, 1978; MD, Louisiana State (Shreveport), 1982

Cory A. Reed, Associate Professor, Department of Spanish and Portuguese
PhD, Princeton University, 1989

Denne N. Reed, Assistant Professor, Department of Anthropology
BSc, University of Michigan-Ann Arbor, 1993; MA, State University of New York at Stony Brook, 1997; PhD, State University of New York at Stony Brook, 2003

Julia A. Reed, Associate Professor, Department of Textiles and Apparel
PhD, Purdue University Main Campus, 1973

Stephen D. Reese, Jesse H. Jones Professorship in Journalism, Associate Dean, College of Communication, Professor, School of Journalism
BS, University of Tennessee, 1976; MA, University of Wisconsin-Madison, 1980; PhD, University of Wisconsin-Madison, 1982

Leonard F. Register, Associate Professor, Department of Electrical and Computer Engineering
BS, North Carolina State University, 1983; PhD, North Carolina State University, 1990

Mark Regnerus, Associate Professor, Department of Sociology
BA, Trinity Christian College, 1993; MA, University of North Carolina at Chapel Hill, 1997; PhD, University of North Carolina at Chapel Hill, 2000

Danny D. Reible, Bettie Margaret Smith Chair in Environmental Health Engineering, Husson M. Altharby Centennial Professorship in Civil Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
BS, Lamar University, 1977; MS, California Institute of Technology, 1979; PhD, California Institute of Technology, 1982

Linda E. Reichl, Professor, Department of Physics
PhD, University of Denver, 1969

Alan W. Reid, Pennoz Company Regents Professorship in Mathematics, Professor, Department of Mathematics
PhD, University of Aberdeen, 1988

Stuart Reifel, Professor, Department of Curriculum and Instruction
EdD, University of California-Los Angeles, 1981

Kui Ren, Assistant Professor, Department of Mathematics
BS, Nanjing University, 1998; MS, Peking University, 2001; PhD, Columbia University in the City of New York, 2006

Pengyu Ren, Assistant Professor, Biomedical Engineering
BS, Zhejiang University, China, 1993; PhD, University of Cincinnati Main Campus, 1999

A. D. Renner, Associate Professor, School of Music
MM, University of Rochester, 1965

David Russ, Research Associate Professor, Section of Neurobiology, Research Associate Professor (Affiliated), Section of Neurobiology
BS, University of California-Davis, 1980; MS, Stanford University, 1984; PhD, Stanford University, 1988

Paul E. Resta, Ruth Knight Millikan Centennial Professorship, Director, Learning Technology Center, Professor, Department of Curriculum and Instruction
PhD, Arizona State University Main, 1968

Donna L. Rew, Denton and Louise Cooley and Family Centennial Professorship in Nursing, Professor, School of Nursing
EdD, Northern Illinois University, 1979

Pedro Reyes, Associate Director of Admissions, Office of Admissions - Minority Student Services
Program, Professor, Department of Educational Administration
BSED, University of Wisconsin-Madison, 1962; MS, University of Wisconsin-Madison, 1963; PhD, University of Wisconsin-Madison, 1985

Ann M. Reynolds, Associate Professor, Department of Art and Art History, Center for Women’s and Gender Studies
BA, Smith College, 1979; PhD, City University of New York Graduate Center, 1993

Lodis Rhodes, Professor, Lyndon B Johnson School of Public Affairs
PhD, University of Nebraska - Lincoln, 1972

Dick Richardson, Professor Emeritus, Section of Integrative Biology
BS, North Carolina State University, 1959; MS, North Carolina State University, 1962; PhD, North Carolina State University, 1965

Matt U. Richardson, Assistant Professor, Department of English, Center for Women’s and Gender Studies, Center for African and African American Studies, Department of African and African Diaspora Studies
BS, Dartmouth College, 1992; MFA, Bennington College, 1996; MA, University of California-Berkeley, 1999; PhD, University of California-Berkeley, 2005

John H. Richburg, Professor, College of Pharmacy
PhD, Rutgers the State University of New Jersey Camden Campus, 1993

Elizabeth Richmond-Carza, Director, Academic Program, Comparative Literature, Associate Professor, Department of English
PhD, Columbia University in the City of New York, 1992

Glenn A. Richter, Professor, School of Music
BMus, University of Texas at Austin, 1971; MM, University of Texas at Austin, 1975

Catherine Riegel-Crumb, Assistant Professor, Department of Curriculum and Instruction, Department of Sociology
BA, Texas A & M University, 1993; MA, University of Chicago, 1996; PhD, University of Chicago, 2000

Herbert J. Rieth, Audrey Rogers Myers Centennial Professorship in Education, Professor, Department of Special Education, Department Chair, Department of Special Education
EdD, University of Kansas Main Campus, 1971

Austen F. Rigsby II, Professor Emeritus, Section of Neurobiology
AM, Harvard University, 1949; PhD, Harvard University, 1951

Andrew M. Rigsby, Professor, Department of Art and Art History, Department of Classics
AB, Harvard University, 1987; MA, University of California-Berkeley, 1988; MA, University of California-Berkeley, 1988; PhD, University of California-Berkeley, 1993

Peter J. Riley, Associate Dean, College of Natural Sciences, Professor, Department of Physics
PhD, University of Alberta, 1962

Violina P. Rindova, Ralph B. Thomas Professorship in Business, Professor, Department of Management, IC2 Institute
JD, University of Sofia, 1990; MBA, Universidad Autonoma de Madrid, 1992; PhD, New York University, 1999

Jack L. Ritchie, Professor, Department of Philosophy
PhD, University of Rochester, 1984

Gretchen Ritter, Vice Provost, Executive Vice President & Provost, Professor, Department of Government, Center for Women’s and Gender Studies
BS, Cornell University, 1985; PhD, Massachusetts Institute of Technology, 1992

Jill Robbins, Associate Professor, Department of Spanish and Portuguese, Department Chair, Department of Spanish and Portuguese
BA, Brown University, 1983; MA, University of Kansas Main Campus, 1985; PhD, University of Kansas Main Campus, 1992

Patricia Roberts-Miller, Professor, Department of Rhetoric & Writing, Department of English
BA, University of California-Berkeley, 1981; MA, University of California-Berkeley, 1983; PhD, University of California-Berkeley, 1985

Brian E. Roberts, Professor, Department of Government, Department of Economics
PhD, Washington University in St Louis, 1986
Bryan R. Roberts, C. B. Smith, Sr. Centennial Chair in United States-Mexico Relations #1, Professor, Department of Sociology
PhD, University of Chicago, 1964

David W. Robertson, W. Page Keeton Chair in Tort Law, Professor, School of Law
BA, Louisiana State University and Agricultural and Mechanical College, 1960; LLB, Louisiana State University, 1961; LLM, Yale University, 1965; JSD, Yale University, 1968

John A. Robertson, Vinson & Elkins Chair in Law, Professor, School of Law
AB, Dartmouth College, 1964; JD, Harvard University, 1968

Jon D. Robertus, Benjamin Clayton Centennial Professorship in Biochemistry, Professor, Department of Chemistry and Biochemistry
PhD, University of California-San Diego, 1972

Daniel H. Robinson, Professor, Center for Women’s and Gender Studies, Department of Educational Psychology
BSED, University of Nebraska - Lincoln, 1988; PhD, University of Nebraska - Lincoln, 1993

Edward L. Robinson, William B. Blakemore II Regents Professorship in Astronomy, Professor, Department of Astronomy
PhD, University of Texas at Austin, 1973

John R. Robinson, Aubrey Smith Professorship in Accounting, Professor, Department of Accounting
PhD, University of Michigan-Ann Arbor, 1981

Keith Robinson, Assistant Professor, Department of Sociology, Center for African and African American Studies
BA, University of California-Los Angeles, 2000; MA, University of Michigan-Ann Arbor, 2002; PhD, University of Michigan-Ann Arbor, 2006

Luiz Alves Rocha Filho, Assistant Professor, Department of Marine Science
BSc, Universidade Federal da Paraiba, 1996; MSc, Universidade Federal da Paraiba, 1999; PhD, University of Florida, 2003

Gary T. Rochelle, Carol and Henry Groppe Professorship in Chemical Engineering, Professor, Department of Chemical Engineering
PhD, University of California-Berkeley, 1977

Aaron B. Rochlen, Associate Professor, Department of Educational Psychology
BA, University of Michigan-Ann Arbor, 1992; MA, University of Maryland College Park, 1997; PhD, University of Maryland College Park, 2000

Gregory J. Rodin, Professor, Department of Aerospace Engineering and Engineering Mechanics
MS, Massachusetts Institute of Technology, 1984; PhD, Massachusetts Institute of Technology, 1986

F. Rodriguez-Villegas, Professor, Department of Mathematics
PhD, The Ohio State University Main Campus, 1990

America B. Rodriguez, Associate Professor, Department of Radio Television Film, School of Journalism
PhD, University of California-San Diego, 1993

Daniel B. Rodriguez, Minerva House Drysdale Regents Chair, Professor, School of Law
BA, California State University-Long Beach, 1984; JD, Harvard University, 1987

Enrique R. Rodriguez, Associate Professor, Department of Anthropology
BA, University of Texas at Austin, 1994; MA, University of Chicago, 1995; PhD, University of Chicago, 2002

Maggie R. Rodriguez, Associate Professor, School of Journalism
PhD, University of North Carolina at Chapel Hill, 1998

Nestor P. Rodriguez, Professor, Department of Sociology
BA, Texas A & M University - Kingsville, 1973; MA, Texas A & M University - Kingsville, 1974; PhD, University of Texas at Austin, 1984

Victoria Rodriguez, Dean, Office of Graduate Studies, Professor, Department of Government, Lyndon B. Johnson School of Public Affairs
BA, Instituto Tecnologico, Mexico, 1975; MA, University of Texas at El Paso, 1981; PhD, University of California-Berkeley, 1987

Sonia Roncoron, Associate Professor, Department of Spanish and Portuguese
BA, Universidad de Brasilia, 1987; BA, Universidad de Brasilia, 1989; MA, Universidad de Brasilia, 1992; PhD, New York University, 1999

Ehud I. Ronn, Professor, Department of Finance
PhD, Stanford University, 1983

Mary Rose, Associate Professor, Department of Sociology
AB, Stanford University, 1991; MA, Duke University, 1996; PhD, Duke University, 1998

Nancy L. Roser, Priscilla Pond Flawn Regents Professorship in Early Childhood Education, Professor, College of Education, Department of Curriculum and Instruction
MSED, Indiana University at Bloomington, 1970; EdD, Indiana University at Bloomington, 1970

Catherine E. Ross, Professor, Department of Sociology
BA, Carleton College, 1975; MA, Yale University, 1977; PhD, Yale University, 1980

Rebecca Rossen, Assistant Professor, Department of Theatre and Dance
PhD, Northwestern University, 2006

Peter J. Rossky, Marvin K. Collie-Welch Regents Chair in Chemistry, Professor, Department of Chemical Engineering, Department of Chemistry and Biochemistry
PhD, Harvard University, 1978

John E. Rouche Jr., Sid W. Richardson Regents Chair in Community College Leadership, Professor, Department of Educational Administration
PhD, Florida State University, 1964

Michele A. Routtree, Assistant Professor, Center for Women’s and Gender Studies, School of Social Work
BA, University of Arizona, 1989; MSW, Boston University, 1992; PhD, Arizona State University, 1992

Stanley J. Roux Jr., Professor, Section of Molecular Cell and Developmental Biology
PhD, Yale University, 1971

Timothy B. Rowe, J. Nalle Gregory Regents Professorship in Geologic Sciences, Professor, Department of Geological Sciences, Director, Texas Memorial Museum
PhD, University of California-Berkeley, 1986

Krishnendu Roy, Associate Professor, Biomedical Engineering
BS, IIT Kharagpur, 1993; MS, Boston University, 1995; PhD, Johns Hopkins University, 1999

Loreine Roy, Professor, School of Information, Center for Women’s and Gender Studies
BT, Oregon Institute of Technology, 1977; MLS, University of Arizona, 1980; PhD, University of Illinois at Urbana-Champaign, 1987

Allen Rubin, Bert Kruger Smith Centennial Professorship in Social Work, Professor, School of Social Work
PhD, University of Pittsburgh, Pittsburgh Campus, 1976

Stephanie S. Rude, Professor, Department of Educational Psychology
PhD, Stanford University, 1983

Sharmila Rudrappa, Associate Professor, Center for Asian American Studies, Center for Women’s and Gender Studies, Department of Sociology
BS, Bangalore University, 1989; MS, University of Wisconsin-Madison, 1996; PhD, University of Wisconsin-Madison, 2001

Timothy W. Ruefli, Professor, H. Timothy (Tim) Harkins Centennial Professor in Business and Daniel B. Stuart Centennial Professor in the Application of Computers to Business Management, Department of Information, Risk, and Operations Management

Robert A. Ruiz, Associate Professor, School of Nursing
MSN, Texas Woman’s University, 1990; PhD, University of Texas Health Science Center at San Antonio, 1999

John P. Rumrich, Arthur J. Thaman and Wilhelmina More Thaman Endowed Professorship in English #1, Professor, Department of English
MA, University of Virginia, 1972; PhD, University of Virginia, 1981

Rodney S. Ruoff, Cockrell Family Regents Chair in Engineering #7, Professor, Department of Mechanical Engineering
BS, University of Texas at Austin, 1981; PhD, University of Illinois at Urbana-Champaign, 1988
Rick Russell, Associate Professor, Department of Chemistry and Biochemistry
BA, Earlham College and Earlham School of Religion, 1991; PhD, Johns Hopkins University, 1998

Cinzia Russi, Associate Professor, Department of French and Italian
Laurea, Università degli Studi G. D’Annunzio (Pescara, IT), 1992; MA, San Jose State University, 1998; MA, University of Washington - Seattle, 2001; PhD, University of Washington - Seattle, 2003

John J. Ruszkiewicz, Professor, Department of Rhetoric & Writing, Department of English
PhD, Ohio State U Main Campus, 1977

Michael J. Ryan, Clark Hubbs Regents Professorship in Zoology, Professor, Section of Integrative Biology
PhD, Cornell University, 1982

Henry G. Rylander III, Harry H. Power Professorship in Engineering, Professor, Biomedical Engineering, Department of Electrical & Computer Engineering
BS, University of Texas at Austin, 1970; MS, University of Texas at Austin, 1974; MD, University of Texas Health Science Center at San Antonio, 1974

Maytal Saar-Tsechansky, Associate Professor, Department of Information, Risk, and Operations Management
BS, Ben-Gurion University of the Negev, 1994; MS, Ben-Gurion University of the Negev, 1997; PhD, New York University, 2002

Lorenzo A. Sadun, Professor, Department of Mathematics
MA, University of California-Berkeley, 1982; PhD, University of California-Berkeley, 1987

Victor B. Saenz, Assistant Professor, Department of Educational Administration
BA, University of Texas at Austin, 1996; MPAF, University of Texas at Austin, 1999; MA, University of California-Los Angeles, 2002; PhD, University of California-Los Angeles, 2005

William M. Sage, James R. Dougherty Chair for Faculty Excellence, Vice Provost, Executive Vice President & Provost, Professor, School of Law
AB, Harvard University, 1982; MD, Stanford University, 1988; JD, Stanford University, 1988

Lawrence Sager, Alice Jane Drysdale Sheffield Regents Chair, John Jeffers Research Chair in Law, Dean, School of Law, Professor, School of Law BA, Pomona College, 1963; LLB, Columbia University in the City of New York, 1966

Thomas W. Sager, Professor, Department of Information, Risk, and Operations Management
BA, University of Iowa, 1968; MS, University of Iowa, 1971; PhD, University of Iowa, 1973

Richard M. Sainsbury, Professor, Department of Philosophy

Arthur Sakamoto Jr., Professor, Department of Sociology
MS, University of Wisconsin-Madison, 1985; PhD, University of Wisconsin-Madison, 1988

Stephen R. Saklad, Clinical Associate Professor, College of Pharmacy
BA, University of California-Los Angeles, 1974; PharmD, University of Southern California, 1978

Maximo R. Salaberry, Professor, Department of Spanish and Portuguese
BA, Military Air School, 1983; MAT, University of Maine, 1993; MA, Cornell University, 1997; PhD, Cornell University, 1997

Cesar A. Salgado, Associate Professor, Department of Spanish and Portuguese
PhD, Yale University, 1993

Cynthia S. Salinas, Associate Professor, Department of Curriculum and Instruction
BS, Spanish and Portuguese

John J. Sampson, William Benjamin Wynne Professorship in Law, Professor, School of Law
BBA, University of Minnesota-Twin Cities, 1957; LLB, University of Minnesota-Twin Cities, 1966

Isaac C. Sanchez, William J. (Bill) Murray, Jr Endowed Chair of Engineering, Professor, Department of Chemical Engineering
PhD, University of Delaware, 1969

Juan M. Sanchez, Temple Foundation Endowed Professorship No. 4, Vice President for Research, Vice-President for Research, Professor, Department of Mechanical Engineering
MS, University of California-Los Angeles, 1974; PhD, University of California-Los Angeles, 1977

Janay B. Sander, Assistant Professor, Department of Educational Psychology
BA, University of Texas at Austin, 1995; MA, University of Texas at Austin, 1999; PhD, University of Texas at Austin, 2001

Bob G. Sanders, Professor, Molecular Genetics and Microbiology, Department of Nutrition Sciences, College of Pharmacy
BA, Concord University, 1954; MEd, Penn State University Park, 1958; PhD, Penn State University Park, 1961

Sujay Sanghavi, Assistant Professor, Department of Electrical & Computer Engineering
B.Tech, Indian Institute of Technology, 2000; MS, University of Illinois at Urbana-Champaign, 2002; MS, University of Illinois at Urbana-Champaign, 2005; PhD, University of Illinois at Urbana-Champaign, 2006

Surya Santoso, Associate Professor, Department of Electrical & Computer Engineering
BS, Satya Wacana Christian University, 1992; MSEE, University of Texas at Austin, 1994; PhD, University of Texas at Austin, 1996

Veronica G. Sardegna, Assistant Professor, Department of Curriculum and Instruction
Licenciatura, Universidad CAECE - Center of High Studies in Exact Sciences, 2002; MA, University of Illinois at Urbana-Champaign, 2005; PhD, University of Illinois at Urbana-Champaign, 2009

Sahota Sarkar, Professor, Department of Philosophy
BA, Columbia University in the City of New York, 1981; MA, University of Chicago, 1984; PhD, University of Chicago, 1989

Ray K. Sasaki, Frank C. Erwin, Jr. Centennial Professorship in Fine Arts, Professor, School of Music
BMus, California State University-Fresno, 1972; MMus, University of North Texas, 1975

Margo L. Sawyer, Professor, Department of Art and Art History
MFA, Yale University, 1982

Sara L. Sawyer, Assistant Professor, Molecular Genetics and Microbiology
BSChE, University of Kansas Main Campus, 1996; PhD, Cornell University, 2003

Elizabeth D. Scala, Associate Professor, Department of English
PhD, Harvard University, 1994

John M. Scalo, Josey Centennial Professorship in Astronomy, Professor, Department of Astronomy
PhD, University of California-Los Angeles, 1973

Bridget R. Scanlon, Senior Research Scientist, Bureau of Economic Geology
BS, Trinity College, 1980; MS, The University of Alabama, 1983; PhD, University of Kentucky, 1985

James L. Schaller, Associate Professor, Department of Special Education
BS, University of Wisconsin-Madison, 1983; MS, University of Wisconsin-Madison, 1987; PhD, University of Wisconsin-Madison, 1991

Diane L. Schallert, Professor, Department of Educational Psychology
PhD, Arizona State University Main, 1975

Timothy J. Schallert, Professor, Department of Psychology
BA, University of San Francisco, 1971; MA, San Francisco State University, 1973; PhD, Arizona State University Main, 1976

Thomas G. Schatz, Mrs. Mary Gibbs Jones Centennial Chair in Communication, Professor, Department of Radio Television Film
MA, University of Iowa, 1974; PhD, University of Iowa, 1976

Nancy Schiesari, Professor, Department of Radio Television Film
MA, Royal College of Art, 1978
Christine E. Schmidt, The BFGoodrich Endowed Professorship in Materials Engineering, Professor, Biomedical Engineering, Department of Chemical Engineering
BS, University of Texas at Austin, 1988; PhD, University of Illinois at Urbana-Champaign, 1995
Jaime Joy Schmidt, Assistant Professor, Department of Accounting
BS, Kansas State University, 2000; MAcc, Kansas State University, 2001; MS, Kansas State University, 2005; PhD, Texas A&M University, 2009
Philip S. Schmidt, Donald J. Douglas Centennial Professorship in Engineering, Professor, Department of Mechanical Engineering
MS, Stanford University, 1965; PhD, Stanford University, 1969
Robert N. Schmidt, Frank C. Erwin, Jr. Centennial Professorship in Drama, Professor Emeritus, Department of Theatre and Dance
BA, University of Wisconsin-Madison, 1976; MFA, University of Wisconsin-Madison, 1979
Erich A. Schneider, Assistant Professor, Department of Mechanical Engineering
BS, Cornell University, 1995; MS, Cornell University, 1997; PhD, Cornell University, 2002
Jan Schneider, Assistant Professor, Department of Finance
Diploma (Foreign), University of Berlin, 2000; PhD, University of British Columbia, 2006
David M. Schneyer, Associate Professor, Department of Psychology
BA, University of Virginia, 1992; MA, University of Arizona, 1994; PhD, University of Arizona, 1998
Richard L. Schott, Professor, Lyndon B Johnson School of Public Affairs
PhD, Syracuse University Main Campus, 1972
Roxanne L. Schroeder, Assistant Professor, Department of Theatre and Dance
MFA, University of Texas at Austin, 2000
Bob E. Schutz, Joe J. King Chair of Engineering, The FSX Professorship in Space Applications and Exploration, Professor, Department of Aerospace Engineering and Engineering Mechanics
BSAEE, University of Texas at Austin, 1963; MSAEE, University of Texas at Austin, 1966; PhD, University of Texas at Austin, 1969
Arthur J. Schwab, Jr., Clara Pope Willoughby Centennial Professorship in Child Welfare, Assistant Dean, School of Social Work, Professor, School of Social Work
MSSW, University of Texas at Austin, 1971; PhD, University of Texas at Austin, 1981
Roy F. Schwitter, Sid W. Richardson Foundation Regents Chair in Physics #4, Professor, Department of Physics
BS, Massachusetts Institute of Technology, 1966; PhD, Massachusetts Institute of Technology, 1971
James G. Scott, Assistant Professor, Department of Information, Risk, and Operations Management
BS, University of Texas at Austin, 2004; MS, University of Cambridge, 2005; PhD, Duke University, 2009
Jay D. Scribner, Professor, Department of Educational Administration, Professor Emeritus, Department of Educational Administration
EdD, Stanford University, 1965
Sonja T. Seemann, Assistant Professor, School of Music, Center for Middle Eastern Studies, Department of Middle Eastern Studies
BA, University of Michigan-Ann Arbor, 1980; MA, University of Washington - Seattle, 1990; PhD, University of California-Los Angeles, 2002
Carolyn C. Seepersad, Assistant Professor, Department of Mechanical Engineering, Applied Research Laboratories
BS, West Virginia University, 1996; MS, George Mason University, 2001; PhD, George Mason University, 2004
Eyal Seidemann, Associate Professor, Section of Neurobiology, Department of Psychology
MSc, Tel Aviv University, 1993; PhD, Stanford University, 1998
Jeri Kristina Seidman, Assistant Professor, Department of Accounting
BS, Case Western Reserve University, 1997; MAcc, Case Western Reserve University, 1998; BS, Case Western Reserve University, 1998; PhD, Massachusetts Institute of Technology, 2008
Martha A. Selby, Associate Professor, Department of Asian Studies
PhD, University of Chicago, 1994
Mraln K. Sen, John A. and Katherine G. Jackson Chair in Applied Seismology, Professor, Department of Geological Sciences, Institute for Geophysics
BSc, Indian School of Mines, 1977; MSc, Indian School of Mines, 1979; PhD, University of Hawaii at Manoa, 1987
David M. Sena, Assistant Professor, Department of Asian Studies
BA, University of California-Berkeley, 1993; MA, University of Chicago, 1996; PhD, University of Chicago, 2005
YunChaih C. Sena, Assistant Professor, Department of Art and Art History
BA, University of Minnesota-Duluth, 1995; MA, University of Minnesota-Duluth, 1997; PhD, University of Chicago, 2007
Luis Sentis, Assistant Professor, Department of Mechanical Engineering
BS, Universitat Politècnica de Catalunya, 1996; MSc, Stanford University, 2000; PhD, Stanford University, 2007
Kamy Sepehrnoori, Bank of America Centennial Professorship in Petroleum Engineering, Professor, Department of Petroleum and Geosystems Engineering
BSME, University of Texas at Austin, 1973; MSEE, University of Texas at Austin, 1974; PhD, University of Texas at Austin, 1977
Sridhar Seshadri, Professor, Department of Information, Risk, and Operations Management
BTech, Indian Institute of Technology, 1978; PhD, University of California-Berkeley, 1993
Jonathan L. Sessler, Rowland Pettit Centennial Chair in Chemistry, Professor, Department of Chemistry and Biochemistry
PhD, Stanford University, 1982
Thomas K. Seung, Jesse H. Jones Regents Professorship in Liberal Arts, Professor, Department of Government, Department of Philosophy
PhD, Yale University, 1965
Sanjay Shakkottai, Associate Professor, Department of Electrical & Computer Engineering
MS, Indian Institute of Science, 1998; PhD, University of Illinois at Urbana-Champaign, 2002
Timothy M. Shanahan, Assistant Professor, Department of Geological Sciences
BS, Brown University, 1994; MS, University of Arizona, 1999; PhD, University of Arizona, 2006
Gerald C. Shank, Assistant Professor, Department of Marine Science
BS, Virginia Polytechnic Institute and State University, 1988; MS, University of North Carolina at Chapel Hill, 1993; PhD, University of North Carolina at Chapel Hill, 2003
S. M. Shankland, Professor, Section of Molecular Cell and Developmental Biology
PhD, University of California-Berkeley, 1982
Liza J. Shapiro, Professor, Department of Anthropology
PhD, State University of New York at Stony Brook, 1991
Paul R. Shapiro, Frank N. Edmonds, Jr. Regents Professorship in Astronomy, Professor, Department of Astronomy
PhD, Harvard University, 1978
Yacov Shhari, Professor, Department of Theatre and Dance
BFA, Bezalel Academy of Art & Design, 1966
Yevgeniy Shorlhat, Assistant Professor, School of Business
BA, Curtis Institute of Music, 2001; MM, Yale University, 2004
Mukul M. Sharma, W. A. “Tex” Moncrief, Jr. Centennial Chair in Petroleum Engineering, Professor, Department of Petroleum and Geosystems Engineering
MS, University of Southern California, 1981; MS, University of Southern California, 1982; PhD, University of Southern California, 1985
John M. Sharp Jr., Dave P. Carlson Centennial Professorship in Geology, Professor, Department of Geological Sciences
PhD, University of Illinois at Urbana-Champaign, 1974
Edwin R. Sharpe Jr., Clinical Professor, Department of Educational Administration
BA, University of Texas at Austin, 1969; MBA, University of Texas at Austin, 1970; PhD, University of Texas at Austin, 1980
Daron R. Shaw, Professor, Department of Government
PhD, University of California-Los Angeles, 1994

Andrew B. Shea, Associate Professor, Department of Radio Television Film
BA, Pennsylvania College, 1976; JD, Northwestern University, 1982; MA, University of Southern California, 1994; MA, California Institute of the Arts, 1985

Jason E. Shearer, Professor, Department of Chemistry and Biochemistry
PhD, Stanford University, 1994

Allan W. Shearer, Assistant Professor, School of Architecture
BA, Princeton University, 1988; MLA, Harvard University, 1994; MA, Harvard University, 2001; PhD, Harvard University, 2003

Li Sheng, Assistant Professor, Department of Computer Science
BS, University of Washington - Seattle, 1994; MS, Stanford University, 1997; MS, Stanford University, 1999; PhD, Stanford University, 2000

Vitaly Shmatikov, Associate Professor, Department of Computer Science
BS, University of Virginia - Charlottesville, 1994; MS, Stanford University, 1997; MS, Stanford University, 1999; PhD, Stanford University, 2000

Clayton T. Showkey, Jaseen and Frances Lockhart Memorial Professorship for Direct Practice in Social Work, Professor, School of Social Work
BA, University of Michigan-Ann Arbor, 1964; MSW, University of Michigan-Ann Arbor, 1968

Harel Shouval, Adjunct Assistant Professor, Biomedical Engineering
BS, Tel Aviv University, 1987; MS, Weizmann Institute of Science, 1990; MS, Brown University, 1992; PhD, Brown University, 1994

George T. Shubita, Assistant Professor, Department of Physics
BS, Birzeit University, 1995; PhD, University of Paris-Sud, 2002

Nicolas Shumway, Professor Emeritus, Department of Chinese and Japanese
BS, Brigham Young University, 1969; MA, University of California-Los Angeles, 1971; PhD, University of California-Los Angeles, 1976

Cennady Shwets, Associate Professor, Department of Physics
BS, Moscow Engineering Physics Institute, 1988; PhD, Massachusetts Institute of Technology, 1995

Clemens Sialm, Associate Professor, Department of Economics
MS, University of St. Gallen, 1995; PhD, Stanford University, 2001

David S. Sibley, John T. Stuart III Centennial Professor in Economics, Professor, Department of Economics
PhD, Yale University, 1973

James Sidbury, Professor, Department of History
PhD, Johns Hopkins University, 1991

Igor P. Siddiqui, Assistant Professor, School of Architecture
BArch, Tulane University, 1998; MA, Yale University, 2003

Dionicio R. Siegel, Assistant Professor, Department of Chemistry and Biochemistry
BA, Reed College, 1997; PhD, Harvard University, 2003

Jeffrey A. Siegel, Associate Professor, Department of Civil, Architectural and Environmental Engineering
BS, Swarthmore College, 1995; MS, University of California-Berkeley, 1999; PhD, University of California-Berkeley, 2002

Charles M. Silver, Roy W. and Eugenia C. McDonald endowed Chair of Political Science, Professor, Department of Government
BA, University of Florida, 1979; MA, University of Chicago, 1981; JD, Yale University, 1987

Beryl Simpson, C. L. Lundell Chair of Systematic Botany, Professor, Section of Integrative Biology, School of Biological Sciences, Director, Plant Resources Center
AB, Harvard University, 1964; MA, Harvard University, 1968; PhD, Harvard University, 1968

Cherie E. Simpson, Assistant Professor, School of Nursing
BA, Austin College, 1981; BU, University of Texas Medical Branch, 1983; MBA, St. Edward's University, 1996; MSN, University of Texas at Austin, 2005; PhD, University of Texas at Austin, 2010

Michael C. Singer, Professor, Section of Integrative Biology
PhD, University of Oxford, 1971

Mihai Sirbu, Assistant Professor, Department of Mathematics
BS, Alexandru Ioan Cuza University of Iasi, 1998; MS, Carnegie Mellon University, 2000; PhD, Carnegie Mellon University, 2004

Jayant Sirsi, Assistant Professor, Department of Aerospace Engineering and Engineering Mechanics
BS, Indian Institute of Technology, 1996; MS, University of Maryland College Park, 1998; PhD, University of Maryland College Park, 2002

Greg O. Sitz, Professor, Department of Physics
PhD, Stanford University, 1987

Lok K. Siu, Associate Professor, Department of Anthropology
BA, University of California-Berkeley, 1993; MA, Stanford University, 1995; PhD, Stanford University, 2000

Allison Skerrett, Assistant Professor, Department of Curriculum and Instruction, Department of African and African Diaspora Studies
BA, University of Massachusetts Boston, 1998; MA, University of Massachusetts Boston, 2000; PhD, Boston College, 2007

Douglas P. Sladen, Assistant Professor, Department of Communication Sciences and Disorders
BA, Western Washington University, 1992; MA, Western Washington University, 1994; PhD, Vanderbilt University, 2006

Stephen M. Slawek, Professor, School of Music
PhD, University of Illinois at Urbana-Champaign, 1986
Members of Graduate Studies Committees

Christopher A. Sneed, Rex G. Baker, Jr. and McDonald Observatory Centennial Research Professorship in Astronomy, Professor, Department of Astronomy
PhD, University of Texas at Austin, 1974

D. M. Snodderly, Professor, Department of Nutritional Sciences, Section of Neurobiology
SM, Massachusetts Institute of Technology, 1965; PhD, Rockefeller University, 1969

Vincent L. Snyder, Associate Professor, School of Architecture
MArch, Princeton University, 1988

Konstantin V. Sokolov, Adjunct Associate Professor, Biomedical Engineering
BS, Moscow Engineering Physics Institute, 1987; PhD, Moscow State University, 1992

Patricia A. Somers, Associate Professor, Department of Educational Administration, Center for Women's and Gender Studies
BA, Michigan State University, East Lansing, 1971; MA, University of Illinois, Urbana, 1973; PhD, University of New Orleans, 1992

Garrett P. Sonnier, Assistant Professor, Department of Marketing Administration
BS, Louisiana State University at Eunice, 1995; MS, Duke University, 1997; PhD, University of California-Los Angeles, 2006

Audrey M. Sorrells, Associate Dean of Students, Office of the Dean of Students, Associate Professor, Department of Special Education
PhD, University of Florida, 1996

David Sosa, Louann and Larry Temple Centennial Professorship in the Humanities, Professor, Department of Philosophy
MA, Princeton University, 1995; PhD, Princeton University, 1996

Jason S. Sowell, Assistant Professor, School of Architecture
BArch, University of Tennessee, 1996; MArch, Harvard University, 2004

Bartholomew H. Sparrow, Professor, Department of Government
PhD, University of Chicago, 1991

Lawrence W. Speck, The W. L. Moody, Jr. Centennial Professorship in Architecture, Professor, School of Architecture, Department of Geography and the Environment
BS, Massachusetts Institute of Technology, 1971; BS, Massachusetts Institute of Technology, 1971; MArch, Massachusetts Institute of Technology, 1972

Shannon Speed, Associate Professor, Department of Anthropology, Center for Women's and Gender Studies
BA, San Francisco State University, 1989; MA, University of Texas at Austin, 1994; MA, University of California-Davis, 1996; PhD, University of California-Davis, 2001

Gerald E. Speitel Jr., John J. McKetta Energy Professorship in Engineering, Associate Dean for Academic Affairs, Cockrell School of Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
MS, University of North Carolina at Chapel Hill, 1979; PhD, University of North Carolina at Chapel Hill, 1985

Denise A. Spellberg, Associate Professor, Center for Middle Eastern Studies, Department of Middle Eastern Studies, Department of Religious Studies, Department of History
AB, Smith College, 1980; MA, Columbia University in the City of New York, 1984; PhD, Columbia University in the City of New York, 1989

Lewis J. Spellman, Professor, Department of Finance
PhD, Stanford University, 1971

William G. Spelman, Professor, Lyndon B Johnson School of Public Affairs
PhD, Harvard University, 1998

David B. Spence, Associate Professor, Business, Government and Society
PhD, Duke University, 1997

Kyle Thomas Spikes, Assistant Professor, Department of Geological Sciences
BS, University of Kansas Main Campus, 2001; MS, University of Kansas Main Campus, 2002; MS, Stanford University, 2007; PhD, Stanford University, 2008

James C. Spindler, Professor, School of Law
BA, Princeton University, 1997; MA, University of California-Los Angeles, 2007; PhD, University of California-Los Angeles, 2010; JD, Harvard University, 2000

Clay Spinuzzi, Associate Professor, Department of English, Department of Rhetoric & Writing, School of Information
BA, University of North Texas, 1991; MA, University of North Texas, 1994; PhD, Iowa State University, 1999

Waneen W. Spirduso, Oscar and Anne Mauzy Regents Professorship for Educational Research and Development, Professor, Department of Kinesiology and Health Education
BS, University of Texas at Austin, 1957; EdD, University of Texas at Austin, 1966

Ellen R. Spofford, Professor, Department of Radio Television Film
MA, State University of New York at Buffalo, 1991

Matthew L. Spitzer, Hayden W. Head Regents Chair for Faculty Excellence in the School of Law, Professor, School of Law
BA, University of California-Los Angeles, 1973; PhD, California Institute of Technology, 1979; JD, University of Southern California, 1977

David W. Springer, Associate Dean, School of Social Work, Professor, School of Social Work, Department of Psychology
AA, Brevard Community College, 1988; BA, Florida State University, 1990; MSSW, Florida State University, 1992; PhD, Florida State University, 1997
James T. Sprinkle, The First Mr. and Mrs. Charles E. Yager Professorship, Professor, Department of Geological Sciences
PhD, Harvard University, 1971

S. V. Srinivasan, Professor, Department of Mechanical Engineering
MS, Ohio State U Main Campus, 1988; PhD, Ohio State U Main Campus, 1994

Rajashri Srinivasan, Associate Professor, Department of Marketing Administration
MS, Madras Christian College, 1981; MBA, Indian Institute of Management, 1983; PhD, Pennsylvania State University Main Campus, 2000

Sanjay Srinivasan, Associate Professor, Department of Petroleum and Geosystems Engineering
BS, Indian School of Mines, 1987; MS, University of Southern California, 1989; PhD, Stanford University, 2000

Dale O. Stahl II, Malcolm Forossan Centennial Professorship, Department Chair, Department of Economics, Professor, Department of Economics
PhD, University of California-Berkeley, 1981

Janet Staiger, William P. Hobby Centennial Professorship in Communication, Professor, Department of Radio Television Film, Center for Women’s and Gender Studies
BA, University of Nebraska at Omaha, 1968; MA, Purdue University Main Campus, 1969; PhD, University of Wisconsin-Madison, 1981

Thomas F. Staley, C. B. Smith, Sr., Nash Phillips, Clyde Copus Centennial Chair honoring Harry Huntt Ransom, Professor, Department of English, Director, Harry Huntt Ransom Humanities Research Center
PhD, University of Pittsburgh, Pittsburgh Campus, 1962

Nancy K. Stalker, Associate Professor, Department of Asian Studies, Department of History
BA, Portland State University, 1984; MA, Stanford University, 1995; PhD, Stanford University, 2002

John F. Stanton, George W. Watt Centennial Professorship, Professor, Department of Chemistry and Biochemistry
PhD, Harvard University, 1989

Jane Stapleton, Ernest E. Smith Professorship in Law, Professor, School of Law
BS, The University of New South Wales, 1974; PhD, Adelaide University, 1977; LLB, The Australian National University, 1981; DCL, University of Oxford, 2009; DPhil, University of Oxford, 1984

Michael P. Starbird, Professor, Department of Mathematics
PhD, University of Wisconsin-Madison, 1974

Kevin D. Stark, Professor, Department of Educational Psychology
PhD, University of Wisconsin-Madison, 1985

Laura T. Starks, Charles E. and Sarah M. Stey Regent Chair in Finance, Department Chair, Department of Finance, Professor, Department of Finance
BA, University of Texas at Austin, 1972; PhD, University of Texas at Austin, 1981

Devin A. Stauffer, Associate Professor, Department of Government
BA, Kenyon College, 1992; PhD, Boston College, 1998

Salomon A. Stavansky, Alcon Centennial Professorship in Pharmacy, Professor, College of Pharmacy
PhD, University of Kentucky, 1974

Ronald J. Steele, Morgan J. Davis Centennial Chair in Petroleum Geology, Professor, Department of Geological Sciences
BSc, University of Glasgow, 1967; PhD, University of Glasgow, 1972

Jordan M. Steiker, Judge Robert M. Parker Chair of Law, Cooper K. Ragan Regents Professorship in Law, Professor, School of Law
BA, Wesleyan University, 1984; JD, Harvard University, 1988

David S. Stein, Professor, Section of Molecular Cell and Developmental Biology
BS, University of Wisconsin, 1982; PhD, Stanford University, 1989

Laura L. Stein, Associate Professor, Department of Radio Television Film
BA, University of California-Berkeley, 1987; MA, Teachers College, Columbia University, 1990; PhD, University of Texas at Austin, 1997

James B. Steinberg, Professor, Lyndon B Johnson School of Public Affairs
BA, Harvard University, 1973; JD, Yale University, 1978

Frederick R. Steiner, Henry M. Rockwell Chair in Architecture, Dean, School of Architecture, Professor, School of Architecture, Research Affiliate - Research Fellow, Department of Geography and the Environment
BSD, University of Cincinnati Main Campus, 1972; MCP, University of Cincinnati Main Campus, 1979; MRP, University of Pennsylvania, 1977; MA, University of Pennsylvania, 1986; PhD, University of Pennsylvania, 1986

Mary A. Steinhardt, Professor, Department of Kinesiology and Health Education, Ombudsperson (Faculty), Office of the General Faculty
EdD, University of Houston, 1985

Paul J. Steikler, Wofford Denius Chair in Entertainment Studies, Professor, Department of Radio Television Film, Lyndon B Johnson School of Public Affairs, Department Chair, Department of Radio Television Film
PhD, Harvard University, 1983

Keri K. Stephens, Assistant Professor, Department of Communication Studies
BS, Texas A & M University, 1990; MA, University of Texas at Austin, 2000; PhD, University of Texas at Austin, 2005

Scott W. Stevens, Associate Professor, Molecular Genetics and Microbiology
BS, University of Illinois at Urbana-Champaign, 1993; PhD, University of North Carolina at Chapel Hill, 1996

Keith J. Stevenson, Associate Professor, Department of Chemistry and Biochemistry
BA, University of Puget Sound, 1989; PhD, University of Utah, 1997

Kathleen C. Stewart, Professor, Department of Anthropology
MA, University of Michigan-Ann Arbor, 1978; PhD, University of Michigan-Ann Arbor, 1982

Maxwell B. Stinchcombe, E. C. McCarty Centennial Professorship, Professor, Department of Economics
BA, University of California-Berkeley, 1978; MA, University of California-Berkeley, 1984; PhD, University of California-Berkeley, 1986

Michael B. Stoff, Director, Academic Program, Plan II Honors Program, Associate Professor, Department of History
PhD, Yale University, 1977

Paul L. Stoffa, Shell Companies Foundation Distinguished Chair in Geophysics, Professor, Department of Geological Sciences
PhD, Columbia University in the City of New York, 1974

Kenneth H. Stokoe II, Jennie C. and Milton T. Graves Chair in Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
MS, University of Michigan-Ann Arbor, 1967; PhD, University of Michigan-Ann Arbor, 1972

Chandler W. Stolz, Associate Professor, Lyndon B Johnson School of Public Affairs, Associate Dean, Lyndon B Johnson School of Public Affairs
BS, Stanford University, 1973; PhD, Carnegie Mellon University, 1982

Allucquere S. Stone, Associate Professor Emeritus, Department of Radio Television Film
PhD, University of California-Santa Cruz, 1993

Peter H. Stone, Associate Professor, Department of Computer Science
BS, University of Chicago, 1993; MS, Carnegie Mellon University, 1995; PhD, Carnegie Mellon University, 1998

John S. Stoney, Assistant Professor, Department of Art and Art History
BFA, Syracuse University Main Campus, 1988; MFA, Cranbrook Academy of Art, 1998

Nikita Storozhev, Associate Professor, School of Music
MFA, Moscow P.I. Tchaikovsky Conservatory, 1979

William M. Stott, Professor, Department of American Studies, Department of English, Professor Emeritus, Department of American Studies, Department of English
PhD, Yale University, 1972
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Institution</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patricia A. Stout</td>
<td>John P. McGovern Regents Professorship in Health and Medical Science Communication, Professor, Department of Advertising</td>
<td>PhD, University of Illinois at Urbana-Champaign</td>
<td>1985</td>
</tr>
<tr>
<td>Scott A. Strassels</td>
<td>Assistant Professor, College of Pharmacy</td>
<td>BS, University of Arizona, 1988; PharmD, University of Arizona, 1989; PhD, University of Washington - Seattle</td>
<td>2005</td>
</tr>
<tr>
<td>Joseph Straubhaar</td>
<td>Amon G. Carter Centennial Professorship in Communication, Professor, Department of Radio Television Film</td>
<td>AM, Tufts University, 1974; MA, Tufts University, 1976; PhD, Tufts University, 1981</td>
<td>1983</td>
</tr>
<tr>
<td>Sandra B. Straubhaar</td>
<td>Senior Lecturer, Department of Germanic Studies</td>
<td>PhD, Stanford University, 1982</td>
<td>1983</td>
</tr>
<tr>
<td>Jerun K. Streck</td>
<td>Associate Professor, Department Communication Studies, Department of Anthropology, Department of Germanic Studies</td>
<td>BA, University of Hamburg, 1972; MA, Free University of Berlin, 1976; PhD, Free University of Berlin, 1981</td>
<td>1983</td>
</tr>
<tr>
<td>Calvin L. Streeter</td>
<td>Meadows Foundation Centennial Professorship in the Quality of Life in the Rural Environment, Professor, School of Social Work MSW, Washington University in St Louis, 1983; PhD, Washington University in St Louis</td>
<td>1983</td>
<td></td>
</tr>
<tr>
<td>Ben C. Streetman</td>
<td>Professor Emeritus, Department of Electrical &amp; Computer Engineering</td>
<td>BSEE, University of Texas at Austin, 1961; MSEE, University of Texas at Austin, 1963; PhD, University of Texas at Austin</td>
<td>1966</td>
</tr>
<tr>
<td>Pauline T. Strong</td>
<td>Associate Professor, Department of Anthropology, Center for Women’s and Gender Studies</td>
<td>BA, Colorado College, 1975; MA, University of Chicago, 1980; PhD, University of Chicago</td>
<td>1982</td>
</tr>
<tr>
<td>Brian M. Stross</td>
<td>Professor, Department of Anthropology</td>
<td>PhD, University of California-Berkeley, 1969</td>
<td>1969</td>
</tr>
<tr>
<td>Natalie J. Strowd</td>
<td>Assistant Professor, Department Communication Studies</td>
<td>BA, University of California-Berkeley, 2001; PhD, University of Pennsylvania</td>
<td>2006</td>
</tr>
<tr>
<td>Scott R. Strowd</td>
<td>Assistant Professor, Department Communication Studies</td>
<td>BA, University of the Pacific, 1998; MA, University of the Pacific, 2000; MA, San Jose State University, 2002; PhD, Temple University</td>
<td>2006</td>
</tr>
<tr>
<td>Walter M. Strowp</td>
<td>Associate Professor, Department of Curriculum and Instruction, College of Education</td>
<td>EdD, Harvard University, 1996</td>
<td>1996</td>
</tr>
<tr>
<td>Sharon L. Strover</td>
<td>Philip G. Warner Regents Professorship in Communication, Professor, Department of Radio Television Film</td>
<td>PhD, Stanford University, 1982</td>
<td>1982</td>
</tr>
<tr>
<td>David S. Stuart</td>
<td>Linda and David Schele Chair in the Art and Writing of Mesoamerica, Professor, Department of Art and Art History</td>
<td>BA, Princeton University, 1989; PhD, Vanderbilt University</td>
<td>1985</td>
</tr>
<tr>
<td>Alex M. Stulbberg</td>
<td>Laura Lee Blanton Chair in Nursing, James R. Dougherty, Jr. Centennial Professorship in Nursing, Professor, School of Nursing, Dean, School of Nursing</td>
<td>PhD, University of Texas at Austin, 1988</td>
<td>1988</td>
</tr>
<tr>
<td>Michael F. Sturley</td>
<td>Fannie Caplin Regents Chair, Stanley D. and Sandra Rosenberg Centennial Professorship in Property Law, Professor, School of Law</td>
<td>BA, Yale University, 1977; JD, Yale University</td>
<td>1981</td>
</tr>
<tr>
<td>Circe D. Sturm</td>
<td>Assistant Professor, Department of Anthropology</td>
<td>BA, University of Texas at Austin, 1991; MA, University of California-Davis, 1994; PhD, University of California-Davis</td>
<td>1997</td>
</tr>
<tr>
<td>Laura J. Suggs</td>
<td>Assistant Professor, Biomedical Engineering</td>
<td>BS, University of Texas at Austin, 1993; BA, University of Texas at Austin, 1993; PhD, Rice University</td>
<td>1998</td>
</tr>
<tr>
<td>Youngsuk Suh</td>
<td>Assistant Professor, Department of Educational Psychology</td>
<td>BA, Ewha Women’s University, 1998; MA, Ewha Women’s University, 2000; PhD, University of Wisconsin-Madison</td>
<td>2008</td>
</tr>
<tr>
<td>Marie-Anne P. Suizzo</td>
<td>Associate Professor, Department of Educational Psychology</td>
<td>BA, Georgetown University, 1981; MA, Stanford University, 1987; MEd, Harvard University, 1993; EdD, Harvard University</td>
<td>1997</td>
</tr>
<tr>
<td>Christopher S. Sullivan</td>
<td>Assistant Professor, Molecular Genetics and Microbiology</td>
<td>BS, Penn State University Park, 1995; PhD, University of Pittsburgh, Pittsburgh Campus</td>
<td>2000</td>
</tr>
<tr>
<td>Nan Sun</td>
<td>Assistant Professor, Department of Electronic &amp; Computer Engineering</td>
<td>BS, Tsinghua University, 2006; PhD, Harvard University</td>
<td>2011</td>
</tr>
<tr>
<td>Yongjun Sung</td>
<td>Assistant Professor, Section of Molecular Cell and Developmental Biology</td>
<td>BS, Seoul National University, 1996; MS, Seoul National University, 1998; PhD, University of Wisconsin-Madison</td>
<td>2004</td>
</tr>
<tr>
<td>Catherine A. Surra</td>
<td>Professor Emeritus, Human Dev &amp; Family Sci</td>
<td>BS, Penn State University Park, 1972; PhD, Pennsylvania State University Main Campus</td>
<td>1980</td>
</tr>
</tbody>
</table>

Harvey M. Sussman, R. P. Doherty, Sr. Centennial Professorship in Communication, Professor, Department of Linguistics, Department of Communication Sciences and Disorders MS, University of Wisconsin-Madison, 1967; PhD, University of Wisconsin-Madison, 1970

Madelin Sutherland-Meier, Associate Professor, Department of Spanish and Portuguese PhD, University of California-San Diego, 1983

Daniel D. Sutherland, Associate Professor, Department of Art and Art History MFA, Syracuse University Main Campus, 1991

Marilla D. Svinicki, Professor, Department of Educational Psychology, Department of Educational Administration BA, Western Michigan University, 1967; MA, Western Michigan University, 1968; PhD, University of Colorado at Boulder, 1972

Janet K. Swaffar, Professor, Department of Germanic Studies BA, Minnesota State University, Mankato, 1956; MA, University of Wisconsin-Madison, 1959; PhD, University of Wisconsin-Madison, 1965

William B. Swann Jr., William Howard Beasley III Professorship in the Graduate School of Business, Professor, Department of Psychology, Department of Management PhD, University of Minnesota-Twin Cities, 1978

Earl E. Swartzlander Jr., Professor, Department of Electrical & Computer Engineering PhD, University of Southern California, 1972

Harry L. Swinney, Sid W. Richardson Foundation Regents Chair in Physics #3, Professor, Department of Physics PhD, Johns Hopkins University, 1968

George Sylvie, Associate Professor, School of Journalism PhD, University of Texas at Austin, 1988

Margaret A. Syverson, Director, Department of Rhetoric & Writing, Associate Professor, Department of Rhetoric & Writing, Department of English PhD, University of California-San Diego, 1994

Paul J. Szaniszlo, Professor, Molecular Genetics and Microbiology, Professor Emeritus, Molecular Genetics and Microbiology PhD, University of North Carolina at Chapel Hill, 1967

Robert L. Talbert Jr., Smithkline Centennial Professorship in Pharmacy, Professor, College of Pharmacy PharmD, University of Kentucky, 1974

Cynthia M. Talbot, Associate Professor, Department of Asian Studies, Department of History BA, University of Michigan-Ann Arbor, 1975; MA, University of Michigan-Ann Arbor, 1980; PhD, University of Wisconsin-Madison, 1988
Eric M. Taleff, Professor, Department of Mechanical Engineering
MS, Stanford University, 1991; PhD, Stanford University, 1995

Hirofumi Tanaka, Associate Professor, Department of Kinesiology and Health Education
BA, Internl Martial Arts Univ, 1989; MS, Bail State University, 1992; PhD, University of Tennessee, 1995

Eric Tang, Assistant Professor, Department of African and African Diaspora Studies
BA, New York University, 1996; MPhil, New York University, 2001; PhD, New York University, 2006

Huseyin Tanriverdi, Associate Professor, Department of Information, Risk, and Operations Management
BS, Middle East Technical University, 1983; MS, Middle East Technical University, 1993; MS, London School of Economics and Political Science, 1995; DBA, Boston University, 2001

Byron D. Tapley, Clare Cockrell Williams Centennial Chair in Engineering, Professor, Department of Aerospace Engineering and Engineering Mechanics, Applied Research Laboratories
BSME, University of Texas at Austin, 1956; MSEM, University of Texas at Austin, 1958; PhD, University of Texas at Austin, 1960

John L. Tassoulas, Phil M. Ferguson Professorship in Civil Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
MS, Massachusetts Institute of Technology, 1979; PhD, Massachusetts Institute of Technology, 1981

Robert H. Talham, Shell Companies Foundation Centennial Chair in Geophysics, Professor, Department of Geological Sciences
PhD, Columbia University in the City of New York, 1975

Rabun M. Taylor, Assistant Professor, Department of Classics
BA, Haverford College, 1982; PhD, University of Minnesota-Twincities, 1997

Rose A. Taylor, Professor, School of Music
BM, University of Southern California, 1968

Shelton R. Taylor, Professor, University of Texas Health Science Center at Houston

Robert J. Tejada, Associate Professor, Department of Art and Art History
BA, New York, 1986; PhD, State University of New York (Buffalo), 2004

Michael J. Telch, Professor, Department of Psychology
PhD, Stanford University, 1982

Frenkel Ter Hofstede, Associate Professor, Department of Marketing Administration
MS, University of Groningen, 1994; PhD, Wageningen University, 1999

Delbert Tesar, Carol Cockrell Curran Chair in Engineering, Professor, Department of Mechanical Engineering, IC2 Institute
BS, University of Nebraska at Omaha, 1958; MS, University of Nebraska at Omaha, 1960; PhD, Georgia Institute of Technology, 1964

Ahmed Hossam Tewfik, Cockrell Family Regents Chair in Engineering #1, Professor, Department of Electrical & Computer Engineering, Department Chair, Department of Electrical & Computer Engineering
BS, Cairo University, 1982; SM, Massachusetts Institute of Technology, 1984; EE, Massachusetts Institute of Technology, 1985; ScD, Massachusetts Institute of Technology, 1987

Deborah J. Tharngere, Professor, Department of Educational Psychology
PhD, University of California-Berkeley, 1981

Sean M. Theriault, Associate Professor, Department of Government
BA, University of Richmond, 1993; MS, University of Rochester, 1996; MA, Stanford University, 2000; PhD, Stanford University, 2001

Edward C. Theriot, Jane and Roland Blumberg Centennial Professorship in Molecular Evolution, Director, Texas Memorial Museum, Professor, Section of Integrative Biology
PhD, University of Michigan-Ann Arbor, 1983

Peter Thomas, H-E-B Endowed Chair in Marine Science, Professor, Section of Integrative Biology, Department of Marine Science
BS, University of Chicago, 1970; PhD, University of Leicester, 1978

Sanna Thompson, Associate Professor, School of Social Work
BS, Weber State University, 1992; MSW, Washington University in St Louis, 1993; PhD, Washington University in St Louis, 1998

Shirley E. Thompson, Associate Professor, Department of American Studies, Center for African and African American Studies, Department of African and African Diaspora Studies
AB, Harvard University, 1992; AM, Harvard University, 2000; PhD, Harvard University, 2001

Sylvia F. Thompson, Associate Professor, Department of Special Education
BS, University of Texas at Austin, 1988; MS, University of Miami, 1992; PhD, University of Texas at Austin, 1999

Wesley J. Thompson, Professor, Section of Molecular Cell and Developmental Biology
PhD, University of California-Berkeley, 1975

Ming Ting, Assistant Professor, Section of Molecular Genetics and Microbiology
BS, Peking, 1987; PhD, Harvard, 1994

Gayle M. Timmerman, Assistant Dean, School of Nursing, Associate Professor, School of Nursing
MSN, Ohio State U Main Campus, 1986; PhD, Ohio State U Main Campus, 1994

Scott W. Tinker, Edwin Allday Centennial Chair in Subsurface Geology, Director, Beg-PI-Kipper, Professor, Department of Geological Sciences
BS, Trinity University, 1982; MS, University of Michigan-An Arbor, 1985; PhD, University of Colorado at Boulder, 1996

Charles E. Tinney, Assistant Professor, Department of Aerospace Engineering and Engineering Mechanics
BS, Clarkson University, 1999; MS, Clarkson University, 2001; PhD, Syracuse University Main Campus, 2005

Helene Tissieres, Associate Professor, Center for Middle Eastern Studies, Department of French and Italian
BA, Art Center College of Design, 1986; MA, New York University, 1993; MPhil, New York University, 1996; PhD, New York University, 2000

Sheridan Titman, Walter W. McAllister Centennial Chair in Financial Services, Professor, Department of Finance, Department of Economics
BS, University of Colorado at Boulder, 1975; MS, Carnegie Mellon University, 1978; PhD, Carnegie Mellon University, 1984

Janice S. Todd, Professor, Department of Kinesiology and Health Education, Center for Women’s and Gender Studies
BA, Mercer University, 1974; MA, Mercer University, 1976; PhD, University of Texas at Austin, 1995

Russell G. Todd, Professor, School of Journalism
MA, Stanford University, 1979; PhD, Stanford University, 1982

Efstathios Tompaidis, Associate Professor, Department of Information, Risk, and Operations Management, Department of Finance
BS, Aristotle University of Thessaloniki, 1989; PhD, University of Texas at Austin, 1994

Fulvio Tonon, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
MS, University of Padua (Italy), 1995; PhD, University of Colorado at Boulder, 2000

Almeida J. Toribio, Professor, Department of Spanish and Portuguese, Center for African and African American Studies, Department of African and African Diaspora Studies
BA, Cornell University, 1985; MA, Brandeis University, 1987; PhD, Cornell University, 1993

Carlos Torres-Verdín, Zarrow Centennial Professorship in Petroleum Engineering, Professor, Department of Petroleum and Geosystems Engineering
PhD, University of California-Berkeley, 1991; PhD, University of California-Berkeley, 1999

Gerald Torres, Bryant Smith Chair in Law, Professor, School of Law
AB, Stanford University, 1974; LLM, University of Michigan-Ann Arbor, 1980; JD, Yale University, 1977
Rebecca M. Torres, Assistant Professor, Department of Geography and the Environment
BA, University of Wisconsin-Madison, 1987; MS, University of California-Davis, 1994; PhD, University of California-Davis, 2000

Nur A. Touba, Professor, Department of Electrical and Computer Engineering
MS, Stanford University, 1991; PhD, Stanford University, 1996

Ciaran Trace, Assistant Professor, School of Information
BA, University College Dublin, 1992; Diploma (Foreign), University College Dublin, 1995; PhD, University of California-Los Angeles, 2004

John W. Traphagan, Associate Professor, Department of Anthropology, Department of Asian Studies, Department of Religious Studies
BA, University of Massachusetts Lowell, 1983; MA, Yale University, 1986; PhD, University of Pittsburgh, Pittsburgh Campus, 1997

Dnika J. Travis, Assistant Professor, School of Social Work
BA, Hampton University, 1995; MSW, University of Michigan-Ann Arbor, 1996; PhD, University of Southern California, 2006

Philip U. Treisman, Professor, Department of Mathematics, Lyndon B Johnson School of Public Affairs, Executive Director, Charles A Dana Center for Science and Mathematics Education
MA, University of California-Berkeley, 1973; PhD, University of California-Berkeley, 1985

Stephen J. Trejo, Associate Professor, Department of Economics
PhD, University of Chicago, 1988

Michael Stephen Trent, Associate Professor, Molecular Genetics and Microbiology
BA, The University of Virginia's College at Wise, 1994; PhD, East Tennessee State University, 1998

Peter Trubowitz, Associate Professor, Department of Government
PhD, University of Houston, 1986

Thomas M. Truskett, Associate Professor, Department of Chemical Engineering
BS, University of Texas at Austin, 1996; MA, Princeton University, 1998; PhD, Princeton University, 2001

Chien-Hsin Tsai, Assistant Professor, Department of Asian Studies
BA, University of Washington - Seattle, 2003; MA, Harvard University, 2005; PhD, Harvard University, 2009

Yen-Hsi Tsai, Associate Professor, Department of Mathematics
BS, National Taiwan University, 1995; MA, University of California-Los Angeles, 1999; PhD, University of California-Los Angeles, 2002

Bion Tsang, Associate Professor, School of Music
BA, Harvard University, 1989; DMA, Yale University, 1993

Maxim Tsai, Associate Professor, Department of Physics

Elliot Max Tucker-Drob, Assistant Professor, Department of Psychology
BA, Cornell University, 2004; MA, University of Virginia, 2007; PhD, University of Virginia, 2009

Christopher J. Tucker, Assistant Professor, School of Music
BM, Dalhousie University, 1998; MA, University of Michigan-Ann Arbor, 2000; PhD, University of Michigan-Ann Arbor, 2005

Philip W. Tucker, Marie Betzner Morrow Centennial Chair, Professor, Molecular Genetics and Microbiology
PhD, Texas A & M University, 1975

Jeffrey K.ulusa, Associate Professor, Department of Communication Studies, Department of Government
PhD, University of Chicago, 1982

Alan Tully, Eugene C. Barker Centennial Professorship in American History, Department Chair, Department of History, Professor, Department of History
BA, Queens University, 1965; MA, University of Toronto, 1968; PhD, Johns Hopkins University, 1973

James W. Tunnell, Assistant Professor, Biomedical Engineering
BS, University of Texas at Austin, 1998; PhD, Rice University, 2002

Jack S. Turner, Associate Professor, Department of Physics
PhD, Indiana University at Bloomington, 1989

Michael C. Tusa, Professor, School of Music
MFA, Princeton University, 1978; PhD, Princeton University, 1983

Emanuel Tutu, Assistant Professor, Department of Electrical & Computer Engineering
BS, Ecole Normale Superieure, 1997; MA, Ecole Normale Superieure, 1998; MA, Princeton University, 1999; MA, Princeton University, 2001; PhD, Princeton University, 2004

Thomas A. Tweed, The Gwyn Shive, Anita Nordan Lindsay and Joe W. Cherry Gray Professorship, Professor, Department of Religious Studies
BS, Penn State University Park, 1977; MTS, Harvard University, 1979; MA, Stanford University, 1983; PhD, Stanford University, 1989

Ann Twinam, Professor, Department of History
BA, Northern Illinois University, 1968; MPhil, Yale University, 1972; PhD, Yale University, 1976

Michael Tye, Professor, Department of Philosophy
BA, University of Oxford, 1972; MA, New York University, 1974; PhD, New York University, 1975

Kathleen R. Tynan, Associate Professor, Department of Radio Television Film, Center for Women’s and Gender Studies
BA, Ball State University, 1973; MA, San Francisco State University, 1986

Danilo V. Udovic, Associate Professor, School of Architecture
PhD, Massachusetts Institute of Technology, 1993

Karen Uhlenbeck, Sid W. Richardson Foundation Regents Chair in Mathematics #3, Professor, Department of Mathematics
PhD, Brandeis University, 1968

Jarvis W. Ulbricht, Professor, Department of Art and Art History, Professor Emeritus, Department of Art and Art History
PhD, University of Iowa, 1976

Canan Ulu, Assistant Professor, Department of Information, Risk, and Operations Management
BS, Middle East Technical University, 1998; MS, Middle East Technical University, 2000; PhD, Duke University, 2007

Debra J. Umberson, Christie and Stanley E. Adams, Jr. Centennial Professorship in Liberal Arts, Professor, Department of Sociology
MA, Vanderbilt University, 1983; PhD, Vanderbilt University, 1985

Per K. Uurlaub, Assistant Professor, Department of Germanic Studies
MA, University of Utah, 2002; PhD, Stanford University, 2008

Luis Urieta, Associate Professor, Department of Curriculum and Instruction, Center for Mexican American Studies
BA, University of California-Los Angeles, 1995; MA, California State University-Los Angeles, 1999; PhD, University of North Carolina at Chapel Hill, 2003

Jeffrey D. Vaaler, Professor, Department of Mathematics
MS, University of Illinois at Urbana-Champaign, 1971; PhD, University of Illinois at Urbana-Champaign, 1974

Fred Valdez Jr., Professor, Department of Anthropology
PhD, Harvard University, 1987

Richard Valencia, Professor, Department of Educational Psychology
BA, University of California-Santa Barbara, 1970; MA, University of California-Santa Barbara, 1972; PhD, University of California-Santa Barbara, 1977

Angela Valenzuela, Professor, Department of Curriculum and Instruction, Department of Educational Administration, Center for Mexican American Studies, Associate Vice President, Div. of Diversity & Community Engagement
MA, Stanford University, 1985; PhD, Stanford University, 1990

Jonathan W. Valvano, Professor, Department of Electrical & Computer Engineering
MS, Massachusetts Institute of Technology, 1977; BS, Massachusetts Institute of Technology, 1981
Wilfried Wang, O’Neil Ford Centennial Chair in Architecture, Professor, School of Architecture  
BS, University College London, 1978; MS, University College London, 1981  

Peter Ward, C. B. Smith, Sr. Centennial Chair in United States-Mexico Relations #4, Professor, Lyndon B Johnson School of Public Affairs, Department of Geography and the Environment, Department of Sociology  
BA, University of Hull, 1973; MA, University of Cambridge, 1988; PhD, University of Liverpool, 1976  

David C. Warner, Wilbur J. Cohen Professorship in Health and Social Policy, Professor, Lyndon B Johnson School of Public Affairs  
BA, Princeton University, 1963; MPA, Syracuse University Main Campus, 1965; PhD, Syracuse University Main Campus, 1969  

Tandy Warnow, David Bruton, Jr. Centennial Professorship in Computer Sciences #3, Professor, Department of Computer Science  
BA, University of California-Berkeley, 1984; PhD, University of California-Berkeley, 1991; PhD, University of California-Berkeley, 1991  

Eric M. Warr, Professor, Department of Sociology  
MA, University of Arizona, 1976; PhD, University of Arizona, 1979  

Brent R. Waters, Assistant Professor, Department of Computer Science  
BS, University of California-Los Angeles, 2000; MA, Princeton University, 2002; PhD, Princeton University, 2004  

Samuel C. Watkins, Associate Professor, Department of Radio Television Film, Department of African and African Diaspora Studies  
PhD, University of Michigan-Ann Arbor, 1994  

Jeffrey C. Wayman, Assistant Professor, Department of Educational Administration  
BS, Truman State University, Kirksville, MO, 1984; MS, Colorado State University, 1993; PhD, Colorado State University, 2000  

Catherine Elizabeth Weaver, Associate Professor, Lyndon B Johnson School of Public Affairs  
BA, University of Michigan-Ann Arbor, 1994; MA, University of Wisconsin-Madison, 2003  

Lauren J. Webb, Assistant Professor, Department of Chemistry and Biochemistry  
AB, Bowdoin College, 2000; PhD, California Institute of Technology, 2005  

Michael Webber, Assistant Professor, Department of Mechanical Engineering  
BS, University of Texas at Austin, 1995; BA, University of Texas at Austin, 1995; MS, Stanford University, 1996; PhD, Stanford University, 2001  

Stephen M. Wechsler, Associate Professor, Department of Linguistics  
PhD, Stanford University, 1991  

Louise Weinberg, William B. Bates Chair for the Administration of Justice, Professor, School of Law  
AB, Cornell University, 1964; LLM, Harvard University, 1974; JD, Harvard University, 1969  

Steven Weinberg, Jack S. Josey-Welch Foundation Chair in Science, Professor, Department of Astronomy, Department of Physics  
PhD, Princeton University, 1957  

Alexander Ariel Weinreb, Associate Professor, Department of Sociology  
BA, University of Durham, 1991; PhD, University of Pennsylvania, 2000  

Claire Ellen Weinstein, Professor, Department of Educational Psychology  
PhD, University of Texas at Austin, 1975  

John M. Weinstock, Professor Emeritus, Department of Germanic Studies  
PhD, University of Wisconsin-Madison, 1967  

Lois Weithal, Associate Professor, School of Architecture  
BFA, Rhode Island School of Design, 1993; BA, Rhode Island School of Design, 1993; MArch, Cranbrook Academy of Art, 1998  

Dan E. Welcher, The Lee Hage Jamail Regents Professorship in Fine Arts, Professor, School of Music  
MM, Manhattan School of Music, 1972  

Olin G. Weldon, William C. Liedtke, Sr. Professorship in Law, Professor, School of Law  
AB, Harvard University, 1970; JD, Harvard University, 1973  

Jay L. Westbrook, Benno C. Schmidt Chair of Business Law, Professor, School of Law  
BA, University of Texas at Austin, 1965; JD, University of Texas at Austin, 1968  

Jo Lynn Westbrook, Associate Professor, School of Information, Center for Women’s and Gender Studies  
BS, Illinois State University, 1979; MA, University of Chicago, 1982; PhD, University of Michigan-Ann Arbor, 1993  

Alexandra K. Wettlaufer, Associate Professor, Plan II Honors Program, Department of French and Italian  
MA, Columbia University in the City of New York, 1987; MPhil, Columbia University in the City of New York, 1983; PhD, Columbia University in the City of New York, 1993  

Kurt G. Weyland, Joe R. & Teresa Lozano Long Endowed Professorships, Professor, Department of Government  
BA, Johannes Gutenberg Universität Mainz, 1983; MA, Johannes Gutenberg Universität Mainz, 1984; MA, Stanford University, 1988; PhD, Stanford University, 1991  

Dan L. Wheat, Associate Professor, Department of Civil, Architectural and Environmental Engineering  
PhD, Colorado State University, 1980  

Harvei G. Wheat, Associate Professor, Department of Mechanical Engineering  
PhD, University of Texas at Austin, 1985  

Marianne Wheeldon, Associate Professor, School of Music  
BMus, University of London, 1990; MPhil, Yale University, 1993; PhD, Yale University, 1997  

John C. Wheeler, Samuel T. and Fern Yangisawa Regents Professorship in Astronomy, Professor, Department of Astronomy  
PhD, University of Colorado at Boulder, 1969  

Mary F. Wheeler, Ernest and Virginia Cockrell Chair in Engineering, Professor, Department of Petroleum and Geosciences Engineering, Department of Aerospace Engineering and Engineering Mechanics, Department of Mathematics  
PhD, Rice University, 1971  

Frank F. Whigham Jr., Arthur J. Thaman and Wilhelmina Dore’ Thaman Endowed Professorship in English #3, Professor, Department of English  
PhD, University of California-San Diego, 1975  

Andrew B. Whinston, Hugh Roy Cullen Centennial Chair in Business Administration, Professor, Department of Information, Risk, and Operations Management, Department of Economics, School of Information, Department of Computer Science  
PhD, Carnegie Mellon University, 1962  

Thomas B. Whitbread, Professor, Department of English  
AM, Harvard University, 1953; PhD, Harvard University, 1959  

Barbara W. White, Centennial Professorship in Leadership for Community, Professional, and Corporate Excellence, Dean, School of Social Work, Professor, Center for African and African American Studies, School of Social Work  
BA, Florida Agricultural and Mechanical University, 1964; MA, Florida State University, 1975; PhD, Florida State University, 1986  

L. M. White, The Ronald Nelson Smith Chair in Classics & Christian Origins, Professor, Department of Classics, Classics Department of Religious Studies  
BA, Abilene Christian University, 1971; MA, Abilene Christian University, 1973; MDiv, Yale University, 1975; MA, Yale University, 1977; MPhil, Yale University, 1978; PhD, Yale University, 1982  

Stephen A. White, Department Chair, Department of Classics, Professor, Department of Philosophy, Department of Classics  
PhD, University of California-Berkeley, 1987  

Marvin Whiteley, Associate Professor, Molecular Genetics and Microbiology  
BS, University of Texas at Austin, 1995; MS, Texas State University-San Marcos, 1997; PhD, University of Iowa, 2001  

Christian P. Whitman, Romeo T. Bachand, Jr. Regents Professorship in Pharmacy, Professor, College of Pharmacy  
PhD, University of California-San Francisco, 1984
Jennifer Whitson, Assistant Professor, Department of Management  
BA, University of California-Irvine, 2000;  
MS, Northwestern University, 2004; PhD, Northwestern University, 2007

Tiffany A. Whittaker, Assistant Professor, Department of Educational Psychology  
BA, University of Texas at San Antonio, 1995;  
MS, University of Texas at San Antonio, 1998; PhD, University of Texas at Austin, 2003

Susan D. Whyne, Associate Professor, Department of Art and Art History  
BA, University of San Francisco, 1974

Abraham L. Wickelgren, The Bernard J. Ward Centennial Professorship in Law, Professor, School of Law  
AB, Harvard University, 1991; PhD, Harvard University, 1999; JD, Harvard University, 1994

Nichole Wiedemann, Associate Dean, School of Architecture, Associate Professor, School of Architecture  
BA, Princeton University, 1992

Nathan P. Wiederhold, Associate Professor, College of Pharmacy  
BA, University of Texas at Austin, 1996;  
PharmD, University of Texas at Austin, 2000

Gary B. Wilcox, John A. Beck Centennial Professorship in Communication, Professor, Department of Advertising  
PhD, Michigan State University, East Lansing, 1982

Richard E. Wilcox, Assistant Dean, Ph.D-Deans Office, Professor, College of Pharmacy  
PhD, Southern Illinois University Carbondale, 1970

Darlene C. Wiley, Professor, School of Music  
MM, University of Illinois at Urbana-Champaign, 1969

Claus O. Wilke, Assistant Professor, Section of Integrative Biology  
Diplom, Ruhr-Universität Bochum, Germany, 1996; PhD, Ruhr-Universität Bochum, 1999

Karin G. Wilkins, Associate Director, Center for Middle Eastern Studies, Professor, Department of Radio Television Film, Center for Middle Eastern Studies, Department of Middle Eastern Studies  
BA, Bucknell University, 1984; MA, University of Pennsylvania, 1987; PhD, University of Pennsylvania, 1991

Lynn R. Wilkinson, Associate Professor, Center for Women’s and Gender Studies, Department of Germanic Studies  
BA, University of California-Santa Barbara, 1973; MA, University of California-Berkeley, 1975; PhD, University of California-Berkeley, 1983

Jennifer M. Wilks, Associate Professor, Department of English, Center for African and African American Studies, Department of African and African Diaspora Studies  
AB, Bryn Mawr College, 1995; MA, Cornell University, 2000; PhD, Cornell University, 2003

Katherine A. Willets, Assistant Professor, Department of Chemistry and Biochemistry  
AB, Dartmouth College, 1999; PhD, Stanford University, 2005

Christine L. Williams, Professor, Department of Sociology, Center for Women's and Gender Studies, Department Chair, Department of Sociology  
BA, University of Oklahoma Norman Campus, 1980; MA, University of California-Berkeley, 1982; PhD, University of California-Berkeley, 1986

Holly A. Williams, Professor, Department of Theatre and Dance  
MFA, Texas Woman’s University, 1994

Jeff Williams, Assistant Professor, Department of Art and Art History  
BFA, Columbus College of Art & Design, 1998; MFA, Syracuse University Main Campus, 2002

Nathan L. Williams, Assistant Professor, School of Music  
Diploma (Foreign), Vienna Academy of Music, 1987; MM, University of Rochester, 1985; DMA, The Juilliard School, 1992

Robert O. Williams III, Johnson & Johnson Centennial Professorship in Pharmacy, Professor, College of Pharmacy  
BSPhr, University of Texas at Austin, 1981; PhD, University of Texas at Austin, 1986

Sean H. Williams, Assistant Professor, School of Law  
BA, Haverford College, 1995; JD, University of Chicago, 2004

Eric B. Williamson, Associate Professor, Department of Civil, Architectural and Environmental Engineering, Applied Research Laboratories  
PhD, University of Illinois at Urbana-Champaign, 1996

Michael G. Williamson, Assistant Professor, Department of Accounting  
BS, Louisiana State University and Agricultural and Mechanical College, 1996; MS, Carnegie Mellon University, 1998; MBA, Indiana University at Bloomington, 2003; PhD, Indiana University at Bloomington, 2005

Derek Wills, Professor, Department of Astronomy  
PhD, University of Cambridge, 1966

Carlton G. Willson, Rashid Engineering Regents Chair, Professor, Department of Chemistry and Biochemistry, Department of Chemical Engineering  
PhD, University of California Berkeley, 1974

Clark R. Wilson, Wallace E. Pratt Centennial Professorship in Geophysics, Wilton E. Scott Centennial Professorship, Professor, Department of Geological Sciences  
PhD, University of California-San Diego, 1975

James A. Wilson Jr., Assistant Professor, John L. Warfield Center for African and African American Studies, Department of History, and Center for Women’s and Gender Studies  
BS, Texas (Austin), 1984; MPS, Cornell, 1994; MA, Princeton, 1998; PhD, 2002

James P. Wilson, Associate Professor, College of Pharmacy  
MS, Purdue University Main Campus, 1985; PhD, Purdue University Main Campus, 1986

Patricia A. Wilson, Professor, School of Architecture  
MRP, Cornell University, 1971; PhD, Cornell University, 1975

Preston S. Wilson, Associate Professor, Department of Mechanical Engineering, Applied Research Laboratories  
BS, University of Texas at Austin, 1990; MS, University of Texas at Austin, 1994; PhD, Boston University, 2002

Robert H. Wilson, Mike Hogg Professorship of Urban Policy, Professor, Department of Geography and the Environment, Lyndon B Johnson School of Public Affairs  
BS, Oklahoma State University, Oklahoma City, 1971; MS, Oklahoma State University, Oklahoma City, 1972; MA, University of Pennsylvania, 1974; PhD, University of Pennsylvania, 1979

Samuel M. Wilson, Department Chair, Department of Anthropology, Professor, Department of Anthropology  
BA, Missouri Southern State University-Joplin, 1978; MA, University of Chicago, 1981; PhD, University of Chicago, 1986

Lyn C. Wiltsire, Professor, Department of Theatre and Dance  
Don Winget, Harlan J. Smith Centennial Professorship in Astronomy, Professor, Department of Astronomy  
PhD, University of Rochester, 1982

Megan A. Winget, Assistant Professor, School of Information  
BA, University of Illinois at Urbana-Champaign, 1996

Michael B. Winship, Iris Howard Regents Professorship in English Literature #2, Professor, School of Information, Department of English  
BA, Harvard University, 1971; MS, Simmons College, 1982; DPhil, University of Oxford, 1990

Thomas E. Wiseman, Associate Professor, Department of Economics  
BA, Swarthmore College, 1966; MA, Northwestern University, 1997; PhD, Northwestern University, 2001

Zipporah B. Wiseman, Thos. H. Law Centennial Professorship in Law, Professor, Center for Women’s and Gender Studies, School of Law  
BA, McGill University, 1950; MA, McGill University, 1951; LLB, Yale University, 1954
Emmett Witchel, Associate Professor, Department of Computer Science
BS, Stanford University, 1992; BA, Stanford University, 1992; MS, Stanford University, 1994; PhD, Massachusetts Institute of Technology, 2004

Hannah C. Wojciechowski, Associate Professor, Department of English
PhD, Yale University, 1984

Seth L. Wollitz, L. D., Marie and Edwin Gale Chair of Judaic Studies, Other University Affiliate, Schusterman Center, Professor Emeritus, Department of French and Italian, Department of Slavic Languages and Literature
PhD, Yale University, 1965

Patrick P. Wong, Associate Professor, Lyndon B Johnson School of Public Affairs
PhD, University of Wisconsin-Madison, 1988

Kristin L. Wood, Cullen Trust for Higher Education Endowed Professorship in Engineering #1, Professor, Department of Mechanical Engineering
PhD, California Institute of Technology, 1983

Lesli J. Wood, Senior Research Scientist, Beeghly-Kiper
BS, Arkansas Tech University, 1985; MS, University of Arkansas at Monticello, 1988; PhD, Colorado State University, 1992

Sharon L. Wood, Crockell Family Chair for Departmental Leadership #3, Robert L. Parker, Sr. Centennial Professorship in Engineering, Department Chair, Department of Civil, Architectural and Environmental Engineering, Professor, Department of Civil, Architectural and Environmental Engineering
PhD, University of Illinois at Urbana-Champaign, 1986

Helena Woodard, Associate Professor, Department of English, Center for African and African American Studies, Department of African and African Diaspora Studies
BS, East Carolina University, 1976; MA, East Carolina University, 1979; PhD, University of North Carolina at Chapel Hill, 1991

Robert D. Woodberry, Assistant Professor, Department of Sociology
BA, Wheaton College, 1987; MA, Fuller Theological Seminary, 1993; MA, University of Notre Dame, 1997; PhD, University of North Carolina at Chapel Hill, 2004

Anthony C. Woodbury, Professor, Department of Linguistics, Department of Anthropology
PhD, University of California-Berkeley, 1981

Paul B. Woodruff, Darrell K Royal Regents Professorship in Ethics and American Society, Dean, School of Undergraduate Studies, Professor, Department of Classics, Department of Philosophy
AB, Princeton University, 1965; BA, University of Oxford, 1968; PhD, Princeton University, 1973

Marjorie C. Woods, Professor, Department of English
PhD, University of Toronto, 1977

Jacqueline D. Woolley, Professor, Department of Psychology
MS, University of Michigan-Ann Arbor, 1987; PhD, University of Michigan-Ann Arbor, 1990

Patrick Woolley, Beck, Redden & Secret Professorship in Law, Professor, School of Law
AB, Stanford University, 1984; JD, Yale University, 1987

Samuel G. Workman, Assistant Professor, Department of Government
BS, West Virginia University Institute of Technology, 2001; MA, West Virginia University, 2003; PhD, University of Washington - Seattle, MA, University of Washington - Seattle, 2005

Mary J. Worthy, Professor, Department of Curriculum and Instruction
PhD, University of Virginia (Old Code), 1989

Casey W. Wright, Assistant Professor, College of Pharmacy
BS, Kansas State University, 1996; PhD, Kansas State University, 2003

Robert E. Wyatt, W. T. Doherty Professorship in Chemistry, Professor, Department of Chemistry and Biochemistry, Department of Physics
PhD, Johns Hopkins University, 1965

Chartered S. Wynn, Associate Professor, Department of History, Department of Slavic Languages and Literature
BA, University of California-Santa Cruz, 1976; MA, Stanford University, 1979; PhD, Stanford University, 1987

Bugao Xu, Professor, Department of Textiles and Apparel
PhD, University of Maryland College Park, 1992

Ying Xu, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
BCE, Tsinghua University, 2001; MCE, Tsinghua University, 2004; PhD, Virginia Polytechnic Institute and State University, 2009

John A. Yancey, John D. Murchison Regents Professorship in Art, Professor, Department of Art and Art History, Department Chair, Department of Art and Art History
Yale University, 1989

Yanhu Yang, Assistant Professor, Department of Accounting
BS, Texas A&M University, 1999; PhD, University of Colorado at Boulder, 2005

Yunzhi Yang, Assistant Professor, University of Texas Health Science Center at Houston

Zong-Liang Yang, Professor, Department of Geological Sciences
BS, Nanjing Institute of Meterology, 1984; MS, University of Melbourne, 1989; PhD, Macquarie University, 1992

Zhen Yao, Associate Professor, Department of Physics
BS, University of Science and Technology of China, 1992; SM, Harvard University, 1993; PhD, Harvard University, 1997

James R. Yates, John L. and Elizabeth C. Hill Centennial Professorship, Professor, Department of Educational Administration, Department of Special Education
PhD, University of Texas at Austin, 1971

Ali E. Yilmaz, Assistant Professor, Department of Electrical & Computer Engineering
BS, Bilkent University, 1999; MS, University of Illinois at Urbana-Champaign, 2001; PhD, University of Illinois at Urbana-Champaign, 2005

Yuhui W. Yin, Assistant Professor, Department of Chemistry and Biochemistry
MD, Tianjin Medical University, 1988; PhD, University of North Carolina at Chapel Hill, 1995

Lexing Ying, Associate Professor, Department of Mathematics
BS, Shanghai Jiao Tong University, 1998; MS, New York University, 2000; PhD, New York University, 2004

Linda H. Yoder, Associate Professor, School of Nursing
BSN, University of Maryland Baltimore, 1978; MSN, University of Texas Health Science Center at San Antonio, 1985; PhD, University of Pennsylvania, 1992

Dean H. Young, William S. Livingston Endowed Chair in Writing, Professor, Department of English
BA, Indiana University at Bloomington, 1978; MFA, Indiana University at Bloomington, 1984

Kenneth R. Young, Department Chair, Department of Geography and the Environment, Professor, Teresa Lozano Long Institute of Latin American Studies, Department of Geography and the Environment
BS, University of Illinois at Urbana-Champaign, 1978; MS, University of Florida, 1984; PhD, University of Colorado at Boulder, 1987

Laurie S. Young, Associate Professor, School of Music
BMusEd, State University of New York at Fredonia, 1977; MMus, University of Nebraska - Lincoln, 1979; PhD, University of Texas at Austin, 1987

Michael Howard Young, Program Director, Bureau of Economic Geology

Michael P. Young, Associate Professor, Department of Sociology
BA, Columbia University in the City of New York, 1989; PhD, New York University, 2000

Michelle D. Young, Executive Director, Department of Educational Administration, Associate Professor, Department of Educational Administration
BA, Southwestern University, 1989; MEd, University of Texas at Austin, 1993; PhD, University of Texas at Austin, 1997
Edward T. Yu, Judson S. Sweanyong Regents Chair in Engineering, Professor, Department of Electrical & Computer Engineering
AM, Harvard University, 1986; AB, Harvard University, 1986; PhD, California Institute of Technology, 1991
Wei-Hsin Yu, Associate Professor, Department of Sociology
BBA, National Taiwan University, 1992; MA, University of Chicago, 1995; PhD, University of Chicago, 1999
Yong Yu, Assistant Professor, Department of Accounting
BA, Tsinghua University, 1999; MA, Tulane University, 2002; PhD, Penn State University Park, 2006
Harold H. Zakon, Professor, Section of Neurobiology
PhD, Cornell University, 1981
Emilio Zamora, Professor, Center for Mexican American Studies, Department of History
BA, Texas A & M University - Kingsville, 1969; MA, Texas A & M University - Kingsville, 1972; PhD, Texas (Austin), 1983
Thalaei Zariphopoulou, V. F. Neuhaus Centennial Professorship in Finance, Professor, Department of Information, Risk, and Operations Management, Department of Mathematics
PhD, Brown University, 1989
Suzan L. Zeder, Theater for Youth Chair, Professor, Department of Theatre and Dance
PhD, Florida State University, 1978
Boris Zemelman, Assistant Professor, Section of Neurobiology
BS, Massachusetts Institute of Technology, 1989; PhD, Stanford University, 1996
Daxun Zhang, Assistant Professor, School of Music
BM, Indiana University at Bloomington, 2005
Ming Zhang, Associate Professor, School of Architecture
BArch, Tsinghua Beijing, 1985; MS, Tsinghua Beijing, 1988; MS, State University of New York at Albany, 1995; MS, Massachusetts Institute of Technology, 1999; PhD, Massachusetts Institute of Technology, 2002
Xiaojing Zhang, Assistant Professor, Biomedical Engineering
BS, Shanghai Jiao-Tong University, 1995; MS, University of Maine, 1998; PhD, Stanford University, 2004
Yan Zhang, Assistant Professor, Department of Chemistry and Biochemistry
BS, Tsinghua University, 1997; MS, University of Oregon, 2000; PhD, The Scripps Research Institute, 2004
Yin Zhang, Associate Professor, Department of Computer Science
BS, Peking University, 1997; MS, Cornell University, 1999; PhD, Cornell University, 2001
Ying Zhang, Assistant Professor, Department of Marketing Administration
BA, Nanjing University, 2001; MS, University of Cambridge, 2002; MBA, University of Chicago, 2007; PhD, University of Chicago, 2007
Zhanmin Zhang, Associate Professor, Department of Civil, Architectural and Environmental Engineering
BSc, Xi’An Highway University, 1983; MS, University of Texas at Austin, 1993; PhD, University of Texas at Austin, 1996
Zhiwen Zhang, Assistant Professor, College of Pharmacy
BS, Nanjing University, 1989; MS, University of Toronto, 1994; PhD, University of Texas at Austin, 2001
Jinying Zhu, Assistant Professor, Department of Civil, Architectural and Environmental Engineering
BS, Zhejiang University, 1992; DEng, Zhejiang University, 1997; PhD, University of Illinois at Urbana-Champaign, 2006
Xiaoyang Zhu, Louis Nicolas Vauquelin Regents Professorship in Inorganic Chemistry, Professor, Department of Chemistry and Biochemistry
BS, Fudan University, 1984; PhD, University of Texas at Austin, 1989
Stanislav Zimic, Professor, Department of Spanish and Portuguese
PhD, Duke University, 1964
Gerhardt Zimmermann, Jack C. Taylor Regents Professorship in Fine Arts, Professor, School of Music
BMusEd, Bowling Green State University, 1967; MFA, University of Iowa, 1971
Gordan Zitkovic, Assistant Professor, Department of Mathematics
Baccalaureate, United World College of the Adriatic, Duino, Italy, 1993; BSc, University of Zagreb, Zagreb, Croatia, 1997; MSc, Vienna University of Technology, 1999; MPhil, Columbia University in the City of New York, 2002; PhD, Columbia University in the City of New York, 2003
Leo E. Zonn, Professor, Department of Geography and the Environment
BA, California State University-Northridge, 1969; MA, California State University-Northridge, 1972; PhD, University of Wisconsin-Milwaukee, 1975
Jorge C. Zornberg, Associate Professor, Department of Civil, Architectural and Environmental Engineering
BS, National University Of Cordoba, 1987; MS, Puc-Rio In Brazil, 1989; PhD, University of California-Berkeley, 1994
David I. Zuckerman, Professorship in Computer Sciences #1, Professor, Department of Computer Science
PhD, University of California-Berkeley, 1991
Nina Isabel Zuna, Assistant Professor, Department of Special Education
BBA, University of Louisiana at Monroe, 1989; MEd, University of Hawaii at Manoa, 2000; PhD, University of Kansas Main Campus, 2007
Appendix
Course Abbreviations

The University offers courses in the following fields of study. The abbreviations in the second column are used in catalogs, course schedules, and student records. Fields marked with a (*) are offered only at the undergraduate level.

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>ACC</td>
</tr>
<tr>
<td>Actuarial foundations</td>
<td>ACF</td>
</tr>
<tr>
<td>Advertising</td>
<td>ADV</td>
</tr>
<tr>
<td>Aerospace engineering</td>
<td>ASE</td>
</tr>
<tr>
<td>African and African diaspora studies</td>
<td>AFR</td>
</tr>
<tr>
<td>Air force science</td>
<td>AFS</td>
</tr>
<tr>
<td>American Sign Language</td>
<td>ASL</td>
</tr>
<tr>
<td>American studies</td>
<td>AMS</td>
</tr>
<tr>
<td>Ancient history and classical civilization</td>
<td>AHC</td>
</tr>
<tr>
<td>Anthropology</td>
<td>ANT</td>
</tr>
<tr>
<td>Applied learning and development</td>
<td>ALD</td>
</tr>
<tr>
<td>Arabic</td>
<td>ARA</td>
</tr>
<tr>
<td>Archaeology</td>
<td>ARY</td>
</tr>
<tr>
<td>Architectural engineering</td>
<td>ARE</td>
</tr>
<tr>
<td>Architectural interior design</td>
<td>ARI</td>
</tr>
<tr>
<td>Architecture</td>
<td>ARC</td>
</tr>
<tr>
<td>Art education</td>
<td>AED</td>
</tr>
<tr>
<td>Art history</td>
<td>ARH</td>
</tr>
<tr>
<td>Asian American studies</td>
<td>AAS</td>
</tr>
<tr>
<td>Asian studies</td>
<td>ANS</td>
</tr>
<tr>
<td>Astronomy</td>
<td>AST</td>
</tr>
<tr>
<td>Bassoon</td>
<td>BSN</td>
</tr>
<tr>
<td>Bengali</td>
<td>BEN</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>BCH</td>
</tr>
<tr>
<td>Biology</td>
<td>BIO</td>
</tr>
<tr>
<td>Biomedical engineering</td>
<td>BME</td>
</tr>
<tr>
<td>Bridging disciplines</td>
<td>BDP</td>
</tr>
<tr>
<td>Business administration</td>
<td>B A</td>
</tr>
<tr>
<td>Business, government, and society</td>
<td>BGS</td>
</tr>
<tr>
<td>Chemical engineering</td>
<td>CHE</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CH</td>
</tr>
<tr>
<td>Chinese</td>
<td>CHI</td>
</tr>
<tr>
<td>Civil engineering</td>
<td>C E</td>
</tr>
<tr>
<td>Clarinet</td>
<td>CLA</td>
</tr>
<tr>
<td>Classical civilization</td>
<td>C C</td>
</tr>
<tr>
<td>Cognitive science</td>
<td>CGS</td>
</tr>
<tr>
<td>Communication</td>
<td>COM</td>
</tr>
<tr>
<td>Communication sciences and disorders</td>
<td>CSD</td>
</tr>
<tr>
<td>Communication studies</td>
<td>CMS</td>
</tr>
<tr>
<td>Community and regional planning</td>
<td>CRP</td>
</tr>
<tr>
<td>Comparative literature</td>
<td>C L</td>
</tr>
<tr>
<td>Computational science, engineering, and mathematics</td>
<td>CSE</td>
</tr>
<tr>
<td>Computer science</td>
<td>C S</td>
</tr>
<tr>
<td>Conducting</td>
<td>CON</td>
</tr>
<tr>
<td>Core texts and ideas</td>
<td>CTI</td>
</tr>
<tr>
<td>Cultural studies</td>
<td>CLS</td>
</tr>
<tr>
<td>Curriculum and instruction</td>
<td>EDC</td>
</tr>
<tr>
<td>Czech</td>
<td>CZ</td>
</tr>
<tr>
<td>Danish</td>
<td>DAN</td>
</tr>
<tr>
<td>Design</td>
<td>DES</td>
</tr>
<tr>
<td>Developmental studies</td>
<td>DEV</td>
</tr>
<tr>
<td>Double bass</td>
<td>DB</td>
</tr>
<tr>
<td>Drum set</td>
<td>DRS</td>
</tr>
<tr>
<td>Dutch</td>
<td>DCH</td>
</tr>
<tr>
<td>Economics</td>
<td>ECO</td>
</tr>
<tr>
<td>Educational administration</td>
<td>EDA</td>
</tr>
<tr>
<td>Educational psychology</td>
<td>EDP</td>
</tr>
<tr>
<td>Electrical engineering</td>
<td>E E</td>
</tr>
<tr>
<td>Energy and earth resources</td>
<td>EER</td>
</tr>
<tr>
<td>Engineering management</td>
<td>ENM</td>
</tr>
<tr>
<td>Engineering mechanics</td>
<td>EM</td>
</tr>
<tr>
<td>Engineering studies</td>
<td>ES</td>
</tr>
<tr>
<td>English</td>
<td>E</td>
</tr>
<tr>
<td>Course</td>
<td>Abbreviation</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>English as a second language</td>
<td>ESL</td>
</tr>
<tr>
<td>Ensemble</td>
<td>ENS</td>
</tr>
<tr>
<td>Euphonium</td>
<td>EUP</td>
</tr>
<tr>
<td>European studies</td>
<td>EUS</td>
</tr>
<tr>
<td>Finance</td>
<td>FIN</td>
</tr>
<tr>
<td>Fine arts</td>
<td>FA</td>
</tr>
<tr>
<td>Flute</td>
<td>FLU</td>
</tr>
<tr>
<td>Foreign language education</td>
<td>FLE</td>
</tr>
<tr>
<td>French</td>
<td>FR</td>
</tr>
<tr>
<td>French civilization</td>
<td>FC</td>
</tr>
<tr>
<td>French horn</td>
<td>FH</td>
</tr>
<tr>
<td>General engineering</td>
<td>GE</td>
</tr>
<tr>
<td>Geography</td>
<td>GRC</td>
</tr>
<tr>
<td>Geological sciences</td>
<td>GEO</td>
</tr>
<tr>
<td>German</td>
<td>GER</td>
</tr>
<tr>
<td>Germanic civilization</td>
<td>GRC</td>
</tr>
<tr>
<td>Government</td>
<td>GOV</td>
</tr>
<tr>
<td>Graduate school</td>
<td>GRS</td>
</tr>
<tr>
<td>Greek</td>
<td>GR</td>
</tr>
<tr>
<td>Guitar</td>
<td>GUI</td>
</tr>
<tr>
<td>Harp</td>
<td>HAR</td>
</tr>
<tr>
<td>Harpsichord</td>
<td>HSC</td>
</tr>
<tr>
<td>Health education</td>
<td>HED</td>
</tr>
<tr>
<td>Hebrew</td>
<td>HEB</td>
</tr>
<tr>
<td>Hindi</td>
<td>HIN</td>
</tr>
<tr>
<td>History</td>
<td>HIS</td>
</tr>
<tr>
<td>Human development and family sciences</td>
<td>HDF</td>
</tr>
<tr>
<td>Human ecology</td>
<td>HE</td>
</tr>
<tr>
<td>Humanities</td>
<td>HMN</td>
</tr>
<tr>
<td>Information studies</td>
<td>INF</td>
</tr>
<tr>
<td>International business</td>
<td>IB</td>
</tr>
<tr>
<td>International relations and global studies</td>
<td>IRG</td>
</tr>
<tr>
<td>Islamic studies</td>
<td>ISL</td>
</tr>
<tr>
<td>Italian</td>
<td>ITL</td>
</tr>
<tr>
<td>Italian civilization</td>
<td>ITC</td>
</tr>
<tr>
<td>Japanese</td>
<td>JPN</td>
</tr>
<tr>
<td>Jewish studies</td>
<td>JS</td>
</tr>
<tr>
<td>Journalism</td>
<td>J</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>KIN</td>
</tr>
<tr>
<td>Korean</td>
<td>KOR</td>
</tr>
<tr>
<td>Landscape architecture</td>
<td>LAR</td>
</tr>
<tr>
<td>Latin</td>
<td>LAT</td>
</tr>
<tr>
<td>Latin American studies</td>
<td>LAS</td>
</tr>
<tr>
<td>Law</td>
<td>LAW</td>
</tr>
<tr>
<td>Legal environment of business</td>
<td>LEB</td>
</tr>
<tr>
<td>Liberal arts</td>
<td>LA</td>
</tr>
<tr>
<td>Liberal arts honors</td>
<td>LAH</td>
</tr>
<tr>
<td>Linguistics</td>
<td>LIN</td>
</tr>
<tr>
<td>Malayalam</td>
<td>MAL</td>
</tr>
<tr>
<td>Management</td>
<td>MAN</td>
</tr>
<tr>
<td>Management information systems</td>
<td>MIS</td>
</tr>
<tr>
<td>Manufacturing systems engineering</td>
<td>MFG</td>
</tr>
<tr>
<td>Marine science</td>
<td>MNS</td>
</tr>
<tr>
<td>Marketing</td>
<td>MKT</td>
</tr>
<tr>
<td>Materials science and engineering</td>
<td>MSE</td>
</tr>
<tr>
<td>Mathematics</td>
<td>M</td>
</tr>
<tr>
<td>Mechanical engineering</td>
<td>ME</td>
</tr>
<tr>
<td>Medieval studies</td>
<td>MDV</td>
</tr>
<tr>
<td>Mexican American studies</td>
<td>MAS</td>
</tr>
<tr>
<td>Middle Eastern studies</td>
<td>MES</td>
</tr>
<tr>
<td>Military science</td>
<td>MS</td>
</tr>
<tr>
<td>Molecular biology</td>
<td>MOL</td>
</tr>
<tr>
<td>Music</td>
<td>MUS</td>
</tr>
<tr>
<td>Natural sciences</td>
<td>NSC</td>
</tr>
<tr>
<td>Naval science</td>
<td>NS</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>NEU</td>
</tr>
<tr>
<td>Norwegian</td>
<td>NOR</td>
</tr>
<tr>
<td>Nursing</td>
<td>N</td>
</tr>
<tr>
<td>Nutrition</td>
<td>NTR</td>
</tr>
<tr>
<td>Oboe</td>
<td>OBO</td>
</tr>
<tr>
<td>Opera</td>
<td>OPR</td>
</tr>
<tr>
<td>Operations management</td>
<td>OM</td>
</tr>
<tr>
<td>Operations research and industrial engineering</td>
<td>ORI</td>
</tr>
<tr>
<td>Organ</td>
<td>ORG</td>
</tr>
<tr>
<td>Percussion</td>
<td>PER</td>
</tr>
<tr>
<td>Persian</td>
<td>PRS</td>
</tr>
<tr>
<td>Petroleum and geosystems engineering</td>
<td>PGE</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>PHR</td>
</tr>
<tr>
<td>Philosophy</td>
<td>PHL</td>
</tr>
<tr>
<td>Physical education</td>
<td>PED</td>
</tr>
<tr>
<td>Physical science</td>
<td>PS</td>
</tr>
<tr>
<td>Physics</td>
<td>PHY</td>
</tr>
<tr>
<td>Piano</td>
<td>PIA</td>
</tr>
<tr>
<td>Polish</td>
<td>POL</td>
</tr>
<tr>
<td>Portuguese</td>
<td>POR</td>
</tr>
<tr>
<td>Portuguese civilization</td>
<td>PRC</td>
</tr>
<tr>
<td>Psychology</td>
<td>PSY</td>
</tr>
<tr>
<td>Public affairs</td>
<td>PA</td>
</tr>
<tr>
<td>Public relations</td>
<td>PR</td>
</tr>
<tr>
<td>Radio-television-film</td>
<td>RTF</td>
</tr>
<tr>
<td>Real estate</td>
<td>RE</td>
</tr>
<tr>
<td>Recorder</td>
<td>REC</td>
</tr>
<tr>
<td>Religious studies</td>
<td>RS</td>
</tr>
<tr>
<td>Rhetoric and writing</td>
<td>RHE</td>
</tr>
<tr>
<td>Risk management</td>
<td>R M</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Russian</td>
<td>RUS</td>
</tr>
<tr>
<td>Russian, East European, and Eurasian studies</td>
<td>REE</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>SAN</td>
</tr>
<tr>
<td>Saxophone</td>
<td>SAX</td>
</tr>
<tr>
<td>* Scandinavian</td>
<td>SCA</td>
</tr>
<tr>
<td>* Science</td>
<td>SCI</td>
</tr>
<tr>
<td>Science and technology commercialization</td>
<td>STC</td>
</tr>
<tr>
<td>Science-mathematics education</td>
<td>SME</td>
</tr>
<tr>
<td>Science, technology, and society</td>
<td>STS</td>
</tr>
<tr>
<td>Serbian/Croatian</td>
<td>SC</td>
</tr>
<tr>
<td>Slavic</td>
<td>SLA</td>
</tr>
<tr>
<td>* Social science</td>
<td>SS</td>
</tr>
<tr>
<td>Social work</td>
<td>SW</td>
</tr>
<tr>
<td>Sociology</td>
<td>SOC</td>
</tr>
<tr>
<td>Spanish</td>
<td>SPN</td>
</tr>
<tr>
<td>* Spanish civilization</td>
<td>SPC</td>
</tr>
<tr>
<td>Special education</td>
<td>SED</td>
</tr>
<tr>
<td>Statistics</td>
<td>STA</td>
</tr>
<tr>
<td>Statistics and scientific computation</td>
<td>SSC</td>
</tr>
<tr>
<td>Studio art</td>
<td>ART</td>
</tr>
<tr>
<td>* Swahili</td>
<td>SWA</td>
</tr>
<tr>
<td>* Swedish</td>
<td>SWE</td>
</tr>
<tr>
<td>Tamil</td>
<td>TAM</td>
</tr>
<tr>
<td>Telugu</td>
<td>TEL</td>
</tr>
<tr>
<td>Textiles and apparel</td>
<td>TXA</td>
</tr>
<tr>
<td>Theatre and dance</td>
<td>TD</td>
</tr>
<tr>
<td>Trombone</td>
<td>TRO</td>
</tr>
<tr>
<td>Trumpet</td>
<td>TRU</td>
</tr>
<tr>
<td>Tuba</td>
<td>TBA</td>
</tr>
<tr>
<td>Turkish</td>
<td>TUR</td>
</tr>
<tr>
<td>* Tutorial course</td>
<td>TC</td>
</tr>
<tr>
<td>* Undergraduate studies</td>
<td>UGS</td>
</tr>
<tr>
<td>* Urban studies</td>
<td>URB</td>
</tr>
<tr>
<td>Urdu</td>
<td>URD</td>
</tr>
<tr>
<td>* UTeach-liberal arts</td>
<td>UTL</td>
</tr>
<tr>
<td>UTeach-natural sciences</td>
<td>UTS</td>
</tr>
<tr>
<td>Vibraphone</td>
<td>VIB</td>
</tr>
<tr>
<td>* Vietnamese</td>
<td>VTN</td>
</tr>
<tr>
<td>Viola</td>
<td>VIA</td>
</tr>
<tr>
<td>Violin</td>
<td>VIO</td>
</tr>
<tr>
<td>Violoncello</td>
<td>VC</td>
</tr>
<tr>
<td>* Visual art studies</td>
<td>VAS</td>
</tr>
<tr>
<td>Voice</td>
<td>VOI</td>
</tr>
<tr>
<td>Women’s and gender studies</td>
<td>WGS</td>
</tr>
<tr>
<td>Writing</td>
<td>WRT</td>
</tr>
<tr>
<td>* Yiddish</td>
<td>YID</td>
</tr>
<tr>
<td>Yoruba</td>
<td>YOR</td>
</tr>
</tbody>
</table>