STUDENT LIFE POLICIES AND PROCEDURES

- General Regulations
- Student Grievance Procedures
- Discrimination Complaints
- Student Educational Records
STUDENT LIFE POLICIES AND PROCEDURES

General Regulations

1.- Authority
2.- Student Conduct
3.- Illegal Substances Policy
4.- Policy on Disruptive Acts
5.- Solicitation
6.- Campus Facilities
7.- Policy on Hazing
8.- Other Prohibited Conduct
9.- Penalties Which May Result
10.- General Debts of Students or Organizations
11.- Debts Owed to the University
12.- Returned Checks
13.- Immunization Requirement
14.- Policy on AIDS, HIV, and Hepatitis B Infection
15.- Student Right-to-Know and Campus Security Act

Detailed policies and procedures affecting student life are printed in the Handbook of Operating Procedures (HOP)—student section and are available on the Internet at http://www.utep.edu/dos. The handbook supplements the rules and regulations of the Board of Regents and covers student conduct and discipline, use of University facilities, student organizations, educational records, and student publications. The Rules and Regulations of the Board of Regents of The University of Texas System are also available in these offices and at http://www.utsystem.edu/BOR/RegentsRules/RULES_.HTM. The President has delegated responsibility for the administration of student discipline to the Dean of Students.
STUDENT LIFE POLICIES AND PROCEDURES

Student Grievance Procedures

Grade Appeals

A student may challenge his/her grade as determined by a member of the faculty of the University during or within one year after the end of any credit course, qualifying or comprehensive examination, for which the student has been enrolled or three months following the term the graduate degree was awarded. A challenge to a grade may be pursued only on the basis of malice, bias, arbitrary, or capricious grade determination, or impermissible discrimination. In no event shall a challenge be pursued on the basis of the standards employed in setting grades, so long as those standards are employed impartially.

The student should first attempt to resolve the question through consultation with the faculty member who assigned the grade. The student should then attempt to resolve the question through consultation with the administrator(s) to whom the faculty member reports. Having failed to resolve the matter after consultation with both the faculty member and her/his supervisors, the student may consult with and/or file a challenge with the Chairperson of the Student Welfare and Grievance Committee. Contact the Dean of Students for specific information or you can get a copy of the grievance form and instructions on the Dean of Students web page www.utep.edu/dos.

Non-Academic Grievances

Non-academic grievances of policies and procedures of university departments related to matters other than discrimination, such as the application or interpretation of student policies, must be initiated by making an effort to resolve the matter with the individual involved in the interpretation or decision. If the matter is not resolved, it must be submitted in writing to the appropriate director, chair, or department head within 10 working days of the questioned decision or interpretation. Grievances not satisfactorily resolved within 10 working days of that appeal may then be submitted to the appropriate Vice President. Disputes not satisfactorily resolved within 15 working days at this level may finally be appealed to the President.
STUDENT LIFE POLICIES AND PROCEDURES

Discrimination Complaints

Web site at: http://www.utep.edu/ecoaa

Complaints regarding discrimination should be reported to the University’s Equal Opportunity/Affirmative Action Office. The University has various policies prohibiting discrimination which can be found in the Handbook of Operating Procedures (HOP). Questions regarding applicable policies should be addressed to the University’s Equal Opportunity/ Affirmative Action Office, Union East, Room 306 or at (915) 747-5662.
STUDENT LIFE POLICIES AND PROCEDURES

Student Educational Records

1. Family Educational Rights And Privacy Act (FERPA)
2. Directory Information
3. Access to File
4. Challenge to Record
5. Copies
6. Complaints
FACILITIES AND STUDENT SERVICES

- Academic and Research Facilities
- Student Services
FACILITIES AND STUDENT SERVICES

Academic and Research Facilities

The University Library, housed in an elegant and comfortable six-story building with seating capacity for 2,300 users, is open on a daily basis, 94 hours a week. It houses over one million books and government publications, as well as over one million microforms. Subscriptions are maintained to 2,600 journals and newspapers. Most materials are available for loan to university students, faculty, and staff. Books, journals, and audio-visual materials are listed in the Library's computerized catalog. This catalog allows users to conduct searches by author, title, subject, and key word. It is accessible from computers located on all floors of the library, campus offices, and at home. In addition, the Library LAN (Local Area Network) provides access to over 150 electronic databases in all major areas of study at the University. These databases provide bibliographic information as well as selected abstracts, full text research articles, and reports. Internet access to catalogs of other academic libraries is also available.

The professional staff of the Reference Department provides instruction and assistance in locating and using traditional hardcopy as well as the electronic resources of the Library. Librarians are available to provide assistance with specialized collections in departments such as Government Documents, which receives half of all materials published by the Federal Government; and Special Collections, which houses rare books as well as the following thematic collections: Art, Printing, Military History, Western Fiction, Chicano Studies, Border Studies, and Oral History. The Library’s manuscript and archival materials are also located in the Special Collections Department.

The Access Services Department provides automated checkout services, makes reserve materials available, and provides inter-library loan/document delivery services. CPM (Current Periodicals and Microforms) houses journals and newspapers that have been published within the last two years, newspapers, and microform.

Support for students and faculty, who are involved in distance education, is provided by the library. Support includes delivery of books and other materials by mail, consultation with librarians, and access to electronic resources via the Internet.

The Library Technology Center provides IBM and Apple microcomputers for student use. Standard word processing and other software packages are available. In addition, the Center has an extensive collection of educational videotapes for use in the Library.

Self-service photocopying equipment is available on all floors of the Library and a full-service Copy Center is located on the first floor. Study rooms and graduate study carrels are conveniently located throughout the library.

The Center for Effective Teaching and Learning (CETaL) is a resource for university faculty. CETaL provides the faculty with workshops, the opportunity for faculty mentoring, and a library of teaching and learning materials. Through these services, faculty can then document their teaching effectiveness.

CETaL seeks to cultivate an environment where teaching is highly valued and where teachers strive continuously to improve their effectiveness. It is a scholarly center working to find, document, and report the best teaching practices at UTEP and elsewhere. In addition, CETaL aids faculty in doing scholarly research on teaching, curriculum, and other issues related to delivery of instruction.

CETaL is a resource for those who understand that teaching is a complex and interactive process among many parties in a variety of environments, and that it can be taught, improved, and evaluated.

The office of Technology Planning and Distance Learning (TPDL) is a resource for UTEP faculty, students, and staff. Its mission is to provide graduate and undergraduate students, who are unable to take advantage of a traditional class schedule, with appropriate opportunities to participate in the learning process through the use of alternative media and methods for the delivery of instruction. The TPDL office serves as the UTEP campus center for design, delivery, and evaluation of distance education; it also collaborates with public and private institutions to meet the expanding needs for higher education and workforce retooling in the region; and it develops graduate and undergraduate instructional programs that integrate a variety of print materials, face-to-face interactions, World Wide Web (WWW), Internet, interactive videoconferencing, and other electronic communication for teaching and learning.

In addition to scheduling and coordinating the use of distance learning facilities across the network service areas and other learning sites, TPDL services include
technical support to faculty, staff, and students in the design and adaptation of instructional material for distance learning; training and assistance in the proper use of equipment in the distance learning classrooms; and the staffing and providing of technical assistance during video conferences and multimedia classroom use.

Located in UTEP's new UGLC, the office of TPDL also enables UTEP to be an active partner of the new "Virtual University" of Texas: the TeleCampus. University courses are offered at a distance across the various University of Texas component campuses using a variety of technology-based delivery systems, such as interactive videoconferencing, the World Wide Web, and the Internet, coupled with print media, digital library resources, and face-to-face instruction at off-campus sites. Two of the full degrees offered through the UT TeleCampus are the MBA, offered by UTEP's College of Business Administration and seven other University of Texas campuses, and the MEd Tech (Educational Technology On-Line), which UTEP, UT Brownsville, UT Austin and several other Texas Universities will deliver via the Internet.

Students interested in undertaking distance courses through the UT TeleCampus must be fully admitted to a UT academic component university and complete the Inter-Institutional Distance Education Admission & Registration (IDEAR) form located on-line at the UT TeleCampus web site. Once admitted to one of the 15 University of Texas campuses, students can select courses offered via the distance education delivery options of the UT TeleCampus. Students are required to abide by the host university policies, procedures, and requirements regarding course drop/withdrawal and graduation policies. For further details on the registration process and student qualifications, visit the UT TeleCampus at www.telecampus.utsystem.edu.

The administrative offices for UTEP's distance learning programs are located in the new Undergraduate Learning Center (UGLC), Suite 316. TPDL staff can be contacted by phone at (915) 747-6675; fax at (915) 747-8610; and e-mail at tpdl@utep.edu. The TPDL web site with a complete listing of course offerings can be visited at http://www.utep.edu/tdl.

Under the auspices of the Office of the Provost and Vice President for Academic Affairs, UTEP is embarking on an initiative to deliver instruction via new communication and instructional technologies through the Office of Technology Planning and Distance Learning (TPDL). Located in UTEP's new UGLC, the Office of TPDL has enabled UTEP to be an active partner in the new UT TeleCampus, offering university courses across the U of T System Campuses using a variety of interactive videoconferencing, web-based delivery systems, and the Internet.

TPDL's mission is to be the UTEP campus center for the design, delivery, and evaluation of distance education; to collaborate with public and private institutions to meet the expanding needs for higher education and workforce retooling; and to develop graduate and undergraduate instructional programs that integrate a variety of print, fact-to-face, and electronic communication for teaching and learning. TPDL will help faculty, staff, and students design and adopt instructional materials for distance learning; learn to run equipment to distance learning classrooms; and schedule or conduct facilities as well as provide technical assistance during video conferences and during periods of multimedia classroom use.

TPDL's office is located at the new Undergraduate Learning Center (UGLC), Suite 316, and can be contacted by phone at (915) 747-8901, by fax at (915) 747-8610, and by e-mail at tpdl@utep.edu. TPDL's web site can be visited at http://www.utep.edu/tdl.

UTEP's specialized research centers provide research opportunities for faculty and students, coordinate academic and research programs, and sponsor seminars and conferences of interest to the university community.

In the Materials Center for Synthesis and Processing (MCSP), faculty and students conduct research on the synthesis and processing of materials, including advanced, optical, and semiconducting materials. A major goal of the MCSP is to increase the access of minorities and women to careers in science and engineering by providing outstanding research opportunities to undergraduate and graduate students.

The Materials Research Institute (MRI) administers UTEP's interdisciplinary Ph.D. program in materials science and engineering. It also sponsors materials-related conferences and seminars and coordinates UTEP's linkages with materials programs in Mexico.

Through manufacturing-related research, outreach, and education, the Institute for Manufacturing and Materials Management (IM3) brings University-based research and technology to the plant floors of manufacturers in El Paso, Ciudad Juárez, and Las Cruces. IM3's manufacturing outreach programs assist area manufacturers in personnel development, technology utilization, product commercialization, and process and facility modernization. As a partner in the Texas Manufacturing Assistance Center, IM3 helps manufacturers convert from
defense-related to civilian production and utilize technology originally created for
the defense industry.

By providing information and technical assistance to private and public sector
organizations, UTEP’s Texas Center for Border Economic and Enterprise
Development, part of a consortium that also includes centers at Texas A&M
University International and the University of Texas Pan-American, enhances the
competitive position of the Texas-Mexico border region in the emerging global
economy while integrating the region into the state’s economy. UTEP’s Center
focuses on demographic and economic analysis, community education,
information services, international trade assistance, project coordination,
surveys, and data acquisition.

The Center for Environmental Resource Management (CERM) coordinates
faculty and student research addressing problems of waste, air quality, water
resources, energy, and environmental policy affecting the El Paso Southwest.
Students receiving support through CERM get first-hand experiences on projects
such as management of water resources in the El Paso/Cd. Juárez area, development
of alternative energy technologies including wind energy and solar
ponds, and investigations of environmental toxicology in desert habitats. CERM
also coordinates education and community outreach programs, including UTEP’s
doctoral program in environmental science and engineering.

Established through a five-year, $6.5 million grant from the National Aeronautics
and Space Administration, the Pan American Center for Earth and
Environmental Science (PACES) contributes to NASA’s Mission to Planet Earth
by maintaining a database of remote sensing, geophysical, geological, and
environmental data generated by NASA and other agencies, focused on the
southwestern United States and northern Mexico. Faculty and students affiliated
with PACES are developing a high-level computer language to facilitate the
access and integrated analysis of the data and use the Center’s databases for
pure and applied research in the earth and environmental sciences. PACES
represents a collaboration between UTEP and NASA’s Goddard Space Flight
Center, Ames Research Center, and Jet Propulsion Laboratory, along with other
universities and agencies.

Established in 1992 through a five-year, $4.5 million grant from the National
Institutes of Health, the Border Biomedical Research Center (BBRC) supports
biomedical and biostatistical research focusing on the U.S.-Mexico border region.
The Center includes a Cell Biology Unit, consisting of three core research
facilities (the Biochemistry and Molecular Biology Core Facility, the Cell Culture
Core Facility, and the Analytical Cytology Core Facility) housed in the Biology
Building and the Biostatistics Unit housed near the Department of Mathematical
Sciences. A local area network connects all members of both units electronically.

The Laboratory for Environmental Biology, a component of UTEP’s Centennial
Museum, is the major research and teaching support unit for the field collections
oriented biological sciences at the University. It is a major regional center for
collections of plants, modern vertebrates, modern mollusks, and late Cenozoic
fossil vertebrates and mollusks of the Southwest and Mexico.

The Center for Geotechnical and Highway Materials Research coordinates basic
and applied research related to the nation’s transportation infrastructure. It is an
internationally known center of excellence in nondestructive testing of
transportation facilities and is expanding its activities to include transportation
planning and infrastructure management. The Center’s laboratory facilities are
comprehensive and modern. It is equipped with a modern soil and paving
materials research test facility for conducting the most advanced dynamic and
static laboratory tests, such as cyclic triaxial, resonant column, resilient modulus,
and almost all tests for mechanistic design of flexible pavements.

A national leader in research and education focusing on the U.S.-Mexico border,
the Center for Inter-American and Border Studies (CIABS) provides support for
faculty and student research, sponsors seminar series and publications
addressing border issues, and works to forge linkages between UTEP and
universities in Mexico and the rest of Latin America. CIABS also coordinates
UTEP’s undergraduate degree programs in Latin American and border studies,
as well as the only U.S. Ph.D. program in Border Studies, which is offered in
conjunction with the University of Texas at Austin.

Established in 1996, the Public Policy Research Center coordinates UTEP’s
efforts to research, analyze, and/or interpret public policy. Faculty and students
from a variety of disciplines analyze issues in three broad areas: general
economic policy; international trade policy, with an emphasis on the North
American Free Trade Agreement; and investment in both physical and social
infrastructure. Recent research has addressed issues related to regional
economic development, criminal justice, water policy, and health reform. PPRC
sponsors community forums on policy issues, and students undertake activities
such as conducting exit polls during local, state, and national elections.

The FAST Center for the Structural Integrity of Aerospace Systems was
established in 1995. Funded primarily by the Air Force Office of Scientific
Research, FAST is a partnership among UTEP, Texas A&M University, Sandia...
and Los Alamos National Laboratories, and the Jet Propulsion Laboratory.

FAST's interdisciplinary teams of faculty and students conduct research to test
the safety of aging military aircraft, using non-destructive evaluation to detect
and characterize flaws before defects reach critical size that could lead to
catastrophic failure. The Center also offers a series of technical seminars,
bringing experts in the field to campus to interact with UTEP students.

The Center for Electronics Manufacturing (CEM) was established in 1995
through a grant from the Department of Defense to conduct cutting-edge
research that enables the electronics industry in general and the defense
electronics industry in particular to meet today's challenges; to transfer DoD
technology to the civilian electronics industry; and to support human resource
development in science and engineering. Faculty and students at CEM conduct
state-of-the-art research projects in four areas: Quality Assessment and Control,
Agile Production Control, Industrial Base Modeling, and Interface and Control.
CEM also sponsors curriculum development and leads technology transfer
efforts with small business through an Industrial Lecture Series and participation
in regional, national, and international conferences.
FACILITIES AND STUDENT SERVICES

Student Services

1. Personal Living
2. Health and Fitness
3. Personal Support
4. Career and Professional Development Services
5. Extracurricular Activities
6. Cultural Life

The University of Texas at El Paso offers a wide array of support services for students to ensure that student needs, concerns, and interests are addressed.
ACADEMIC SUPPORT

General Information
Web site at: http://www.utep.edu/tlc
The Tutoring and Learning Center
300 Library
747-5366
Fax: 747-5486
DIRECTOR: Gladys R. Shaw

Academic success for UTEP students is the goal of the Tutoring and Learning Center (TLC). Services made available by the center are focused on helping students successfully meet the high academic standards of UTEP's regular college courses; helping students prepare for and pass various standardized exams, including the TASP Test; and helping students make up learning deficiencies in course content to prepare themselves for regular college courses. All services are free to enrolled, eligible, UTEP students.

The center offers the following:

Free Peer Tutoring at posted hours in most content areas, but especially math, writing, science, languages, and business and accounting courses. Open to all students on a walk-in basis.

Individualized and Computer Assisted Instruction in math, reading, writing, study skills, standardized test preparation, and other areas is available in the Learning Assistance Lab.

Distance Learning Programs at UTEP: The office of Technology Planning and Distance Learning (TPDL) is a resource for UTEP faculty, students, and staff. Its mission is to provide graduate and undergraduate students, who are unable to take advantage of a traditional class schedule, with appropriate opportunities to participate in the learning process through the use of alternative media and methods for the delivery of instruction. The TPDL office serves as the UTEP campus center for design, delivery, and evaluation of distance education; it also collaborates with public and private institutions to meet the expanding needs for higher education and workforce retooling in the region; and it develops graduate and undergraduate instructional programs that integrate a variety of print materials, face-to-face interactions, World Wide Web (WWW), Internet, interactive videoconferencing, and other electronic communication for teaching and learning.

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Individualized Assistance with Learning and Study Problems. Available to all students.

Collaborative Learning Activities in special topic classes and workshops facilitated by trained Peer Tutors: content study groups, skills workshops, focused labs, language conversation classes, content reviews, and test preparation. Scheduled activities open to all students. Others may be implemented on demand by five or more students.

Facilities for Special Needs: All rooms are accessible by wheelchair, and special equipment is available for students with vision or hearing impairments. Appointment tutoring is available for learning disabled students in any content area.

Non-Credit Courses: All non-credit courses are free and open to eligible UTEP students. Students may register for courses during the regular registration process except as noted.

Life Management and Personal Development: A variety of instructional and motivational audio and video tapes are available to help students in such areas as stress management, time management, test anxiety skills, and attitudes for being successful, etc. These are available on a walk-in basis in the Learning Assistance Lab in the center.

ESOL Assistance: Self-paced instructional and practice materials are available in addition to the bilingual courses and labs listed below.

Distance Tutoring: Quick, specific questions in content areas may be submitted by phone (747-7414), Fax (747-5486), or e-mail (tutoring@utep.edu).

Mentoring: Peer Mentors and Counselor Interns are available on request to provide personal support for UTEP students.

Graduate Student Services: In addition to the services listed above, the center offers the following services especially for graduate students:

Standardized Test Preparation Workshops for the GRE, GMAT, and EXCET are made available each long semester. Twelve hours of instruction are provided that include test-taking strategies plus work on the specific sections of the exams. UTEP students may sign up in the center. Non-enrolled students must sign up in the Department of Continuing Education for a fee.

Computer Assisted Instruction programs for the GRE and the GMAT are available for individual use in the center. UTEP students may enroll at the center. Non-enrolled students must sign up with the Department of Continuing Education and pay a fee.

Thesis Writing Workshop is offered each long semester. This workshop provides four hours of instruction and is free to UTEP students who may sign up in the center. Non-enrolled students must sign up in the Department of Continuing Education and pay fee.

The University of Texas at El Paso
Developed by the UTEP Web Development Team
Revised: February 19, 2001
FACULTY AND STAFF

- Administrative Staff
  Make a selection by alphabetical order:

- Faculty
  Make a selection by alphabetical order:

- Library Staff
FACULTY AND STAFF

Administrative Staff

1. A - M

Ricardo Adauto III, Assistant to the President, 1988
B.S., The University of Texas at El Paso; J.D., Berkeley School of Law

William E. Adcox, Chief of University Police, 1999
B.S., Park College

Robert M. Almanzan, Equal Opportunity/Affirmative Action Officer, 1997
B.A., Stanford University; M.P.A., M.S.W., University of Southern California

Jon Amastae, Director, Center for Inter-American and Border Studies (CIBS), 1980
B.A., University of New Mexico; Ph.D., University of Oregon

Charles H. Ambler, Associate Vice President for Graduate Studies, 1984
B.A., Middlebury College; M.A., Ph.D., Yale University

Earl Wynn Anderson, Assistant to the Vice President for Finance and Administration, 1966
B.A., The University of Texas at El Paso

Sally J. Andrade, Director, Center for Institutional Evaluation, Research, and Planning, 1993
B.S.F.S., M.S.F.S., Georgetown University; M.A., Trinity University; Ph.D., The University of Texas at Austin

Ricardo V. Aranda, Assistant to the Vice President / Student Support Services, 1976
B.B.A., The University of Texas at El Paso; M.B.A., Sul Ross State University

Robert C. Aylmer, Director, Counseling Center, 1996
A.B., Harvard College; Ed.M., Ed.D., Harvard University

Samuel Benavides, Director, Union Dining Services, 1980
B.S., The University of Texas at El Paso

Miguel Blanco, Director, Youth Employment Scholastic Skills, 1986
B.A., The University of Texas at El Paso

Thomas E. Brady, Dean, College of Science, 1997
B.A., Beloit College; M.S., Ph.D., Yale University

Sandra E. Braham, Assistant Vice President for Outreach Programs, 1992
B.A., University of Missouri-Columbia

Arturo Bronson, Director, Materials Center for Synthesis and Processing (MCSP), 1993
B.S., Met. E., M.S., The University of Texas at El Paso; Ph.D., Ohio State University

Elizabeth F. Cardona, Director, Office of Auditing and Advisory Services, 1992
B.B.A., The University of Texas at El Paso

Albert Carrillo, Director, Information Technology, 1995
B.S., C.S., The University of Texas at El Paso

Briane K. Carter, Director, Career Services, 1980
B.A., West Virginia Institute of Technology; M.S., Marshall University

Coquis Y. Casavantes, CPA, Assistant to the Vice President for Finance and Administration, 1998
B.B.A., The University of Texas at El Paso; Master of Taxation, Arizona State University

Patricia T. Castiglia, R.N., Dean of Health Sciences, 1990
B.S., University of Buffalo; M.S.; Ph.D., State University of New York at Buffalo

Norma Chacon, Director, High School Equivalency Program, 1987
B.B.A., The University of Texas at El Paso

Danny Cisneros, Assistant Director, Facilities Services, 1997
A.A.S., El Paso Community College
GERARD D. COCHRANE, Director, Purchasing and Materials Management, 1982
B.S., Park College

BEA DARANCOU, Manager, Information Technology, 1991
B.I.S., The University of Texas at El Paso

HOWARD C. DAUDISTEL, Dean of College of Liberal Arts, 1997
B.A., M.A., Ph.D., University of California-Santa Barbara

ROLANDO J. DIAZ, Director, Student Development Center, 2000
B.A., University of Texas at Austin; M.A., University of North Texas; M.A., Texas Women's University

GARY E. EDENS, Director, New Student Orientation, 1989
B.B.A., M.P.A., The University of Texas at El Paso

EMILIO ESCANDON, Assistant Director, Facilities Services, 1999
B.S.M.E., The University of Texas at El Paso

ROMEO GARCIA, Business Manager, Facilities Services, 1995
B.B.A., University of Texas at Austin; M.B.A., Texas A & M University

LINDA GONZALEZ-HENSGEN, Director, Financial Aid, 1976
B.B.A., The University of Texas at El Paso

HUBERT GRIFFIN, Manager, Information Technology, 1994
B.S., Park College

DIANA GUERRERO, Director of Undergraduate Admissions and Evaluation, 1969
B.S., B.A., M.Ed., The University of Texas at El Paso

JOSE CARLOS HERNANDEZ, CPA, Comptroller, Financial Services, 1988
B.B.A., The University of Texas at El Paso

CAROL B. HICKS, Director, Educational Talent Search, 1990
B.S., The University of Texas at El Paso

ANNA PERALTA HINES, Associate Vice President for Information Technology, 1981
M.S., The University of Texas at El Paso

FRANK HOY, Dean of College of Business Administration, 1991
B.B.A., The University of Texas at El Paso; M.B.A., North Texas State University; Ph.D., Texas A&M University

HENRY T. INGLE, Associate Vice President for Technology Planning and Distance Learning, 1994
B.A., Texas Western College; M.S., Newhouse School of Communication, Syracuse University; Ph.D., Stanford University

YOLANDA INGLE, Assistant Vice President/Alumni Relations Office, 1995
B.S., The University of Texas at El Paso; M.A., California State University, Chico; Ph.D., Claremont Graduate University

KAREN E. KNIGHT, Director, Housing Services, 1991
B.A., East Texas Baptist University; M.A., New Mexico State University

C. WESLEY LEONARD, Acting Director, Center for Environmental Resource Management (CERM), 1988
B.A., Emory University

ALBERTO LOPEZ, Assistant Vice President/University Relations, 1983
B.A., M.A., Austin College

SUSAN J. LOPEZ, Director, Disabled Student Services, 1996
B.S., The University of Texas at El Paso

DAVID L. MADEIRA, Vice President for Institutional Advancement, 1999
B.S., University of Illinois; M.A., University of Indiana; J.D., Indiana University School of Law

LUZ M. MARQUEZ, Coordinator, University Women's Center, 1999
B.A., University of Texas at El Paso; M.A., Webster University

GLORIA J. MARTINEZ, Director, Facilities Services, 1996
B.S.C.E., New Mexico State University

PAUL C. MAXWELL, Vice President for Research and Sponsored Projects, 1999
B.S., The University of Texas at El Paso; M.S., Ph.D., Stanford University

LILLIAN MAYBERRY, Director of Honors Program and Junior Scholars Program, 1979
B.S., California State University, San Jose; M.S., University of Nevada, Reno;
Ph.D., Colorado State University

ROBERT D. MOSS, Interim Director, Environment Health and Safety, 1992
B.S.C.E., The University of Texas at El Paso

HECTOR MUÑOZ, Director, Recreational Sports Department, 1987
B.S., University of Chihuahua; M.S.E., University of Kansas

PATRICIA MUNOZ, Director, Conference Services, 1998
Certified Meeting Professional

LAWRENCE E. MURR, Director, Materials Research Institute (MRI), 1989
B.Sc., Albright College; B.S., M.S., Ph.D., Pennsylvania State University

MEG MURRAY, Director, Academic Advising Center, 1999
B.A., M.A., Ph.D., The University of Connecticut
DIANA S. NATALICIO, President, 1971
B.S., St. Louis University; M.A., Ph.D., The University of Texas at Austin

ALBERTO NAVAR, Assistant Director, Facilities Services, 1991
B.A., Texas Tech University

ROBERTO A. OSEQUEDA, Director, FAST Center for Structural Integrity of Aerospace Systems, 1995
B.S., M.S., Ph.D., Texas A&M University

ARTURO PACHECO, Dean of Education, 1991
B.A., San Jose State University; M.A., San Francisco State University; Ph.D., Stanford University

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COLLEGE OF BUSINESS ADMINISTRATION

- Introduction
- Enrollment for Non-Business Graduate Students
- Requirements for Admission
- Departments:
  Select a Department

Dr. Frank Hoy, Dean
Dr. Robert D. Tollen, Associate Dean

Business Bldg.
Room 101
Phone: (915) 747-5241
Fax: (915) 747-5147
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Introduction

The College of Business Administration at The University of Texas at El Paso shares with the University its fundamental mission to provide quality higher education to the citizens of El Paso and the West Texas region, to prepare them to function effectively in society, and to contribute to the quality of life in this community and region. The border location of the University and College provides an environment that affords opportunities for students to become knowledgeable in Inter-American economic, business, and cultural matters within the context of a business school education comparable to that provided by other accredited institutions.

The College is committed to the widest possible access to quality higher education to allow our students to be competitive on a local, regional, national, and international level. Therefore, it is the goal of the College to provide:

- Broad-based programs which give students the background for entry into, and advancement in, professional and managerial positions, and for lifelong career success.
- Intellectual contributions that improve application of existing knowledge in regional businesses and industries and the border economy, as well as nationally and worldwide; enhance the delivery of instruction to students; and extend the boundaries of knowledge.
- Service which contributes to meeting the personal and professional needs of our students, the University alumni, and academia.

Our quality is reflected in the success of our students, alumni, and faculty, and in the enhancement of the personal and professional lives of community residents.

The College also meets an important secondary responsibility as a partner in the U.S.-Mexico business community of the region. Many individuals engaged in business in the community enroll in selected courses in order to get specific skills or to broaden their knowledge. In addition, the faculty of the College of Business Administration participates in the Division of Continuing and Professional Education, which offers a wide variety of non-credit courses including programs for the business practitioner. CEDARS (Centers for Entrepreneurial Development, Advancement, Research, and Support), located in the College of Business Administration, through its Family and Closely-Held Business Forum and The Franchise Center, nurtures an environment to develop, advance, support, and transfer proven strategies and techniques in business principles and practices that will provide for effective and efficient entrepreneurial ventures and support in both local and international markets.

At the heart of all these programs is a distinguished faculty committed to teaching, research, and community service. Their work as well as that of the students is supported by the superb facilities of the College of Business Administration. The College of Business Administration provides a Computer Application Learning Center (CALC) laboratory that is the focal point of computer, audiovisual, and multimedia-based learning, including three microcomputer laboratories. The BBA, MBA, and MAcc, and the BBA in Accounting are accredited by the AACSB-the International Association for Management Education.
Requirements for Admission into Graduate Degree Programs in Business Administration

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1.- Master of Accountancy Program (MAcc)
2.- Requirements for Admission to the Master of Accountancy Program
3.- Specific Requirements for the Master of Accountancy Degree
4.- Concurrent Award of the BBA in Accounting and the Master of Accountancy
5.- Requirements for Admission
6.- Course of Study for the Combined BBA/MAcc Program
7.- Accounting (ACCT) Courses
8.- Business Law (BLAW) Courses

2.- Requirements for Admission to the Master of Accountancy Program

(See the Economics and Finance Department for admission requirements for the MS in Economics.)

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Satisfactory score on either the Graduate Management Admissions Test (GMAT) with a minimum score of 450 and a score of 3.0 or higher on the Analytical Writing Assessment (for MBA or MAcc)
3. GPA of 2.7 or higher (4.0 scale) on all university work
4. TOEFL score for international students of 600 or higher
5. Application of one of the following formulas:
   a. GPA on all university work (all undergraduate and graduate) x 200 plus GMAT score = 1050 or higher for unconditional admission
   b. GPA on all upper-division (junior and senior) and graduate university work x 200 plus GMAT score = 1100 or higher for unconditional admission
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**Business Administration**  
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| 2. | Requirements for Admission to the MBA Program |
| 3. | Specific Requirements for the Master of Business Administration Degree |
| 4. | Pre-Master of Business Administration (Pre-MBA) Requirements |</p>
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<th>Program of Study for the Master of Business Administration (MBA)</th>
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<td>Master of Business Administration and Master of Public Administration Two-Degree Option (MBA/MPA)</td>
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<td>Master of Business Administration and Master of Science in Nursing: MBA/MSN: Two Degree Option</td>
</tr>
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</table>

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Developed by the UTEP Web Development Team  
Revised: February 19, 2001
Accounting

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3. Specific Requirements for the MAcc Master of Accountancy Degree
4. Concurrent Award of the BBA in Accounting and the Master of Accountancy
5. Requirements for Admission
6. Course of Study for the Combined BBA/MAcc Program
7. Accounting (ACCT) Courses
8. Business Law (BLAW) Courses

CHAIRPERSON: Gary J. Mann

GRADUATE FACULTY: Braun, Eason, Hoffmans, Mann, Mayne, Omundson, Putnam, Zimmermann, Zlatkovich

The mission of the Department of Accounting is to provide quality higher education to the citizens of El Paso and the surrounding region, prepare them to function effectively in society, and contribute to the quality of life in this community and region. The Department’s goal is to provide a Master of Accountancy (MAcc) degree which enables career advancement in the accounting profession. The MAcc program, which may be entered after receiving a bachelor’s degree or within the combined BBA/MAcc plan, permits students to tailor their curriculum to meet their career objectives, allowing specialization in taxation, managerial accounting, or financial accounting and auditing. The Department is AACSB accredited.

The following content areas are included under Accounting:

Accounting (ACCT)
Business Law (BLAW)
COLLEGE OF BUSINESS ADMINISTRATION

Economics and Finance

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1. Master of Science Degree in Economics (MS)
2. Requirements for Admission to the MS Degree in Economics
3. Course of Study for the MS in Economics
4. Economics (ECON) Courses
5. Finance (FIN) Courses

CHAIRPERSON: Timothy P. Roth

GRADUATE FACULTY: Brannon, Fullerton, Herbst, Herendeen, Holcomb, James, Johnson, Lin, Roth, Schauer, Smith, Sprinkle, Tollen
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- Business Administration
- Economics and Finance
- Information and Decision Sciences
- Marketing and Management

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2. Production/Operations Management (POM) Courses
3. Quantitative Methods (QMB) Courses

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The Information and Decision Sciences Department participates in the Master of Business Administration, the Master of Accountancy, and the Master of Science in Economics degrees. The requirements of these degrees are found under Business Administration, Accounting, and Economics in this catalog.

The following areas are included under Information and Decision Sciences:

- Computer Information Systems
- Production/Operations Management
- Quantitative Methods

Computer Information Systems (CIS)

For Undergraduate and Graduate Students

CIS 4305 Advanced Business Systems Development (3-0)
CIS 4365 Database Management (3-0)

For Graduate Students Only

5311 Management Information Systems Theory and Practice (3-0)
A broad study of Management Information Systems, Decision Support Systems, and Expert Systems. MIS will be studied in-depth from the standpoint of structures, technology, and requirements. Problems and issues related to the design, implementation and management of MIS will be covered.

5313 Strategic Information Systems (3-0)
This course is concerned with how general managers can apply information technology (IT) to increase strategic advantage and organizational effectiveness. The objective of the course is to develop students’ ability to identify information systems that can increase organizational competitiveness and to recognize the major threats to these desired outcomes. Successful application of IT to business problems and opportunities will also be reviewed.

5317 Information Resource Policy and Management (3-0)
A study of the information systems management function with particular emphasis on planning, organizing, and controlling information resources including MIS personnel. Coverage of various methodologies for assessing and evaluating the MIS function. Also covered are various strategies and procedures for managing MIS development. Prerequisite: CIS 5311.

5330 Expert and Decision Systems (3-0)
Fundamental Decision Support System (DSS) and Expert System (ES) concepts, illustrating a number of software products and indicating possible directions for future development. The course covers the functions and components of DSS and ES, design and implementation issues, and organizational issues. Topics include the evolution of DSS/ES versus traditional information systems. Prerequisite: CIS 5311.

5392 Directed Individual Study in CIS (0-0-3)
This course may be repeated, but no more than three semester credit hours may be applied to satisfy the requirements for the Master's degree. Prerequisite: Department approval.

5394 Current Issues in CIS (3-0)
A course organized to investigate special topics and current issues in Computer Information Systems. May be repeated for credit when content varies. Prerequisite: Department approval.

5397 Professional Report in Computer Information Systems (3-0)
May be taken only once for credit. Continuous enrollment required while work on the professional report continues. Prerequisite: Department approval.
Production/Operations Management (POM)

For Undergraduate and Graduate Students

POM 3333 Production Planning and Control (3-0)

For Graduate Students Only

5308 Concepts of Production Management (3-0)
The production or operations function is concerned with the planning and decision-making activities of managers directly responsible for the conversion of resources into products and services. The operations manager plans production, schedules work and controls inventories. This course is a study of the issues underlying the management of operations, and introduces the student to a variety of tools and techniques used by operations managers exploring alternative means of implementing decisions.
Prerequisites: QMB 2301 and MATH 2301.

5310 Manufacturing Strategy (3-0)
This course is primarily intended for manufacturing and operations managers and practitioners. Manufacturing strategy attempts to make explicit the interrelationships between a firm’s markets and its manufacturing processes, control systems, and other functional areas. Without strategic context, manufacturing has traditionally responded to changes with an ad hoc set of solutions. The course covers such topics as: Product Profiling, Choice and Positioning of Processes, manufacturing implications of corporate marketing decisions, dimensions of competitiveness quality, productivity, and raw Products and Processes, Planning and Implementing Manufacturing Strategies, etc.
Prerequisite: POM 5308 or instructor approval.

5311 Purchasing and Materials Management (3-0)
This course addresses the issues related to the efficient and effective management of supply and materials function. The course primarily focuses on the management of materials and the control of materials costs in businesses and institutional enterprises. It emphasizes purchasing as the primary materials activity. At the same time, it explicitly integrates the purchasing activity with all other materials activities. Some of the topics include: The role, objectives, policies, operating procedures and organization of purchasing and materials management; sources of supply, pricing and cost analysis; make or buy decisions; standardization, negotiation; legal, ethical, and international considerations; value analysis/engineering; inventory and production planning, other related topics. Prerequisites: POM 5308 and department approval.

5394 Current Issues in Production/Operations Management (3-0)
A course organized to investigate special topics and current issues in production/operations management. May be repeated for credit when topic varies. Prerequisite: POM 5308 or POM 3321.

5397 Professional Report in Production/Operations Management (3-0)
May be taken only once for credit. Continuous enrollment required while work on the professional report continues. Prerequisite: Department approval.

Quantitative Methods (QMB)

For Graduate Students Only

5311 Quantitative Methods in Business (3-0)
Basic mathematical techniques employed in the solution of management problems, including probability theory and tests of hypotheses. May be counted only as Pre-MAcc or Pre-MBA courses in the graduate degree programs offered by the College of Business Administration. Prerequisite: Department approval.

5397 Professional Report in Quantitative Methods in Business (3-0)
May be taken only once for credit. Continuous enrollment required while work on the professional report continues. Prerequisite: Department approval. The Information and Decision Sciences Department participates in the Master of Business Administration, the Master of Accountancy, and the Master of Science in Economics degrees. The requirements of which are found under Business Administration, Accounting, and Economics in this catalog.

The following areas are included under Information and Decision Sciences:

- Computer Information Systems
- Production/Operations Management
- Quantitative Methods
Introduction

Enrollment for Non-Business Graduate Students

Requirements for Admission

Departments:
- Accounting
- Business Administration
- Economics and Finance
- Information and Decision Sciences
- Marketing and Management

Dr. Frank Hoy, Dean
Dr. Robert D. Tollen, Associate Dean
Dr. Charles P. Zlatkovich, Associate Dean

Business Bldg.
Room 101
Phone: (915) 747-5241
Fax: (915) 747-5147
E-mail: coba@utep.edu

COLLEGE OF BUSINESS ADMINISTRATION

Marketing and Management

Web site at: http://www.utep.edu/coba/

230 Business Administration Building
(915) 747-5185
E-mail: mandm@utep.edu

1. Management (MGMT) Courses
2. Marketing (MKT) Courses

CHAIRPERSON: Gary L. Sullivan

GRADUATE FACULTY: Eason, Hadjimarcou, Hoy, Ibarreche, Michie, Posthuma, Sama, Sullivan, Trevino

The Department of Marketing and Management participates in the Master of Business Administration, the Master of Accountancy, and the Master of Science in Economics degrees. The requirements of these degrees are found under Business Administration, Accounting, and Economics in this catalog.
COLLEGE OF BUSINESS ADMINISTRATION

Introduction

Web site at: http://www.utep.edu/coba/

The College of Business Administration at The University of Texas at El Paso shares with the University its fundamental mission to provide quality higher education to the citizens of El Paso and the West Texas region, to prepare them to function effectively in society, and to contribute to the quality of life in this community and region. The border location of the University and College provides an environment that affords opportunities for students to become knowledgeable in Inter-American economic, business, and cultural matters within the context of a business school education comparable to that provided by other accredited institutions.

The College is committed to the widest possible access to quality higher education to allow our students to be competitive on a local, regional, national, and international level. Therefore, it is the goal of the College to provide:

- Broad-based programs which give students the background for entry into, and advancement in, professional and managerial positions, and for lifelong career success.
- Intellectual contributions that improve application of existing knowledge in regional businesses and industries and the border economy, as well as nationally and worldwide; enhance the delivery of instruction to students; and extend the boundaries of knowledge.
- Service which contributes to meeting the personal and professional needs of our students, the University alumni, and academia.

Our quality is reflected in the success of our students, alumni, and faculty, and in the enhancement of the personal and professional lives of community residents.

The College also meets an important secondary responsibility as a partner in the U.S.-Mexico business community of the region. Many individuals engaged in business in the community enroll in selected courses in order to get specific skills or to broaden their knowledge. In addition, the faculty of the College of Business Administration participates in the Division of Continuing and Professional Education, which offers a wide variety of non-credit courses including programs for the business practitioner. CEDARS (Centers for Entrepreneurial Development, Advancement, Research, and Support), located in the College of Business Administration, through its Family and Closely-Held Business Forum and The Franchise Center, nurtures an environment to develop, advance, support, and transfer proven strategies and techniques in business principles and practices that will provide for effective and efficient entrepreneurial ventures and support in both local and international markets.

At the heart of all these programs is a distinguished faculty committed to teaching, research, and community service. Their work as well as that of the students is supported by the superb facilities of the College of Business Administration. The College of Business Administration provides a Computer Application Learning Center (CALC) laboratory that is the focal point of computer, audiovisual, and multimedia-based learning, including three microcomputer laboratories. The BBA, MBA, and MAcc, and the BBA in Accounting are accredited by the AACSB-the International Association for Management Education.
Master of Arts in Education

The Master of Arts degree with a major in Education is designed for students who wish to pursue research and who wish to continue studies beyond the master's degree level. Students may pursue the MA in Education in any of three academic departments in Education:

- Educational Leadership and Foundations
- Educational Psychology and Special Services
- Teacher Education

Prerequisites

- At least 12 semester hours of upper-division course work in Professional Education
- A satisfactory undergraduate grade point average (GPA)
- A satisfactory score on the Graduate Record Examination. International students whose first language is not English must score 550 or higher on the TOEFL.

Admission

Applicants must additionally submit an acceptable plan of study to the Graduate Advisor, representing the Graduate Studies Committee of the selected department. The plan must be submitted and approved by the academic department and by the Graduate School during the student's first term of enrollment.

Program

Thirty semester hours of course work, including at least 21 semester hours at the 5000 level and a thesis (with oral defense).

Thesis

A thesis and an oral defense, both satisfactory to the Graduate Studies Committee of the academic department, must be completed to meet degree requirements.
Certification and Endorsement

Initial teacher certification and professional certification for classroom teachers can also be earned. Eligibility for these programs includes a minimum 2.50 cumulative GPA from an accredited college or university, successful completion of the TASP (Texas Academic Skills Program), and development of an approved plan of study.

Eligible applicants for certification and endorsement programs will be notified that they may enroll as non-degree students but will need to contact the Certification Office in the College of Education immediately for eligibility into one of several certification or endorsement programs.

All post-baccalaureate students are required to maintain a minimum cumulative GPA of 2.50. Students whose cumulative GPA drops below a 2.50 are placed on academic probation and have nine semester hours in which to return the GPA to 2.50 or higher. Failure to do so will result in dismissal from the University.

Graduate-level course work completed during the certification or endorsement program that has not been used to meet other degree requirements may be recommended by the departmental Graduate Advisor to the Graduate School to count toward an advanced degree under certain circumstances. These courses are limited to a maximum of 9 semester hours in which the grade of "B" or higher has been earned within the time limits and other restrictions detailed in this Graduate Studies catalog.

Additional information on certification and endorsement programs is available from the Certification Office within the College of Education and the Graduate School.
Educational Leadership and Foundations

Web site at: http://utmmins.utep.edu/education

501 Education Building
(915) 747-5300
E-mail: edlshpfd@utep.edu

1. - Master of Education
2. - Master of Arts in Education
3. - EdD in Educational Administration
4. - Educational Administration (EDAD) Courses
5. - Educational Research and Statistics (EDRS) Courses

CHAIRPERSON AND GRADUATE ADVISOR: Gary D. Brooks

PROFESSORS EMERTI: Herbert K. Heger, John B. Peper

GRADUATE FACULTY: Brinson, Brooks, Daresh, Oliva, Pacheco, Rippberger, Rodriguez, Slate

DIRECTOR OF THE DOCTORAL PROGRAM: Gary D. Brooks

DOCTORAL FACULTY: Brinson, Brooks, Daresh, Gonzalez, Oliva, Pacheco, Rippberger, Rodriguez, Slate, Staudt, Villareal, Wood

The Educational Leadership and Foundations Department offers an MA degree with a major in Education and an MEd degree with a major in Educational Administration.

The department also offers a Doctorate of Education degree (EdD) in Educational Leadership and Administration.

In addition to these degree programs, the Department offers course work leading to certification by the State Board for Educator Certification in the following areas:

- Professional Principal
- Professional School Superintendent
- Professional School Supervisor
The University of Texas at El Paso

COLLEGE OF EDUCATION

Educational Psychology and Special Services

Web site at: http://utminers.utep.edu/education/

701 Education Building
(915) 747-5221
E-mail: edpsych@utep.edu

1. Graduate Programs and Plans
2. Master of Arts in Education
3. Master of Education
4. Educational Diagnostics
5. Guidance and Counseling
6. Special Education
7. Endorsements
8. Educational Psychology and Counseling (EDPC) Courses
9. Special Education (SPED) Courses

CHAIRPERSON: Thomas A. Wood

GRADUATE ADVISOR: Sandra Lloyd

GRADUATE FACULTY: Combs, Gonzalez, Hammond, Ingalls, Johnson, Lloyd, Wood

Developed by the UTEP Web Development Team
Revised: February 19, 2001
Introduction

Master of Arts in Education
Certification and Endorsement

Departments:
- Educational Leadership and Foundations
- Educational Psychology and Special Services
- Teacher Education

Dr. Arturo Pacheco, Dean
Dr. Josefina Tinajero, Associate Dean
Education Bldg, Room 414
Phone: (915) 747-5572
Fax: (915) 747-5755
E-mail: educ@utep.edu

GO:
[ UTEP Home Page ]  [ Catalog Index ]  [ College of Education ]  [ Graduate Degrees ]  [ University Map ]

COLLEGE OF EDUCATION

[Teacher Education]
Web site at: http://utminers.utep.edu/education/
601 Education Building
(915) 747-5426
teachered@utep.edu

1.- Master of Arts in Education
2.- Master of Education
3.- Program Advising
4.- Teacher Certification
5.- Bilingual Education (BED) Courses
6.- Elementary Education (ELED) Courses
7.- Educational Technology (EDT) Courses
8.- Elementary Education (ELED) Courses
9.- Reading Education (RED) Courses
10.- Secondary Education (SCED) Courses
11.- Teacher Education (TED) Courses

CHAIRPERSON: Robert Devillar

PROFESSORS EMERTI: Lou Ella Burmeister, Richard W. Burns, Joe Lars Klingstet

ASSOCIATE PROFESSORS EMERTI: Mary Louise Zanders Aho, John Paul Scarbrough

GRADUATE ADVISOR: Milagros M. Seda

GRADUATE FACULTY: Ainsa, Ball, Bixler-Marquez, Blake, Descamps, Gonzalez, Hampton, Hernandez, Hurley, Izquierdo, Kies, Licona, Norris, R. Rodriguez, Seda, Tchoshanov, Tinajero

The Teacher Education Department offers graduate programs that provide advanced professional education skills for application in school and non-school settings. Students who wish to pursue graduate degrees in Teacher Education may select from two programs. The Master of Arts in Education is designed for students wishing to pursue research and continue studies beyond the master's degree level. The Master of Education degree is directed toward mastery of professional education practice.

[UTEP Home Page]  [ Catalog Index ]  [ College of Education ]  [ Graduate Degrees ]  [ University Map ]

The University of Texas at El Paso
Developed by the UTEP Web Development Team
Revised: February 19, 2001
The University of Texas at El Paso has a long-standing commitment to quality engineering education. Today the College of Engineering strives to educate engineers to formulate and solve the technical problems of today and tomorrow.

At the graduate level, the College fulfills its mission by offering graduate degree programs in all of its departments. Master of Science degrees are available in Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Environmental Engineering, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering, and Metallurgical and Materials Engineering. In addition to these programs, students may pursue an undesignated Master of Science in Engineering, with concentrations in a number of areas or a Master of Engineering degree in Environmental Engineering. A Ph.D. degree in Computer Engineering is jointly offered by the Electrical and Computer Engineering and Computer Science departments. Multi-disciplinary Ph.D. degrees are also awarded in Materials Science and Engineering and Environmental Science and Engineering and their program descriptions are provided under Interdisciplinary Doctoral Programs.

Requirements for Admission into All Master's Degree Programs in Engineering

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. undergraduate degree in the same or a related field or a minimum of 15 semester hours of upper-division course work in engineering
3. satisfactory score on the Graduate Record Examination (GRE)
4. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or other English speaking institution
5. depending upon selected areas of concentration, students may need to complete deficiency undergraduate course work
Doctoral Programs

Departments:
- Civil Engineering
- Chemical Science
- Electrical and Computer Engineering
- Mechanical and Industrial Engineering
- Metallurgical and Materials Engineering

Dr. Andrew Swift, Dean
Dr. Stephen Stafford, Associate Dean
Dr. Vijay Singh, Associate Dean for Research
Dr. Darrell Schroder, Assistant Dean

Engineering/Science Complex
Engineering Building
Room E230
Phone: (915) 747-5460
Fax: (915) 747-5616
E-mail: engineer@utep.edu

1. Doctor of Philosophy Degree in Computer Engineering
2. Doctor of Philosophy in Environmental Science and Engineering
3. Doctor of Philosophy in Materials Science and Engineering

Web site at: http://eng.utep.edu/
Master of Science with a Major in Engineering

The College of Engineering offers an interdepartmental Master of Science degree with a major in Engineering. The program is administered by the Office of the Dean of Engineering.

Requirements for Admission
Applicants are expected to have a Bachelor of Science in an engineering or related physical sciences field or the equivalent. Depending upon selected area(s) of concentration, students may need to complete deficiency undergraduate course work.

Requirements for Graduate Degree
The MS in Engineering is a 33 semester hour non-thesis program. Course work includes:

1. 18 semester hours in the major field of engineering
2. 12 semester hours in a concentration
3. 3 semester hours of a graduate project

No more than 9 hours of upper-division undergraduate course work may be counted toward the degree requirements. Course work, direction of the project, and administration of a final exam are coordinated by a committee of no less than three graduate faculty members. The chairman of the committee would normally hold an appointment in the department of the major field of study, and at least one of the committee members would be from the concentration area(s).

Major areas include Civil, Computer, Electrical, Environmental, Industrial, Manufacturing, Mechanical, Metallurgical, and Materials Engineering, and Computer Science. Possible areas of concentration include all of the major engineering areas and other areas such as Business Management, Economics, Operations Research, Structural Mechanics, Mathematics, Physics, Chemistry, Biology, Geology, Waste Materials Management, or others approved by the student’s committee.
College of Engineering

Civil Engineering

Web site at: http://www.utep.edu/civil/
201B Engineering/Science
(915) 747-5464
civilengineering@utep.edu

1. Requirements for Admission
2. Requirements for the Master of Science in Civil Engineering Degree
3. Requirements for the Master of Science in Environmental Engineering Degree
4. General Courses
5. Civil Engineering (CE) Courses

Chairperson: Carlos M. Ferregut
Graduate Faculty: AAshur, Ferregut, Li, Nazarian, Oey, Osegueda, Rozendal, Tandon, Tarquin, Turner, Walton

The Civil Engineering Department offers the degrees of Master of Science in Civil Engineering (MS), Master of Science in Environmental Engineering (MSEnE), Master of Engineering in Environmental Engineering (MEEnE), and an undesignated Master of Science with a major in Engineering.
Introduction

Doctoral Programs

Master of Science with a Major in Engineering

Departments:
- Civil Engineering
- Computer Science
- Electrical and Computer Engineering
- Mechanical and Industrial Engineering
- Metallurgical and Materials Engineering

Dr. Andrew Swift, Dean
Dr. Stephen Stafford, Associate Dean
Dr. Vijay Singh, Associate Dean for Research
Dr. Darrell Schroder, Assistant Dean

Engineering/Science Complex,
Engineering Building,
Horn 5230
Phone: (915) 747-3820
Fax: (915) 747-3821
E-mail: engineering@utep.edu

COLLEGE OF ENGINEERING

Computer Science

Web site at: http://cs.utep.edu
234 Computer Science Building
(915) 747-5480

1. Requirements for Admission
2. Requirements for the Degree
3. Computer Science (CS) Courses

CHAIRPERSON: David Novick

GRADUATE FACULTY: Bernat, Gates, Gelfond, Kreinovich, Longpré, Novick, Teller

The Computer Science Department offers a Master of Science in Computer Science and participates with the Electrical and Computer Engineering Department in the Ph.D. program in Computer Engineering. Specific courses of study include database theory, artificial intelligence, software engineering, theory of computation, algorithms, computer systems, and computing applications. The department also offers an undesignated Master of Science with a major in Engineering.
Introduction

Doctoral Programs
Master of Science with a Major in Engineering

Departments:
- Civil Engineering
- Computer Science
- Electrical and Computer Engineering
- Mechanical Engineering
- Metallurgical and Materials Engineering
- Aerospace Engineering

Dr. Andrew Swift, Dean
Dr. Stephen Stafford, Associate Dean
Dr. Vijay Singh, Associate Dean for Research
Dr. Darrell Schroder, Assistant Dean

Engineering/Science Complex
Engineering Building
Room E230
Phone: (915) 747-5460
Fax: (915) 747-5616
E-mail: engineer@utep.edu

COLLEGE OF ENGINEERING

Electrical and Computer Engineering

Web site at: http://www.ece.utep.edu/
301B Engineering/Science Complex
(915) 747-5470
E-mail: electengr@ece.utep.edu

1.- Requirements for Admission
2.- Requirements for the Degree
3.- Specific Requirements for the Master of Science with a major in Electrical Engineering Degree
4.- Specific Requirements for the Master of Science with a major in Computer Engineering Degree
5.- Electrical and Computer Engineering (EE) Courses
6.- Doctoral Computer Engineering (COMP) Courses

CHAIRPERSON: Michael Austin

GRADUATE FACULTY: Austin, Cabrera, Carrasco-Flores, Diong, Liu, Lush, Manoli, Nava, Pierluissi, Riter, Schroder, Shadaram, Singh, Smith, Starks, Usevitch, Williams

The Electrical and Computer Engineering Department offers a Master of Science Degree with a major in either Electrical Engineering or Computer Engineering, an undesignated Master of Science with a major in Engineering, and, in conjunction with the Department of Computer Science, a Ph.D. degree in Computer Engineering.
Metallurgical and Materials Engineering

Web site at: http://www.utep.edu/meandie/
M201 Engineering/Science Complex
(915) 747-5468

1.- Requirements for Admission
2.- Requirements for the Degree
3.- Advisory Committees
4.- Undesignated Degrees
5.- Sub-Specialization
6.- PhD in Materials Sciences and Engineering
7.- Metallurgical and Materials Engineering (MME) Courses

CHAIRPERSON: Lawrence E. Murr

GRADUATE FACULTY: Arrowood, Bronson, Fisher, McClure, Murr, Stafford, Varma

Graduate students in Metallurgical and Materials Engineering are involved with academic studies and research programs that focus on understanding the structure, properties, processing, and performance of materials, including the development of new or improved materials and advanced processing methods. These are the critical links between the design and the realization of new materials systems. Materials and materials limitations pervade all of the engineering and high technology fields that are an integral part of our society and its economic infrastructure. The challenges and opportunities for graduates in metallurgical and materials engineering are certainly exciting and exceptional.

The Metallurgical and Materials Engineering Department offers a Master of Science with a major in Metallurgical and Materials Engineering and an undesignated Master of Science with a major in Engineering.
## COLLEGE OF LIBERAL ARTS

**Introduction**

Web site at: [http://www.utep.edu/libarts/](http://www.utep.edu/libarts/)

**GRADUATE DEGREES OFFERED**

### Ph.D.
- History
- Psychology

### MA
- Art Education
- Studio Art
- Communication
- English
- History
- Linguistics
- Political Science
- Psychology
- Sociology
- Spanish
- Theatre Arts

**MAIS Interdisciplinary Studies, Liberal Arts***

**MAT Master of Arts in Teaching/English**

**MFA Creative Writing***

**MM Music Education Performance**

**MPA Public Administration or MPA/MBA Public Administration/Business Administration**

* Interdisciplinary Program

In 1942, the History Department, a component of today’s College of Liberal Arts, awarded UTEP’s first master’s degree. Since then, most of the departments in the College have developed graduate programs. MA programs are available in Art, Communication, English, History, Linguistics, Political Science, Psychology, Sociology, Spanish, Teaching, and Theatre Arts. In addition to the MA, the Political Science Department offers the Master in Public Administration Degree (MPA) and, in conjunction with the College of Business Administration, a joint MBA/MPA degree option. The Department of Music offers the Master of Music (MM) degree with options in Performance and Music Education. The Master of Fine Arts (MFA) with a major in creative writing is an interdisciplinary program with options in English, Spanish, or bilingual. In September 1993, the first students began course work in the Ph.D. program in Applied Research Psychology-- the first doctoral degree program in Liberal Arts. In September 1999, the first students entered the Ph.D. program in History.

Students wishing to expand their knowledge in areas outside their previous training or present profession may pursue the Master of Arts in Interdisciplinary Studies. Students in this program take MAIS courses that emphasize cross-disciplinary approaches, with encouragement to pursue an individualized course of study designed to further their particular interdisciplinary interests.

Also offered is a joint UTEP-UT Austin doctorate with a concentration in Border Studies. Students in this program can complete much of their course work in residence at UTEP with the doctoral degree awarded by UT Austin. In 1942 the History Department, a component of today’s College of Liberal Arts, awarded UTEP’s first master’s degree. Since then, most of the departments in the College have developed graduate programs. MA programs are available in Art, Communication, English, History, Linguistics, Political Science, Psychology, Sociology, Spanish, and Theatre Arts. In addition to the MA, the Political Science Department offers the Master in Public Administration Degree (MPA) and, in conjunction with the College of Business Administration, a joint MBA/MPA degree option. The Department of Music offers the Master of Music (MM) degree with options in Performance and Music Education. The Master of Fine Arts (MFA) with a major in creative writing is an interdisciplinary program with options in English, Spanish, or bilingual. In September 1993, the first students began course work in the Ph.D. program in Applied Research Psychology-- the first doctoral degree program in Liberal Arts.

Students wishing to expand their knowledge in areas outside their previous training or present profession may pursue the Master of Arts in Interdisciplinary Studies.
Studies. Students in this program take MAIS courses that emphasize cross-disciplinary approaches, with encouragement to pursue an individualized course of study designed to further their particular interdisciplinary interests.

Also offered is a joint UTEP-UT Austin doctorate with a concentration in Border Studies. Students in this program can complete much of their course work in residence at UTEP with the doctoral degree awarded by UT Austin.

**Graduate Degrees Offered**

- PhD Psychology
- MA Art Education or Studio Art Education
- Communication English and American Literature or Professional Writing and Rhetoric
- History or Border History
- Linguistics
- Political Science
- Psychology: Clinical Psychology or General Experimental Psychology
- Sociology
- Spanish
- Theatre Arts
- MAIS Interdisciplinary Studies, Liberal Arts*
- MFA Creative Writing*
- MM Music Education or Music Performance
- MPA Public Administration or MPA/MBA Two-Degree Option*
- Interdisciplinary Program

*Interdisciplinary Program
COLLEGE OF LIBERAL ARTS

Art

Web site at: http://www.utep.edu/libarts/
350 Fox Fine Arts
(915) 747-5181
E-mail: artdept@utep.edu

CHAIRPERSON: Albert Wong
GRADUATE FACULTY: Bauer, Fensch, Jones, Koontz, Nguyen, Parish, Quinnan, Segal, Thiewes, Wong
Art

Web site at: http://www.utep.edu/libarts/
350 Fox Fine Arts
(915) 747-5181
E-mail: artdept@utep.edu

1.- MA in Studio Art and Art Education

MA in Studio Art and Art Education
The Art Department offers two Master's degree: the MA in Studio Art and the MA in Art Education. The MA in Studio Art offers concentrations and minors in Ceramics, Drawing, Graphic Design, Metals, Painting, Printmaking, and Sculpture. The MA in Art Education offers a major in Art Education with a minor in Studio Art with a final exhibition or a minor in Education with a thesis or non-thesis option. The MA in Art Education with a Studio Art minor is for students who wish to continue their professional development in art education and seek artistic growth. The non-thesis degree plan is for students who wish to pursue research in art education and may at a future date continue studies beyond the master's degree. The thesis degree plan is for students who wish to pursue research in art education for continued professional development purposes, but may not wish to continue studies beyond the master's degree in the future.
COLLEGE OF LIBERAL ARTS

Art

Web site at: http://www.utep.edu/libarts/  
350 Fox Fine Arts  
(915) 747-5181  
E-mail: artdept@utep.edu

2.- Program Admission Requirements

Program Admission Requirements

Studio Art

Requirements for Admission to Department

1. A bachelor’s degree from an accredited U.S. institution or proof of equivalent education in a foreign institution
2. Satisfactory preparation in Art, Art History, or Art Education
3. Applicants must apply both to the Graduate School and to the Art Department
4. Satisfactory portfolio, applicant’s written statement, and letters of recommendation
5. TOEFL scores of 550 or higher for international applicants.

Application Procedures

The applicant must submit to the Art Departmental Advisor the following:

1. A completed Department of Art MA Application form
2. A letter of application
3. A portfolio of 10-15 slides of the applicant’s recent art work, presented in a clear plastic slide sheet, with each slide labeled and identified on a separate slide list
4. At least two confidential letters of recommendation
5. A written statement by the applicant about his/her art

Art Education

Requirements for Admission to the Department

To qualify for the Art Education program, the applicant must have completed:

1. A bachelor’s degree in Art, Art History, Art Education, or the equivalent from an accredited U.S. institution or proof of equivalent education in a foreign institution;  
2. A satisfactory score on the Graduate Record Examination (GRE) or TOEFL (for international students); and 51 semester hours in Studio Art, Art History, and Art Education.

Application Procedures

The applicant must submit to the Art Department Advisor the following:

1. A completed Department of Art MA application form
2. A letter of application
3. A portfolio of 10-15 slides of the applicant’s most recent work, presented in a clear plastic slide sheet with each slide labeled and identified on a separate slide list (for minor in Studio Art only)
4. At least two confidential letters of recommendation
5. A written philosophic and theoretical statement regarding the applicant’s views of art and art education
## COLLEGE OF LIBERAL ARTS

### Art

Web site at: [http://www.utep.edu/libarts/](http://www.utep.edu/libarts/)
350 Fox Fine Arts
(915) 747-5181
E-mail: artdept@utep.edu

### Degree Plans

#### Studio Art

The Studio Art major requires 33 semester hours: 15 in a studio concentration, nine hours of a studio minor, three hours of Graduate Seminar, three hours in a related discipline or in Art History, and three hours of a Graduate Exhibition with exhibition report.

#### Art Education

**Minor in Studio Art:** The MA in Art Education with a minor in Studio Art requires 33 graduate-level credit hours (with at least 27 semester hours at the graduate level) that include 12 hours in Art Education, 12 hours in studio (to be determined by the student and the Graduate Committee chairman), 3 hours of Graduate Seminar, 3 hours in Art History, and 3 hours of Graduate Exhibition with exhibition report. All upper-division undergraduate-level work proposed for inclusion in this graduate degree must be eligible for graduate credit and recommended for approval by the graduate advisor of the department.

**Minor in Education with Thesis:** This degree plan requires 36 graduate-level semester hours (with at least 27 semester hours at the graduate level) which include 12 hours of Art Education, three hours of Art History, three hours of Graduate Seminar, 12 hours of Education, and six hours of thesis (with oral defense). A thesis, satisfactory to the Graduate Committee and the Graduate School, must be completed before the degree will be awarded. All upper-division graduate work proposed for inclusion in this graduate degree must be eligible for graduate credit and recommended for approval by the graduate advisor of the department.

**Minor in Education without Thesis:** This degree plan requires 36 semester hours (with at least 27 semester hours at the graduate level) that include 18 hours of Art Education, three hours of Art History, three hours of Graduate Seminar, and 12 hours of Education. Graduate students will be required to successfully complete both a written and oral comprehensive examination in Art Education and Education before the degree will be awarded. Candidates will be required to write several scholarly papers, one of which must be presented to the Graduate Advisor for inclusion in the student's file. All upper-division undergraduate work proposed for inclusion in this graduate degree must be eligible for graduate credit and recommended for approval by the graduate advisor of the department.
4.- Application Deadlines

Application Deadlines
The deadline for application to the Art Department for either of the MA degree programs is April 15 for the following fall semester, and October 15 for the following spring semester.
## Art

**Web site at:** [http://www.utep.edu/libarts/](http://www.utep.edu/libarts/)

**350 Fox Fine Arts**

(915) 747-5181

E-mail: artdept@utep.edu

### 5. Undergraduate and Graduate General Courses

#### For Undergraduate and Graduate Students

**Art History**

- 4309 Research Problems in Art History
- 4319 Special Problems in Art History

**Ceramics**

- 4304 Ceramics VI
- 4314 Ceramics VII
- 4324 Special Problems in Ceramics

**Drawing**

- 4330 Special Problems in Life Drawing
- 4310 Advanced Drawing I
- 4320 Advanced Drawing II

**Metals**

- 4303 Metals VI
- 4313 Metals VII
- 4323 Special Problems in Metals

**Painting**

- 4301 Painting VI
- 4331 Painting VII
- 4341 Special Problems in Painting

**Printmaking**

- 4305 Printmaking VI
- 4325 Printmaking VII
- 4335 Special Problems in Printmaking

**Sculpture**

- 4302 Sculpture VI
- 4332 Sculpture VII
- 4342 Special Problems in Sculpture
Art

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6. Graduate Only General Courses (ART)

For Graduate Students Only

General Courses (ART)

5393 Graduate Exhibition (0-0-3)
Organization and presentation of a one-person exhibition. This effort includes the planning, promotion, design, installation, and verbal defense of the exhibition to the selected graduate committee. Prerequisite: Department approval. Supplemental Tuition and Coaching fee required.

5395 Graduate Seminar (3-0)
Conference and discussions of various topics in Art by faculty, graduate students, and outside speakers. Required of all graduate Art majors. May be repeated one time.

The University of Texas at El Paso
Developed by the UTEP Web Development Team
Revised: February 19, 2001
7.- Art Education (ARTE) Courses

Art Education (ARTE)

5301 Art Education Seminar (3-0)
Literature and current research in art education, with exchange of ideas and discussion of problems in the field.

5303 Art Curriculum Development (3-0)
Identification of principles, problems, and issues affecting visual arts curriculum in the schools. Examination of rationale and philosophies of various models of art education programs in the U.S.

5321 Art Criticism in the Schools (3-0)
Examination of the history, philosophies, theories, and practices of visual arts criticism in American schools. Identification of problems and issues which center on the application of art criticism approaches affecting today's schools.

5322 Crafts Workshop (3-0)
Exploration of a variety of media in the crafts. Emphasis on media most adaptable to the public school art room. Problems and projects tailored to the students' needs. Course may be repeated when problem varies. Laboratory fee required.

5397 Directed Research in Art Education (0-0-3)
Independent research in art education with regular consultation between student and assigned professor. Course may be repeated when problem varies.

5398 Thesis (0-0-3)
Initial work on the thesis. Supplemental Tuition and Coaching fee required.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: ARTE 5398. Supplemental Tuition and Coaching fee required.
8. - Art History (ARTH) Courses

Art History (ARTH)

5309 The Art and Civilization of Ancient Mexico: The Maya (3-0)
This course surveys the art and civilization of the Maya, the Aztecs, and their predecessors from 1800 BC to the present. In addition to large scale art and architecture, the invention of writing, funerary ceramics, and the use of art as both religious and political art will be examined.

5310 The Border and Visual Culture (3-0)
The course explores the history of art and its role in the civilizations of the El Paso/Northern Chihuahua region, from Hueco Tanks to the rise of Modernism and the mural renaissance. Using the rich artistic legacy of this area, the class examines the way art functions across borders and how borders have been constructed, debated, and lived through in the art of the past.

5329 Modern and Contemporary Art Theory (3-0)
A seminar that reviews art theory from Kant to baudrillard. Issues such as art-for-art's sake, Marxism, phenomenology, interpretation, deconstruction, multiculturalism, and hypereality will be discussed. Course fee required.
COLLEGE OF LIBERAL ARTS

Art

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9.- Graphic Design (ARTG) Courses

Graphic Design (ARTG)

5350 Directed Studio Problems (0-6)
Independent creative research with regular consultation between student and assigned faculty member. Prerequisite: Department approval. Fees required.
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10.- Ceramics (CERM) Courses

Ceramics (CERM)

5350 Directed Studio Problems (0-6)
Independent creative research with regular consultation between student and assigned faculty member. Fees required.
11.- Drawing (DRAW) Courses

Drawing (DRAW)

5302 Graduate Problems in Drawing (0-6)
This course stresses individual direction and achievement in drawing. May be repeated for credit. Supplemental Tuition and Coaching fee required.

5350 Directed Studio Problems (0-6)
Independent creative research with regular consultation between student and assigned faculty member. Supplemental Tuition and Coaching fee required.
### COLLEGE OF LIBERAL ARTS

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<td><strong>5350 Directed Studio Problems (0-6)</strong></td>
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<td>Independent creative research with regular consultation between student and assigned faculty member. Fees required.</td>
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Dr. Howard C. Daughtel, Head
Dr. Mike R. Gargaro, Associate Dean for Fine and Performing Arts
Dr. Nancy M. Howard, Assistant Dean for Liberal Arts and Interdisciplinary Studies
Ms. Mame H. Hamer, Assistant to the Dean for Fine and Performing Arts

UTEP Home Page | Catalog Index | College of Liberal Arts | Graduate Degrees | University Map |
COLLEGE OF LIBERAL ARTS

Art

Departments:
- Art
- Communication
- Criminal Justice
- English
- History
- Languages and Linguistics
- Liberal Arts
- Interdisciplinary Studies
- Music
- Philosophy
- Political Science
- Psychology
- Sociology and Anthropology
- Theatre Arts

13.- Painting (PNTG) Courses

Painting (PNTG)

5350 Directed Studio Problems (0-6)
Independent creative research with regular consultation between student and assigned faculty member. Department approval required. Fees required.
14. Printmaking (PRNT) Courses

Printmaking (PRNT)

5350 Directed Studio Problems (0-6)
Independent creative research with regular consultation between student and assigned faculty member. Fees required.
### Art

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#### 15.- Sculpture (SCUL) Courses

**Sculpture (SCUL)**

**5302 Graduate Problems in Sculpture (0-6)**  
This course stresses individual direction and achievement in Sculpture. May be repeated for credit. Fees required.

**5350 Directed Studio Problems (0-6)**  
Independent creative research with regular consultation between student and assigned faculty member. Fees required.
COLLEGE OF LIBERAL ARTS

Communication

Web site at: http://www.utep.edu/comm/
202A Cotton Memorial
(915) 747-5129
E-mail: com@utep.edu

1. MA Degree Requirements

2. Communication (COMM) Courses

INTERIM CHAIRPERSON: Eduardo Barrera
GRADUATE FACULTY: Barrera, Byrd, Ingle, Riccillo, Trejo
Communication

The department offers a Master of Arts degree in Communication.

MA Degree Prerequisites

Twelve advanced hours (3300-4300) in Communication. Satisfactory score on Graduate Record Examination (GRE).

MA Degree Requirements

Majors in Communication must take a minimum of 18 semester hours in Communication. For majors electing to do a thesis, 6 hours of credit (5398-5399 Thesis) may be counted toward a required minimum of 30 hours of total course work, of which at least 21 hours must be in courses numbered 5300-5399. Majors electing a non-thesis option must take a minimum of 36 hours of total course work, of which at least 27 must be in courses numbered 5300-5399.

Undergraduate Courses for Graduate Credit

With the prior approval of the graduate advisor, students may take up to 9 hours of upper-level course work, 6 hours of which may be from the departmental offerings, to strengthen areas in which the student may be deficient and to enrich the graduate offering. The following undergraduate courses have been approved for graduate credit.
COLLEGE OF LIBERAL ARTS

Communication

Web site at http://www.utep.edu/comm/
202A Cotton Memorial
(915) 747-5129

1.- MA Degree Requirements

2.- Communication (COMM) Courses

For Undergraduates and Graduate Students
COMM 4359 Seminar in Communication
COMM 4323 Case Studies in Public Relations
COMM 4355 Advanced Organizational Communication

For Graduate Students Only
Communication (COMM)

5332 Seminar in Contemporary Rhetoric (3-0)
Study of the contributions to understanding of persuasion and communication by modern humanistic theorists, such as Kenneth Burke, I. A. Richards, and Marshall McLuhan. Application of such theory to a variety of contemporary communication events. May be taken more than once with a change in area of emphasis.

5343 Seminar in Communication Theory (3-0)
Study of recent non-traditional contributions to theories of human communication. Investigates the application of models, the implications of recent developments in social psychology, and the results of experimental research. May be repeated for credit when content varies.

5350 Directed Study (3-0)
Investigation of a significant area in rhetoric, communication, public address, or media-based communication practices by individual students or small groups. May include individual research projects or field study. May be taken more than once with a change in area of emphasis.

5362 Organizational Communication (3-0)
Philosophy, methods, and designs for studying the communication systems and practices in a complex organization.

5398 Thesis (0-0-3)
Initial work on thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: COMM 5398.
COLLEGE OF LIBERAL ARTS

Criminal Justice

Web site at: http://www.utep.edu/crimjust/

101 Jack Vowell Hall
Phone: (915) 747-7943
E-mail: crimjust@utep.edu

DIRECTOR: Roy S. Malpass
GRADUATE FACULTY: Daudistel, Graves, Hosch, Lucas, Malpass, Rodriguez, Smither

Graduate study in Criminal Justice may be used as elective credit towards the Master in Public Administration (MPA) degree. Inclusion in other degree plans requires the recommendation of the student's department or program Graduate Advisor and the approval of the Graduate School.

Criminal Justice (CRIJ)

5300 Seminar in Criminal Justice Administration (3-0)
Research, writing, and discussion.

5308 Seminar in Juvenile Justice (3-0)
Research, writing, and discussion.

5320 Seminar in Corrections (3-0)
Research, writing, and discussion.

5340 Seminar in Selected Topics (3-0)
Research, writing, and discussion.

Both basic and specific requirements for the MPA degree are found under "Political Science" in this catalog.
COLLEGE OF LIBERAL ARTS

English
Web site at: http://www.utep.edu/english
113 Hudspeth Hall
Phone: (915) 747-5731
E-mail: english@utep.edu

1. MA Degree and MAT Degree in English
2. English and American Literature
3. Creative Writing
4. Professional Writing and Rhetoric
5. Information for All Degrees/Concentrations
6. English (ENGL) Courses
7. Master of Arts in Teaching - English

CHAIRPERSON: Tony Jason Stafford
COLLEGE OF LIBERAL ARTS

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1.- MA Degree and MAT Degree in English

The English Department offers a Master of Arts in English degree with two concentrations available:

1. English and American Literature and
2. Professional Writing and Rhetoric; and a Master of Arts in Teaching degree with a major in English.
COLLEGE OF LIBERAL ARTS

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2.- English and American Literature

The primary objective of the Literature concentration is to develop skill in reading and interpreting literature. The course work is designed to provide both a comprehensive knowledge of literature in its historical and intellectual contexts and the opportunity to explore competing theories of critical interpretation. The Literature concentration offers the opportunity for students to prepare for teaching in secondary schools and at junior colleges. It also offers the opportunity for students to prepare for admission to Ph.D. programs in British and American Literature.

Requirements for Admission

1. A bachelor's degree from an accredited U.S. institution or proof of equivalent education in a foreign institution
2. For unconditional acceptance, a score of 500 on the GRE verbal scale and 500 on the GRE analytical scale; the score on the verbal scale will be given greater weight
3. 18 hours of advanced level English courses
4. A writing sample (optional)

Requirements for Degree

1. 36 semester hours to include 30 semester hours of course work, ENGL 5398-5399, and an oral examination; or
2. 36 semester hours of course work to include ENGL 5197, and an oral examination.
   a. Core Curriculum (27 hours): ENGL 5300; 4 courses from ENGL 5301-5306; four courses in at least 3 different literary periods from ENGL 5351-5356 (ENGL 5325 may be included as one of the four).
   b. Electives (3-9 hours): any other graduate ENGL courses except ENGL 5130, 5230, and 5330; graduate courses in other departments as approved by the Director of Graduate Studies.
   c. Research Options (1-6 hours): (a) Thesis (ENGL 5398-5399)—a substantial work of literary scholarship: the student submits a thesis proposal and the names of a thesis director, English Department reader, and outside reader to the Graduate Advisor for approval, and then follows the Graduate School guidelines for preparing and submitting a thesis; (b) Master's Paper (ENGL 5197): the student submits to the Graduate Advisor a proposal for expansion and revision of a graduate research paper under the supervision of a director, English department reader, and an outside reader and then follows the Graduate School guidelines for preparing and submitting the paper.
   d. Oral Examination: A defense of the thesis or Master's paper before the student's committee. In all cases, a majority vote of the committee will determine acceptance or rejection.
COLLEGE OF LIBERAL ARTS

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3. Creative Writing

The Department of English and the Department of Languages and Linguistics offer a Master of Fine Arts degree in Creative Writing. A complete description of this program is listed under Liberal Arts Interdisciplinary Studies.
COLLEGE OF LIBERAL ARTS

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7. Master of Arts in Teaching - English

4.- Professional Writing and Rhetoric

The Professional Writing and Rhetoric (PWR) concentration includes courses in rhetoric and professional writing, as well as an introduction to graduate studies in English. There is, however, sufficient flexibility through electives to allow students to fashion degree plans suitable to their individual interests. The PWR concentration offers students the opportunity to prepare for careers as professional/technical writers and junior college or community college teachers, as well as for future academic study.

Requirements for Admission

1. A bachelor’s degree from an accredited U.S. institution or proof of equivalent education at a foreign institution
2. For unconditional acceptance, a score of 500 on the GRE verbal scale and 500 on the GRE analytical scale; the score on the verbal scale will be given greater weight
3. Nine hours of upper-division course work in English, including Advanced Composition or the equivalent
4. A writing sample

Requirements for the Degree

36 semester hours consisting of

1. 33 semester hours of course work, plus a 3-hour practicum (ENGL 5397), and an oral examination; or
2. 30 hours of course work, plus a 6-hour practicum (ENGL 5395 and ENGL 5396), and an oral examination.
   a. Core Curriculum (21 hours) Research Methods (3 hours): ENGL 5300 Rhetoric (6 hours): ENGL 5310 and ENGL 5311 Professional Writing (12 hours): ENGL 5312, ENGL 5314, ENGL 5315, and ENGL 5317
   b. Electives (9-12): Electives may include any graduate English courses not being counted as part of the core curriculum (with the exception of ENGL 5130, ENGL 5230, or ENGL 5330); other approved electives may include COMM 5332, COMM 5343, or COMM 5362; LING 5301, LING 5310, LING 5319, LING 5341, LING 5370, or LING 5373; POLS 5364; or graduate courses in these or other departments as approved by the Director of Professional Writing and Rhetoric, and Graduate Advisor.
   c. Practicum (3-6 hours) or Thesis (6 hours) (1) The practicum option requires the completion of a supervised experience in addressing, responding to, and resolving a professional or academic communication problem through the preparation of an appropriate written document. The student submits a practicum proposal and the names of a thesis director, English Department reader, and an outside reader to the Graduate Advisor for approval, and then follows the Graduate School guidelines for preparing and submitting the practicum paper. (2) The thesis option requires the completion of a substantial work of professional writing and rhetoric scholarship. The student submits a thesis proposal and the names of a practicum director, English Department reader, and an outside reader to the Graduate Advisor for approval, and then follows the Graduate School guidelines for preparing and submitting a thesis.
   d. Oral Examination: A defense of the thesis or practicum document before the student’s committee is required. In all cases, a majority vote of the committee will determine acceptance or rejection.
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5.- Information for All Degrees/Concentrations

1. Undergraduate Credit Hours: Generally, undergraduate credit hours may not be used to satisfy graduate requirements. Exceptions must be approved by the Graduate Advisor in the English department and the Graduate School and in no cases are to exceed 6 hours. With the prior approval of the Graduate Advisor and the Graduate School, the following undergraduate course may be taken for graduate credit: ENGL 4390.

2. Foreign Students: Foreign students must supply a satisfactory grade in a special proficiency test in the English language before being allowed to register (write to Graduate Advisor, Department of English, for details).

3. Graduate Advising: All students upon entering the graduate program will outline a tentative degree plan with their Graduate Advisor. Students who have deficiencies in their undergraduate preparation are encouraged to supplement their graduate courses with undergraduate courses (no graduate credit).

4. Programs of Study: During the first semester of graduate study, all students must submit to the Office of the Graduate Student Services for approval of a Preliminary Program of Study signed by their Graduate Advisor. The Preliminary Program of Study should show the courses required by the department that the student must complete prior to graduation. During the final semester of graduate study, each student must submit to the Graduate School for approval a Final Program of Study signed by their Graduate Advisor. The Final Program of Study should show the courses taken and the courses required by the department that the student will complete during his or her last semester of graduate study. Programs that show an incomplete grade or a GPA below 3.0 cannot be approved.
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8. English (ENGL) Courses

For Undergraduate and Graduate Students

ENGL 4390 (Directed Study) has been approved for graduate credit. Students wishing to take this course for credit should see the Graduate Advisor for further information.

For Graduate Students Only

ENGLISH (ENGL)

5130 Topics in Composition (0-0-1)
5230 Topics in Composition (0-0-2)
5330 Topics in Composition (0-0-3)
Discussion, from a basis in discourse theory, of problems surfacing in the teaching of English composition and the application of strategies in the self-contained classroom and other instructional formats. Students may enroll for 1 to 3 hours; the course may be repeated; grading will be pass/fail. Prerequisites: ENGL 5310 and consent of the Director of Graduate Studies.

5197 Master of Arts Research Paper (English and American Literature Concentration) (0-0-1)
The student submits to the Director of Graduate Studies a proposal for expansion and revision of a graduate research paper under the supervision of a director, English Department reader, and an outside reader, and then follows the Graduate School guidelines for preparing and submitting the paper.

5300 Introduction to Graduate Studies in English (3-0)
Introduces students to the range of scholarly endeavors in English studies, to the standards, methods, and tools of research in the field, and to theoretical assumptions implicit in the various analytical and critical approaches to texts. Course work will include a substantial research project carried out under close faculty supervision.

5301 British Literature to 1485 (3-0)
Survey of Old English and Middle English literature ranging from Beowulf to the Arthurian romances and covering such writers as Chaucer, the Gawain poet, and Malory.

5302 British Literature 1485-1660 (3-0)
Survey of representative writers, literary trends, and the social and intellectual background from the early Renaissance to the Restoration. Such writers as More, Wyatt, Sidney, Spenser, Shakespeare, Donne, Herbert, Milton, and Marvell, and such issues as Humanism, Petrarchanism, Neoplatonism, and Metaphysical poetics may be discussed. Emphasis will vary with the instructor.

5303 British Literature 1660-1832 (3-0)
Survey of literature from the Restoration through the Romantic period. Such writers as Dryden, Swift, Pope, Richardson, Fielding, Johnson, Wordsworth, Coleridge, Keats, and Byron, and such subjects as Restoration Theatre, Neoclassicism, the novel, Gothicism, and the Romantic aesthetic may be covered. Emphasis will vary with the instructor.

5304 British Literature 1832-Present (3-0)
Survey of representative writers and literary trends from the Victorian period to the present. Such writers as Tennyson, Browning, Dickens, Bronte, Eliot, Wilde, Shaw, Joyce, Woolf, Yeats, Lawrence, Lessing, and Fowles, and such issues as social reform, religious turmoil, industrialism, Darwinism, Marxism, and existentialism may be discussed. Emphasis will vary with the instructor.

5305 American Literature to 1860 (3-0)
Survey of representative writers, literary trends, and the social and intellectual background from the colonial period to 1860. Such writers as Bradford, Franklin, Jefferson, Bryant, Irving, Cooper, Poe, Hawthorne, Whitman, Emerson, Thoreau, and Melville, and such issues as Puritanism, national self-realization, and
Transcendentalism may be discussed. Emphasis will vary with the instructor.

**5306 American Literature since 1860 (3-0)**
Survey of representative writers and literary trends from the Civil War to the present. Such writers as Twain, James, Crane, Dickinson, Cather, Frost, Cummings, Pound, Fitzgerald, Hemingway, Steinbeck, Faulkner, Porter, Ellison, and Plath, and such subjects as Realism, Naturalism, Marxism, Freudianism, sexism, racism, Modernism, the World Wars, and regional writing may be discussed. Emphasis will vary with the instructor.

**5310 Rhetorical Theory (3-0)**
An exploration of the three major schools of rhetorical theory, including that of Ancient Greece and Rome, the 18th century, and the modern theorists. To include discussion of the major rhetoricians of each period such as Aristotle, Cicero, and Quintilian; Blair, Campbell, and Whately; I.A. Richards, Burke, Toulmin, Perelman, Foucault, Bakhtin, Kinneavey, Moffett, and Britton. The course will also include some rhetorical analyses.

**5311 Persuasion and Argument (3-0)**
A writing course stressing the application of classical and contemporary rhetorical theory to a variety of practical writing tasks involving argument and persuasion.

**5312 Technical Writing Proseminar (3-0)**
A writing course focusing upon rhetorical techniques for technical writing, graphics, and editing.

**5314 Computers and Writing Seminar (3-0)**
A variable topics course focusing on the application of computers to professional writing. May be repeated when topic varies.

**5315 Professional Writing Seminar (3-0)**
Intensive study and practice in a range of professional writing fields, such as organizational and managerial communication, report writing, writing for publication, biography, and translation. May be repeated once when topic varies.

**5317 Professional Writing Internship (0-3)**
Supervised professional writing internship in business, industry, government, or the university. Prerequisite: Instructor approval.

**5320 Literary Criticism: Theory and Practice (3-0)**
A survey of the basic critical texts and arguments about literature in the Western tradition. Students will examine and practice the translation of these arguments into practical readings and valuation of selected literary texts. Course work includes at least one substantial research project carried out under close faculty supervision.

**5325 Genre: Theory and Practice (3-0)**
Studies in the theory of genre with focus on one genre, such as the novel, the lyric, comedy, or the epic. Course may be repeated when the topic varies.

**5327 Variable Topics in Contemporary Literature (3-0)**
Detailed study of contemporary works in fiction, poetry, or non-fiction, often with bicultural emphasis. The course will stress close analysis of text and technique. May be repeated when the topic varies.

**5344 Integrated Teaching Methods (3-0)**
An advance course in English teaching methods, stressing research and theory and their classroom applications, and focusing on teaching literature, composition/rhetoric, grammar/usage, and creative writing in an integrated format.

**5345 English Teaching Methods (3-0)**
An advanced course in English teaching methods, stressing theory and its classroom applications, and focusing alternately on such topics as teaching literature, composition, grammar, creative writing, or appropriate combinations of these. May be repeated when topic varies.

**5350 Seminar: Special Topics (3-0)**
Studies in comparative literature, current literary thought or techniques, or a focus on a prescribed area such as a subgenre or literary group.

**5351 Seminar: Studies in British Literature to 1485 (3-0)**
Detailed study of one or more major authors, schools, literary trends, or genres from the Anglo-Saxon period to the Renaissance.

**5352 Seminar: Studies in British Literature 1485-1660 (3-0)**
Detailed study of one or more major authors, schools, literary trends, or genres from the early Renaissance to the Restoration.

**5353 Seminar: Studies in British Literature 1660-1832 (3-0)**
Detailed study of one or more major authors, schools, literary trends, or genres from the Restoration through the Romantics.
5354 Seminar: Studies in British Literature 1832-Present (3-0)
Detailed study of one or more major authors, schools, literary trends, or genres from the Victorian period to the present.

5355 Seminar: Studies in American Literature to 1860 (3-0)
Detailed study of one or more major authors, schools, literary trends, or genres from the Colonial period to the Civil War.

5356 Seminar: Studies in American Literature Since 1860 (3-0)
Detailed study of one or more major authors, schools, literary trends, or genres from the Civil War to the present.

5364 Forms and Techniques of Fiction (3-0)
A course in directed reading and writing that leads the student to an understanding of the creative process through analysis and imitation of important contemporary works of fiction. May be repeated once. Prerequisite: Department approval.

5365 Forms and Techniques of Poetry (3-0)
A course in directed reading and writing that leads the student to an understanding of the creative process through analysis and imitation of important contemporary works of poetry. May be repeated once. Prerequisite: Department approval.

5366 Advanced Fiction Writing (3-0)
Intensive study and practice in the various forms and approaches of fiction writing, including workshop discussion of individual student manuscripts. May be repeated once. Prerequisite: Department approval.

5367 Advanced Poetry Writing (3-0)
Intensive study and practice in the various forms and approaches within the writing of poetry, including workshop discussion of individual student poems. May be repeated once. Prerequisite: Department approval.

5368 Creative Writing Seminar (3-0)
A variable topics course that provides intensive practice and study in one of the genres of imaginative writing, such as novel writing, screenwriting, non-fiction freelancing, or biography/autobiography. May be repeated when topic varies. Prerequisite: Department approval.

5370 Tutorial in Fiction (3-0)
Advanced workshop course in which the student is guided towards the production of works of fiction of professional quality. May be repeated once. Prerequisite: Department approval.

5371 Tutorial in Poetry (3-0)
Advanced workshop course in which the student is guided towards the production of works of poetry of professional quality. May be repeated once. Prerequisite: Department approval.

5375 Creative Writing Workshop (3-0)
A workshop designed for non-MFA students in either fiction, poetry, creative non-fiction, dramatic forms, or some combination of the above, depending on the instructor, for students in any discipline. Submission of writing sample and permission of the instructor required. May be repeated when topic varies.

5395 Writing Practicum (0-0-3)
Initial work on a six-hour professional writing and rhetoric practicum.

5396 Writing Practicum (0-0-3)
Continuous enrollment required while work on the six hour professional writing and rhetoric practicum continues. Prerequisite: ENGL 5395.

5397 Writing Practicum (0-0-3)
Enrollment required in the three hour professional writing and rhetoric practicum. Prerequisite: ENGL 5396.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: ENGL 5398.
COLLEGE OF LIBERAL ARTS

English

Web site at: http://www.utep.edu/english/
113 Hudspeth Hall
Phone: (915) 747-5731
E-mail: english@utep.edu

1. MA Degree and MAT Degree in English
2. English and American Literature
3. Creative Writing
4. Professional Writing and Rhetoric
5. Information for All Degrees/Concentrations
6. English (ENGL) Courses
7. Master of Arts in Teaching - English

The Master of Arts in Teaching degree with a major in English is designed to deepen teachers’ knowledge of rhetoric, writing, literature, and language in ways that are professionally relevant to them as teachers in secondary schools, community colleges, and universities. Course work includes specialized English teaching methods, rhetoric and writing, literature, reading, and teacher education, with a thesis in an area related to the teaching of English.

Requirements for Admission

1. A bachelor’s degree from an accredited U.S. institution or proof of equivalent education at a foreign institution
2. For unconditional acceptance, a score of 500 on the GRE verbal scale and 500 on the GRE analytical scale; applicants with lower scores may be accepted conditionally if other prerequisites are met with distinction
3. A bachelor’s degree in English OR 12 hours of advanced-level English courses plus English 4355 or the equivalent

Requirements for the Degree

36 semester hours consisting of

1. 130 semester hours of course work, a six-hour thesis ( ENGL 5398-5399), and an oral examination
2. 15 hours of field experience in ENGL 5344
   a. Core Curriculum (12 hours)
      Research Methods (3 hours): ENGL 5300
      English Teaching Methods (6 hours): ENGL 5344 and 5345
      Rhetoric/Writing (3 hours): 5310
   b. Electives (18 hours)
      Rhetoric/Writing (3 hours): ENGL 5311 or 5315
      Literature (9 hours): a 6-hour pair from ENGL 5301-51; 5302-52; 5303-53; 5304-54; 5305-55; or 5360-56 AND 3 hours from ENGL 5325 or 5350
      Teacher Education (6 hours): RED 5341 or 5346 AND one of the following:
      TED 5300; 5301; 5302; or EDT 5370
   c. Thesis (6 hours)
      ENGL 5398-5399: A thesis is required with emphasis on one or all of the following: a reflective practitioner model of teacher/researcher; interaction of theory and practice in the teaching of English; theoretical issue in the teaching of English; synthesis, history and overview of teaching some aspect of the English curriculum.
   d. Oral Examination
      A defense of the thesis before the student's committee is required. In all classes, a majority vote of the committee will determine acceptance or rejection.
COLLEGE OF LIBERAL ARTS

History

Web site at: http://www.utep.edu/history/
334 Liberal Arts
Phone: (915) 747-5508
E-mail: history@utep.edu

1. Degree Requirements
2. Graduate Credit Courses
3. History (HIST) Courses (Graduate only)
4. Ph.D. Program
5. Seminars
6. Thesis and Independent Research

PROFESSORS EMERITI: Kenneth K. Bailey, Wayne E. Fuller, John H. McNeely, Kenneth B. Shover, W. H. Timmons
COLLEGE OF LIBERAL ARTS

History

Web site at: http://www.utep.edu/history/

1.- Degree Requirements
2.- Graduate Credit Courses
3.- History (HIST) Courses (Graduate only)
4.- Ph.D. Program
5.- Seminars
6.- Thesis and Independent Research

1.- Degree Requirements

Requirements for Admission

1. Bachelor's degree from an accredited institution in the U.S. or proof of equivalent education in a foreign institution
2. Satisfactory subject preparation and grade point average (GPA)
3. Satisfactory score on the Graduate Record Examination (GRE)
4. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S.

MA Degree Concentrations

Students working toward the Master of Arts degree in History may choose either the standard concentration or a specialized concentration in the history of the United States-Mexico Border. Both concentrations provide degree plans with or without a thesis.

Degree Requirements

Standard Degree Plans (I & II)

Plan I requires the completion of 30 hours, including an acceptable thesis. A Plan I student must complete 9 hours of graduate seminars in history, 9 hours of graduate studies courses in history, and HIST 5398-HIST 5399. The remaining 6 hours may be selected in any combination, from among graduate studies courses, graduate seminars, and upper-division undergraduate courses available for graduate credit.

Plan II requires the completion of 36 hours, including the submission of one acceptable seminar paper in lieu of a thesis. A Plan II student must complete 12 hours of graduate studies courses in history, 9 hours of graduate studies courses in history, and, in the final semester of work, HIST 5398-HIST 5399. The remaining 6 hours may be selected in any combination, from among graduate studies courses, graduate seminars, and upper-division undergraduate courses available for graduate credit. In keeping with graduate school regulations, no more than 9 hours of approved undergraduate courses may be counted for graduate credit and only 6 of these hours may be taken in history; 3 additional hours may be included in a Minor field if a Minor field is selected and approved. Plan II students must submit the completed seminar paper to the departmental committee that conducts the final examination for the MA degree, as prescribed by the Graduate School. As a part of the total 36 hours, a student may choose a Minor in a related field, provided the department's Graduate Advisor approves. The Minor requires 6 hours, of which at least 3 must be at the graduate level.

Minor in Public History

Whether choosing Plan I or II, a student may take a Minor in Public History. For the minor, a student must successfully complete HIST 5302, Introduction to Public History, and HIST 5390, Internship in Public History (HIST 5390 may be replaced with HIST 5370, Seminar in U.S. History: Public History). In addition, the student must complete 9 hours of Department of History offerings or selected courses outside the department. These courses must be approved by the Department of History Graduate Advisor. The Minor in Public History will be awarded only in conjunction with the completion of the MA in History degree.

Border History Degree Plans (III & IV)

Prerequisite: Admission to the Graduate Program in History and the completion of the fourth semester of Spanish language instruction with a grade of "B" or better, or successful completion of a department-approved Spanish language competency examination.

Plan III requires the completion of 30 hours, including an acceptable thesis. Specific requirements are as follows:

Seminars: Nine hours required, including the core course in border history and
2 other courses directly related to the U.S.-Mexico borderlands. Course substitution is permitted with the approval of the Border Studies Graduate Committee.

Studies Courses: Nine hours required. Of the 9 hours, 6 must be related to the U.S.-Mexico Border and must be approved by the Border Studies Graduate Committee.

Other Courses: Six hours required from among HIST 3309, HIST 3312, HIST 3316, HIST 3317, HIST 3322, HIST 3328, HIST 3342, HIST 3343, and HIST 3390 (when topic is related to the U.S.-Mexico Border). With the approval of the Border Studies Graduate Committee, a student may substitute a graduate course, or a student may select a Minor field in a related discipline. A Minor field requires 6 hours, of which at least 3 hours must be at the graduate level.

Thesis: HIST 5398 - HIST 5399.

Plan IV requires the completion of 36 hours; in lieu of a thesis, one revised seminar paper must be submitted to the committee conducting the final examination. Specific requirements are as follows:

Seminars: Six hours required of courses related to the U.S.-Mexico border. Course substitution is permitted with the approval of the Border Studies Graduate Committee.

Studies Courses: Twelve hours required, of which at least 9 must be related to the U.S.-Mexico Border and must be approved by the Border Studies Graduate Committee.

Undergraduate Courses Taken for Graduate Credit: Six hours from among the following—HIST 3309, HIST 3312, HIST 3316, HIST 3317, HIST 3322, HIST 3328, HIST 3342, and HIST 3390 (when topic is related to the U.S.-Mexico Border). With the approval of the Border Studies Graduate Committee, a student may submit graduate-level courses.

Other Courses: Nine hours from among any graduate courses in the department of history, or 3 graduate hours in the department of history and 6 hours in a Minor field in a related discipline. Minor fields must be approved by the Border Studies Graduate Committee. A Minor field requires 6 hours, of which at least 3 hours must be at the graduate level.

Independent Research: HIST 5393, to be taken in the final semester of work.

Degree Requirements

Standard Degree Plans (I & II)

Prerequisite: Admission to the Graduate Program in History

Plan I requires the completion of 30 hours, including an acceptable thesis. A Plan I student must complete 9 hours of graduate seminars in history, 9 hours of graduate studies courses in history, and HIST 5398 - HIST 5399.

The remaining 6 hours may be selected in any combination, from among graduate studies courses, graduate seminars, and upper-division undergraduate courses available for graduate credit.

Plan II requires the completion of 36 hours, including the submission of one acceptable seminar paper in lieu of a thesis. A Plan II student must complete 12 hours of graduate studies courses in history, 6 hours of graduate seminars in history, and, in the final semester of work, HIST 5393.

The remaining 15 hours may be selected from among graduate studies courses, graduate seminars, and upper-division undergraduate courses available for graduate credit. In keeping with graduate school regulations, no more than 9 hours of approved undergraduate courses may be counted for graduate credit and only 6 of these hours may be taken in history; 3 additional hours may be included in a Minor field if a Minor field is selected and approved.

Plan II students must submit the completed seminar paper to the departmental committee that conducts the final examination for the MA degree, as prescribed by the Graduate School.

As a part of the total 36 hours, a student may choose a Minor in a related field, provided the department's Graduate Advisor approves. The Minor requires 6 hours, of which at least 3 must be at the graduate level.

Minor in Public History

Whether choosing Plan I or II, a student may take a Minor in Public History. For the minor, a student must successfully complete HIST 5302, Introduction to Public History, and HIST 5390, Internship in Public History (HIST 5390 may be replaced with HIST 5370, Seminar in U.S. History: Public History). In addition, the student must complete 9 hours of Department of History offerings or selected courses outside the department. These courses must be approved by the Department of History Graduate Advisor.

The Minor in Public History will be awarded only in conjunction with the
completion of the MA in History degree.

**Border History Degree Plans (III & IV)**

**Prerequisite:** Admission to the Graduate Program in History and the completion of the fourth semester of Spanish language instruction with a grade of "B" or better, or successful completion of a department-approved Spanish language competency examination.

Plan III requires the completion of 30 hours, including an acceptable thesis. Specific requirements are as follows:
## 2.- Graduate Credit Courses

### For Undergraduate and Graduate Students

The following undergraduate courses have been approved for graduate credit. Students taking these courses for graduate credit will be required to do additional work.

1. HIST 3301 Colonial America to 1763 (3-0)
2. HIST 3302 The American Revolution and the New Nation, 1763-1815 (3-0)
3. HIST 3303 The Age of Jackson, Clay, and Webster, 1815-1860 (3-0)
4. HIST 3304 The Civil War and Reconstruction Era, 1863-1877 (3-0)
5. HIST 3305 From Plutocracy to Progressivism, 1877-1917 (3-0)
6. HIST 3306 The Interwar Years, 1918-1941 (3-0)
7. HIST 3307 United States since 1941 (3-0)
8. HIST 3308 Mexican-American History (3-0)
9. HIST 3309 American Legal History (3-0)
10. HIST 3310 History of American Foreign Relations to 1914 (3-0)
11. HIST 3311 History of American Foreign Relations since 1914 (3-0)
12. HIST 3312 American Military History (3-0)
13. HIST 3313 United States in Vietnam and Southeast Asia (3-0)
14. HIST 3314 American Revolution and the New Nation, 1763-1815 (3-0)
15. HIST 3315 American Revolution and the New Nation, 1763-1815 (3-0)
16. HIST 3316 Southwest Frontier (3-0)
17. HIST 3317 History of Texas since 1821 (3-0)
18. HIST 3318 19th Century American West (3-0)
19. HIST 3319 20th Century American West (3-0)
20. HIST 3320 American Indian History (3-0)
21. HIST 3321 History of American Foreign Relations to 1914 (3-0)
22. HIST 3322 History of American Foreign Relations since 1914 (3-0)
23. HIST 3323 American Military History (3-0)
24. HIST 3324 Main Currents in American Thought to 1865 (3-0)
25. HIST 3325 History of Immigration and Ethnicity in the U.S. (3-0)
26. HIST 3326 Life and Labor in the U.S. in the 19th and 20th Centuries (3-0)
27. HIST 3327 Racial Thought in U.S. History (3-0)
28. HIST 3328 History of Hispanic Peoples in the United States (3-0)
29. HIST 3329 East Asia (3-0)
30. HIST 3330 History of Religion in the East (3-0)
31. HIST 3331 History of Religion in the East (3-0)
32. HIST 3332 Russia (3-0)
33. HIST 3333 The Soviet Union (3-0)
34. HIST 3334 Modern Africa (3-0)
35. HIST 3335 Pyramids and Prophets: Ancient Egypt, Mesopotamia and Palestine (3-0)
36. HIST 3336 The Middle East and Islam (3-0)
37. HIST 3337 The Spanish Borderlands (3-0)
38. HIST 3338 Central America and the Caribbean (3-0)
39. HIST 3339 Argentina, Brazil, and Chile since 1810 (3-0)
40. HIST 3340 History of Mexico to 1900 (3-0)
41. HIST 3341 The Mexican Revolution (3-0)
42. HIST 3342 England to 1603 (3-0)
43. HIST 3343 England since 1603 (3-0)
44. HIST 3344 History of Religion in the West (3-0)
45. HIST 3345 Ancient Greece (3-0)
46. HIST 3346 Hellenism and the Coming of Rome (3-0)
47. HIST 3347 The Medieval World (3-0)
48. HIST 3348 The Roman Empire (3-0)
49. HIST 3349 The Age of Renaissance (3-0)
50. HIST 3350 The Age of the Reformation (3-0)
51. HIST 3351 The Age of Absolutism and Enlightenment (3-0)
52. HIST 3352 Twentieth Century Europe, 1900 to the Present (3-0)
53. HIST 3353 The Holocaust in Europe (3-0)
54. HIST 3354 Modern Germany since 1866 (3-0)
55. HIST 3355 The History of Spain and Portugal (3-0)
56. HIST 3356 Spain in the Age of Expansion, Eighth-Sixteenth Centuries (3-0)
57. HIST 3357 History, Special Topics (3-0)
58. HIST 3358 History of Women (3-0)
59. HIST 3359 History and Historians (3-0)
COLLEGE OF LIBERAL ARTS

History

Studies Courses
Graduate Studies courses are designed to provide a flexible approach to the study of history in various general areas. The specific topic studied will vary from semester to semester; each semester, a brief description will be found in the published schedule of classes. Generally, studies courses involve reading, discussion, and writing, but depending on the nature of the topic, lectures or other approaches may be employed.

5302 Introduction to Public History (3-0)
Emphasizes history careers apart from traditional teaching jobs. Fields such as archive and museum management, historic preservation, cultural resource management, and policy planning will be explored.

5305 Studies in United States History (3-0)
Focuses in depth on a theme, movement, or period of significance in United States history. Past topics have included the family in colonial America, quantification in history, American slavery, the West in fact and fiction, U.S. foreign policy in Southeast Asia, Progressivism, and great American historians. Historical interpretation is usually emphasized. May be repeated for credit when topic varies.

5309 Studies in Latin American History (3-0)
Survey of a major topic or period in Latin American history, with special emphasis on reading and discussion of significant historiographical interpretations. Typical topics include the Indian in Mexican history, the history of underdevelopment in Latin America, and women and the family in Latin America. May be repeated for credit when topic varies.

5312 Studies in Borderlands History (3-0)
Survey of a major topic in the history of the Spanish Borderlands to 1821 or the U.S.-Mexico Borderlands region since 1821, with special emphasis on reading and discussion of significant historiographical interpretations. Possible topics are the history of the El Paso region, the Mexican Revolution in the Borderlands region, and the Chicano Movement. May be repeated for credit when topic varies.

5316 Studies in European History (3-0)
Focuses in depth on a theme, movement, or period of significance in European history. Topics could include problems such as: the Renaissance, the Reformation, the Industrial Revolution, the French Revolution, Nazism, modern social history methods; or could be focused on specific countries during a particular period such as Soviet Russia, modern Germany, Tudor-Stuart England, ancient Greece, medieval France, and the like. Historical interpretation is usually emphasized. May be repeated for credit when topic varies.

5345 Independent Reading (0-0-3)
Exploration of an historical theme or topic mutually agreeable to the professor and student. Substantial reading and writing required; periodic conferences with the professor. Prerequisite: Instructor approval.

5351 Literature and Methodology of Borderlands History (3-0)
A survey of the principal themes and methodological approaches in the study of history of the Borderlands region.

5352 Literature and Methodology of Mexican and Latin American History (3-0)
A survey of the principal themes and methodological approaches in the study of Mexican and Latin American history.

5353 Literature and Methodology of United States History (3-0)
A survey of the principal themes and methodological approaches in the study of United States history.

5354 Literature and Methodology of World History (3-0)
A survey of selected key themes and methodological approaches in the study of history outside the Americas. May be repeated for credit when emphasis varies.

6320 History Teaching and Learning (3-0)
Reading, lecture, discussion, and field practice in the methodology and theory of teaching and learning history. Students will be assisted in the preparation of teaching portfolios, in the development of lecturing techniques, in the implementation of active learning strategies, and the possibilities of educational technologies. Students in the course will teach a course in conjunction with the course under the supervision of a faculty mentor.
The degree is intended to prepare students for professional careers as college and university faculty, or as public historians working in such fields as museum administration, historic preservation, archival management, and public policy.

Admissions Requirements
In addition to the general requirements for admission to the Graduate School and the graduate program in History listed above, students should meet the following qualifications:

1. Completion of a BA or MA degree in History. Students whose degree was in a field other than history should submit evidence of preparation equal to an undergraduate minor in History (survey courses in US History and World History or Western Civilization; and 12 upper-division hours).
2. Submission of satisfactory GRE scores. (Test must have been taken in the last 5 years.)
3. Evidence of potential for scholarly work in history (from references and a written personal statement as well as the academic record).
4. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or another English-speaking country.

Application Procedures
Application forms can be obtained from and should be submitted to the Graduate School of The University of Texas at El Paso. Applications may be submitted at any time, but will be acted upon only once a year. The deadline for the submission of applications for the following academic year is February 15.

The documents to be submitted to the Graduate School are as follows:

1. Official Graduate School application form
2. Official transcripts of all previous academic work
3. Official test results on the GRE (and TOEFL if applicable)
4. A two to three-page personal statement outlining the applicant's personal experience, educational background, research interests, career goals, and how the program will benefit the applicant's professional development
5. Three letters of reference from individuals who can evaluate the applicant's potential for graduate academic work and future professional contributions
6. A sample of the student's academic work in the form of a term paper or chapter about 25 pages in length

Course Requirements
All Ph.D. students will be required to take courses at the graduate level (5300 and above) totaling at least 63 semester credit hours. This requirement is composed of core courses (15 hours), seminar courses (9 hours), elective courses (30 hours), and required doctoral dissertation courses (9 hours). Dissertation preparation courses (HIST 6398 and HIST 6399) may be repeated, but counted for credit only once in the above total.

The core courses (15 hours) for the degree are as follows:
Literature and methodology courses in the student's two additional fields of concentration should be chosen from the following: HIST 5352, 5353, 5354. Students choosing a composite field in history or an interdisciplinary field outside history must take an equivalent course in the literature and methodology of the field.

The seminar courses (9 hours) may be selected from any of the research seminars HIST 5370-5382. Seminars may be repeated for credit if the topic varies.

The free electives (30 hours) must be chosen from among the following:
- Literature and methodology courses (HIST 5352-5354) other than those taken to satisfy the core requirements
- HIST 6301 Dissertation Planning Course
- HIST 6398 and 6399 Dissertation

Dissertation courses may be repeated, but count for only 6 credit hours in the total of 63 semester credit hours.

Language Requirement
Students must demonstrate reading proficiency in the Spanish language by the time they complete 36 semester credit hours. Students are required to have a reading knowledge of Spanish sufficient to conduct research in primary and secondary sources in that language. Alternate languages may be accepted by the Graduate Program Committee where appropriate to the student's research. Course work taken to meet the language requirement will not be counted in the 63 hours required for the Ph.D. degree.

Transfer with Graduate Credit
Students accepted into the Ph.D. program with graduate credit (from UTEP or another institution) will be required to meet the specific degree requirements stated above. The student may petition the Graduate Program Committee to accept up to 30 hours of credit toward the degree. If titles of the transferred courses differ substantially from the history courses listed in this catalog, the student will be requested to provide documentation to the Committee that the courses transferred are equivalent in content. The required core courses (HIST 5351-54 and HIST 6320) cannot be met by transferred credit.

Maximum Time for Completion of the Ph.D. Degree
Students in the Ph.D. program in History must complete all requirements for the Ph.D. within eight years of their admission to the program. The eight-year period begins with the semester in which the first courses are taken after receiving formal acceptance into the program. Extensions of the period can be granted by the Graduate Program Committee in response to written petitions from the candidate if, in their judgment, final completion of the degree requirements by the candidate is considered likely.

Qualifying Examinations
Qualifying examinations must be taken upon completion of all course work except the 9 hours of dissertation courses. Students must enroll in HIST 6300 (Advanced Topics in Historiography) during the semester in which they take the qualifying examinations. Students will be examined in three geographical fields of concentration: Borderlands history (required) and two additional fields chosen from the following areas: United States history, Mexican and Latin American history, and World history, or in a previously arranged composite field. The Graduate Program Committee will appoint examining committees for each of the three fields.

Dissertation
Students must complete a doctoral dissertation containing substantial original research using primary documents, under the supervision of a dissertation advisor. After completing the qualifying examinations, students will prepare for the dissertation by taking HIST 6301 (Dissertation Preparation) under the direction of the dissertation advisor. A committee of three department faculty and one outside faculty member will be selected. The candidate will prepare a formal Dissertation Proposal that must be approved by the dissertation committee, the Graduate Advisor, and the Graduate Program Committee.

Ph.D. Oral Examination
On completion of the dissertation, the candidate will be required to make an oral defense of the dissertation before the dissertation committee, the faculty, and the general public.
Microfilming of Dissertations
The doctoral candidate who has successfully completed the above requirements will be required to pay the cost of a microfilm copy of the dissertation. The signed original copy (unbound) of the dissertation will be sent by the Graduate School to University Microfilms in Ann Arbor, Michigan, for reproduction. Along with the original copy of the dissertation, the student must submit to the Graduate School two copies of an abstract, not to exceed 350 words in length (double-spaced), which has been approved in final form by the dissertation committee. This will be published in Dissertation Abstracts International.
COLLEGE OF LIBERAL ARTS

History

Web site at: http://www.utep.edu/history/

334 Liberal Arts
Phone: (915) 747-5508
E-mail: history@utep.edu

1.- Degree Requirements
2.- Graduate Credit Courses
3.- History (HIST) Courses (Graduate only)
4.- Ph.D. Program
5.- Seminars
6.- Thesis and Independent Research

5.- Seminars

Graduate seminars usually involve discussion of research methodologies and some background reading; however, primary emphasis is on research in original resources, with students writing a substantial seminar paper based on the research.

5370 Seminar in United States History (3-0)
Focuses in depth on a theme, movement, or period of significance in United States history. Areas from which topics have been chosen in the past include Colonial and Revolutionary America, American Foreign Relations, the Chicano, American Intellectual History, Modern America, the American South, the Civil War and Reconstruction Period, Texas History, the American West, and American Military History. May be repeated for credit when topic varies.

5374 Seminar in Borderlands History (3-0)
Focuses in depth on a theme, movement, or period of significance in Borderlands history. Topics might include the history of the El Paso region, Chicanos/as in the Borderlands, the creation of the U.S.-Mexico border, or economic transformations in the region. May be repeated for credit when topic varies.

5377 Seminar in Latin American History (3-0)
Focuses in depth on a theme, movement, or period of significance in Latin American or Border history. Areas from which topics have been chosen in the past include all aspects and time periods of Mexican history, nineteenth and twentieth-century problems in other Latin American countries and Central American history. May be repeated for credit when topic varies.

5379 Seminar in African History (3-0)
Introductory readings and research on themes in nineteenth or twentieth century African history. Particular focus on the relations between Africa and Europe and the United States. May be repeated for credit when topic varies.

5382 Seminar in European History (3-0)
Focuses on a theme, movement, or period of significance in European history. Topics could include themes in European history, such as military history, religion and society, family history, women's history, or revolution; or they could concern a particular area and time period such as modern Britain, Soviet Russia, modern Germany, and the like. May be repeated for credit when topic varies.
COLLEGE OF LIBERAL ARTS

History

- Degree Requirements
- Graduate Credit Courses
- History (HIST) Courses (Graduate only)
- Ph.D. Program
- Seminars
- History (HIST) Courses (Graduate only)

History Web site at: http://www.utep.edu/history/
334 Liberal Arts
Phone: (915) 747-5508
E-mail: history@utep.edu

1. Thesis and Independent Research

5390 Public History Internship (0-0-3)
History work experience in a public agency, museum, archive, history consulting business, or other business. Evaluation by work place supervisor and instructor. May be considered for seminar credit if appropriate project is completed.

5393 Independent Research (0-0-3)
(Open only to Plan II and Plan IV graduate students in history in the final semester of work.)

5395 Problems in Historical Research (0-0-3)
Emphasizes research, with writing and discussion. To be taken in conjunction with HIST 5393, HIST 5398, or HIST 5399. Students will be required to make a formal presentation of the results of their ongoing research. Grading will be pass/fail, this course cannot be used for credit toward the MA degree.
Prerequisite: Consent of the Graduate Advisor.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: HIST 5398.

5695 Problems in Historical Research (0-0-6)
In-depth readings on selected topics. Consent of instructor and graduate advisor required. May be taken only once for credit toward degree, but students must register for this course during each semester or term in which they are preparing for or taking qualifying examinations.

6300 Advanced Topics in Historiography (3-0)
In-depth readings on selected topics. Consent of instructor and graduate advisor required. May be taken only once for credit toward degree, but students must register for this course during each semester or term in which they are preparing for or taking qualifying examinations.

6301 Dissertation Preparation (3-0)
Preparation and approval of a satisfactory dissertation proposal. Required of all doctoral students before admission to candidacy. May be taken only once for credit toward the degree, but students must register for this course during each semester or term in which they are working on their dissertation proposal.

6398 Dissertation (0-0-3)
The student must register for 6398 when work on the dissertation is begun, after the dissertation proposal has been approved. The student must register for 6398 during each semester or term in which work on the dissertation is being done. Credit toward the degree is given only one time per course.

6399 Dissertation (0-0-3)
The student must register for 6398 when work on the dissertation is begun, after the dissertation proposal has been approved. The student must register for 6398 during each semester or term in which work on the dissertation is being done. Credit toward the degree is given only one time per course.
COLLEGE OF LIBERAL ARTS

Languages and Linguistics
Web site at: http://www.utep.edu/lgsling/
137 Liberal Arts
Phone: (915) 747-5767
E-mail: lgsling@utep.edu

1. Linguistics
2. Spanish
3. General Courses
4. French (FREN) Courses
5. Linguistics (LING) Courses
6. Spanish (SPAN) Courses

CHAIRPERSON: Sandra S. Beyer
PROFESSORS EMERITI: Edgar T. Ruff, John McCarty Sharp

The department offers three graduate degrees:

1. the MA in Linguistics with concentrations in Applied Linguistics and in Hispanic Linguistics,
2. the MA in Spanish, and
3. the MFA in Creative Writing. Information about the MFA may be found under Liberal Arts Interdisciplinary Studies in this catalog.
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Departments:
- Art
- Communication
- Criminal Justice
- English
- History
- Languages and Linguistics
- Liberal Arts
- Interdisciplinary Studies
- Music
- Philosophy
- Political Science
- Psychology
- Sociology and Anthropology
- Theatre Arts

Dr. Howard C. Daudistel, Dean
Dr. Mimi R. Gladstein, Associate Dean for Humanities
Dr. Harmon M. Hosch, Associate Dean for Social and Behavioral Sciences
Mr. Myron H. Nadel, Assistant to the Dean for Fine and Performing Arts

Liberal Arts Bldg., Room 343
Phone: (915) 747-5666
Fax: (915) 747-5905
E-mail: libarts@utep.edu

Languages and Linguistics Web site at: http://www.utep.edu/lgsling/

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Linguistics

Requirements for Admission

1. Bachelor's degree from an accredited institution in the U.S. or proof of equivalent education in a foreign institution
2. Undergraduate degree or satisfactory subject preparation in linguistics, a language, or a related field resulting in a satisfactory grade point average (GPA)
3. Successful completion of a statistics course (for applied linguistics)
4. Competency in both Spanish and English (for Hispanic linguistics or Spanish applied linguistics)
5. Satisfactory score on the Graduate Record Examination (GRE)
6. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S.

Degree Requirements (30 hours)

Core (9 hours)
LING 5301 Principles of Linguistic Analysis
LING 5309 Generative Syntax or
LING 5312 Functional Syntax
LING 5320 Phonology

Electives (21 hours)
Students complete their curriculum with 21 additional graduate hours in linguistics. Up to 6 graduate hours in Spanish may be used in place of linguistics hours for students for whom such course work would be appropriate.

Those who choose to focus on either applied linguistics or Hispanic linguistics should include the following courses among these 21 hours.

Applied Linguistics
LING 5308 Second Language Teaching
LING 5330 Computer-Assisted Language Learning
LING 5348 Second Language Acquisition

Plus the courses in one of the following two groups:

English
LING 5310 Pedagogical Issues in English Structure
Three additional hours chosen form the following:
LING 5331 Teaching Second Language Composition
LING 5341 Psycholinguistics and Reading
LING 5374 Language Testing
LING 5388 Bilingualism
LING 5389 Problems in Language Instruction

Spanish
Six hours chosen from the following:
LING/SPAN 5381 Spanish Phonetics and Phonology
LING/SPAN 5382 Spanish Syntax
LING/SPAN 5383 Spanish Morphology
LING/SPAN 5385 Spanish Historical Linguistics

Hispanic Linguistics LING/SPAN 5381 Spanish Phonetics and Phonology
LING/SPAN 5382 Spanish Syntax
LING/SPAN 5383 Spanish Morphology
LING/SPAN 5385 Spanish Historical Linguistics

There are both thesis and non-thesis options for all students. The thesis option requires LING 5398 and LING 5399 in addition to the above requirements. The non-thesis option requires LING 5397, three additional hours of linguistics electives, and one extended research paper, which will be defended and submitted as required by the Graduate School.
Languages and Linguistics
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E-mail: lgsling@utep.edu

1. Linguistics 4. French (FREN) Courses
2. Spanish 5. Linguistics (LING) Courses
3. General Courses 6. Spanish (SPAN) Courses

2.- Spanish

Admission to the Program

1. Fulfillment of all general requirements for admission to the Graduate School
2. A satisfactory score on the Departmental Advanced Spanish examination

Students seeking conditional admission with deficiencies will be required to complete advanced level undergraduate courses as directed by the Graduate Advisor. Such courses will not count toward the degree.

Degree Requirements
MA in Spanish

1. Complete 36 hours of work, including the appropriate options chosen from "Required Courses and Subject Areas" listed below. With the approval of the Committee on Graduate Studies, a student may present a minor consisting of 6 to 12 hours in a related field.
2. Complete course 2302 (fourth semester) in a second foreign language with a grade of at least "B", or demonstrate equivalent proficiency.

Must select Plan I or Plan II below:

Plan I (Non-Thesis Option): Submit two graduate seminar research papers, suitably bound, as required by the Graduate School. A prospectus outlining each proposed paper must be approved by the Committee on Graduate Studies. The papers will be defended orally.

Plan II (Thesis Option): Complete SPAN 5398-SPAN 5399, Thesis, which counts for 6 of the required 36 hours of work. A prospectus outlining the proposed thesis must be approved by the Committee on Graduate Studies. The thesis will be defended orally.

Required Courses and Subject Areas
In order to ensure a balanced course of study, all students must complete 21 credit hours distributed as follows:

1. Required Course: SPAN 5301
2. Required Subject Areas
   a. Spanish Peninsular Literature
      (1) One course in Golden Age (SPAN 5333, SPAN 5334, or SPAN 5335)
      (2) One course in Twentieth Century (SPAN 5340 or SPAN 5341)
   b. Spanish American Literature
      (1) One course in Prose Fiction (SPAN 5319 or SPAN 5321)
      (2) One course in Poetry (SPAN 5315 or SPAN 5317)
   c. Hispanic Linguistics
      (1) One course. Students who have not taken SPAN/LING 3309 (or the equivalent) prior to undertaking MA course work will be required to take this course, which will count for credit toward the MA. Those who have completed SPAN/LING 3309 before entering the master's program will be required to complete one of the following: SPAN/LING 3472, SPAN/LING 3585, or SPAN/LING 3586.
      (2) One course selected from the following:
         (1) SPAN 5304
         (2) SPAN 5335
         (3) A second course in Hispanic linguistics
COLLEGE OF LIBERAL ARTS

Languages and Linguistics

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French
FREN 4301 Methods of Foreign Language Instruction (3-0)
FREN 4387 Poetry (3-0)
FREN 4388 Prose (3-0)
FREN 4389 Theater (3-0)
FREN 4390 Topics in French (3-0)

German
GERM 4301 Methods of Foreign Language Instruction (3-0)
GERM 4387 Poetry (3-0)
GERM 4388 Prose (3-0)
GERM 4389 Theater (3-0)
GERM 4390 Topics in German (3-0)

Linguistics
LING 4301 Methods of Foreign Language Instruction (3-0)
LING 4306 Language Acquisition (3-0)
LING 4316 Language and Cognition (3-0)
LING 4348 Analyses of Second Language Acquisition (3-0)
LING 4371 Studies in Linguistics (3-0)
LING 4372 Contrastive Linguistics: Spanish/English (3-0)

Portuguese
PORT 4390 Topics in Portuguese (3-0)

Spanish
SPAN 4301 Methods of Foreign Language Instruction (3-0)
SPAN 4324 The Literature of Mexico (3-0)
SPAN 4328 Golden Age Drama (3-0)
SPAN 4335 Nineteenth Century Spanish Novel (3-0)
SPAN 4341 Modern Drama (3-0)
SPAN 4339 The Short Story (3-0)
SPAN 4358 Twentieth Century Spanish Literature (3-0)
SPAN 4360 Twentieth Century Spanish American Novel (3-0)
SPAN 4361 Cervantes (3-0)
SPAN 4363 Spanish American Poetry (3-0)
SPAN 4372 Contrastive Linguistics: English/Spanish (3-0)
SPAN 4390 Topics in Spanish (3-0)

Translation
TRAN 4381 Commercial and Legal Translation (3-0)
TRAN 4382 Translation from the Information Media (3-0)
TRAN 4383 Literary Translation (3-0)
TRAN 4384 Introduction to Interpreting (3-0)
TRAN 4389 Topics in Translation (3-0)
TRAN 4390 Senior Project in Translation (3-0)
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Languages and Linguistics
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For Graduate Students Only

French (FREN)
5390 Topics in French (3-0)
Languages and Linguistics

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5.- Linguistics (LING) Courses
6.- Spanish (SPAN) Courses

Linguistics (LING)

5107 Seminar in Special Topics in Linguistics (1-0)

5301 Principles of Linguistic Analysis (3-0)
A survey of the precepts and procedures of modern linguistic analysis with special attention to the fundamentals of phonetics, phonology, and syntax.

5308 Second Language Teaching--English (3-0)
A study of the principles underlying modern second-language teaching, and their application, with particular reference to English as a second language. Includes use of audio-visual equipment.

5309 Generative Syntax (3-0)
An investigation of the syntax of natural language from the perspective of modern generative grammar. Prerequisite: LING 3302 or LING 5301 or equivalent background.

5310 Pedagogical Issues in English Structure (3-0)
The structure of English grammar from the perspective of pedagogical concerns.

5312 Functionalist Syntax (3-0)
A study of Tagmemic and Paris School grammatical frameworks. Analysis of languages of a wide typological range.

5319 English Historical Linguistics (3-0)
An investigation into the origins of English as an Indo-European language and as a Germanic language. Reading of texts of historical interest. Attention to the nature of linguistic change. Examination and use of standard research tools.

5320 Phonology (3-0)
The phonetic basis of modern phonological analysis: phonological systems and structures; theory and practice in phonological analysis.

5330 Computer-Assisted Language Learning (3-0)
An investigation of the use of computer to enhance second language learning. Includes the study of current research and developing skills for using computers effectively.

5331 Teaching Second Language Composition (3-0)
A study of the writing process in second-language learning and the principles and practice of teaching composition to this population.

5341 Psycholinguistics and Reading (3-0)
An inquiry into the fundamental aspects of the reading process—linguistic, psychological, and physiological.

5348 Second Language Acquisition (3-0)
An investigation of the results and techniques of current research in second language acquisition, with some attention to implications for second language teaching.

5370 Study in Language (3-0)
Topic to be discussed will be selected. May be repeated for credit when topic varies.

5373 Linguistic Variation (3-0)
A study of linguistic varieties and variation; particular attention to methods and hypotheses of different approaches.

5374 Language Testing (3-0)
A study of the principles of effective language testing, with special attention to second-language testing.

5378 Language Universals and Typology (3-0)
A survey of findings regarding language and typology and language universals. Attention to major questions that motivate ongoing research.

5381 Spanish Phonetics and Phonology (3-0)
Analysis of the sounds and sound patterns of Spanish. Prerequisites: LING 5301 and LING 5320.

5382 Spanish Syntax (3-0)
A survey of the major syntactic phenomena of Spanish. Prerequisites: LING 5301 and LING 5309.

5383 Spanish Morphology (3-0)
Analysis of the major morphological structures of Spanish. Prerequisite: LING 5301.

5385 Spanish Historical Linguistics (3-0)
A study of the origins of Spanish as a reflex of Latin and as a Romance language. Reading of texts of historical interest. Attention to the nature of linguistic change. Examination and use of standard research tools.

5388 Bilingualism (3-0)
A study of the formal and sociolinguistic dimensions of bilingualism. Attention to aspects of language planning and linguistics as a contributing factor in the devising of public policy.

5389 Problems in Language Instruction (3-0)
A course designed for language teachers involving study of psychological, linguistic, and methodological aspects of language instruction and testing, especially with reference to English. May be repeated for credit when topic varies.

5397 Seminar in Linguistic Research (3-0)
Advanced linguistic description, argumentation, and research design. Emphasizes discussion, reading, and writing: students will make a formal presentation of their own work and will analyze the work of others. Bibliographic methods and information retrieval. Requires the completion of a paper that meets Graduate school standards for a final M.A. project. For non-thesis option students only.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: LING 5398.
Languages and Linguistics

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Spanish (SPAN)

General

5301 Critical Approaches to Hispanic Literature (3-0)
Examination of historical and contemporary literary analysis, techniques, and theories and their application to Spanish-language prose, poetry, theater, and essays. Required of all MA candidates.

5302 Independent Study (0-0-3)
Subject to be determined in consultation with the Graduate Advisor. Prerequisite: Department approval.

5303 Special Topics (3-0)
An examination of a particular area of Hispanic languages or literature. May be repeated for credit as topic changes. Prerequisite: Department approval.

5304 The Hispanic Essay (3-0)
The development and influence of the essay in the Hispanic world. Included in the readings are both Peninsular and Latin American writers.

5308 Thesis (0-0-3)
Initial work on the thesis.

5309 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: SPAN 5308.

Spanish American Literature

5311 Indigenous and Colonial Literature of Spanish America (3-0)
Readings in Spanish translations of important works of the Mayan, Nahuatl, and Incan cultures. Selected works of Hispanic discoverers, conquistadors, and literati from 1492 through the eighteenth century.

5314 Nineteenth Century Spanish-American Literature (3-0)
Study of major Spanish-American works of the nineteenth century exclusive of Modernism; notably, Neoclassic and Romantic poetry, Romantic and Realist narrative, and Gauchesque poetry.

5315 Premodernist and Modernist Poetry (3-0)
Readings in the works of major Spanish poets of the nineteenth and early twentieth century, with special attention placed upon Ruben Dario and his school.

5316 Postmodernist and Contemporary Poetry (3-0)
Readings in the works of major Spanish-American poets from approximately 1910 to the present.

5319 Spanish-American Short Story (3-0)
Development of the short story form in Spanish America from its origin in the nineteenth century to the present.

5321 Twentieth Century Spanish-American Novel (3-0)
Readings from selected works of contemporary Spanish-American novelists.

Spanish Literature

5332 Spanish Literature to 1500 (3-0)
A study of the most representative works of medieval and early renaissance Spain, including El Cid, Las Cantigas de Santa Maria, El Libro de Buen Amor/El Conde Lucanor, El Romancero, and La Celestina.

5333 Golden Age Drama (3-0)
Readings in major works of Spain's classical theater, by authors such as Lope de Vega, Tirso de Molina, and Calderon de la Barca.

5334 Golden Age Prose and Poetry (3-0)
Representative readings from Spain's major poets and/or writers of the sixteenth century.
and seventeenth centuries.

5335 Cervantes (3-0)
A thorough reading and substantial analysis of El Ingenioso Hidalgo Don Quixote de la Mancha, plus two or three of the Novelas Ejemplares.

5340 The Generation of 1898 (3-0)
Selections from the writings of important members of this literary generation, including Unamuno, Azorín, Ortega y Gasset, Baroja, and Antonio Machado.

5341 Twentieth Century Spanish Literature (3-0)
Readings in the works of modern Spanish literature, with emphasis on poetry and/or narrative prose fiction written after the Generation of 1898 to the present.

Hispanic Linguistics

5381 Spanish Phonetics and Phonology (3-0)
Analysis of the sounds and sound patterns of Spanish. Prerequisites: LING 5301 and LING 5320.

5382 Spanish Syntax (3-0)
A survey of the major syntactic phenomena of Spanish. Prerequisites: LING 5301 and LING 5309.

5383 Spanish Morphology (3-0)
Analysis of the major morphological structures of Spanish. Prerequisite: LING 5301.

5385 Spanish Historical Linguistics (3-0)
A study of the origins of Spanish as a reflex of Latin and as a Romance language. Reading of texts of historical interest. Attention to the nature of linguistic change. Examination and use of standard research tools.

5388 Bilingualism (3-0)
A study of the formal and sociolinguistic dimensions of bilingualism. Attention to aspects of language planning and linguistics as a contributing factor in the devising of public policy.

5389 Problems in Language Instruction (3-0)
A course designed for language teachers involving study of psychological, linguistic, and methodological aspects of language instruction and testing. Same as LING 5389. May be repeated once for credit when topics vary.

Creative Writing

5305 Literary Subgenres: Theory and Practice (3-0)
Study of the theory and techniques implied in a specific literary subgenre such as the detective novel, the fantastic short story, the autobiographical essay, mystical poetry, etc. Course may be repeated for credit when topic varies.

5364 Forms and Techniques of Fiction (3-0)
A course in directed reading and writing that leads the student to an understanding of the creative process through analysis and imitation of important contemporary works of fiction. May be repeated once.

5365 Forms and Techniques of Poetry (3-0)
A course in directed reading and writing that leads the student to an understanding of the creative process through analysis and imitation of important contemporary works of poetry. May be repeated once.

5366 Advanced Fiction Writing (3-0)
Intensive study and practice in the various forms and approaches within the writing of fiction, including workshop discussion of individual student manuscripts. May be repeated once under a different instructor.

5367 Advanced Poetry Writing (3-0)
Intensive study and practice in the various forms and approaches within the writing of poetry, including workshop discussion of individual student poems. May be repeated once under a different instructor.

5368 Creative Writing Seminar (3-0)
A variable topics course that provides intensive practice and study in one of the genres of imaginative writing, such as novel writing, screenwriting, non-fiction freelancing, or biography/autobiography. May be repeated when topic varies.

5370 Tutorial in Fiction (3-0)
Advanced workshop course in which student is guided towards the production of works of fiction of professional quality. May be repeated once for credit.

5371 Tutorial in Poetry (3-0)
Advanced workshop course in which student is guided towards the production of works of poetry of professional quality. May be repeated once for credit.
The College of Liberal Arts offers two interdisciplinary studies programs leading toward the master's degree. These programs are the Master of Arts in Interdisciplinary Studies (MAIS) and the Master of Fine Arts in Creative Writing (MFA).
COLLEGE OF LIBERAL ARTS

Liberal Arts Interdisciplinary Studies

Web site at: http://www.utep.edu/mais/
110 Worrell Hall
Phone: (915) 747-6264
E-mail: mais@utep.edu

1. Master of Arts in Interdisciplinary Studies
2. Master of Fine Arts in Creative Writing

1.- Master of Arts in Interdisciplinary Studies

PROGRAM DIRECTOR: Gail Mortimer

The MAIS program is designed for individuals who, having completed a baccalaureate program or professional degree program at an accredited college or university, wish to expand their knowledge in areas outside of their previous training or present profession. To this end, each student will participate in the design of a plan of study consisting of courses offered by a variety of departments and including core seminars designed specifically for students in the program.

Basic Requirements for Admission

1. A bachelor's degree from an accredited institution in the United States (or proof of equivalent training in a foreign institution)
2. A satisfactory grade point average (GPA) in upper-division (junior and senior level) work and in any graduate work already completed
3. A satisfactory score on the Graduate Record Examination (GRE)
4. Submission to the MAIS Advisory Committee of an acceptable Plan of Study
5. Acceptance by the MAIS Advisory Committee and by the Graduate School

Specific Requirements for the MAIS Degree

1. Thirty-nine semester hours of course work, no more than nine of which may be in a single disciplinary area, and of which no more than nine may be outside of the College of Liberal Arts. Exceptions to the nine-hour limitations may be made under unusual circumstances. Exceptions must be approved by the MAIS Advisory Committee and by the Graduate School.
2. A minimum of 30 semester hours of graduate-level courses; the remaining nine hours may be selected from among graduate-level courses and/or upper-division undergraduate courses, if approved for graduate credit.
3. A minimum of six semester hours of course work from among the MAIS core seminars.
4. Successful completion of MAIS 5393 Final Project. The Final Project will be submitted to the committee conducting the student's final oral examination. Upon successful completion of the final examination, 2 copies of the Final Project will be bound and submitted to the Graduate School.
5. Successful completion of the final oral examination and approval of the Graduate School.

MAIS Core Seminars

5350 The History of an Idea (3-0)
The historical consideration of a seminal idea or concept drawn from art, ethics, politics, science, religion, or philosophy, and an assessment of its contemporary social and cultural importance. This course may be team-taught and cross-listed with a participating department. May be repeated once for credit when the topic varies.

5360 Contemporary Issues (3-0)
The detailed examination of a contemporary social or cultural concern from a multi-disciplinary perspective. This course may be team-taught and cross-listed with a participating department. May be repeated once for credit when topic varies.

MAIS Final Project

5393 MAIS Final Project
The final project consists of either: 1) two substantially revised or extended papers originally prepared for two of the graduate level courses taken as part of the MAIS program, one of which must have been written for MAIS 5350 or MAIS 5360; or (2) a new interdisciplinary paper which is based on two or more papers prepared for graduate level courses taken as a part of the MAIS program.
Open only to MAIS students in the final semester of their work. If the project is not completed in one semester, students will register for MAIS 5393 during each semester or summer session in which work on the final project is being done, but only 3 hours of credit will count toward the degree.
Liberal Arts Interdisciplinary Studies

Web site at: http://www.utep.edu/mais/
110 Worrell Hall
Phone: (915) 747-6264
E-mail: mais@utep.edu

1. Master of Arts in Interdisciplinary Studies
2. Master of Fine Arts in Creative Writing

2. Master of Fine Arts in Creative Writing

112 Worrell Hall
Phone: (915) 747-5529
E-mail: lullman@utep.edu

PROGRAM DIRECTOR: Leslie Ullman

The MFA with Major in Creative Writing is a program designed to provide the highest professional preparation and training to individuals who wish to pursue careers in writing or the teaching of writing. The program is interdepartmental. Students may choose to take creative writing and literature courses in English, Spanish, or a combination of the two languages. An additional concentration focuses on the literature and culture of the US-Mexico border. This concentration requires bilingual creative writing and literature and includes courses from other disciplines as well. The MFA curriculum, in both the literature and border culture concentrations, culminates in the writing of a book length manuscript of original poetry or fiction (thesis).

Admission Requirements

All applicants must meet the General Requirements listed under the Policies and Procedures section of this Graduate Studies catalog. Other specific requirements of the MFA program are as follows:

1. Minimum undergraduate grade point average (GPA) of 3.0
2. Minimum of 500 on verbal and 500 on the analytical portions of the Graduate Record Examination (GRE) or other evidence of ability to complete graduate-level work
3. A writing sample (10 poems or 20-30 pages of fiction)
4. A Statement of Purpose, not to exceed three pages
5. Three letters of recommendation

Specific Requirements - Literature Concentration
Forty-eight (48) hours of course work, distributed as follows:
Creative writing courses 18 hours
Literature courses 18 hours
Electives 6 hours
Thesis 6 hours

1. Creative Writing Courses (18 hours)
Six hours from
ENGL or SPAN 5364 Forms and Techniques of Fiction 6
ENGL or SPAN 5365 Forms and Techniques of Poetry 6
Six hours from
ENGL or SPAN 5366 Advanced Fiction Writing 6
ENGL or SPAN 5367 Advanced Poetry Writing 6
Six hours from 6
ENGL or SPAN 5368 Special Topics in Creative Writing 6
ENGL or SPAN 5370 Tutorial in Fiction 6
ENGL or SPAN 5371 Tutorial in Poetry 6

2. Literature Courses (18 hours) Semester Hours
ENGL 5300 Introduction to Graduate Studies in English 3 or
ENGL 5320 Literary Criticism: Theory and Practice or
SPAN 5301 Critical Approaches to Hispanic Literature 3
One or two courses from period survey and genre 3 or 6* courses in
English, American, and Spanish-American literature:
ENGL 5301 British Literature to 1485 3
ENGL 5302 British Literature 1485-1660 3
ENGL 5303 British Literature 1660-1832 3
ENGL 5304 British Literature 1832-Present 3
ENGL 5305 American Literature to 1860 3
ENGL 5306 American Literature since 1860 3
SPAN 5304 Hispanic Essay 3
SPAN 5311 Indigenous and Colonial Literature 3
SPAN 5314 Nineteenth Century Spanish-American Literature 3
SPAN 5315 Premodernist and Modernist Poetry 3
SPAN 5317 Postmodernist and Contemporary Poetry 3
SPAN 5319 Spanish-American Short Story
SPAN 5321 Twentieth Century Spanish-American Novel
One or two courses from seminars in English and 3 or 6* American Literature and Spanish Literature:
ENGL 5351 Seminar: Studies in British Literature to 1485
ENGL 5352 Seminar: Studies in British Literature 1485-1660
ENGL 5353 Seminar: Studies in British Literature 1660-1832
ENGL 5354 Seminar: Studies in British Literature 1832-Present
ENGL 5355 Seminar: Studies in American Literature to 1860
ENGL 5356 Seminar: Studies in American Literature 1860-Present
SPAN 5332 Spanish Literature to 1500
SPAN 5333 Golden Age Drama
SPAN 5334 Golden Age Prose and Poetry
SPAN 5335 Cervantes
SPAN 5340 The Generation of 1898
SPAN 5341 Twentieth Century Spanish Literature
Analysis of literature from writer's standpoint: 3
ENGL 5327 Variable Topics in Contemporary Literature or
SPAN 5305 Literary Subgenres: Theory and Practice or Approved Elective

3. Approved Electives (6 hours) 6
4. Thesis 6
   ENGL/SPAN 5398 Thesis
   ENGL/SPAN 5399 Thesis

The thesis will consist of a book length manuscript of original fiction or poetry, accompanied by a preface. The thesis will be prepared under the direction of a three-member supervising committee and will be defended orally.

* Students in English may elect to take 3 hours in each of the survey and seminar blocks, and choose from the above courses plus ENGL 5325 (Genre: Theory and Practice) and ENGL 5390 (Special Topics) and/or any of the Spanish Literature courses for their remaining 6 hours. Descriptions of all courses specified above are contained in the respective listings for the Departments of English and Languages and Linguistics.

Specific Requirements, - Border Culture Concentration
Forty eight (48) hours of course work, distributed as follows:
Creative writing courses 18 hours (6 hours of workshop must be in the second language)
Literature courses 15 hours
Electives 9 hours (6 hours of literature or electives must be in the second language)
Thesis 6 hours

1. Creative Writing Courses (18 hours)
   See listings under Literature concentration
2. Literature Courses (15 hours)
   ENGL 5300 Introduction to Graduate Studies in English or
   ENGL 5320 Literary Criticism: Theory and Practice or
   SPAN 5301 Critical Approaches to Hispanic Literature 3
   THEA 5325 Advanced Playwriting or
   SPAN 5321 20th Century Spanish-American Novel or
   SPAN 4383 Literary Translation or
   SPAN 4317 Postmodernist and Contemporary Poetry or
   SPAN 5315 Postmodernist and Modernist Poetry 3
   ENGL 5327 Special Topics in Contemporary Literature (when topic is Chicano Literature) 3

   Any graduate literature seminar or survey listed in the catalogue in either the English Department or the Languages and Linguistics Department 6

3. Core Elective Courses (9 hours)
   POLS 5336 Seminar in Southwest Border Politics
   POLS 6303 Seminar in Cultural, Linguistic and Political Borders
   HIST 5309 Studies in Latin American History
   HIST 5377 Seminar in Latin American and Border History
   SOCI 5355 U.S.-Mexico Borderlands in Change
   SOCI 5375 Seminar in Southwest Cultures
   ART 4329 Multicultural Art in America
   SPAN 5319 Spanish-American Short Story 9 or Other electives as approved by the advisor
4. Thesis (6 hours)

See listings under Literature concentration 6
COLLEGE OF LIBERAL ARTS

Music

Web site at: http://www.utep.edu/music/

301M Fox Fine Arts
Phone: (915) 747-5606
E-mail: music@utep.edu

CHAIRPERSON: Ron Hufstader

GRADUATE FACULTY: Cardon, Fountain, Hufstader, Leinberger, Packales, Paul, Ross, Tredway, Trimble, White

Master of Music

The Master of Music degree is offered in two majors: Performance (instrumental, vocal, conducting, or composition) which specializes in the study of a performing medium; and Music Education, which is designed for advanced training in the teaching profession.

Specific Requirements for the Master of Music in Performance

1. A Bachelor's degree in Music or its equivalent
2. Acceptance into the performance program via audition with a three-person panel of area faculty; vocal majors must demonstrate knowledge of Italian, French, German, Latin, and English diction
3. Completion of the following required courses with a "B" or above:
   3 hours MUSL 5371 Bibliography and Research
   3 hours MUSE 5396 Pedagogy of Vocal Music, OR MUSE 5397 Pedagogy of Instrumental Music
   2 hours MUST 5217 Theory of Twentieth Century Music
   2 hours MUSL 5211 Music History
   9 hours MUSA 5391 Applied Music
   3 hours MUGS 5398 Thesis
   3 hours MUGS 5399 Thesis
   6 hours Electives (Approved upper-division undergraduate courses)

   31 hours TOTAL

The thesis sequence includes both a Master's recital and a written thesis documenting that recital. A final oral examination on the thesis is also required.

Specific Requirements for the Master of Music in Music Education

1. A Bachelor's degree in Music or its equivalent certification to teach music in the public schools or significant and equivalent professional teaching experience.
2. Acceptance into the music education program via the approval of a three-person panel of area faculty after appropriate interviews and/or auditions.
3. Completion of the following required courses with a "B" or above:
   3 hours MUSL 5371 Bibliography and Research
   3 hours MUSE 5396 Pedagogy of Vocal Music, OR MUSE 5397 Pedagogy of Instrumental Music
   2 hours MUST 5217 Theory of Twentieth Century Music
   2 hours MUSL 5211 Music History
   3 hours MUSA 5391 Applied Music
   3 hours MUSA 5335 Field Work in Music
   4 hours MUSA 5281 Applied Music OR MUSA 5261 Applied Music
   3 hours MUSA 5398 Thesis
   3 hours MUSA 5399 Thesis
   6 hours Electives (Approved upper-division undergraduate or graduate courses)

   32 hours TOTAL

No recital is required in the Music Education program. The thesis sequence includes the submission of a research thesis on a pedagogical topic. A final oral examination on the thesis is also required.

For Undergraduate and Graduate Students

The following undergraduate courses may be included in the Graduate Programs with permission of the Graduate Advisor.

MUST 3215 Analytical Process in Music (2-0)
MUST 3216 Theory Seminar (2-0)
MUST 3319 Advanced Composition (3-0)
MUSL 3219 Music in the Middle Ages and Renaissance (2-0)
MUSL 3220 Music in the Baroque Period (2-0)
MUSL 3221 Music in the Viennese Classical Period (2-0)
For Graduate Students Only

Applied Music (MUSA)

5261 Applied Lessons (0-0-2)

5361 Applied Lessons (0-0-3)
Used by Music Education majors to develop playing skills on a new secondary instrument. Supplemental Tuition and Coaching fee required.

5281 Applied Lessons (0-0-2)

5381 Applied Lessons (0-0-3)
It can be used as: 1) a secondary applied area for a performance major; 2) the principal applied area for a music education major; or 3) an elective by graduate students in fields other than music. Admission requires proficiency of upper-level undergraduate major as certified either by audition or the previous undergraduate upper-level number admission. Supplemental Tuition and Coaching fee required.

5391 Applied Lessons (0-0-3)
For performance majors. Requires acceptance into degree program by a three-person committee of area faculty. Supplemental Tuition and Coaching fee required.

Education (MUSE)

5331 Problems in Music Education (3-0)
Educational research in the elementary and secondary school fields. Students may conduct research on a problem of their own selection in a field of major interest. May be repeated for credit. Prerequisites: Twelve semester hours of advanced courses in Music and a bachelor's degree.

5396 Pedagogy of Vocal Music (0-0-3)
A study of pedagogical materials and methods for use in teaching vocal music at various instructional levels.

5397 Pedagogy of Instrumental Music (0-0-3)
A study of pedagogical materials and methods for use in teaching instrumental music at various instructional levels.

General (MUSG)

5335 Field Work in Music (0-0-3)
The student works individually on a selected topic with an assigned specialist in that area under supervision of area specialist. May be repeated for credit. Prerequisites: Twelve semester hours of advanced courses in Music and a bachelor's degree.

5336 Independent Study (0-0-3)
Independent academic study for students in the Master of Music Degree Program.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: MUSG 5398.

Literature and History (MUSL)

5211 Selected Topics in Music History (0-0-2)
Historical examination of important musical documents selected from the Medieval, Renaissance, Baroque, Classic, Romantic, and Contemporary periods.

5314 Music History Survey (3-0)
Music history survey from Middle Ages to twentieth century. Emphasis on stylistic identification of scores and performances. Will not count for Master of Music degree.

5371 Bibliography and Research (3-0)
A study of research methods and materials designed to equip the student for
scholarly research. Includes research project.

**Theory (MUST)**

**5217 Theory of Twentieth Century Music (2-0)**
Survey of important theoretical systems used to analyze twentieth-century music including those of Schoenberg, Hindemith, and Schenker.

**5313 Survey of Music Theory (3-0)**
Theory of the common practice period in western music. Includes figured bass realization, soprano harmonization, ear-training, harmonic analysis, and form.
Will not count for Master of Music degree.
COLLEGE OF LIBERAL ARTS

Philosophy

Web site at: http://www.utep.edu/philos/
113 Hudspeth Hall
Phone: (915) 747-6617
E-mail: philos@utep.edu

PROGRAM DIRECTOR: William Springer
GRADUATE FACULTY: Best, Haddox, Hall, Robinson, Springer

The Philosophy Department does not offer a graduate-level degree, but it regularly offers graduate courses that may be used towards graduate degrees in other disciplines.

For Graduate Students Only

Philosophy (PHIL)

5351 World Historical Philosophers (3-0)
A detailed study of the life, writings, and influence of one or a few selected philosophers. Usually Plato, Aristotle, Kant, and Hegel are treated in a sequence of offerings of this course. May be repeated when the course content varies.

5352 Basic Philosophical Issues (3-0)
Contemporary philosophical theories of perception and cognition, philosophical anthropology, the technological society, and new religious sensibilities have been topics.

5353 Independent Study (0-0-3)
Student research under supervision of the faculty. Prerequisite: Instructor approval.
COLLEGE OF LIBERAL ARTS

Political Science

Web site at: http://www.utep.edu/pols/
111 Benedict Hall
Phone: (915) 747-5227
E-mail: politicalscience@utep.edu

CHAIRPERSON: Roberto E. Villarreal
GRADUATE FACULTY: Barracca, Brenner, Coronado, Graves, Kruszewski, Longoria, Peterson, Price, Rocha, Soden, Staudt, Villarreal, Weaver, Webking

Programs

Political Science graduate students may pursue one of two graduate programs, choosing among the Master of Arts degree and the Master in Public Administration degree.

Master of Arts in Political Science

Basic Requirements for Admission to the MA Program

1. Bachelor's degree from an accredited college or university with a degree in Political Science or a related area
2. Satisfactory GRE or GMAT score as determined by the Department's Graduate Studies Committee
3. Satisfactory GPA (3.0) in all upper-division undergraduate work

Specific Requirements for the MA Degree

The Master of Arts in Political Science requires the successful completion of 30 semester hours: 24 hours of course work and 6 hours for the thesis. There must be a minimum of 21 hours, including POLS 5398 and POLS 5399, of graduate-level courses. No more than 9 hours of eligible upper-division undergraduate courses, taken for graduate credit, are permitted in a program. No more than 6 of these hours may be included in a major.

The MA Degree Plan shall include:

1. Research Preparation (3 hours) POLS 5300 Research Methods in Political Science
2. Three of the following seminars from among five general fields: (9 hours)
   a. POLS 5310 Political Participation
   b. POLS 5320 Public Law
   c. POLS 5330 International Politics OR POLS 5333 Comparative Politics
   d. POLS 5342 American Political Thought
   e. POLS 5351 Administrative Theory
3. Four electives from among the specialized graduate-level seminars offered in the sub-fields of Political Science; or, with the advice of the Graduate Advisor, 2 electives from Political Science and 2 from a related minor field, or 1 from Political Science and 3 from the minor field (12 hours)
4. Two Thesis courses: (6 hours)
   POLS 5398 Thesis
   POLS 5399 Thesis

Total Hours: 30

Master in Public Administration

The Master in Public Administration (MPA) degree provides professional education for students interested in public service careers. The program is designed to stress the knowledge, skills, values, and behavior essential to the successful public servant. Some flexibility in curriculum is permitted to meet the diverse educational needs of pre-entry and in-career students, changing career students, and students in different career specialties in public administration. The curriculum components are designed to produce professionals capable of intelligent and creative analysis, communication, and action in the public sector context.

Basic Requirements for Admission to the MPA Program

1. Bachelor's degree from an accredited college or university
2. Satisfactory GRE or GMAT score as determined by the Department's Graduate Studies Committee
3. Satisfactory GPA (3.0) in all upper-division work
4. All students must have the course equivalent of 3 hours of Public Administration and 3 hours of American Government as a prerequisite to the graduate seminars in the MPA Program
5. In-career students may be requested to submit vitae of their professional work and letters of recommendation to complete the evaluation for
admission and eligibility to enroll in certain courses

Specific Requirements for the MPA Degree
Completion of at least 42 semester hours of course work consisting of the following:

1. At least 27 hours of courses in the theoretical, methodological, and technical components of public management
   - POLS 5300 Seminar in Research Methods in Political Science
   - POLS 5350 Seminar in Administrative Theory
   - POLS 5351 Seminar in Advanced Research Methods in Public Administration
   - POLS 5352 Seminar in Financial Management Administration
   - POLS 5353 Seminar in Human Resources Management
   - POLS 5354 Seminar in Administrative Law and Regulation
   - POLS 5358 Administrative Ethics and Responsibilities
   - POLS 5362 Seminar in Public Sector Accounting
   - POLS 5364 Seminar in Public Policy Analysis
   Selected MBA core courses may be substituted for some of these courses, depending on course offerings by each program. Advance approval of MPA director is required for substitution.

2. Completion of an additional 12 hours of approved electives. No more than 6 hours of electives can be at the undergraduate level in courses approved for graduate-level credit.

3. Satisfactory performance in a comprehensive written final examination of six hours in length in the core subject areas of public administration. Students are required to enroll in and successfully complete POLS 5367 before being permitted to take the exam. (POL 5367 is not included in either the 27 hours of requirements or the 12 hours of electives.) A student may repeat the comprehensive exam only once if failed and must also re-enroll in POLS 5367 before doing so.

4. Upon admission, the MPA Director may direct students who do not already possess significant administrative experience to enroll in POLS 5366 (Internship in Public Administration) as part of their 12-hour elective requirement.

Those students who want to take courses in Criminal Justice to satisfy the 12-hour elective requirement for the MPA degree must take the following courses:
- CRJ 5300 Seminar in Criminal Justice Administration
- CRJ 5308 Seminar in Juvenile Justice
- CRJ 5320 Seminar in Corrections
- CRJ 5340 Seminar in Selected Topics

Two Degree Option - MPA/MBA
Students may also enroll in a two-degree option MPA-MBA program. The objective of this program is to permit students with broad interest in both the public and private sectors to double register in both the MPA and MBA programs. With the increasing interdependence of the public and private sectors, this option is attractive to those students wishing to pursue careers in positions responsible for working with their counterparts in private or public organizations. In order to be admitted into the two-degree option, the applicant must specify the option at the time of application to the Graduate School. Students who wish to enter either the MPA or MPA-MBA programs should consult with the Director of the MPA program with regard to admission, required courses, approved electives, petition for candidacy, and comprehensive examinations.

The program consists of 60 semester hours of graduate study, of which 30 hours are in areas of Public Administration and 30 hours in Business Administration.

Specific Requirements for the MPA/MBA Two-Degree Option

1. Students must meet all requirements for admission to both programs.
2. The same leveling work required of an MBA student without a BBA will be required, subject to the waiver procedures currently operative in the MBA program.
3. The program consists of 27 semester hours of core MPA courses, 24 semester hours of core MBA courses, 6 semester hours of graduate business electives, POLS 5367, and a comprehensive written exam in the core subject areas of public administration, plus any additional required courses. The number of hours necessary to complete the two-degree option will vary depending upon each student's background and previous academic work.
4. The core curriculum in each of the separate degree programs must be satisfactorily completed.
5. Electives must be approved by the academic advisor of both programs; upon such approval, the core courses of one program may be used to meet the elective requirements of the other.
6. Admission and continuance decisions are handled separately by the MPA and MBA graduate committees and by the Graduate School.

Registration
No student may be registered as a graduate student of the Department of Political Science without the advice of, and signed approval of his/her program
by the Graduate Advisor for MA students or the Advisor for the MPA program for MPA students. This applies not only to the initial registration, but to all subsequent enrollments.

Satisfactory Performance
Satisfactory performance in all graduate programs of the Department of Political Science is defined as maintaining a 3.0 GPA. A student in any of these programs receiving a grade of "C" or lower in two courses taken for graduate credit will be dismissed from the graduate program.

For Undergraduate and Graduate Students
The following undergraduate courses have been approved for graduate credit. Enrollment in them must be in consultation with the graduate advisor.

POL 3310 Political Socialization and Political Culture
POL 3313 Public Opinion and Public Policy
POL 3332 Political Geography
POL 3333 State and Society
POL 3353 State Administration
POL 3410 The Legislative Process
POL 3411 The Presidency
POL 3414 Women, Power, and Politics
POL 3421 Philosophy of Law
POL 3431 Relations of Post-Communist States
POL 3433 European Politics
POL 3434 Regional Politics
POL 3436 Caribbean and Central American Politics
POL 3438 Relations Between the United States and Mexico
POL 3441 Democracy
POL 3442 Contemporary Political Thought

For Graduate Students Only
All seminars may be repeated for credit when the topic varies.

Political Science (POLs)

American Political Processes

5310 Seminar in Political Participation (3-0)
Public political behavior in parties, interest groups, and elections.

5311 Seminar in Racial, Ethnic, Gender Politics in America (3-0)
An analysis of race, ethnicity, class, and gender in American politics, with emphasis on such concepts as multi-culturalism, assimilation, alienation, and separatism.

5312 Seminar in Political Leadership (3-0)
A study of the theoretical and practical foundations of leadership behavior, including the styles and interactions, confrontational as well as collaborative, of persons in various positions of political authority.

5313 Seminar in Political Communication (3-0)
The study of the formation of shared public perceptions through various media and the analysis of their political effects.

5314 Seminar in Urban Politics (3-0)
Politics in the urban environment, with emphasis upon the effects of heterogeneity and pluralism.

Public Law

5320 Seminar in Public Law (3-0)
Covers a wide range of substantive and/or procedural topics in public law and/or the sociological analysis of the functioning of law.

5321 Seminar in Judicial Process and Behavior (3-0)
An analysis and evaluation of the judicial process and trial and appellate judges' behavior in state and federal courts, including the organization of courts, judicial recruitment and appointment, judicial decision making, and the implementation and effects of judicial policies.

5322 Seminar in Comparative Law (3-0)
A study of the differences in substance, procedure, methods, and ways of thinking between the United States and countries of the civil law tradition (most European countries, Mexico, and Latin American countries).

Comparative and International Politics

5330 Seminar in International Politics (3-0)
Examines the political structures and the interactions that characterize the global nation-state political system.

5331 Seminar in International Organizations and International Law (3-0)
Focuses on the creation and operation of international organizations, both state and non-state based, and on the continuing evolution of international law.

5332 Seminar in Foreign Policy Decision Making (3-0)
Examines in detail the process of decision making within individual international actors and the cumulative effects of such decisions.

5333 Seminar in Comparative Politics (3-0)
Study of comparative political systems, including comparative political cultures. Emphasis on the methodology of comparative politics.

5334 Seminar in the Politics of Developing Countries (3-0)
Focuses on the politics and economics of developing nations in global context.

5335 Seminar in Post-Communist Transition (3-0)
Focuses on the politics and economics of selected countries undergoing post-communist transition.

5336 Seminar in Southwestern Border Politics (3-0)
United States-Mexico relations as they affect the international frontier, with emphasis upon political leadership, ethnicity, and institutions.

5337 Seminar in Latin American Politics (3-0)
A study of the political systems of Latin America. Offerings of the course may focus upon one country, regions, or all of Latin America.

5338 Seminar in African Politics (3-0)
Focuses on the politics and economics of Africa.

5339 Seminar in Comparative Politics of U.S. Foreign Policy (3-0)
Study of the political systems of the United States and their international relations.

5340 Seminar in Ancient and Medieval Political Philosophy (3-0)
Study of the works of major western political philosophers of the ancient and medieval periods.

5341 Seminar in Modern Political Philosophy (3-0)
Study of the works of major western political philosophers from the modern period.

5342 Seminar in American Political Thought (3-0)
Study of American political thought with special focus upon the founding.

Political Theory

5343 Seminar in Political Theory (3-0)
Study of political theory with special emphasis on the works of major western political philosophers.

Public Administration

5350 Seminar in Administrative Theory (3-0)
Basic introduction to the major theories and approaches which form the basis for the practice of public administration. ( MGMT 5311 may be substituted, with permission of MPA advisor.)

5351 Seminar in Advanced Research Methods in Public Administration (3-0)
Practical in-the-field application of quantitative and methodological techniques by government agencies, with special emphasis on microcomputers. The seminar usually will be taken during the second semester of graduate study.

5352 Seminar in Financial Management and Administration (3-0)
Analysis of the concepts and theories of public fiscal administration. Emphasis is placed on budgeting, accounting, purchasing, and debt administration. ( FIN 5305 may be substituted, with permission of MPA advisor.)

5353 Seminar in Human Resources Management (3-0)
The study of the social, political, and legal dimensions of public personnel management with emphasis on human resources, development, and implementation. ( MGMT 5322 may be substituted, with permission of MPA advisor.)

5354 Seminar in Administrative Law and Regulation (3-0)
The legal problems of the administrative process, including the uses of administrative discretion, fact-finding, and hearing procedures, and the methods and scope of judicial review of administrative decisions.

5355 Seminar in Comparative Public Administration (3-0)
A comparative view of government administration in developed and developing countries. Examines both the effects of culture on government bureaucracy and the efforts of governments to promote socioeconomic development. May include emphasis on U.S.-Mexico border administration.

5356 Seminar in Non-Profit Sector Administration (3-0)
Examines the special administrative challenges in the nonprofit sector, with attention to practical management and problem-solving. Includes topics such as the nature and scope of the nonprofit sector, fund raising, volunteer
management, government and public relations, and the organization of nonprofit institutions.

5357 Women and Men in Management (3-0)
Analyzes gender diversity in public and private institutions.

5358 Administrative Ethics and Responsibility (3-0)
The course deals with ethical issues that face public administrators—responsibilities, accountability, discretion, the public interest, professionalism, codes of ethics, and corruption. It focuses on applied ethics and the reasoning process administrators can use to analyze and evaluate ethical dilemmas.

5359 Seminar in Regional and Urban Planning (3-0)
Covers planning topics associated with satisfying area-wide service needs in urban and regional environments. Topics may include land-use regulations, capital facilities siting, and transportation planning.

5360 Seminar in Urban Administration (3-0)
Public Administration at the level of service delivery with emphasis upon the management and policy problems facing local agencies.

5361 Seminar in Political Economy (3-0)
Teaches how political and economic theory, tools, and techniques can be used to analyze public policy issues and problems. Substantive topics may vary with instructor.

5362 Seminar in Public Sector Accounting (3-0)
Examination of the public sector and non-profit accounting process including the preparation of annual financial reports, transaction analysis, auditing, and cost analysis for grants and service efforts.

5363 Seminar in Intergovernmental Relations (3-0)
Covers the interrelationships among international, national, state, and/or local governmental institutions in the policy making, executive, and/or administrative processes. The special issue of states and communities situated on international borders is also discussed.

5364 Seminar in Public Policy Analysis (3-0)
The study of the politics of the policy making process. Emphasis is on the actors involved in public policy-making, their interactions, and the outputs of the policy process.

5365 Seminar in Policy and Decision Making (3-0)
The use of quantitative decision tools and formal modeling in legislative, executive, and judicial policy making and evaluation processes.

5366 Internship in Public Administration (0-0-20)
Practical internship experience with a public or nonprofit sector agency, selected in consultation with the MPA program advisor. The experience consists of at least twenty hours of work per week with the selected agency. The internship will be under close supervision by the agency and the MPA program advisor.

5367 Comprehensive Integration of Public Administration (3-0)
The course is designed to prepare the student for the final comprehensive examination in public administration. Key management concepts, issues, and value concerns in the subject areas of public administration are reviewed and integrated. This course is taken in the student’s final semester in the MPA program.

General

5300 Seminar in Research Methods in Political Science (3-0)
Basic introduction to quantitative and methodological techniques in the field for students in both the MA and MPA programs. Required of all graduate Political Science majors. The seminar usually is taken during the first semester of graduate study. (MPA students may substitute ECON 5301 or QMB 5311 with the permission of the MPA advisor).

5380 Selected Problems in Government (3-0)
Independent study, research, and writing on a topic agreed upon by student and professor.

5398 Thesis (0-0-3)
As part of this course, the student will successfully prepare and defend a prospectus for the MA thesis. The prospectus must be approved by the student’s thesis committee, and failure to meet this requirement within two long semesters will preclude continuation of the student in the MA program. Prerequisite: Instructor approval.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisites: POLS 5398 and instructor approval.
Psychology
Web site at: http://www.utep.edu/psyc/
112 Psychology Building
Phone: (915) 747-5551
E-mail: psychology@utep.edu

CHAIRPERSON: Judith P. Goggin
GRADUATE FACULTY: Cohn, Coleman, Crites, Francis, Goggin, Hosch, Lucker, Malpass, Moreira, Moss, Radhakrishnan, Schneider, Tomaka, Wiebe, Wood, Zárate

General Requirements for Graduate Programs in Psychology

Admissions Requirements

Before being admitted into any graduate program, either MA or Ph.D., the applicant’s undergraduate preparation must include a course in psychological statistics and 12 hours of upper-division courses in psychology including a course in experimental psychology.

Although applications are accepted by the Graduate School throughout the year, decisions regarding applications for admission to the graduate programs in Psychology are made once per year, for the fall term. Applicants must submit all required documents by February 1. Applications not completed by February 1 will be considered for admission for the following year. Decisions regarding admissions are made by the Psychology Graduate Program Committee and the Graduate School. Admission is competitive.

In addition to the General Requirements for Admission into a Graduate Program established by the Graduate School, the Psychology Department requires that specific documents be sent directly to the Graduate Program Director to complete the application process for graduate programs in Psychology. The address to which these documents must be sent is:

Graduate Program Director
Department of Psychology
The University of Texas at El Paso
El Paso, Texas 79968-0553

The documents required are as follows:

1. A copy of the completed application for admission submitted to the Graduate School
2. A copy of all transcripts submitted to the Graduate School
3. A copy of official GRE aptitude test scores (note: the Psychology Department requires GRE scores of all applicants regardless of other advanced degrees)
4. A two to three-page personal statement outlining your experiences, skills, training, and career goals and how the program will benefit your professional development
5. Three letters of reference from individuals who can evaluate your potential for graduate academic work and future professional contributions

Departmental Academic Standards

In addition to the University requirement that all students admitted into graduate programs must maintain an overall cumulative GPA of 3.0 or better in all upper-division and graduate courses, the Department of Psychology requires in all graduate programs that: (1) students earn a grade of "B" or better in those courses that are taken to meet the minimum core course requirements; and (2) students who receive a grade of "C" or lower in two courses be dismissed from the program.

Students who earn a grade of "C" or lower in a required core course must retake the course the next time it is offered and earn a grade of "B" or better. A student who fails in two attempts to earn a grade of "B" or better in a required core course will be dismissed from the program.

Students may not count more than 6 hours of approved upper-division undergraduate courses for graduate credit. The following courses are approved for undergraduate and graduate credit:

PSYC 4301 Psychological Testing (3-0)
PSYC 4309 History and Systems of Psychology (3-0)
PSYC 4311 Advanced Topics in Developmental Psychology (3-0)
PSYC 4312 Advanced Abnormal Psychology (3-0)
PSYC 4317 Advanced Statistics (3-0)
MA Programs

The department offers two concentrations leading to the MA degree: General Experimental Psychology and Clinical Psychology. The MA in General Experimental Psychology requires the completion of 30 credits, including 24 hours of course work and 6 hours of thesis. The MA in Clinical Psychology requires the completion of 45 credits, including 33 hours of course work, 6 hours of internship, and 6 hours of thesis. Information on required courses, which may change from year to year, may be obtained from the Graduate Program Director.

All MA students are required to pass both a written and an oral examination. The written preliminary examination is given twice a year, in the Fall and Spring semesters. Students must complete the written examination prior to beginning the thesis. The oral examination is the final defense of the thesis before the thesis committee members.

Ph.D. Program

The Ph.D. is designed to train research psychologists to work in applied psychology. A special focus of this research is directed toward bilingual, bicultural issues as a result of the University's location on the U.S.-Mexico border. Candidates are required to take a core curriculum consisting largely of quantitative, experimental design, methods, and psychometrics courses. In addition, two proseminars in the core curriculum provide breadth in students' knowledge of sensation and perception, cognition, physiological, developmental, personality, and social psychology.

Students must select one of two areas of concentration: (1) Psychology and Health or (2) Human Behavior in Organizations. Field placement and dissertation topic must reflect the concentration chosen.

Course Requirements

All Ph.D. candidates, regardless of their area of concentration, are required to complete concentration core courses that are designed to provide students with specific knowledge and skills that will prepare them for field placements in applied settings. Students are required to complete 78 semester hours: 21 hours of core courses, 18 hours of concentration courses, 9 hours of research (with at least two faculty members), 6 hours field placement, 6 hours of dissertation, and 18 hours of electives. A research dissertation (PSYC 6320 and PSYC 6321) is required of students. Students must register for PSYC 6320 for the first 3 hours of dissertation work and for PSYC 6321 thereafter until the dissertation is complete.

The core courses (21 semester hours) required for all Ph.D. candidates are:

PSYC 5100 Seminar on Current Topics
PSYC 5310 Statistics I - Applied Correlation and Regression
PSYC 5311 Statistics II - Experimental Design
PSYC 5331 Cross-Cultural Research Methods
PSYC 5334 Field Methods in Psychology
PSYC 5404 Proseminar I
PSYC 5405 Proseminar II

The remaining 57 credits will be earned in concentration electives (12), research applications (9), field placement (6), dissertation (6), and general electives (18).

Concentration Electives (18 hours):
Concentration electives, consistent with the student's interests, should be chosen from the courses listed below and must be approved by the Graduate Advisor. Any substitutions must be approved by the Graduate Advisor.

PSYC 5306 Attitudes and Attitude Measurement
PSYC 5309 Seminar in Psychopathology
PSYC 5312 Program Evaluation
PSYC 5315 Psychopharmacology
PSYC 5321 Seminar in Personality Assessment
PSYC 5322 Theories and Methods of Psychotherapy
PSYC 5323 Psychometrics
PSYC 5325 Special Topics in Health Psychology
PSYC 5326 Seminar in Industrial/Organizational Psychology
PSYC 5330 Special Topics in Organizational/Social Behavior
PSYC 5333 Seminar in Intellectual and Neuropsychological Assessment
PSYC 5335 Special Topics in Research Design and Data Analysis
PSYC 5337 Special Topics in Industrial/Organizational Psychology
PSYC 5338 Personnel Selection, Placement, Evaluation, and Training
PSYC 5342 Special Topics in Psychology and Law
PSYC 5355 Seminar in General Psychology

It is recommended that students interested in a field placement in industry
complete PSYC 5330 and 5338 prior to their placement.

Language Requirement

Students must demonstrate written and oral proficiency in two languages, English and Spanish. Alternative languages must be approved by the Graduate Program Committee. Course work taken to complete the language requirement cannot be counted toward the seventy-eight (78) credit hours required for the Ph.D. degree.

Transfer Students with Graduate Credit

Students accepted into the Ph.D. program with graduate credit from The University of Texas at El Paso (including the Psychology Department) or from another university must satisfy the same requirements as those beginning their Ph.D. graduate training in Psychology at UTEP without previously earned graduate credits. The student may petition the Graduate Program Committee to accept a maximum of 24 hours of graduate credit (excluding thesis hours) completed at UTEP or another institution. Approved credits will appear as Advanced Standing Credit on the Preliminary Plan of Study. Students who have taken PSYC 5301 (Research Applications) from UTEP prior to admission to the Ph.D. program may request that a maximum of 3 credit hours for this course be included in the 24 hours that may be counted toward their Ph.D. degree as long as those hours were not used to meet requirements for a previous or separate degree.

The student must make a written request for Advanced Standing Credit to the Graduate Program Committee. It is the student's responsibility to provide all evidence and material necessary for the Graduate Program Committee to review the request. Advanced Standing Credits are subject to final approval from the Graduate School.

Maximum Time for Completion of the Ph.D. Degree

Students in the Ph.D. program in Psychology must complete all requirements for a Ph.D. within one eight-year period. The eight-year period begins with the term of the first course listed on the student's degree plan. Use of advanced standing will proportionately decrease this time period but in no case will be less than six years of study.

Written Examinations

Preliminary Exam - A written preliminary examination will be given after the student's second year of study. A student may retake the written preliminary examination one time. If not passed in two attempts, the student will be dismissed from the program. Students are not permitted to register for PSYC 6320 (dissertation) until they have passed the written preliminary exam.

Written Comprehensive Exam - Ph.D. candidates must pass a written comprehensive examination that will be constructed and graded by the student's comprehensive examination committee. Students may retake the written comprehensive examination one time. If students do not pass the written comprehensive examination in two attempts, they will be dismissed from the program.

Ph.D. Oral Examinations

A dissertation proposal must be defended orally before the student's committee prior to collecting data. In addition, students must successfully defend their dissertation during a final oral examination conducted by the dissertation committee. The final oral examination may include committee examination on any appropriate material.

Field Placements

Field placements are arranged and administered by the Coordinator of Field Placements and the Field Placement Committee. Students are required to complete six (6) credit hours of field placement (PSYC 6305). Twenty (20) clock hours per week for one long semester (Fall or Spring) or for a summer term (June 1 through August 31) is equal to 3 credit hours of Field Placement. Thus, students may fulfill the field placement requirement by (1) working 40 hours per week for one long semester or for the summer term or (2) by working 20 hours per week for two long semesters or for one summer term and one long semester.

Microfilming of Dissertation

The doctoral candidate who has successfully completed all requirements for the degree is required to pay the cost of microfilm reproduction of the complete dissertation. The signed original copy (unbound) of the doctoral dissertation is sent from the Office of Graduate Student Services to University Microfilms, Ann Arbor, Michigan, for reproduction.

The student must also submit to the Graduate School two copies of an abstract,
not to exceed 350 words in length (double-spaced) that has been approved in final form by the supervising committee. This will be published in Dissertation Abstracts International.

Publication by microfilm does not preclude subsequent publication of the dissertation, in whole or in part, as a monograph or in a journal. Copyright at the author’s expense may be arranged, if desired, by completing a special form available in the Graduate Student Services Office. In order to protect patent or any other rights, the Graduate Student Services Office may be requested to delay publication by microfilm for a period of one year. This request must be supported by a written recommendation of the supervising professor.

For Graduate Students Only

Psychology (PSYC)

5100 Seminar on Current Topics (1-0)
Contemporary problems in various research areas will be discussed and recent applied research programs will be examined. Special methodological requirements for field evaluation and other non-experimental research approaches will be emphasized. All psychology doctoral students are required to take this course. Prerequisite: Department approval.

5301 Research Applications (0-0-3)
Supervised research in designated laboratories. Students may repeat course for credit. Prerequisite: Instructor approval. Psychology Research Course fee required.

5306 Attitudes and Attitude Measurement (3-0)
Considers issues relevant to psychological construct assessment, including attitudes, emotion, and personality.

5309 Seminar in Psychopathology (3-0)
An examination of the research related to problems in etiology, diagnosis, and prognosis of the major disorders.

5310 Statistics I: Applied Correlation and Regression Methods (3-0)
Reviews correlation techniques, simple and multiple regression, and discusses their applications for psychological research in applied settings. Prerequisite: PSYC 4317 or equivalent.

5311 Statistics II: Experimental Design (3-0)
Consideration of problems of analysis and design commonly encountered in psychological research. Prerequisite: PSYC 4317, PSYC 5310, or equivalent.

5312 Program Evaluation (3-0)
Examines issues in evaluation research design, implementation, utilization, and ethics. Case studies and class activities provide applied experience.

5315 Psychopharmacology (3-0)
A study of current topics and recent developments in the biochemical basis of psychopathology and related strategies of psychopharmacological intervention.

5321 Seminar in Personality Assessment (3-0)
Introduction to methods and issues in the evaluation of personality and to the projective and objective instruments to assess personality. Prerequisite: PSYC 4301 or instructor approval.

5322 Theories and Methods of Psychotherapy (3-0)
An analysis of theory, technique, and research methods used in various current psychotherapies. Prerequisite: Instructor approval.

5323 Psychometrics (3-0)
Principles of psychological evaluation, including intellectual, academic, neuropsychological, personality, attitude, and interest measures; reliability and validity; principles, methods, and statistical procedures employed in developing new psychometric instruments, especially with respect to different cultural/ethnic minorities.

5325 Special Topics in Health Psychology (3-0)
Examines relationships among psychological factors, physical health, and subjective well-being. May be repeated for credit when topics vary.

5326 Seminar in Industrial/Organizational Psychology (3-0)
An introductory graduate foundation course covering the application of psychological principles, methods, and knowledge in the workplace. Topics may include individual differences in the workplace, employee selection and training, organizational development, performance measurement and evaluation, employee motivation, leadership, job attitudes, groups and conflict in organizations, and cross-cultural organizational psychology.

5330 Special Topics in Organizational/Social Behavior (3-0)
Theoretical and applied approaches to individual and group behavior. Topics may include organizational and group theory, organizational culture and climate,
leadership, jury/group decision making, intra- and intergroup conflict, and cross-cultural issues related to the above processes. May be repeated for credit when topics vary.

5331 Cross-Cultural Research Methods (3-0)
Consideration of the difficulties confronting causal inference in cross-cultural comparisons. The concept of equivalence is examined as it applies to populations, tests and indicators, and controlled manipulations. The role of theory in developing appropriate research strategies is emphasized. A broad range of research methods are examined for their special contributions and difficulties in cross-cultural comparisons.

5333 Seminar in Intellectual and Neuropsychological Assessment (3-0)
Techniques of intellectual and neuropsychological assessment. Administration of major intellectual and neuropsychological instruments and interpretation and reporting of results. Introduction to neuropathological syndromes. Prerequisite: PSYC 4301 or instructor approval. Course fee required.

5334 Field Methods in Psychology (3-0)
Design and implementation of field research, including observational methods, experiments and quasi-experimental designs, and program evaluation. Solutions to specific, commonly occurring design and statistical problems are emphasized.

5335 Special Topics in Research Design and Data Analysis (3-0)
An advanced course in data analysis and research design. Topics may include structural equation modeling (exploratory and confirmatory factor analysis, multiple group confirmatory analysis), meta-analysis, or the selection and implementation of an appropriate data analysis plan for a grant or research proposal. Prerequisites: PSYC 5310 and PSYC 5311.

5337 Special Topics in Industrial/Organizational Psychology (3-0)
Topics may include negotiation and conflict resolution, cross-cultural issues, judgment and decision making, job attitudes and behaviors, organizational climate and values, motivation, leadership, training, career development, and consumer behavior. May be repeated for credit when topics vary.

5338 Personnel Selection, Placement, Evaluation, and Training (3-0)
Examines principles in the development of selection, placement, performance evaluation, and employee training. Topics may include issues in selection and placement, performance evaluation and evaluation of training programs, methods of determining reliability and validity of selection, evaluation and training procedures, cross-cultural and legal issues. Prerequisite: PSYC 5326 or instructor approval.

5342 Special Topics in Psychology and Law (3-0)
Focuses on selected issues and problems where psychology contributes to and has implications for the legal system and human behavior in relation to the legal system. May be repeated for credit when topic varies.

5355 Seminar in General Psychology (3-0)
Advanced study of contemporary problems and issues in selected topics in psychology. May be repeated with different instructors. Prerequisite: Department approval.

5360 Clinical Internship (0-0-6)
Supervised experience with clinical techniques in an approved agency other than the department's clinic. Each 150 clock hours is equivalent to three credit hours. May be repeated until 9 hours are accumulated; however, no more than nine credit hours of PSYC 5360 or a combination of PSYC 5360 and PSYC 5370 will count towards the MA degree in Clinical Psychology. Grades in this course will not be utilized in computing grade point average. Prerequisite: Instructor approval. Psychology majors only. Pass/Fail grading option.

5398 Thesis (0-0-3)
Initial work on the thesis. Psychology Research Course fee required.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: PSYC 5398. Psychology Research Course fee required.

5404 Proseminar I: Sensation/Perception; Cognition; Physiological Psychology (4-0)
Survey of current theories, methods, and research involving sensory and perceptual mechanisms; human cognition and information processing; brain function related to behavior.

5405 Proseminar II: Developmental, Personality, Social, and Differential Psychology (4-0)
Survey of the basic principles, current theories, methodology, and research in developmental, personality, social, and differential psychology. Cross-cultural research and theories appropriate to each field will be emphasized.

For Doctoral Students Only
Psychology (PSYC)

6305 Field Placement (0-0-3)
Professional experience in an applied setting. The location and extent of the activity involved must be approved by the graduate studies committee.

6320 Dissertation (0-0-3)
Initial work on the dissertation. Psychology Research Course fee required.

6321 Dissertation (0-0-3)
Continuous enrollment required while work on dissertation continues.
Prerequisite: PSYC 6320. Psychology Research Course fee required.
COLLEGE OF LIBERAL ARTS

Sociology
Web site at: http://www.utep.edu/soci
109 Old Main
Phone: (915) 747-5740
E-mail: soci@utep.edu

CHAIRPERSON: S. Fernando Rodriguez
GRADUATE ADVISOR: Martha Smithey

PROFESSORS EMERITI: Julius Rivera, Elwyn Stoddard

GRADUATE FACULTY: Campbell, Carmichael, Daudistel, Howard, Lucas, Morales, Peterson, Rodriguez, Romero, Smithey

The Department offers a Master of Arts degree in Sociology.

Requirements for Admission

1. Twelve semester hours of advanced courses in Sociology
2. A bachelor's degree from an accredited U.S. university or proof of equivalent education at a foreign institution
3. Graduate standing
4. Consent of the graduate advisor

The units presented should include theory and methods. Official GRE scores should be sent directly to Graduate Student Services.

Requirements for the Degree

The following are the requirements of the 30-hour MA degree program:

1. At least 24 of the 30 eligible hours will be in graduate-level courses (that is, only six hours of upper-division undergraduate work will be allowed for graduate credit).
2. Each candidate must take SOCI 5100, 5101, 5102 (Pro-seminar on Current Problems and Topics), SOCI 5312 (Advanced Measurement and Inference), SOCI 5320 (Methodology), SOCI 5325 (Classical Social Theory), and SOCI 5326 (Contemporary Social Theory), plus nine semester hours from the list of courses below.
3. Enroll for at least one semester in SOCI 5398 (Thesis I) and SOCI 5399 (Thesis II) and successfully propose and defend the thesis before a committee while enrolled in SOCI 5399.
4. The student will be encouraged, but not required, to take 6 hours course work in some discipline other than Sociology as a minor; if the student elects to take a minor in another department or discipline, course work in Sociology will be reduced accordingly.
5. The student will submit a suitably bound thesis which must be approved by the student's committee and placed on file in the Department and two additional bound copies in Graduate Student Services.

Students will be allowed only one grade lower than a "B" in course work taken for graduate credit, and must maintain a minimum 3.0 GPA.

For Undergraduate and Graduate Students

Sociology

SOCI 3306 Cultural Diversity (3-0)
SOCI 3311 Methods of Research (3-0)
SOCI 3327 Majority/Minority Relations in the United States (3-0)
SOCI 3333 Juvenile Delinquency (3-0)
SOCI 3341 Special Undergraduate Topics (3-0)
SOCI 3348 Criminology (3-0)
SOCI 3361 Contemporary Mexican Culture (3-0)
SOCI 3362 Medical Sociology (3-0)
SOCI 3370 Sociology of Sex Roles (3-0)
SOCI 3381 Complex Organizations (3-0)
SOCI 4301 General Sociological Theory (3-0)
SOCI 4347 Population Analysis and Problems (3-0)
SOCI 4390 Independent Study (0-0-3)

Anthropology

ANTH 4370 Studies in Anthropology (3-0)

For Graduate Students Only

Sociology (SOCI)

5100 Pro-Seminar on Current Problems and Topics (1-0)

Contemporary problems and research in the discipline and in our graduate training program are discussed. The emphasis is on acclimating each student to the demands of graduate education. Further emphasis is on the role of the
graduate student as teaching assistant.

5101 Pro-Seminar on Current Problems and Topics (1-0)
Contemporary problems and research in the discipline and in our graduate training program are discussed. The emphasis is on developing and articulating research topics. Further emphasis is on fostering an interest in doctoral-level education.

5102 Pro-Seminar on Current Problems and Topics (1-0)
Contemporary problems and research in the discipline and in our graduate training program are discussed. The emphasis is on developing and articulating research topics. Further emphasis is on fostering an understanding of the fit between the program and employment in the public and private sectors.

5312 Seminar in Advanced Measurement and Inference (3-0)
Introduction to techniques of multivariate analysis commonly used in sociology including multiple regression, logistic regression, regression diagnostics, and non-parametric techniques.

5320 Seminar in Methodology (3-0)
The field research process from initial project proposal to the final report including the integration of the planning, execution, and analysis phases.

5325 Classical Social Theory (3-0)
An examination of the pre-1950's social theories and their roots in philosophical traditions. The course has three objectives: first, identifying connections between philosophy and social theory; second, examining how social theory develops into research traditions; and third, acquiring a sense of how classical theory evolved within and articulated these traditions.

5326 Contemporary Social Theory (3-0)
An examination of post-1950's social theorists and their roots in philosophical and social theoretical traditions. The course has four objectives: first, identifying connections between philosophy and social theory; second, examining the linkages between different research traditions; third, developing a sense of how contemporary theory developed within and articulated these traditions; and fourth, examining the implication of contemporary theory for social policy and practice.

5330 Social Inequality (3-0)
An overview of how sociologists understand and theorize about social inequality; emphasis is on workplace, race, and gender inequalities.

5340 Seminar in Demography (3-0)
Causes and consequences of trends in fertility, mortality, and migration.

5341 Special Graduate Topics (3-0)
A course organized to investigate special topics and current issues of significance to sociologists. May be repeated for credit when content varies.

5346 Seminar in the Sociology of Law (3-0)
A broad and thorough grounding in the sociological literature on the role of law in society, law as a social institution, and legal actors as social actors. Equal attention is given to social theory and empirical research. Prerequisite: SOCI 5325.

5348 Seminar in Criminology (3-0)
Social context of criminal law and criminal justice; theories of crime and treatment programs.

5355 U.S.- Mexico Borderlands in Change (3-0)
The study of social, economic, and technological change in the Borderlands. Transborder networks and nationalistic policies are compared; the border maquiladora industry is studied.

5362 Seminar in Health Services Delivery (3-0)
Health and medical occupations and the organization of care, cure, and prevention systems; social and cultural factors affecting sick roles and community health policies and practices.

5365 Seminar in Sociology of Education (3-0)
Application of sociological theory and research to American education; present educational problems and possible solutions.

5375 Seminar in Southwestern Cultures (3-0)
An anthropological, ethnohistorical, and sociological examination of salient Southwestern cultures: Mexican-Americans, Indian societies, Blacks, Orientals, etc.

5390 Individual Studies (0-0-3)
Prerequisite: Department approval.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite:
SOCI 5398.
Theatre Arts

Chairperson: Charles Fensch  
Graduate Faculty: Eastman, Farah, Yeatman

The Theatre Arts Department offers a Master of Arts with a major in Theatre Arts.

Requirements for Admission

1. Bachelor's degree from an accredited college or university  
2. Acceptable scores on the Graduate Record Examination (GRE)  
3. Twelve approved advanced semester hours (3300, 4300) of undergraduate credit in Theatre Arts

Requirements for Degree

1. Each candidate for the MA degree will be required to make a satisfactory score on a comprehensive examination; at the discretion of the department chairperson, a portion of the examination may be a performance or a laboratory demonstration.  
2. Majors in Theatre Arts must take a minimum of 18 semester hours in Theatre Arts included in a total of 30 semester hours, of which at least 21 hours must be in courses numbered 5300-5399. Students in Theatre Arts must do either a research or a production thesis, for which they will receive 6 hours of credit (THEA 5398 - THEA 5399: Thesis) toward these minimum requirements.

For Undergraduate and Graduate Students

These are courses which may be taken for graduate credit with approval of the graduate advisor. They are to be used to strengthen areas in which the student may be deficient and to enrich the graduate offerings.

THEA 3325 Directing I  
THEA 3335 Chicano Theatre & Drama  
THEA 3336 Theatre in Spanish  
THEA 3340 A History of Costume Design  
THEA 3351 History of the Theatre I  
THEA 3352 History of the Theatre II  
THEA 3353 History of the Theatre III  
THEA 3355 The Musical Theatre  
THEA 3356 Women in Drama  
THEA 3413 Acting II  
THEA 4318 Playwriting  
THEA 4340 Selected Topics in Drama and Theatre

For Graduate Students Only

The following Graduate Research Projects courses (5300-5307) are directed by members of the graduate faculty in specific topics of drama and theatre according to the student's interest and need, including such areas as aesthetics, history, criticism, dramatic literature, design, management, and drama education. A course in this group may be taken a second time when the topic is significantly different.

Theatre Arts (THEA)

5300 Graduate Projects in Drama (3-0)  
Individual research in Theatre Management.  

5301 Graduate Projects in Drama (3-0)  
Individual research in Costume and/or Makeup Design.  

5302 Graduate Projects in Drama (3-0)  
Individual research in History and/or Dramatic Criticism.  

5303 Graduate Projects in Drama (3-0)  
Individual research in Scene Design and/or Shop Management.  

5304 Graduate Projects in Drama (3-0)  
Individual research in Lighting and/or Sound Design.  

5305 Graduate Projects in Drama (3-0)  
Individual research in Directing and Rehearsal Methods.
5306 Graduate Projects in Drama (3-0)
Individual research in the Teaching of Acting.

5307 Graduate Projects in Drama (3-0)
Individual research in Spanish Language Theatre and Drama.

5318 Methods of Graduate Theatre and Drama Research (3-0)
Survey of the essential tools of graduate research and creation in theatre and drama—including bibliography, aesthetics, and creative and scholarly procedure—culminating in the preparation of a scholarly paper. Required of all majors.

5322 Seminar in Theatre Technology (3-0)
Studies of production design and methods of staging in the unfolding pattern of western theatre. Required of all majors.

5323 Seminar in Theatre History (3-0)
The study of the dramatic forms of theatre in selected historical periods. Required of all majors.

5325 Advanced Playwriting (3-0)
Advanced playwriting seeks to familiarize students with the major American playwrights of the past quarter-century and their impact on the state of the art. In addition, students write a full-length play.

5327 Seminar in Performance: Acting and Directing (3-0)
Study of the strategies of theatrical presentation: the modes, styles, and techniques of acting and directing in a cultural context. Required of all majors.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: THEA 5398.
Introduction

Departments:

Select a Department

Dr. Patricia Castiglia, Dean
Dr. Gail Ackall, Associate Dean
Connie Gamboa, Assistant Dean

1101 N. Campbell
Phone: (915) 747-8217
Fax: (915) 747-7207
E-mail: chs@utep.edu
http://www.nurse.utep.edu/
The College of Health Sciences offers masters programs in Nursing, Health and Physical Education, Kinesiology, Physical Therapy, and Speech-Language Pathology. Students enrolling in the Master of Science in Nursing degree program may elect options in adult health nursing, community health nursing, family nurse practitioner, nursing administration, nurse-midwifery, parent-child nursing, psychiatric-mental health nursing, or women’s health care nurse practitioner. The Master of Science in Nursing degree is offered for Registered Nurses in an accelerated RN to MSN program. These nursing degree programs are accredited and qualify students for national certification in their specialty.

The Master of Science degree in Speech-Language Pathology will qualify students for Texas License and certification by the American Speech, Language, Hearing Association in Speech-Language Pathology. A Health Care concentration is available with the Master's of Business Administration (MBA) degree offered by the College of Business Administration as well as a two-degree option that offers both the MBA (Master of Business Administration) and the MSN (Master of Science in Nursing).

In cooperation with The University of Texas at Austin College of Pharmacy, UTEP offers a doctoral program in Pharmacy.

Students may also attend classes offered on the UTEP campus to obtain a Master's in Public Health from The University of Texas Health Science Center at Houston.
COLLEGE OF NURSING AND HEALTH SCIENCES

Department of Public Health
Departments:
- Nursing
- Health Sciences
- Pharmacy
- Physical Therapy
- Speech-Language Pathology

Dr. Patricia Castiglia,
Dean
Dr. Gail Ackall,
Associate Dean
Connie Gamboa,
Assistant Dean
1101 N. Campbell
Phone: (915) 747-8217
Fax: (915) 747-7207
E-mail: chs@utep.edu

GRADUATE DEGREES OFFERED

MSN
- Adult Health Nursing
- Community Health Nursing
- Family Nurse Practitioner
- Nurse Midwifery
- Nursing Administration
- Parent/Child Nursing
- Psychiatric/Mental Health Nursing
- Women’s Health Care/Nurse Practitioner

MBA/MSN
- Business Administration/Nursing

MS
- Health and Physical Education
- Kinesiology
- Speech-Language Pathology

MPT
- Physical Therapy

COOPERATIVE PROGRAMS

- PharmD Pharmacy/The University of Texas at Austin College of Pharmacy
- MPH Public Health/The University of Texas Health Science Center at Houston
- DSN Nursing/The University of Texas Health Science Center at Houston School of Nursing
**COLLEGE OF NURSING AND HEALTH SCIENCES**

**Kinesiology**

Web site at: [http://www.nurse.utep.edu/kss/home.html](http://www.nurse.utep.edu/kss/home.html)

Phone: (915) 747-7245

E-mail: kin@utep.edu

**PROGRAM DIRECTOR:** Carl Eichstaedt, Interim Program Director

The Master of Science degree with a major in Kinesiology is directed toward students who wish: (a) to increase their knowledge and competency as a professional physical educator, (b) to complete a master's degree in preparation for continuing their education in a doctoral program at another institution, (c) to concentrate in the various exercise science areas, or (d) to prepare for any profession that deals with human movement and physical activity.

**Admission Requirements**

For unconditional acceptance into the master's program in Kinesiology, students must present:

1. An undergraduate degree in Kinesiology or a related field with an overall GPA of at least 3.0 on a 4.0 scale.
2. Satisfactory GRE scores on the verbal exam and the quantitative exam. The analytical score may also be considered.
3. TOEFL score of at least 550 for those students for whom English is a foreign language.

For conditional acceptance into the master's program in Kinesiology, students must present:

1. An undergraduate degree from an accredited institution with an overall GPA of at least 2.5 on a 4.0 scale.
2. At least 12 hours of undergraduate Kinesiology core courses approved by the program graduate advisor.
3. Satisfactory GRE scores on the verbal exam and the quantitative exam. The analytical score may also be considered.
4. TOEFL score of at least 550 for those students for whom English is a foreign language.

**Degree Requirements for the MS in Kinesiology**

A total of 30 hours, distributed as follows:

- Required of all students
- Graduate level research methods 3 hours
- Graduate level statistics 3 hours
- *Elective graduate courses in Kinesiology 12 hours*

**Thesis Option**

*Directed electives 6 hours*

**KIN 5398, 5399** Thesis 6 hours

**Non-Thesis Option**

*Directed electives 9 hours*

**KIN 5397** Graduate Project 3 hours

* Elective courses must be selected with the approval of the program graduate advisor.

Undergraduate courses available for graduate credit

**KIN 4314** Special Populations (3-0)

**KIN 4334** Coronary Intervention Programs (3-0)

Courses for Graduate Students Only:

**Kinesiology (KIN)**

**5178 Directed Individual Studies (0-0-1)**

**5378 Directed Individual Studies (0-0-3)**

Individual investigation of specific topics of interest. May be repeated for credit. Prerequisites: Instructor approval and program director approval.

**5279 Graduate Research (0-0-2)**

**5379 Graduate Research (0-0-3)**

Department approved research in special areas of student or faculty interest. Prerequisites: Instructor approval and program director approval.

**5361 Biomechanical Basis of Sport (3-0)**

Advanced level kinesiological, mechanical, and physiological aspects as a basis...
for physical education. Prerequisite: KIN 3413 or instructor approval. Course fee required.

5362 Administration and Supervision of Physical Education Programs (3-0)
The application of administration and supervisory techniques in physical activity programs.

5363 Sociological Foundations of Physical Activity and Sports (3-0)
Socio-psychological processes, principles, and factors affecting the behavior of humans in physical activity and sport. Investigation of current socio-psychological problems with implications for physical education and athletic coaching.

5364 Advanced Topics in Health and Physical Education (3-0)
Individual problems in the field of health and physical education. May be repeated for credit.

5365 Programs of Physical Activity (3-0)
Factors affecting the selection of physical activity participation in various settings and cultural environments.

5366 Physical Activities for Young Children (3-0)
A study of the various physical activities pursued by young children ages four to eleven along with the contribution made by each to physical development.

5370 Practicum in Exercise Science (0-0-6)
Assignment to professionals in the field of exercise or therapy in the community for a minimum of 90 clock hours. A daily log of experience will be required.

5371 Measurement Techniques in Exercise Physiology (3-0)
Techniques and equipment used in assessing strength, cardiorespiratory efficiency, and other components of physical fitness. Prerequisite: Instructor approval. Course fee required.

5372 Advanced Exercise Physiology (3-0)
Advanced study of the physiological adaptations that occur in response to acute and chronic exercise. Examination of these changes as they affect training, performance, and health. Prerequisite: Instructor approval. Course fee required.

5373 Psychological Foundations of Physical Activity and Sports (3-0)
This course centers upon the mental processes involved during motor skill acquisition and performance. Major topics include the psychological aspects of sport performance in novice and elite athletes, from the performer's viewpoint, as well as how teachers and coaches use the principles of motor learning concepts to accelerate the progress of their students/athletes. Prerequisite: KIN 3232 or instructor approval.

5374 Measurement Techniques in Biomechanical Analysis (3-0)
An in-depth study of the methods used in the Biomechanics Laboratory. Topics include techniques related to cinematography, video analysis, force transducers, data filtering, and collection of human body characteristics. Prerequisite: Instructor approval. Course fee required.

5376 Neuroscience Applied to Exercise and Sport (3-0)
An advanced course designed to study the normal neurological structure and function as applied to movement science and recognize the functional consequences of selected neurological lesions. Prerequisite: Instructor approval.

5377 Graduate Seminar in Current Issues (3-0)
Discussion and presentation of pertinent and current issues in the areas of physical education, exercise science, and sport. May not be taken more than one time.

5397 Graduate Projects (0-0-3)
Individual research or development of a project/proposal under the direct supervision of a graduate faculty member. Requires satisfactory completion of the course, including a written report and oral presentation. Prerequisite: Permission of advisor.

5398 Thesis (0-0-3)
Initial work on the thesis. Prerequisite: Instructor approval.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: KIN 5398.
The University of Texas at El Paso
Developed by the UTEP Web Development Team Revised: February 19, 2001

The University of Texas at El Paso

Introduction

Master of Public Health

Departments:
- Nursing
- Health Sciences
- Kinesiology
- Pharmacy
- Physical Therapy
- Speech-Language Pathology

Dr. Patricia Castiglia,
Dean
Dr. Gail Ackall,
Associate Dean
Connie Gamboa,
Assistant Dean

1101 N. Campbell
Phone: (915) 747-8217
Fax: (915) 747-7207
E-mail: chs@utep.edu

GO:
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- Catalog Index
- College of Nursing and Health Sciences
- Graduate Degrees
- University Map

COLLEGE OF NURSING AND HEALTH SCIENCES

Pharmacy

Web site at: http://www.nurse.utep.edu/pharmacy/home.html
1100 N. Stanton, Suite 201
Phone: (915) 747-8519
E-mail: pharm@utep.edu

UT-UTEP Cooperative Pharmacy Program

PROFESSOR AND PROGRAM DIRECTOR: Lloyd Y. Young, Pharm.D.
REGIONAL DIRECTOR, EL PASO INTERNSHIP PROGRAM: William A. Klein III

CLINICAL ASSOCIATE PROFESSOR: Rivera
CLINICAL ASSISTANT PROFESSORS: Piñón, Robin-Krohn, C. Taylor, E. Taylor

CLINICAL COORDINATORS: Reilly, Rudder

The University of Texas at Austin College of Pharmacy in cooperation with The University of Texas at El Paso offers a six-year curriculum leading to the Doctor of Pharmacy (Pharm.D.) degree. This program offers a course of study in the pharmaceutical and clinical sciences designed to provide to the community, pharmacists who are scientifically trained and clinically competent to deliver a full spectrum of pharmaceutical services in all areas of practice.

The Pharm.D. degree is designed to prepare men and women whose abilities and career aspirations suggest significant potential for innovative leadership in professional practice. In addition, this degree will prepare students to practice pharmacy in a contemporary setting, whether in a community or hospital pharmacy, in a long-term care facility, or in the pharmaceutical industry. This objective is met through a balanced program of study in pharmaceutics, pharmaceutical and natural products chemistry, pharmacology, therapeutics, pharmacy administration, natural and social sciences, and the humanities, as well as a structured clinical and professional practice experience program. In addition, the curriculum is aimed at inculcating an understanding of the basic sciences sufficient to prepare the student for graduate study in the pharmaceutical sciences.

The Cooperative Pharmacy Program, located on the UTEP campus, is designed to facilitate access to the College of Pharmacy at Austin by providing opportunities to fulfill pre-pharmacy requirements in El Paso. At present, the first two years of pre-pharmacy curriculum (e.g., organic chemistry, calculus, and physics) are offered at UTEP. In the third and fourth year of the 6-year curriculum, students study in Austin at the College of Pharmacy and the remaining approximate two years are spent in El Paso.

The Pharmacy Scholars Program (PSP), which is an integral part of the Cooperative Pharmacy Program, provides highly qualified high school seniors conditional admission to The University of Texas College of Pharmacy and supplements the usual application process for admission to UT College of Pharmacy. A select number of students will be chosen to enroll each year into the program. These undergraduates may select any major of their choice [provided pre-pharmacy prerequisites are fulfilled] and are encouraged to take advantage of the diversity and many opportunities at UTEP. Students selected for this program attend UTEP for approximately two years to complete their pre-pharmacy curriculum and, after maintaining required criteria, will move to Austin to attend the College of Pharmacy for approximately two years. The final approximate two years of the six-year curriculum will be completed in El Paso, and successful candidates will receive their Pharm.D. degree from The University of Texas at Austin College of Pharmacy, in cooperation with the Cooperative Pharmacy Program at UTEP.

Further information about the program can be obtained from the Program Assistant who is located at 1100 N. Stanton, Suite 201, El Paso, TX 79902 (915/747-8519).
Physics

Web site at: http://www.utep.edu/~physics/

1.- General Departmental Requirements
2.- Master of Science in Physics
3.- Master of Science in Geophysics
4.- Physics (PHYS) Courses

214 Physical Science

Phone: (915) 747-5715
E-mail: physics@utep.edu

CHAIRPERSON: Ramon E. Lopez


The Department of Physics offers studies leading to the degree of Master of Science in Physics with experimental and/or theoretical physics research in astrophysics, atmospheric physics and optics, computational physics, condensed matter and surface physics, geophysics, nuclear, and radiation physics. Through a cooperative program with the Geological Sciences Department, the Master of Science in Geophysics is offered. The department also offers other cooperative plans that can lead to the doctorate degree. For details please contact the Graduate Advisor of the Physics Department.
COLLEGE OF NURSING AND HEALTH SCIENCES

Speech-Language Pathology

Web site at: http://www.nurse.utep.edu/slp/home.html

Phone: (915) 747-7250
E-mail: splp@utep.edu

PROGRAM COORDINATOR AND PROFESSOR: Anthony P. Salvatore

The Master of Science degree in Speech-Language Pathology is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association. Students who successfully complete the master's fulfill academic course work and clinical practicum requirements for the Certificate of Clinical Competence and the Texas License in Speech-Language Pathology.

Admission Requirements

1. Bachelor's degree from an accredited U.S. institution or equivalent degree at a foreign institution
2. Minimum of 21 semester hours of upper-division undergraduate courses related to communication disorders
3. GPA of 3.0 in upper-division preparatory SPLP undergraduate courses
4. GRE score of 500 Verbal and 500 Analytical and a 550 or higher on the Test of English as a Foreign Language (TOEFL) from international applicants
5. A GPA higher than 3.0 may offset GRE scores lower than the specified minimums and GRE scores higher than the specified minimums may offset a GPA lower than 3.0 for unconditional acceptance into Graduate School.

Admission is competitive. The number admitted each semester is dependent on available program resources.

MS Degree Requirements

Majors in Speech-Language Pathology Must Complete

1. A minimum of 54 required semester hours.
2. A minimum of 350 clock hours of supervised clinical practicum is required.
   In addition, 25 clock hours of supervised clinical observation must be completed prior to beginning the initial practicum experience.

Comprehensive written and oral examinations are required for students who choose not to write a thesis. Students who write a thesis are required to defend the thesis in an oral examination. Students who choose to write a thesis must enroll in SPLP 5398 and 5399.

Grade Criteria

1. A "D" or "F" grade in any graduate course will result in immediate dismissal from the graduate program and no reconsideration of the student for readmission will be taken.
2. No more than 2 "C" grades will be permitted. A third "C" grade will lead to immediate dismissal from the graduate program and no reconsideration of the student for readmission will be taken. If a "C" grade is earned, it must be matched with an "A" grade in a course within the program's required SPLP courses and this must be accomplished the semester (Fall/Spring/Summer) immediately following the semester the "C" was earned.

Required Courses (54 hours)

SPLP 5300 Aural Rehabilitation
SPLP 5320 Research Design in Communication Disorders
SPLP 5330 Differential Diagnosis of Communication Disorders
SPLP 5359 Fluency Disorders
SPLP 5360 Aphasia and Related Disorders
SPLP 5362 Language Disorders in School-Aged Children
SPLP 5363 Phonatory Disorders of Voice
SPLP 5364 Motor Speech Disorders
SPLP 5365 Advanced Audiology
SPLP 5370 Dysphagia
SPLP 5375 Articulation in Phonological Disorders
SPLP 5376 Multicultural Issues
SPLP 5377 Treatment Efficacy
SPLP 5369 Graduate Practicum in Speech-Language Pathology, University Clinic
SPLP 5379 Graduate Practicum in Speech-Language Pathology, School Setting
SPLP 5389 Graduate Practicum in Speech-Language Pathology, Hospital/Agency
Electives
SPLP 5310 Gerontology and Communication Disorders
SPLP 5367 Conservation of Hearing
SPLP 5372 Problems and Projects in Speech-Language Pathology
SPLP 5373 Advanced Clinical Practicum in Audiology
SPLP 5374 Problems and Projects in Audiology
SPLP 5398 Thesis
SPLP 5399 Thesis

Out-of-department graduate electives must be approved by the graduate advisor.

Recommended Sequence
First Year
Fall: SPLP 5320, 5330, 5362, 5369 12 semester hours
Spring: SPLP 5359, 5360, 5369, 5376 12 semester hours
Summer: SPLP 5369, 5375 6 semester hours

Second Year
Fall: SPLP 5364, 5365, 5370, 5379, or 5389 12 semester hours
Spring: SPLP 5300, 5363, 5377, 5379, or 5389 12 semester hours
Summer: SPLP 5379 or 5389 (if necessary) 3 semester hours
54 TOTAL

For Undergraduate and Graduate Students
SPLP 4312 Neural Bases of Speech and Language (3-0)

For Graduate Students Only

Speech-Language Pathology (SPLP)

5300 Aural Rehabilitation (3-0)
Clinical aspects of habilitation and/or rehabilitation programs for deaf and hard-of-hearing children and adults. Prerequisite: SPLP 4309 or equivalent introductory course in audiology or audiometry.

5310 Gerontology and Communication Disorders (3-0)
A description of the sociological, psychological, medical, and educational aspects of adult development and aging as they relate to communication processes and disorders.

5320 Research Design in Communication Disorders (3-0)
Typical and single-subject designs utilized in the research of speech, hearing, and language disorders.

5330 Differential Diagnosis of Communication Disorders (3-0)
Selection, application, and interpretation of formal and informal assessment procedures for the diagnosis and description of speech and language disorders. Topics include multicultural issues related to the diagnosis of communication.

5359 Fluency Disorders (3-0)
Theoretical foundations, diagnosis, and treatment of fluency disorders in children and adults.

5360 Aphasia and Related Disorders (3-0)
Study of the etiology, symptomatology, diagnosis, and treatment of aphasia and related neurogenic disorders including traumatic brain injury, right hemisphere syndrome, and dementia. Bilingual aspects of aphasia are discussed.

5362 Language Disorders in School-Aged Children (3-0)
Theoretical influences, diagnosis, and intervention for language impairments in school-aged populations including aspects of both spoken and written language. Topics include multicultural issues related to language disorders in this population.

5363 Phonatory Disorders of Voice (3-0)

5364 Motor Speech Disorders (3-0)
Study of the dysarthrias, apraxia of speech, and dysphagia. Prerequisite: SPLP 4312.

5365 Advanced Audiology (3-0)
Procedures utilized in diagnostic audiology to describe the type, degree, and, whenever possible, the site of auditory dysfunction.

5367 Conservation of Hearing (3-0)
Current laws and procedures leading to effective programs in the conservation of hearing for all age groups.

5369 Graduate Practicum in Speech-Language Pathology, University Clinic (3-0)
Supervised clinical practicum in providing services for individuals who are speech and language impaired at the University Clinic. University practicum during some semesters includes participation in off-campus sites. Enrollment is
limited. May be repeated one time for elective credit. Liability insurance and TB clearance required. Course fee required. Prerequisites: 21 semester hours of upper-division undergraduate course work in communication disorders and proficient use of Standard American Oral English.

5370 Dysphagia (3-0)
This course provides the student with information regarding normal and disordered swallowing. Anatomy, physiology, and neurology of deglutition will be presented, followed by discussion of appropriate assessment procedures and treatment protocols. Dysphagia and its relation to motor speech disorders will be discussed.

5372 Problems and Projects in Speech-Language Pathology (3-0)
Special projects under faculty supervision. May be repeated for credit with a change in area of emphasis.

5373 Advanced Clinical Practicum in Audiology (3-0)
Supervised clinical practicum in providing audiological services. Enrollment is limited. Liability insurance and TB clearance required. Prerequisite: SPLP 5365. Course fee required.

5374 Problems and Projects in Audiology (3-0)
Special projects under faculty supervision. May be taken more than once with a change in area of emphasis.

5375 Articulation and Phonological Disorders (3-0) This course will address theory and research on phonological development and disorders. Data sampling, analysis procedures, and interaction techniques will be emphasized.

5376 Multicultural/Multilingual Issues in Communication Disorders: an Hispanic Focus (3-0)
This course will promote students' awareness of cultural and language variables that will influence provision of services to clients and families of bilingual Spanish/English and monolingual Spanish speakers, particularly along the U.S./Mexico border. Students will review the emerging literature on normal language development of Spanish-speaking children who live in the U.S., on bilingualism, language loss, and cultural factors that can influence diagnosis, treatment, and counseling for fluency, voice, swallowing disorders, and hearing loss. Prerequisite: Department approval.

5377 Treatment Efficacy in Communication Disorders (3-0)
This course reviews the theoretical and procedural issues involved in the assessment of treatment efficacy. The value and use of single-subject treatment designs will be emphasized. Models of patient care and their impact on efficacious treatment will be examined.

5379 Graduate Practicum in Speech-Language Pathology, School Setting (0-0-3)
Supervised clinical practicum in providing services to the speech and language impaired in school settings. Offered Fall and Spring semesters only. Enrollment is limited. Liability insurance and TB clearance are required. Prerequisites: 50 clock hours of supervised practicum; SPLP 5369 with a grade of "B" or better, SPLP 5330, and SPLP 5362.

5389 Graduate Practicum in Speech-Language Pathology, Hospital/Agency (0-0-3)
Supervised clinical practicum in providing services to the speech and language impaired in hospitals and/or agencies. Enrollment is limited. Liability insurance, TB clearance required, and CPR certification are required. Prerequisites: 50 clock hours of supervised practicum; SPLP 5369 with a grade of "B" or better, SPLP 5330, SPLP 5360, and SPLP 5364.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues. Prerequisite: SPLP 5398.
• Introduction
• Master of Science in Interdisciplinary Science
• Departments

Select a Department

Dr. Thomas E. Brady, Dean Bell Hall, Room 100
Dr. Larry P. Jones, Associate Dean Phone: (915) 747-5536
Dr. Jorge A. Lopez, Assistant Dean Fax: (915) 747-6807

E-mail: science@utep.edu
http://www.utep.edu/science/
The College of Science is the home of the University's first doctoral degree program, the Doctor of Geological Sciences, which was approved in 1974. In 1991, the designation of the degree was changed to Ph.D. in Geological Sciences. The College now offers the Ph.D. in Biological Sciences and also participates in two multidisciplinary Ph.D. programs. The Departments of Chemistry and Physics are participants in a program leading to the Ph.D. degree in Materials Science and Engineering and the Departments of Biological Sciences, Chemistry, Geological Sciences, and Physics are participants in a program leading to the Ph.D. degree in Environmental Science and Engineering. Information about admission to these programs and degree requirements is found in the Interdisciplinary Doctoral Programs section of this catalog.

Doctor of Philosophy in Environmental Science and Engineering

The Ph.D. in Environmental Science and Engineering is an interdisciplinary doctoral program, coordinated by the Center for Environmental Resource Management (CERM) to prepare scientists and engineers to address the environmental issues facing this region, the nation, and the world. The program emphasizes a cross-disciplinary perspective to the understanding, management, and remediation of human impacts on the environment, with a particular focus on problems of the Southwest Border region. For information regarding admission and degree requirements, see the Interdisciplinary Graduate Programs section.

Doctor of Philosophy in Materials Science and Engineering

The Ph.D. in Materials Science and Engineering is an interdisciplinary doctoral program, coordinated by the Materials Research Institute (MRI) to prepare scientists and engineers to address the rapidly expanding opportunities and problems created by emerging materials-related industries. The program emphasizes a cross-disciplinary perspective of this vital field with a range of skills linking materials, structure, properties, synthesis and processing, and performance. For information regarding admission and degree requirements, see the Interdisciplinary Doctoral Programs section.

Master's Degrees

The College of Science offers nine graduate degrees at the master's level. These include Master of Science (MS) degrees in Biological Sciences, Chemistry, Geological Sciences, Geophysics, Mathematics, Physics, and Statistics. Five-year BS-MS programs are offered in Chemistry and Physics. The Department of Mathematical Sciences offers a Master of Arts in Teaching with a major in Mathematics (MAT). For information regarding admission and degree requirements for these degrees, see the individual Department sections.

A Master of Science in Interdisciplinary Studies (MSIS) degree is available to students who wish to undertake interdisciplinary studies which cannot be accommodated within the normal programs of the College's academic departments. As may be seen in the next section, curricula in this program are individualized to meet the needs of students.
Master of Science in Interdisciplinary Studies

Web site at: http://www.utep.edu/graduate/

404A Geology Building
Phone: (15) 747-5218
E-mail: cornell@utep.edu

PROGRAM DIRECTOR: William C. Cornell

The MSIS program is designed to satisfy the need for interdisciplinary graduate programs of study which cannot be accommodated within the confines of the normal graduate programs of the university's academic departments. Typical interdisciplinary courses of study include Arid Region Studies, Environmental Science, Resource Management, Engineering Management, Materials Science, curricula in Computer Applications, and others. All such interdisciplinary programs require courses from the offerings of several different departments. The curricula under the MSIS program are individually tailored to the needs of each student.

Requirements for Admission

In addition to the other Graduate School entrance requirements, including a satisfactory score on the GRE, applicants for the MSIS program must submit a letter outlining their proposed areas of study and their graduate education goal. Upon the receipt of the application documents and letter, an evaluation is made to determine the Program's ability to satisfy the needs of the applicants. Upon acceptance of the applicant into the program, a Guidance Committee, made up of at least three graduate faculty members from different departments, is selected by the Program Director and approved by the Graduate School to guide the student in his or her program. Faculty selected will normally have interests and expertise in the student's proposed field of study. Courses for the individual study plan are determined by the committee in consultation with the student. This committee normally also acts as the student's examination committee.

Special Requirements for the MSIS Degree

The MSIS degree requires 36 hours of course work; at least 27 of these hours must be selected from graduate-level courses. The individually designed curriculum must include courses from the offerings of at least three different departments with no more than 15 hours in the department of highest course concentration and no more than 12 hours of credit from any other single department. At least half of all semester hours credited toward the degree must be selected from graduate credit courses offered by science and/or engineering departments.

Up to 6 hours of graduate-level individual instruction problem-solving courses may be used to satisfy degree requirements. Students enrolled in such courses are expected to submit a report of the work accomplished. If the student desires and the Guidance Committee concurs, this report may be bound and presented in the form of a thesis.

The individualized curricula are composed of courses listed under the various individual departmental offerings in this catalog.
COLLEGE OF SCIENCE

Introduction

Master of Science in Interdisciplinary Science

Departments:
- Biological Sciences
- Chemistry
- Geological Sciences
- Mathematical Sciences
- Physics

Dr. Thomas E. Brady,
Dean
Dr. Larry P. Jones,
Associate Dean
Dr. Jorge A. Lopez,
Assistant Dean

Bell Hall, Room 100
Phone: (915) 747-5536
Fax: (915) 747-6807
E-mail: science@utep.edu

GO:
[ UTEP Home Page ] [ Catalog Index ] [ College of Science ] [ Graduate Degrees ] [ University Map ]

COLLEGE OF SCIENCE

Biological Sciences

Web site at: http://www.utep.edu/biology/

- Master of Science in Biological Sciences
- PhD in Biological Sciences
- Biology (BIOL) Courses
- Botany (BOT) Courses
- Microbiology (MICR) Courses
- Zoology (ZOO) Courses
- Biology (BIOL) Courses (Graduate only)
- Biology (BIOL) Courses (Doctoral only)

226 Biology Building
Phone: (915) 747-5844
E-mail: biology@utep.edu

CHAIRPERSON: Eppie D. Rael


The Department of Biological Sciences offers a Master of Science degree and a Doctor of Philosophy degree in Biological Sciences.
COLLEGE OF SCIENCE

Biological Sciences

Web site at: http://www.utep.edu/biology/

1. Master of Science in Biological Sciences
2. PhD in Biological Sciences
3. Biology (BIOL) Courses
4. Botany (BOT) Courses
5. Microbiology (MICR) Courses
6. Zoology (ZOOL) Courses
7. Biology (BIOL) Courses (Graduate only)
8. Biology (BIOL) Courses (Doctoral only)

Requirements for Admission

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Undergraduate degree in biology or a related field and at least eight semester hours of general chemistry
3. Satisfactory score on the general Graduate Record Examination (GRE)
4. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or other English-speaking institution

Requirements for the Master's Degree in Biological Sciences

A minimum of 30 semester hours to include:

1. Completion of 6 semester hours of Thesis (BIOL 5398-BIOL 5399)
2. A minimum of 21 semester hours of graduate-level work (may include thesis)
3. A minimum of 3 semester hours of Seminar (Biology 5130) or equivalent Special Topics Seminar courses
4. A maximum of 9 semester hours of approved upper-division undergraduate work
5. A maximum of 6 semester hours of BIOL 5302 or BIOL 5502 (Research in the Biological Sciences) to count toward degree
6. A maximum of 6 semester hours in an area of concentration

A thesis based on original work is required and must be defended orally. The student should decide on an area of specialization and select a supervising professor within the first semester or 12 semester hours of admission. The supervising professor will act as chairperson of the thesis committee, which will be comprised of a minimum of three graduate faculty members, including one from outside the Department of Biological Sciences.
COLLEGE OF SCIENCE

Biological Sciences

Web site at: http://www.utep.edu/biology/

1. Master of Science in Biological Sciences
2. PhD in Biological Sciences
3. Biology (BIOL) Courses
4. Botany (BOT) Courses
5. Microbiology (MICR) Courses
6. Zoology (ZOOL) Courses
7. Biochemistry (BIOL) Courses (Graduate only)
8. Botany (BOT) Courses (Doctoral only)

2. PhD in Biological Sciences

The educational objective of the doctoral program in Biological Sciences is to prepare students for research on the pressing pathobiological problems of the region, with an emphasis on (1) the pathogenesis of infectious diseases, (2) the toxic and carcinogenic effects of environmental pollutants, and (3) neurological and metabolic disorders.

Requirements for Admission

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Undergraduate degree in biology or a related field and successful completion of:
   a. two semesters of organic chemistry with lab
   b. one semester of calculus
   c. course work in physiology, ecology, evolutionary theory, microbiology, cell biology biochemistry, and genetics
3. Satisfactory score on the general GRE
4. Personal statement of research and professional interests
5. Three letters of recommendation indicating unqualified endorsement of the applicant for doctoral study
6. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or other English-speaking institution

Requirements for Ph.D. Degree in Biological Sciences: A minimum of 72 semester hours beyond the Bachelor's degree to include:

1. 36 semester hours of course work and seminars
2. 30 semester hours of research
3. 6 semester hours of dissertation (BIOL 6398 and BIOL 6399)

Students entering the program with a Master's degree may count up to 24 semester hours of graduate course work as advanced standing toward the Ph.D. degree. Students with deficiencies in biochemistry, cell biology, microbiology, physiology, genetics, ecology, or evolutionary theory will be required to take additional course work to remove the deficiencies.

Ph.D. Curriculum

1. Required course work (16 semester hours)
   BIOL 5328 Numerical Methods in Biology
   BIOL 5340 Structure and Function of Macromolecules
   BIOL 6301 Environmental Pathobiology
   BIOL 6310 Advanced Research Techniques
   BIOL 5130 Biological Sciences Seminar (taken 3 times)
   BIOL 5131 Ethical, Social, and Political Dimensions of Science
2. Additional requirements include two of the following, one of which must be at the doctoral (6000) level (6-7 semester hours)
   BIOL 5326 Advances in Immunological Concepts
   BIOL 5346 Ecosystem Toxicology
   BIOL 5360 Limnology
   BIOL 6303 Gene Regulation
   BIOL 6304 Physiological Regulatory Mechanisms
   ESE 6404 Environmental Biology
3. Electives
   Additional course work to total a minimum of 36 semester hours
4. Research (30 semester hours minimum)
   Options include:
   BIOL 6350 Independent Research
   BIOL 6490 Independent Research
   BIOL 6590 Independent Research
   BIOL 6690 Independent Research
5. Dissertation (6 semester hours)
   BIOL 6398
   BIOL 6399
Admission to Candidacy
The student must pass a qualifying oral examination in order to advance to candidacy for the doctorate. This exam will be designed to assess the candidate's knowledge and understanding of the material covered in the core courses as well as the candidate's ability to rationally discuss the design, implementation, and analysis of a research problem of the student's and the committee's choosing. The Preliminary Examination Committee will determine whether the student displays sufficient breadth of knowledge and understanding of basic principles to undertake original research.

Dissertation
A dissertation demonstrating both the ability to do original independent research and competence in scholarly exposition will be required of all students. The dissertation must present original research and should provide the basis for one or more publishable contributions to the research literature. The dissertation will be supervised by the Dissertation Advisor, in consultation with a Dissertation Committee consisting of at least three additional members, at least one of whom must be a graduate faculty member from outside the Department of Biological Sciences. The candidate will present a dissertation proposal for approval by the Dissertation Committee. Final Oral Examination Upon completion of the dissertation, the student must defend, in public, his or her work. The Dissertation Committee will be responsible for administering the final public oral defense and will have the responsibility of determining whether the written dissertation and its oral presentation and defense are acceptable.
COLLEGE OF SCIENCE

Biological Sciences

Web site at: http://www.utep.edu/biology/

1. Master of Science in Biological Sciences
2. PhD in Biological Sciences
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4. Botany (BOT) Courses
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6. Zoology (ZOOL) Courses
7. Biology (BIOL) Courses (Graduate only)
8. Biology (BIOL) Courses (Doctoral only)

3.- Biology (BIOL) Courses

For Undergraduate and Graduate Students

BIOL 3119 Experimental Embryology (0-3)
BIOL 3318 Developmental Biology (3-0)
BIOL 3320 Genetics (3-0)
BIOL 3321 Evolutionary Theory (3-0)
BIOL 3326 Animal Ecology (3-0)
BIOL 3330 Histology (2-2)
BIOL 3341 Plants in Southwest Cultures (3-0)
BIOL 3414 Molecular Cell Biology (3-3)
BIOL 4198 Special Problems (0-0-2)
BIOL 4223 Transmission Electron Microscopy (0-4)
BIOL 4298 Special Problems (0-0-4)
BIOL 4322 Biological Ultrastructure Interpretation (3-0)
BIOL 4324 Animal Behavior (3-0)
BIOL 4325 Field Biology (0-0-9)
BIOL 4326 Bioarchaeology (2-3)
BIOL 4390 Biological Practicum (0-0-6)
BIOL 4398 Special Problems (0-0-6)
COLLEGE OF SCIENCE

Biological Sciences

Web site at: http://www.utep.edu/biology/

1. Master of Science in Biological Sciences
2. PhD in Biological Sciences
3. Biology (BIOL) Courses (Graduate only)
4. Botany (BOT) Courses

4.- Botany (BOT) Courses

For Undergraduate and Graduate Students

BOT 3330 Comparative Plant Morphology (3-0)
BOT 3340 Plant Physiology (3-0)
BOT 3437 Plant Taxonomy (2-4)
COLLEGE OF SCIENCE

Biological Sciences

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6. Zoology (ZOO) Courses
7. Biology (BIOL) Courses (Graduate only)
8. Biology (BIOL) Courses (Doctoral only)

5. Microbiology (MICR) Courses

For Undergraduate and Graduate Students

MICR 3128 Microbial Ecosystem Techniques (0-3)
MICR 3328 Microorganisms in Ecosystems (3-0)
MICR 3443 Pathogenic Microbiology (3-3)
MICR 3445 Microbial Physiology (3-3)
MICR 3449 Prokaryotic Molecular Genetics (3-3)
MICR 4152 General Virology Techniques (0-3)
MICR 4351 General Virology (3-0)
MICR 4355 Medical Mycology (3-0)
MICR 4453 Immunology (3-3)
The University of Texas at El Paso
Developed by the UTEP Web Development Team
Revised: February 19, 2001
Introduction

Master of Science in Interdisciplinary Science

Departments:
- Biological Sciences
- Chemistry
- Geological Sciences
- Mathematical Sciences
- Physics

Dr. Thomas E. Brady, Dean
Dr. Larry P. Jones, Associate Dean
Dr. Jorge A. Lopez, Assistant Dean

Bell Hall, Room 100
Phone: (915) 747-5536
Fax: (915) 747-6807
E-mail: science@utep.edu

COLLEGE OF SCIENCE

Biological Sciences

Web site at: http://www.utep.edu/biology/

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4. Botany (BOT) Courses
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6. Zoology (ZOOL) Courses
7. Biotechnology (BIOL) Courses (Graduate only)
8. Biotechnology (BIOL) Courses (Doctoral only)

5130 Seminar (1-0)
Topics vary and are presented by enrollees and other speakers.

5131 Ethical, Social, and Political Dimensions of Science (1-0)
Readings and discussion on the philosophical and social structure, ethical climate, and public policy environment of the modern scientific research establishment.

5301 Selected Advanced Topics in the Biological Sciences (3-0)
Course in the form of formal classes. May be repeated for credit when topics vary.

5302 Research in the Biological Sciences (0-0-3)

5502 Research in the Biological Sciences (0-0-5)
Emphasizes research, with writing and discussion. Not given as a formal class. May be repeated, but no more than six hours of credit will be counted towards degree. Laboratory fee required.

5305 Herpetology (2-3)
A study of the morphology, taxonomy, and life histories of reptiles and amphibians. Laboratory fee required.

5307 Biology of the Pleistocene (3-0)
A study of the organisms of the Pleistocene.

5309 Regulation of the Eukaryotic Genome (3-0)
The molecular biology of eukaryotes including genetic engineering, structure and organization of the eukaryotic genome, regulating the expression of eukaryotic genes, and the role of oncogenes in eukaryotes. Prerequisite: (1) BIOL 3320 or equivalent or (2) instructor's approval.

5313 Biogeography (3-0)
Geographic distribution of plants and animals, and analysis of causative factors.

5316 Biosystematics (3-0)
Methods and principles of taxonomy, classification, and systematics.

5318 Ecology of Desert Organisms (2-3)
Study of the physiological, morphological, and behavioral adaptations of desert plants and animals. Effects of desert abiotic factors on species, populations, and communities. Laboratory fee required.

5320 Endocrinology (2-3)
A study of the effects and actions of vertebrate hormones with an emphasis on neuroendocrine control. Laboratory fee required.

5323 Ultrastructure (3-0)
Current research advances in cellular biology.

5324 Mammalogy (2-3)
Class Mammalia, with emphasis on morphological, physiological, ecological, and behavioral adaptations to past and present environments. Laboratory fee required.

5326 Advances in Immunological Concepts (3-0)
Study of immunological and immunochemical concepts. Emphasis will be placed on recent experimental advances in immunology. Prerequisite: MICR 4453 or instructor approval.

5327 Advances in Ecological Theory (3-0)
Study of recent advances in ecological theory with special emphasis on adaptation, population structure and dynamics, behavioral processes, and species interactions.

5328 Numerical Analysis in Biology (2-3)
Study and application of specialized numerical methods in biological sciences. Prerequisite: Instructor approval.
5329 Physiology of the Bacterial Cell (3-0)
The study of the biochemical and physiological processes occurring in the bacterial cell. Emphasis will be placed on recent experimental approaches that are in current use in microbial physiology research. Prerequisite: Instructor approval.

5340 Structure and Function of Macromolecules (3-0)
Functional biology of cells, with emphasis on the relationship between molecular structure and function.

5342 Synthesis and Degradation of Macromolecules (3-0)
In-depth discussion of the mechanisms and pathways for the synthesis of amino acids, lipids, membranes, and nucleic acids and for the degradation of carbohydrates, lipids, and the salvage pathways. Prerequisite: BIOL 5340 or instructor approval.

5343 Mechanisms of Cellular Toxicity (3-0)
Theory and application of toxicology. Focus will be on the absorption, distribution, excretion, and metabolism of xenobiotic and toxic materials and the molecular approaches to the study of toxicology.

5344 Molecular Pathogenesis (3-0)
Cellular and molecular basis of diseases induced or exacerbated by microbes, parasites, pollutants, poor sanitation, and malnutrition.

5346 Ecosystem Toxicology (3-0)
Practical analysis of degraded natural communities of plants and animals, including biotic inventories, detection of bio accumulated toxins, and the use of indicator species.

5360 Limnology (3-0)
Study of the freshwater environment, including chemical parameters and biological populations.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on thesis continues. Prerequisite: BIOL 5398.

5401 Molecular Biology Techniques (2-6)
Theory and application of modern molecular and cell biology techniques. Student projects combine theory and practical application in the laboratory. Laboratory fee required.
## Biological Sciences

**Web site:** [http://www.utep.edu/biology/](http://www.utep.edu/biology/)

### Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6301</td>
<td>Environmental Pathobiology (3-0)</td>
<td>Survey of the biological basis of diseases induced or exacerbated by microbes, parasites, pollutants, and poor sanitation. Topics will include microbial ecology, the integrity and degradation of natural ecosystems, and mechanisms of pathogenesis.</td>
</tr>
<tr>
<td>6302</td>
<td>Gene Regulation (3-0)</td>
<td>The molecular biology of the genome, including genetic engineering, structure, and organization of the prokaryotic and eukaryotic genome, regulation of gene expression, and processes that damage and repair genetic material.</td>
</tr>
<tr>
<td>6304</td>
<td>Physiological Regulatory Mechanisms (3-0)</td>
<td>Function of cardiovascular, pulmonary, digestive, renal, reproduction, neural, endocrine, and neuroendocrine systems in humans as a foundation for understanding the body's response to pathobiological challenges.</td>
</tr>
<tr>
<td>6305</td>
<td>Cell Physiology (3-0)</td>
<td>Physiological aspects of cells and cellular organelles, with emphasis on the potential effects of adverse conditions and cell stress.</td>
</tr>
<tr>
<td>6306</td>
<td>Membrane Biology (3-0)</td>
<td>Structure and function of biological membranes at the molecular level. Emphasis is placed on the dynamic aspects of membrane assembly, bioenergetic reactions, receptors, and signal transduction. Prerequisite: BIOL 5340 or instructor approval.</td>
</tr>
<tr>
<td>6310</td>
<td>Advanced Research Techniques (0-6)</td>
<td>An overview of advanced research methods and strategies. Students will rotate through three laboratories and spend 3-4 weeks at each lab.</td>
</tr>
<tr>
<td>6312</td>
<td>Biodiversity (3-0)</td>
<td>Genotypic and phenotypic diversity at the population, species, and community levels. Role of bioconservation in maintaining intact communities and preserving genetic heterogeneity.</td>
</tr>
<tr>
<td>6345</td>
<td>Molecular Parasitology (3-0)</td>
<td>Invasive and non-invasive parasites, tropical diseases, parasite surface proteins and their variation, unusual glycosylation and fatty acylation, unusual strategies for gene expression and RNA editing and the evolution of parasites. Biochemical and molecular techniques to control parasitic disease will also be discussed. Prerequisites: BIOL 5342 and BIOL 5344.</td>
</tr>
<tr>
<td>6390</td>
<td>Independent Research (0-0-3)</td>
<td>May be repeated.</td>
</tr>
<tr>
<td>6490</td>
<td>Independent Research (0-0-4)</td>
<td>May be repeated.</td>
</tr>
<tr>
<td>6590</td>
<td>Independent Research (0-0-5)</td>
<td>May be repeated.</td>
</tr>
<tr>
<td>6690</td>
<td>Independent Research (0-0-6)</td>
<td>May be repeated.</td>
</tr>
<tr>
<td>6398</td>
<td>Dissertation (0-0-3)</td>
<td>Initial work on the doctoral dissertation.</td>
</tr>
<tr>
<td>6399</td>
<td>Dissertation (0-0-3)</td>
<td>Completion of work on the doctoral dissertation. Continuous enrollment required while work on the dissertation continues.</td>
</tr>
</tbody>
</table>
The Department of Chemistry offers studies leading to the degree of Master of Science in Chemistry with experimental and/or theoretical research in the following fields of specialization: analytical, biochemistry, environmental, inorganic, organic, organometallic, physical, chemical physics, and materials science.
COLLEGE OF SCIENCE

Chemistry

Web site at: http://www.chemistry.utep.edu/

1. Master of Science in Chemistry
2. Five-year BS-MS Program
3. Chemistry (CHEM) Courses

Requirements for Admission

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Undergraduate degree in chemistry
3. Satisfactory score on the general Graduate Record Examination (GRE)
4. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or other English-speaking institution

Requirements for Master's Degree in Chemistry

In addition to the institutional requirements for a Master of Science degree, the candidate must also meet the following stipulations: A minimum of 21 of the required 30 hours of credits must be in courses at the graduate level. Credits must include at least one graduate-level course in three of the five areas of organic chemistry, physical chemistry, inorganic chemistry, analytical chemistry, or biochemistry. The candidate must also enroll in CHEM 5195 during each semester of residence. Not more than one hour of CHEM 5195 may be counted toward the 30 credit hour requirement. The normal program for the MS degree in Chemistry may include 6 hours of supporting work from approved fields. A program of specialization in chemical physics may be elected with the permission of the graduate advisor. Such a program may include, within the required 30 hours of credits, up to 12 hours in the related fields (e.g., Physics, Mathematics). Courses of study are designed for each student in consultation with the advisor. Each student must confer with the graduate advisor prior to each registration. The thesis presented for this degree must describe original work related to a research problem of some importance. The thesis must be defended orally.
1. Master of Science in Chemistry
2. Five-year BS-MS Program
3. Chemistry (CHEM) Courses

2.- Five-Year BS-MS Program

The curriculum for the BS degree in Chemistry can be completed in three and one-half years. After admission to the Graduate School of the University, it is possible to obtain the MS degree at the end of the fifth year of study in Chemistry. Qualified students should consult their academic advisor about the course of study and about the various forms of financial assistance obtainable through this program.

For Undergraduate and Graduate Students

CHEM 3110 Laboratory for Chemistry 3310 (0-4)
CHEM 3124 Laboratory for Chemistry 3324 (0-4)
CHEM 3125 Laboratory for Chemistry 3325 (0-4)
CHEM 3151 Laboratory for Chemistry 3351 (0-4)
CHEM 3152 Laboratory for Chemistry 3352 (0-4)
CHEM 4165 Laboratory for Inorganic Chemistry (0-4)
CHEM 4176 Introduction to Research (0-0-3)
CHEM 3221 Laboratory for Chemistry 3321 (0-6)
CHEM 3222 Laboratory for Chemistry 3322 (0-6)
CHEM 4211 Instrumental Methods of Analytical Chemistry (2-0)
CHEM 4212 Laboratory for Chemistry 2411 (0-6)
CHEM 3310 Analytical Chemistry (3-0)
CHEM 3321 Organic Chemistry (3-0)
CHEM 3322 Organic Chemistry (3-0)
CHEM 3324 Organic Chemistry (3-0)
CHEM 3325 Organic Chemistry (3-0)
CHEM 3351 Physical Chemistry (3-0)
CHEM 3352 Physical Chemistry (3-0)
CHEM 4328 Advanced Topics in Organic Chemistry (3-0)
CHEM 4330 Topics in Biochemistry (3-0)
CHEM 4332 Biochemistry (3-0)
CHEM 4362 Structure of Matter (3-0)
CHEM 4365 Inorganic Chemistry (3-0)
CHEM 4376 Introduction to Research (0-0-9)
Chemistry

Web site at: http://www.chemistry.utep.edu/

1. Master of Science in Chemistry
2. Five-year BS-MS Program
3. Chemistry (CHEM) Courses

For Graduate Students Only

5195 Graduate Seminar (1-0)
5196 Graduate Research in Chemistry (0-0-1)
5396 Graduate Research in Chemistry (0-0-3)

Prerequisites: Graduate standing and instructor approval.

5318 Advanced Analytical Chemistry (3-0)
Chemical equilibrium and its applications to separation and analysis.

5319 Contemporary Topics in Analytical Chemistry (3-0)
Selected topics of current interest in modern analytical chemistry. May be repeated for credit when topics vary.

5321 Advanced Organic Chemistry I (3-0)
A survey of the more important types of reactions in organic chemistry; reaction mechanisms, stereochemistry of intermediates and products; current structural theory. Prerequisite: CHEM 3322.

5329 Contemporary Topics in Organic Chemistry (3-0)
Selected topics of current interest in descriptive and theoretical organic chemistry. May be repeated for credit when topics vary.

5339 Contemporary Topics in Biochemistry (3-0)
Selected topics of current interest in organic or physical aspects of biological chemistry. May be repeated for credit when topics vary.

5351 Advanced Physical Chemistry I (3-0)
Schroedinger wave mechanics; atomic and molecular quantum states; applications to the treatment of wave functions for atoms and molecules.

5352 Advanced Physical Chemistry II (3-0)
Classical and statistical thermodynamics; applications to physical and chemical systems.

5359 Contemporary Topics in Physical Chemistry (3-0)
Selected topics of current interest in experimental and theoretical fields of physical chemistry. May be repeated for credit when topics vary.

5361 Advanced Inorganic Chemistry (3-0)
Ionic, metallic, and covalent bonding; valence bond, molecular orbital, and ligand field theories; structure and properties of coordination compounds, metal carbonyls, and complexes.

5369 Contemporary Topics in Inorganic Chemistry (3-0)
Selected topics in Inorganic Chemistry. May be repeated for credit when topics vary.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on thesis continues. Prerequisite: CHEM 5398.
Introduction

Master of Science in Interdisciplinary Science

Departments:
- Biological Sciences
- Chemistry
- Geological Sciences
- Mathematical Sciences
- Physics

Dr. Thomas E. Brady,
Dean
Dr. Larry P. Jones,
Associate Dean
Dr. Jorge A. Lopez,
Assistant Dean

Bell Hall, Room 100
Phone: (915) 747-5536
Fax: (915) 747-6807
E-mail: science@utep.edu

COLLEGE OF SCIENCE

Geological Sciences
Web site at: http://www.geo.utep.edu

1. Master of Science in Geological Sciences
2. Master of Science in Geophysics
3. PhD in Geological Sciences
4. Geology (GEOL) Courses
5. Geophysics (GEOP) Courses
6. Geology (GEOL) Courses (Graduate only)
7. Geophysics (GEOP) Courses (Graduate only)
8. Geology (GEOL) Courses (Doctoral only)
9. Geophysics (GEOP) Courses (Doctoral only)

Geological Sciences 101
Phone: (915)-747-5501
E-mail: mail@geo.utep.edu
226 Biology Building
E-mail: mail@geo.utep.edu

CHAIRPERSON: Kate C. Miller

GRADUATE FACULTY: Anthony, Clark, Cornell, Doser, Goodell, Hoffer, Keller, Langford, LeMone, Miller, Pingitore, Schmidt, Schulze-Makuch

The Department of Geological Sciences offers a Doctor of Philosophy (Ph.D.) degree in Geological Sciences and the Master of Science (MS) degree in Geological Sciences and in Geophysics.
COLLEGE OF SCIENCE

Geological Sciences

Web site at: http://www.geo.utep.edu

1. Master of Science in Geological Sciences
2. Master of Science in Geophysics
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8. Geology (GEOL) Courses (Doctoral only)
9. Geophysics (GEOP) Courses (Doctoral only)

2. MS Degree in Geophysics

Requirements for Admission

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Undergraduate degree in geology or geophysics, with no deficiencies in science courses required for the BS degree in Geophysics at UTEP; prospective MS students whose BS degree was not in the geological sciences should contact the Graduate Advisor to discuss procedures leading to acceptance into the program
3. Satisfactory score on the general GRE
4. TOEFL score of at least 550 (paper-based), 213 (computer-based) for international applicants whose first language is not English or who have not completed a university degree in the U.S. or at other English-speaking institutions

Requirements for Degree

Students must complete 30 semester hours including a thesis (6 hours). At least 21 hours must be in graduate-level courses (a maximum of 6 hours may be in Directed Study course work and a maximum of 9 semester hours may be in approved upper-division undergraduate course work). Work in supporting fields (a minor) is not specifically required. However, course work in supporting fields will often be included in a student's program of study with the approval of the Graduate Advisor and the Graduate School. All candidates are required to enroll in GEOL 5101 every semester they are in residence. All candidates are required to pass an oral defense of their thesis investigation in an open meeting. Draft copies of the thesis must be submitted to the thesis committee no less than 7 days prior to the defense. In order to graduate in a given semester, two copies of the final bound thesis must be submitted to the Graduate School by the published deadlines. Two bound copies and one unbound copy must also be submitted to the Graduate Advisor.

Time Limits and Catalog Changes

All requirements for an MS in Geological Sciences or Geophysics must be completed within one six-year period. Work more than 6 years old is lost and can be reinstated only by special permission of the Graduate School upon recommendation of the Departmental Committee on Graduate Studies.

General and specific requirements for degrees in the Graduate School may be altered in successive catalogs. Provided the requisite course continues to be offered, the student is bound only by the course requirements of the catalog in force at the time of admission, unless, with the approval of the Graduate School, he or she elects to be bound by the course requirements of a subsequent catalog. This regulation applies to course requirements only.
COLLEGE OF SCIENCE

Geological Sciences
Web site at: http://www.geo.utep.edu

3.- Ph.D. in Geological Sciences

Requirements for Admission into the Doctoral Program

1. Master's degree in the Geological Sciences, or Bachelor's degree in the Geological Sciences plus 30 hours of post-bachelor's study in the geological sciences from an accredited institution in the United States or proof of equivalent education in a foreign institution; students who hold a master's or bachelor's degree from an accredited institution in one of the following areas: biology, chemistry, mathematics, physics, computer science or engineering, and intend to make up all deficiencies in their geological background are encouraged to contact the Graduate Advisor to discuss procedures leading to acceptance into the program

2. Satisfactory score on the general GRE

3. Three letters of reference

4. TOEFL score of at least 550 (paper-based)/213 (computer-based) for international applicants whose first language is not English or who have not completed a university degree in the U.S. or at other English-speaking institutions

Requirements for Doctoral Candidacy

1. Removal of all academic deficiencies

2. Completion of at least three-fourths of the required credit hours in Geological Sciences and supporting fields

3. Successful completion of the prescribed Comprehensive Examination (Parts I and II)

4. Approval for Candidacy by the Graduate School upon the recommendation of the Comprehensive Examination Committee

Requirements for Degree

1. Minimum of 60 semester hours of graduate study beyond the baccalaureate degree or minimum of 30 semester hours of graduate study beyond the Master's degree

2. Maximum of 12 semester hours of Directed Study course work in the 60-hour program, 6 semester hours in the 30-hour program

3. Enrollment in GEOL 5101 (Technical Session) (Graduate Seminar) each term of residence

4. Maximum of 9 semester hours of approved upper-division undergraduate course work; successful completion of the Comprehensive Examination (Parts I and II)

5. Dissertation of 8 semester hours including successful oral defense (GEOL 6320, GEOL 6321)

Foreign Language/Computer Programming Language

Proficiency in a foreign language and/or computer programming language will be required by a student's dissertation committee when it is necessary for the successful completion of the student's dissertation.

Committees

For each provisional doctoral student or doctoral student, the Graduate Advisor shall appoint an Advisory Committee consisting of three members of the graduate faculty.

For each doctoral candidate, a Doctoral Committee will consist of the dissertation advisor, at least two professors in the Department of Geological Sciences, and at least one scientist or engineer from outside the Department of Geological Sciences—all of whom are members of the graduate faculty and are approved by the Graduate School. The total committee shall consist of at least five individuals.

Examinations

The Graduate Advisor will appoint a Comprehensive Examination Committee to administer the Comprehensive Examination. The Comprehensive Examination will normally be taken after removal of all deficiencies and completion of most of the course work. Any student who fails the Comprehensive Examination twice shall be barred from further consideration for Doctoral Candidacy.
Dissertation
A doctoral dissertation is required. This dissertation must demonstrate the candidate's capacity for originality and independence in recognizing a significant geological problem, in carrying out an effective investigation, and in interpreting and reporting the results. The subject of the dissertation is to be selected in consultation with the dissertation advisor, and it must be approved by the student's Doctoral Committee and by the Graduate School. The dissertation advisor is to supervise the research work and to consult with other members of the Doctoral Committee on the progress of the work.

The candidate is required to defend the dissertation before the faculty of the University in an open meeting under the supervision of his Doctoral Committee.

Draft copies of the dissertation must be submitted to the Doctoral Committee six days before the defense and any suggested corrections must be made. Prior to commencement and by the published deadlines, two copies of the final bound dissertation and the unbound original must be submitted to the Graduate School. Two bound copies must also be submitted to the Graduate Advisor.

Microfilming of Dissertation
The doctoral candidate who has successfully completed all requirements for the degree is required to pay the cost of microfilm reproduction of the complete dissertation. The signed original copy (unbound) of the doctoral dissertation is sent from the Graduate School to University Microfilms, Ann Arbor, Michigan, for reproduction.

With the dissertation, the student must also submit to the Graduate School two copies of an abstract, not to exceed two pages in length (double-spaced) which has been approved in final form by the Doctoral Committee. This will be published in Dissertation Abstracts International.

Publication by microfilm does not preclude subsequent publication of the dissertation, in whole or in part, as a monograph or in a journal. Copyright at the author's expense may be arranged, if desired, by completing a special form to be secured in the Graduate School Office. In order to protect patent or any other rights, the Graduate School may be requested to delay publication by microfilm for a period of one year. This request must be supported by a written recommendation of the supervising professor.

Time Limits and Catalog Changes
All requirements for a Ph.D. in Geological Sciences must be completed within one eight-year period. Work more than eight years old is lost and can be reinstated only by special permission of the Graduate School upon recommendation of the Departmental Committee on Graduate Studies. Further, all requirements for the doctorate must be completed within five years after passing the comprehensive examination.

General and specific requirements for degrees in the Graduate School may be altered in successive catalogs. Provided the requisite course continues to be offered, the student is bound only by the course requirements of the catalog in force at the time of admission or re-admission within an eight-year limit, unless, with the approval of the Graduate School, he or she elects to be bound by the course requirements of a subsequent catalog. This regulation applies to course requirements only.
Geological Sciences

Web site at: http://www.geo.utep.edu

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5. Geophysics (GEOP) Courses
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8. Geology (GEOL) Courses (Doctoral only)
9. Geophysics (GEOP) Courses (Doctoral only)

4.- Geology (GEOL)

GEOL 4155 Vertebrate Paleontology Techniques (0-3)
GEOL 4157 Advanced Vertebrate Paleontology Techniques (0-3)
GEOL 4166 Directed Study, Geology (0-0-1)
GEOL 4266 Directed Study, Geology (0-0-2)
GEOL 4354 Paleozoic and Mesozoic Vertebrate Paleontology (3-0)
GEOL 4356 Cenozoic Vertebrate Paleontology (3-0)
GEOL 4362 Stratigraphy (2-3)
GEOL 4366 Directed Study, Geology (0-0-3)
GEOL 4380 Environmental Geology and Geophysics (3-0)
Geological Sciences

**Web site at:** [http://www.geo.utep.edu/](http://www.geo.utep.edu/)

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9. Geophysics (GEOP) Courses (Doctoral only)

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5. Geophysics (GEOP)

- **GEOP 4167 Directed Study, Geophysics (0-0-1)**
- **GEOP 4267 Directed Study, Geophysics (0-0-2)**
- **GEOP 4332 Exploration Geophysics, Seismic Methods (2-3)**
- **GEOP 4334 Exploration Geophysics, Non-Seismic Methods (2-3)**
- **GEOP 4367 Directed Study, Geophysics (0-0-3)**
COLLEGE OF SCIENCE

Geological Sciences

Web site at: http://www.geo.utep.edu/

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3.- PhD in Geological Sciences
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6.- Geology (GEOL) Courses (Graduate only)
7.- Geophysics (GEOP) Courses (Graduate only)
8.- Geology (GEOL) Courses (Doctoral only)
9.- Geophysics (GEOP) Courses (Doctoral only)

6.- Geology (GEOL)

5101 Graduate Seminar (1-0) Required of all graduate students. Discussion of various geological topics by the faculty, graduate students, and speakers from industry and other institutions. Prerequisite: Graduate standing.

5115 Selected Topics in the Geological Sciences (1-0)

5215 Selected Topics in the Geological Sciences (2-0)

5315 Selected Topics in the Geological Sciences (3-0) Study of advanced topics in such fields as structural geology, environmental geoscience, economic geology, paleontology, petrology, and geochemistry. May be repeated when the topics vary. Prerequisite: Instructor approval.

5162 Directed Study in Geology (0-0-1)

5262 Directed Study in Geology (0-0-2)

5362 Directed Study in Geology (0-0-3) Prerequisites: Graduate standing and instructor approval.

5289 Graduate Research in Geological Sciences (0-0-2)

5389 Graduate Research in Geological Sciences (0-0-3) Cannot be used to satisfy minimum degree requirements. Grade of S or U. Prerequisites: Graduate standing and instructor approval.

5343 Isotope Geology (2-1) Study of the systematics and geochemistry of radiogenic and stable isotopes. The course includes both geochronology and the use of isotopes as tracers in igneous, sedimentary, and metamorphic processes. Prerequisite: Graduate standing. Laboratory fee required.

5344 Advanced Petrology (2-3) Study of magmas and magmatic genesis in light of field, theoretical, and experimental considerations. The course includes interpretation of isotopic and trace-element data. Laboratory studies focus on field trips and petrographic description of thin-sections. Prerequisites: GEOL 3315 or equivalent; CHEM 3351-CHEM 3352 recommended. Laboratory fee required.

5345 Environmental Geochemistry (3-0) Processes of a geological nature which are important in environmental studies will be the topic of this course. The geological context is usually important in determining the effect of foreign intrusions into the natural environment. The course will involve problem solving, class participation, exams, field trips, and a semester project report. Prerequisite: Graduate standing or instructor approval.

5364 Sedimentary Depositional Environments (3-0) Reconstruction of ancient depositional environments in the surface and subsurface using facies analysis. Field trips are included. The class will focus on analysis of field examples. Prerequisites: GEOL 2314 and GEOL 3325.

5365 Basin Analysis (3-0) The study of evolution of sedimentary basins and the influences of tectonics and other factors to create a stratigraphic framework. The course includes basin analysis techniques such as backstripping, paleotemperature calculations, and sequence stratigraphy. Field trips are included. Prerequisite: GEOL 3325 or instructor approval.

5367 Advanced Stratigraphy (2-3) The history, usage, and subtleties of stratigraphy will be investigated through lectures, assigned readings, and examples. Students will have the chance in the field to see if they agree with those who have defined real stratigraphic units. Prerequisite: GEOL 4362 or instructor approval. Laboratory fee required.

5370 Tectonics (3-0) Extensive readings on selected topics in and a broad review of the major principles and theory of tectonics. Prerequisites: GEOL 3423 and graduate
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5375</td>
<td>Quantitative Techniques in the Geological Sciences (2-3)</td>
<td>Introduction to techniques for quantitative analysis of geologic data. Emphasis on the extraction of maximum information from large data matrices. Specific applications to petroleum and mineral exploration. Laboratory fee required.</td>
</tr>
<tr>
<td>5376</td>
<td>Low Temperature Geochemistry (2-2)</td>
<td>Chemical reactions at the earth's surface and their interpretation by thermodynamic and kinetic principles. Precipitation and dissolution, the solid-solution interface, oxidation and reduction, the distribution and circulation of elements and compounds. Prerequisite: CHEM 1306. Laboratory fee required.</td>
</tr>
<tr>
<td>5377</td>
<td>Principles of Geochemistry (3-0)</td>
<td>Chemical processes involved in the distribution and migration of the elements on the earth through space and time. Principles of solution and mineral equilibria in surficial, sedimentary, hydrothermal, and igneous environments. Prerequisite: Graduate standing.</td>
</tr>
<tr>
<td>5379</td>
<td>Petroleum Geochemistry (3-0)</td>
<td>Examination of the biologic, chemical, and geologic processes involved in the accumulation of petroleum-source rocks, including diagenesis, catagenesis, and metagenesis of petroleum prone organic matter; of migration, accumulation, and maturation of liquid hydrocarbons; and of geochemical parameters useful in hydrocarbon exploration. Prerequisite: Graduate standing or instructor approval. Laboratory fee required.</td>
</tr>
<tr>
<td>5382</td>
<td>Chemical Hydrogeology (3-0)</td>
<td>A study of the chemistry of ground and surface water. Subjects covered by the course are the chemistry of natural waters, chemistry of weathering, chemical interactions between geological materials and water, groundwater contamination and the movement of contaminants in groundwater. Prerequisite: GEOL 5376 or instructor approval.</td>
</tr>
<tr>
<td>5383</td>
<td>Physical Hydrogeology (3-0)</td>
<td>A study of the geological controls on ground and surface water flow. Subjects studied are the geology of aquifers, a review of major aquifers in North America, aquifer hydraulics, Darcy's law aquifer tests, and groundwater flow modeling. Prerequisite: Instructor approval.</td>
</tr>
<tr>
<td>5384</td>
<td>Nuclear Waste Disposal (3-0)</td>
<td>In-depth study of problems and issues associated with the past, current, and projected principles and methods of nuclear waste disposal. The multidisciplinary legal, political and technical aspects of siting, operation, and decommissioning of reactors and the subsequent removal of source waste generated at these facilities is considered. The course examines waste removal, classification, containerization, quality assurance, and transport. Waste repository site selection, performance assessment, operation, and entombment in various geological media are stressed. Prerequisites: Graduate standing; students outside the colleges of Engineering and Science will require instructor approval.</td>
</tr>
<tr>
<td>5385</td>
<td>Numerical Methods in Geology (3-0)</td>
<td>Introduction to the theory and application of numerical methods (finite differences and finite elements) with application to problems in hydrology, environmental geology, and structural geology. Subjects covered include general mechanics of groundwater flow, general continuum mechanics, geologic influences on model design, model limitations, convergence, calibration, and verification. Prerequisite: GEOL 5383 or instructor approval.</td>
</tr>
<tr>
<td>5386</td>
<td>Engineering Geology (3-0)</td>
<td>Introduction to the application of geologic fundamentals to geotechnical engineering and the analysis of geologic processes using continuum mechanics. Subjects covered include general soil and rock mechanics, slope stability, surface water and flooding, subsidence, earthquakes, volcanoes, shore line processes, expansive soils, and geologic aspects of engineering works (dams, tunnels, buildings, etc.). Prerequisite: GEOL 3423 or GEOL 3321 or instructor approval.</td>
</tr>
<tr>
<td>5387</td>
<td>Applied Quaternary Geology (3-0)</td>
<td>Addresses pertinent topics of Quaternary science (including paleoclimatology, geomorphology, hydrogeology, pedology, geochronology, neotectonics, and geophysics) in an environmental context. Major bodies of environmental regulation will be introduced and the relationship of these regulations to Quaternary science will be emphasized. Environmental case studies of national significance will be an integral part of the course. Graduate students from other disciplines are encouraged. Prerequisite: Graduate standing or instructor approval.</td>
</tr>
<tr>
<td>5394</td>
<td>Mining Geology (3-1)</td>
<td>Geologic mapping, sample drilling, reserve calculations, and economic evaluation of actively exploited and potential economic mineral deposits. Mine visits required. Prerequisite: Graduate standing. Laboratory fee required.</td>
</tr>
<tr>
<td>5397</td>
<td>Geology and Mineral Resources of Mexico (3-0)</td>
<td></td>
</tr>
</tbody>
</table>
Stratigraphic and structural framework of the Republic of Mexico with particular reference to the distribution of mineral resources. Field excursion required. Prerequisite: Graduate standing.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on thesis continues. Prerequisite: GEOL 5398.

5405 Biostratigraphy (3-3)
The systematic analysis of the separation and differentiation of rock units on the basis of the assemblages of fossils which they contain; special emphasis will be placed on the evolution of biothermal systems through time and problems of the establishment and utilization of biostratigraphic units and chronostratigraphic boundaries. Prerequisite: Graduate standing in Geology or Biology or instructor approval. Laboratory fee required.
**COLLEGE OF SCIENCE**

**Geological Sciences**

Web site at: [http://www.geo.utep.edu/](http://www.geo.utep.edu/)

1. Master of Science in Geological Sciences
2. Master of Science in Geophysics
3. PhD in Geological Sciences
4. Geology (GEOL) Courses
5. Geophysics (GEOP) Courses (Graduate only)
6. Geology (GEOL) Courses (Graduate only)
7. Geophysics (GEOP) Courses (Doctoral only)
8. Geophysics (GEOP) Courses (Doctoral only)

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### 7. Geophysics (GEOP)

**5163 Directed Study in Geophysics (0-0-1)**

**5263 Directed Study in Geophysics (0-0-2)**

**5363 Directed Study in Geophysics (0-0-3)**

Prerequisites: Graduate standing and instructor approval.

**5258 Geophysical Field Methods (1-3)**

An overview of geophysical techniques stressing field applications. Students will participate in seismic, gravity, magnetic, electrical, and radiometric surveys in actual field situations. A report discussing data collection procedures, data processing, and interpretations is required. Prerequisite: Instructor approval. Fees required.

**5336 Digital Image Processing (2-3)**

A survey of the techniques used to manipulate digital image data including atmospheric correction, geocoding, image enhancement, and classification. Data from multispectral sensors such as LANDSAT, SPOT, and IRS-C as well as hyperspectral sensors such as AVIRIS are utilized. Prerequisite: GEOP 4336. Laboratory fee required.

**5351 Groundwater Geophysics (2-2)**

Survey of geophysical field data collection, reduction, and interpretation techniques applied to groundwater, geotechnical, and waste disposal studies. Topics include gravity, magnetics, reflection, and refraction seismology, electrical methods, and well logging. A strong emphasis is placed on data interpretation on actual studies in the southwest. Laboratory fee required.

**5352 Geophysical Inverse Theory (3-0)**

The quantitative study of mathematical methods used to interpret geophysical measurements and determine earth structure. Techniques for both linear and non-linear geophysical problems are studied to determine the resolution and precision of a geophysical model from a given set of data. Prerequisites: GEOP 4332, GEOP 4334, and MATH 3323, or instructor approval.

**5353 Reflection Seismic Data Processing (2-2)**

The computer application of digital signal processing to reflection seismic data from environmental, petroleum, and crustal surveys. Topics include: definition of survey geometries, data editing techniques, amplitude recovery, bandpass filtering, deconvolution, velocity analysis, F-K filtering, and migration. Prerequisite: GEOP 4332, GEOP 5460, or instructor approval.

**5354 Seismology (3-0)**

A study of earthquake seismology, seismotectonics, and the use of seismological methods to determine earth structure. A theoretical foundation is provided by the study of wave propagation in homogeneous and isotropic media from the standpoint of both ray and wave theory. Prerequisite: MATH 4336, PHYS 3351, or instructor approval.

**5356 Topics in Geophysics (3-0)**

Study of advanced topics in the fields such as exploration geophysics, geothermics, theoretical seismology, potential field, data analysis, environmental applications, inversion, seismotectonics, crustal studies, and global tectonics. May be repeated for credit when the topics vary. Prerequisite: Instructor approval.

**5357 Well Logging (2-2)**

The application of well logs to hydrogeologic, petroleum, and mineral studies to characterize sedimentation history and quantitatively evaluate rock and fluid properties. Prerequisite: Graduate standing. Laboratory fee required.

**5361 Plate Tectonics (3-0)**

The application of geological and geophysical data to the description and evolution of motion between the lithospheric plates. Topics include: relative velocities between plates, triple junctions, plate rotations, seismicity and plate boundaries, marine magnetic anomalies, paleomagnetism, plate driving behavior.
mechanisms, and relationship of plate tectonic processes to the geologic evolution of the western United States. Prerequisite: Graduate standing or instructor approval.

5362 Reflection Seismic Data Interpretation (2-2)
The fundamentals of the geologic interpretation of reflection seismic data. Introduction to seismic data acquisition and processing, and their effects on data interpretation. Interpretation techniques: well log to seismic ties, contour maps, fault plane maps, time-to-depth conversion. Interpretation of data from different structural settings. Seismic stratigraphy and applications of sequence stratigraphy to seismic stratigraphic interpretation. 3-D seismic interpretation. Prerequisite: Graduate standing. Laboratory fee required.

5364 North American Geophysical Framework (3-0)
Study of the tectonic evolution of North America from an integrated geological/geophysical approach. Recent literature on large-scale geophysical studies of the lithosphere will be emphasized. Prerequisite: Graduate standing or instructor approval.

5365 Topics in Remote Sensing (3-0)
Study of advanced topics in fields such as radar imaging, thermal imaging, image processing, and hyperspectral techniques. May be repeated for credit when the topics vary. Prerequisites: Graduate standing and instructor approval.

5366 Directed Study in Remote Sensing (0-0-3)
Emphasizes research and data analysis. Not given as a formal class. May be repeated, but no more than six hours of credit will be counted toward a degree. Prerequisites: Graduate standing and instructor approval.

5460 Geophysical Applications of Digital Signal Processing (3-2)
Computer application of discrete signals and systems to geophysical data in one and two dimensions. Properties of the FFT, DFT, Z-transform, and continuous Fourier integral transform. Digital filter design, spectral analysis, deconvolution, spatial filtering of geophysical data sets. Knowledge of FORTRAN, C, or mathematical software package required. Prerequisite: Graduate standing or instructor approval.
## College of Science

### Geological Sciences

**Web site at:** [http://www.geo.utep.edu/](http://www.geo.utep.edu/)

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>6105</td>
<td>Directed Study in Geology (0-0-1)</td>
<td></td>
</tr>
<tr>
<td>6205</td>
<td>Directed Study in Geology (0-0-2)</td>
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</tr>
<tr>
<td>6305</td>
<td>Directed Study in Geology (0-0-3)</td>
<td>Prerequisites: Doctoral graduate standing and instructor approval.</td>
</tr>
<tr>
<td>6115</td>
<td>Advanced Topics in the Geological Sciences (1-0)</td>
<td></td>
</tr>
<tr>
<td>6315</td>
<td>Advanced Topics in the Geological Sciences (3-0)</td>
<td>Advanced topics in paleontology and stratigraphy, mineralogy, environmental geoscience, petrology, geochemistry, structural geology, economic geology, and geophysics. May be repeated for credit when the topics vary. Prerequisites: Doctoral graduate standing and instructor approval.</td>
</tr>
<tr>
<td>6296</td>
<td>Doctoral Research in Geological Sciences (0-0-2)</td>
<td></td>
</tr>
<tr>
<td>6396</td>
<td>Doctoral Research in Geological Sciences (0-0-3)</td>
<td>Cannot be used to satisfy minimum degree requirements. Grade of S or U. Prerequisites: Doctoral standing and instructor approval.</td>
</tr>
<tr>
<td>6320</td>
<td>Dissertation (0-0-3)</td>
<td>Initial work on dissertation.</td>
</tr>
<tr>
<td>6321</td>
<td>Dissertation (0-0-3)</td>
<td>Continued enrollment required while work on dissertation continues. Prerequisite: GEOL 6320.</td>
</tr>
</tbody>
</table>
COLLEGE OF SCIENCE

Geological Sciences

Web site at: http://www.geo.utep.edu/

1. Master of Science in Geological Sciences
2. Master of Science in Geophysics
3. PhD in Geological Sciences
4. Geology (GEOL) Courses
5. Geophysics (GEOP) Courses
6. Geology (GEOL) Courses (Graduate only)
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8. Geophysics (GEOP) Courses (Doctoral only)

8. Geophysics (GEOP)

6110 Directed Study in Geophysics (0-0-1)

6210 Directed Study in Geophysics (0-0-2)

Prerequisites: Doctoral graduate standing and instructor approval.
Mathematical Sciences

Web site at: http://www.math.utep.edu/

1. Information and Requirements
2. Mathematics (MATH) Courses
3. Statistics (STAT) Courses
4. Mathematics (MATH) Courses (Graduate only)

Dr. Thomas E. Brady,
Dean
Dr. Larry P. Jones,
Associate Dean
Dr. Jorge A. Lopez,
Assistant Dean

Bell Hall, Room 100
Phone: (915) 747-5536
Fax: (915) 747-6807
E-mail: science@utep.edu

COLLEGE OF SCIENCE

<table>
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</tbody>
</table>

124 Bell Hall
Phone: (915) 747-5761
E-mail: mathdept@math.utep.edu

CHAIRPERSON: Joe A. Guthrie

GRADUATE FACULTY: Dennis, Duval, Foged, Gregory, Guthrie, Kaigh, Khamsi, Knaust, Moschopoulos, Nymann, O'Neill, Rojo, Schuster, Sewell, Srinivasan, Staniswalis, Thurman, Valdez-Sanchez, Wojciechowski

The Department of Mathematical Sciences offers the Master of Science (MS) degree in Mathematics or Statistics and the Master of Arts in Teaching (MAT) with a major in Mathematics.
COLLEGE OF SCIENCE

Mathematical Sciences
Web site at: http://www.math.utep.edu/

1. Information and Requirements

Requirements for Admission

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Undergraduate degree in mathematics
3. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or other English-speaking institution

Departmental Requirements for MS Degree

For the MS degree, both thesis and non-thesis options are available. The thesis option requires 24 semester hours of course work plus the completion of the six-semester hour thesis. The non-thesis option requires 36 semester hours of course work including MATH 5396. In either case, a maximum of nine semester hours of approved upper-division undergraduate courses are acceptable. Particular courses of study for the MS must be approved by the departmental committee on graduate studies. The passing of a comprehensive examination is required. All MS students must enroll in MATH 5195 each semester in residence.

Specific Requirements for the Master's Degree in Mathematics

Specific course requirements for the MS in Mathematics are MATH 5331, MATH 5351, and MATH 5380.

Specific Requirements for the Master's Degree in Statistics

Specific course requirements for the MS in Statistics are MATH 5380, MATH 5381, MATH 5385, and MATH 5388.

Departmental Requirements for the MAT Degree

Prior to admission, students must have completed the calculus sequence together with 12 semester hours of advanced courses in Mathematics (3300 or 4300 level). The student's GPA for these 12 hours must be at least 3.0. (Students with a bachelor's degree, who do not satisfy these requirements, must first enroll in the post-baccalaureate program at UTEP.) Since the degree is intended for current and future high school teachers of Mathematics, it is desirable that the student will have obtained a teaching certificate in Mathematics upon completion of the program. (Teaching certification courses are not part of the MAT program.)

The Master of Arts in Teaching degree with a major in Mathematics is available in both a thesis (recommended) and a non-thesis option. The thesis option requires 24 hours of course work plus the completion of a six-semester hour thesis in Mathematics Education, while the non-thesis option requires 36 hours of course work. A maximum of nine of these hours may be taken from the 3300 and 4300-level courses listed below. Each student must have his or her courses approved by the Graduate Advisor in order to ensure adequate breadth of courses in the mathematical sciences. A comprehensive examination is required.

Study Plan: At most, 9 hours of Undergraduate courses taken from the list below. At least 15 hours plus 6 hours of thesis work (or 27 hours for the non-thesis option) of Graduate courses: 6-9 hours must be taken from MATH 5360, MATH 5365, or appropriate courses in the College of Education. Other suggested courses: MATH 5311, MATH 5321, MATH 5325, MATH 5351, and STAT 5380.
# COLLEGE OF SCIENCE

## Mathematical Sciences

### Web site at: http://www.math.utep.edu/

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 3300</td>
<td>History of Mathematics*</td>
</tr>
<tr>
<td>MATH 3319</td>
<td>Elementary Number Theory</td>
</tr>
<tr>
<td>MATH 3320</td>
<td>Actuarial Mathematics</td>
</tr>
<tr>
<td>MATH 3327</td>
<td>Applied Algebra</td>
</tr>
<tr>
<td>MATH 3328</td>
<td>Foundations of Mathematics</td>
</tr>
<tr>
<td>MATH 3335</td>
<td>Applied Analysis I</td>
</tr>
<tr>
<td>MATH 3341</td>
<td>Introduction to Analysis</td>
</tr>
<tr>
<td>MATH 4326</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 4329</td>
<td>Numerical Analysis</td>
</tr>
<tr>
<td>MATH 4336</td>
<td>Applied Analysis II</td>
</tr>
<tr>
<td>MATH 4370</td>
<td>Topics Seminar</td>
</tr>
<tr>
<td>MATH 4299-4399</td>
<td>Individual Studies in Mathematics</td>
</tr>
</tbody>
</table>
Master of Science in Interdisciplinary Science

Departments:
- Biological Sciences
- Chemistry
- Geological Sciences
- Mathematical Sciences
- Physics

Dr. Thomas E. Brady, Dean
Dr. Larry P. Jones, Associate Dean
Dr. Jorge A. Lopez, Assistant Dean

Bell Hall, Room 100
Phone: (915) 747-5536
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E-mail: science@utep.edu

GO:
- UTEP Home Page
- Catalog Index
- College of Science
- Graduate Degrees
- University Map

COLLEGE OF SCIENCE

Mathematical Sciences
Web site at: http://www.math.utep.edu/

1.- Information and Requirements
2.- Mathematics (MATH) Courses
3.- Statistics (STAT) Courses
4.- Mathematics (MATH) Courses (Graduate only)

3.- Statistics (STAT) Courses

STAT 3330 Probability
STAT 3380 Sampling Techniques
STAT 3381 Nonparametric Statistical Methods
STAT 4380 Statistics I
Mathematical Sciences

Web site at: http://www.math.utep.edu/

1.- Information and Requirements
2.- Mathematics (MATH) Courses
3.- Statistics (STAT) Courses
4.- Mathematics (MATH) Courses (Graduate only)

4.- Mathematics (MATH) Courses (Graduate only)

5195 Graduate Seminar (1-0)
Conferences and discussions of various topics in mathematics and statistics by faculty, graduate students, and outside speakers. Required of all graduate students during each semester of full-time enrollment. May not be counted more than once toward the degree requirement.

5311 Applied Mathematics (3-0)
Mathematics 5311 is designed to introduce the student to those areas of mathematics which are useful in engineering and science. Topics are chosen from Differential Equations, Fourier Series, Calculus of Variations, and Theory of Algorithms. The course may be repeated once as content changes. Prerequisite: Instructor approval.

5321 Principles of Analysis (3-0)
Investigation of convergence, continuity, differentiability, compactness and connectedness, the Riemann-Stieltjes integral, and sequences of functions. Prerequisite: MATH 3341.

5325 Principles of Algebra (3-0)
Groups, including subgroups, quotient spaces and homomorphisms, Ring Theory, including ideals and quotients, homomorphisms and polynomial rings. An introduction to modules and fields, including field extensions. Prerequisites: MATH 3325 and department approval.

5329 Numerical Analysis (3-0)
Introduction to approximation theory, interpolation, numerical differentiation and integration, solutions of linear and non-linear equations, numerical solution of differential equations, optimization. Emphasis is on error analysis and stability. Several practical examples and computer programs will be covered. Prerequisites: The analysis equivalent of MATH 3341 and a working knowledge of a high-level programming language.

5330 Computational Methods of Linear Algebra (3-0)
Numerical methods involved in the computation of solutions of linear systems of equations, eigenvalues, linear least squares solutions; linear programming; error analysis. Prerequisites: MATH 3323 and a working knowledge of a high-level programming language.

5331 Real Variables (3-0)
Lebesgue integration, integration with respect to measure, absolute continuity, Fundamental Theorem of Calculus for the Lebesgue integral. Prerequisite: MATH 5321.

5341 General Topology (3-0)
Topics include: Separation, compactness, connectedness, paracompactness, metric spaces, and metrization of topological spaces. Prerequisite: MATH 5321.

5343 Numerical Solutions to Partial Differential Equations (3-0)
Introduction to finite difference and finite element methods for the solution of elliptic, parabolic, and hyperbolic partial differential equations. Prerequisites: (1) MATH 2326 or MATH 3326; MATH 3323; and MATH 4 4329, each with a "C" or better or their equivalents and (2) knowledge of a high level programming language.

5351 Complex Variables (3-0)
Complex integration and the calculus of residues. Analytical continuation and expansions of the analytic function. Entire, meromorphic, and periodic functions. Prerequisite: MATH 5321 or its equivalent as approved by the instructor.

5360 Introduction to Research in Mathematics Education (3-0)
An introduction to current research literature in mathematics education focusing on the relations between theories of cognition and learning and philosophies of mathematics. Topics may include constructivism, Vygotskian theory, genetic epistemology, and technological cognition. The course may be repeated once for credit as content changes. Prerequisites: MATH 3300 with a grade of "C" or better and department approval.

5365 Technology in the Mathematics Classroom (3-0)
An introduction to technology used in mathematics education such as graphing calculators, computer algebra systems, course specific software and the use of the Internet, and an exploration of its appropriate and effective use in the mathematics classroom. Prerequisite: Department approval.

5370 Seminar (3-0)
Various topics not included in regular courses will be discussed. May be repeated once for credit as the topics vary. Prerequisite: Instructor approval.

5380 Mathematical Statistics I (3-0)
The probabilistic foundations of mathematical statistics. Probability spaces, random variables, univariate and multivariate probability distributions, conditional distributions, expectation, generating functions, multivariate transformations, modes of convergence, and limit theorems. Prerequisite: STAT 3330 or its equivalent as approved by instructor.

5381 Mathematical Statistics II (3-0)
A continuation of Mathematical Statistics I. Parametric statistical models, sufficiency, exponential families, methods of estimation, comparison of estimators, confidence intervals, hypothesis testing, optimal tests, likelihood ratio tests, large sample theory. Prerequisite: MATH 5380.

5385 Statistics in Research (3-0)
An introduction to statistical modeling of a univariate response conditional on a test of explanatory variables. Classical formulation of multiple linear regression and analysis of variance. Some discussion of experimental design from power considerations. Selected topics from generalized linear models, nonparametric regression, and quasi-likelihood estimation. Emphasis is on model building, fitting, validation, and subsequent inferences. Analysis of real data using major statistical software packages. Prerequisite: MATH 3323, STAT 4380, or instructor approval.

5386 Stochastic Processes (3-0)
Random walks, discrete time Markov chains, and Poisson Process. Further topics such as continuous time Markov chains, branching processes, renewal theory, and estimation in branching processes. Prerequisites: (1) MATH 4341 and (2) STAT 3330 or MATH 5380.

5388 Multivariate Data Analysis (3-0)
Statistical analysis of a multivariate response. Multivariate multiple linear regression, principal components, factor analysis, canonical correlation, and discriminate analysis. Applications with the use of statistical packages will be considered. Prerequisite: MATH 5385 or equivalent.

5390 Nonparametric Statistics (3-0)
Distribution-free statistical methods; nonparametric one and two sample tests and analysis of variance; goodness-of-fit tests; nonparametric measures of association; and robust procedures. Prerequisite: MATH 5380 or equivalent.

5391 Time Series Analysis (3-0)
Time domain and frequency domain aspects of discrete time stationary processes, correlation functions, power spectra, filtering, linear systems, and ARMA models for nonstationary series. An introduction to the analysis of multiple time series. Some use of statistical software will be included. Prerequisite: MATH 5380 or equivalent.

5392 Statistical Computing (3-0)
A study of stochastic simulation and select numerical methods used in statistical computation. Prerequisites: A high-level programming language, linear algebra, and STAT 4380 or equivalent.

5396 Graduate Research (0-0-3)
A written report on an appropriate subject in mathematics or statistics is required. May not be counted towards the 24 hours of course work in the thesis option, but may be substituted for three hours of thesis credit. May not be repeated for credit. Prerequisite: Instructor approval.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on thesis continues. Prerequisite: MATH 5398 or department approval.
The Department of Physics offers studies leading to the degree of Master of Science in Physics with experimental and/or theoretical physics research in: astrophysics, atmospheric physics and optics, computational physics, condensed matter and surface physics, geophysics, nuclear, and radiation physics. Through a cooperative program with the Geological Sciences Department, the Master of Science in Geophysics is offered. The department also offers other cooperative plans that can lead to the doctorate degree. For details please contact the Graduate Advisor of the Physics Department.
Physics

Web site at: http://www.utep.edu/~physics/

1. General Departmental Requirements
2. Master of Science in Physics
3. Master of Science in Geophysics
4. Physics (PHYS) Courses

1.- General Departmental Requirements

The normal prerequisite to graduate studies in the Department of Physics is the bachelor's degree in physics with a "B" average in physics courses taken at the undergraduate level. The bachelor's degree course work should include advanced undergraduate courses in Mechanics, Electromagnetics, Modern Physics, Quantum Mechanics, Thermal Physics, and advanced laboratory practice. Any deficiency must be removed before the petition is made for candidacy for the MS degree.
COLLEGE OF SCIENCE

Physics

Web site at: http://www.utep.edu/~physics/

1. General Departmental Requirements
2. Master of Science in Physics
3. Master of Science in Geophysics
4. Physics (PHYS) Courses

2. Master of Science in Physics

The department offers a program of courses and research leading to the MS degree in physics. Two routes are available. Plan 1 requires 30 semester hours of credit: 24 hours of course work plus a 6-hour thesis (PHYS 5398 and PHYS 5399). Plan 2 requires the favorable recommendation of the Physics Department Graduate Studies Committee and 36 hours of course work including the successful completion of a research problem (PHYS 5391) with a written report submitted to the department.

Requirements for Plan 1 are a minimum of 21 semester hours of graduate work including thesis. Specific courses required are PHYS 5321, PHYS 5325, PHYS 5341, PHYS 5361, PHYS 5398, and PHYS 5399.

Requirements for Plan 2 are a petition stating the reason for the alternate route and a minimum of 27 semester hours of graduate work. Specific courses required are PHYS 5321, PHYS 5325, PHYS 5341, PHYS 5361, and PHYS 5391.

Students must have their course program approved by the graduate advisor each semester. The student will choose, in consultation with the graduate advisor, a chairperson of the research committee and at least two additional committee members, who will supervise the thesis or research problem. One member of this committee must be from outside the Physics Department. These choices should be made and approved by the department Graduate Advisor and by the Graduate School before the student has completed two semesters of graduate work.

The candidate for the MS degree in Physics may have no more than two grades of "C" for courses used to fulfill the requirements of the degree and must pass a final examination which will include an oral defense of the thesis or research problem.
# COLLEGE OF SCIENCE

## Physics

Web site at: [http://www.utep.edu/~physics/](http://www.utep.edu/~physics/)

|-------------------------------------|--------------------------------|----------------------------------|--------------------------|

### 3. Master of Science in Geophysics

Physics graduate students may elect to obtain the MS degree in Geophysics. This degree requires 30 semester hours including a six-hour thesis. A minimum of 21 hours must be at the graduate level or above. For physics students, specific courses required are PHYS 5321, PHYS 5325, PHYS 5341, PHYS 5398, and PHYS 5399. At least 12 hours of approved course work must be selected from the Geology-Geophysics courses offered by the Geological Sciences Department. All physics graduate students with deficiencies in Geology should consult the Graduate Advisor in the Department of Geological Sciences about the development of an individualized plan to remedy such deficiencies.

Thesis supervisory committees will have at least two geophysics representatives from the Geological Sciences Department.

### For Undergraduate and Graduate Students

A maximum of 6 semester hours of the following undergraduate courses in physics may, with the approval of the graduate advisor, be counted toward an MS in Physics. (An asterisk indicates that the course will only be approved in exceptional cases.)

**PHYS 3243** Advanced Laboratory Practice (0-6)

**PHYS 3323** Physical Optics (3-0)

*PHYS 3325** Survey of Modern Physics (3-0)

*PHYS 3331** Thermal Physics (3-0)

*PHYS 3351** Analytical Mechanics I (3-0)

**PHYS 3352** Analytical Mechanics II (3-0)

*PHYS 3359** Astrophysics (3-0)

**PHYS 4328** Theoretical Geophysics (3-0)

*PHYS 4341** Electromagnetics I (3-0)

**PHYS 4342** Electromagnetics II (3-0)

*PHYS 4348** Fundamentals of Acoustics (3-0)

**PHYS 4355** Introduction to Quantum Mechanics (3-0)

**PHYS 4356** Atoms, Molecules, and Solids (3-0)

**PHYS 4357** Relativity, Nuclei, and Particles (3-0)
COLLEGE OF SCIENCE
Introduction

Master of Science in Interdisciplinary Science

Departments:
- Biological Sciences
- Chemistry
- Geological Sciences
- Mathematical Sciences
- Physics

Dr. Thomas E. Brady, Dean
Dr. Larry P. Jones, Associate Dean
Dr. Jorge A. Lopez, Assistant Dean

Bell Hall, Room 100
Phone: (915) 747-5536
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Physics Web site at: http://www.utep.edu/~physics/

1. General Departmental Requirements
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3. Master of Science in Geophysics
4. Physics (PHYS) Courses

4. Physics (PHYS) Courses

5195 Graduate Seminar (1-0)
May be repeated three times for credit.

5196 Graduate Research in Physics (0-0-1)
5396 Graduate Research in Physics (0-0-3)

5696 Graduate Research in Physics (0-0-6)
This course may be taken as often as needed, but no more than 3 semester credit hours may be applied to satisfy the requirements for the master's degree. A student will receive only an S or U grade except when the student has filed a preliminary degree plan in which this course appears. Prerequisite: Graduate Advisor approval.

5321 Mechanics (3-0)
Lagrange’s equations, nonholonomic constraints, Hamilton's principle, two-body central force, rigid body dynamics, Lagrangian relativistic mechanics, Hamilton and Hamilton-Jacobi equations, and canonical transformations. Prerequisite: PHYS 3352. Offered during fall semester.

5325 Mathematical Physics (3-0)
Linear systems, special functions, complex variables, and tensor problems in Physics. Offered fall semester.

5341 Electrodynamics (3-0)

5361 Quantum Mechanics (3-0)
Solution of the Schroedinger wave equation for discrete and continuous energy eigenvalues; representation of physical variables as operators and the matrix formulation of quantum mechanics; approximation methods. Prerequisite: PHYS 4356. Offered during spring semester.

5365 Advanced Statistical Mechanics (3-0)
Classical and quantum statistics of systems in equilibrium. Treatment of fluctuations and transport phenomena. Introduction to many-body problems. Prerequisite: PHYS 3331 or equivalent as determined by the instructor.

5371 Solid State Physics (3-0)
Electromagnetic, elastic, and particle waves in periodic lattices as applied to the electrical, magnetic, and thermal properties of solids. Prerequisite: PHYS 4356 or instructor approval.

5375 Topics in Ultra-High Vacuum Technology and Surface Science (3-0)
This course consists of two parts. The first part will discuss the issues involved in production and measurement of ultra-high vacuum including pumps, gauges, and appropriate UHV materials. The second part of the course will discuss the physical principles underlying several surface spectroscopies, including AES, XPS, ESD, LEED, and EELS.

5391 Research Problems in Physics (0-0-3)
Required course for the 36-hour non-thesis option. Requires two copies of a type-written report. May be repeated for credit; maximum credit allowed six hours. May not be counted as thesis research but may be taken one time as a preparatory investigation course prior to the beginning of thesis research. Prerequisites: Submission of the Petition of Candidacy and department approval.

5393 Special Topics in Physics (3-0)
Topics to be announced. May be repeated for credit.

5398 Thesis (0-0-3)
Initial work on the thesis.

5399 Thesis (0-0-3)
Continuous enrollment required while work on thesis continues. Prerequisite: PHYS 5398.
INTERDISCIPLINARY DOCTORAL PROGRAMS

- Environmental Science and Engineering
- Materials Science and Engineering
INTERDISCIPLINARY DOCTORAL PROGRAMS

Environmental Science and Engineering

Program Director: Jorge Gardea-Torresdey
Ph.D. in Environmental Science and Engineering
The University of Texas at El Paso presents both an extraordinary setting and excellent capabilities for the multi-disciplinary doctoral program in Environmental Science and Engineering. Located on the U.S.-Mexico border and one of the most environmentally-impacted areas of North America, UTEP has already established itself as a center of environmental research and development activity, with support from the EPA, the NSF, the Department of Energy, private foundations, and state agencies. With support and coordination from the Center for Environmental Resource Management (CERM), faculty and students from several departments conduct research often in collaboration with local agencies and national laboratories. With the implementation of the North American Free Trade Agreement (NAFTA), the establishment of a new EPA regional office in El Paso and of the joint U.S. and Mexico Border Environmental Cooperation Commission in Ciudad Juárez, Mexico, and UTEP’s already established base of collaborations with Mexico on environmental problems, UTEP and El Paso can become an internationally recognized source of cutting-edge research, technology, and education.

Requirements for Admission
In addition to Graduate School requirements, students entering the program must have a Master of Science degree or equivalent study in an environmentally related scientific or engineering field. Such fields include but are not limited to chemistry, physics, biology, geology, civil engineering, industrial engineering, electrical engineering, mechanical engineering, and metallurgical engineering. Students are expected to have superior graduate records (GPA > 3.5/4.0) and, for students from countries where English is not the principal language, a minimum TOEFL score of 550. Students must submit at least two letters of reference from individuals qualified to judge their capability to do doctoral-level work. Applicants will be notified of their admission status by the Graduate School.

Degree Requirements
The specific course requirements for each student will be determined by the student’s Doctoral Advisory Committee. However, each student must complete at least 60 hours beyond the master’s degree. Of the 60 hours, at least 30 hours are organized course work. ESE 6306, Principles of Experimental and Engineering Design (3 semester hours) and ESE 6307, Interdisciplinary Environmental Problem Solving (3 semester hours) are required core courses. Ten to twelve semester hours of optional core courses (generally ESE 6301, 6303, and one from 6402, 6404, and 6405 are normally taken).

Students, depending on their background, may be required to take one or more undergraduate or master’s level courses prior to enrolling in core courses. The prerequisite courses will not count for credit toward the doctoral degree. Ten to fifteen additional credits of advanced-level course work are required which, when taken as a whole, lead to in-depth expertise in an area of environmental science or engineering. Two hours of Graduate Seminar, ESE 6107, which must be taken each semester of full-time enrollment, may be counted toward the degree. The remaining semester hours are filled by research and dissertation (ESE 6396, ESE 6398, and ESE 6399).

Before completing 24 hours of course work, each student will be required to pass a qualifying examination based upon the material covered in the ESE core. A grade of "B" or better in a core course exempts a student from taking a qualifying exam in that subject area. Prior to beginning the dissertation research, each student will take a comprehensive examination by his or her Doctoral Advisory Committee. The examination may be written, oral, or both. At this time, the student’s Doctoral Committee will approve the proposed dissertation topic and determine if the student has the background required to address the topic.

Environmental Science and Engineering (ESE)

6107 Graduate Seminar (1-0)
Presentation and discussion of topics in environmental science and engineering by graduate students, faculty, and visitors. Prerequisite: Permission of the ESE Program Director.

6301 Environmental Law and Policy (3-0)
Focus on the formulation, implementation, enforcement, and evaluation of environmental policies. A review of the legal and administrative environmental
systems of both the United States and Mexico will be included. Questions of environmental risk and equity will be addressed. Prerequisite: Enrollment in the ESE program or permission of the ESE Program Director.

6303 *Transport, Fate, and Treatment of Contaminants in the Environment (3-0)
Review of transport phenomena active in environmental systems. Fluid flow and contaminant transport in surface waters, groundwaters, the vadose zone, and the atmosphere. Multimedia contaminant transport. Relationship between transport properties and site remediation. Application of computer models for environmental transport. Prerequisite: Enrollment in the ESE program or permission of the ESE Program Director.

6306 *Principles of Experimental and Engineering Design (3-0)
Students with different backgrounds examine experimental and engineering design principles with special application to the solution of environmental problems. Student teams will be formed to define an interdisciplinary environmental problem of regional interest. Prerequisite: Enrollment in the ESE program or permission of the ESE Program Director.

6307 *Interdisciplinary Environmental Problem Solving (3-0)
Students with different backgrounds will work in teams to examine interdisciplinary environmental issues specific to the far West Texas border region and prepare a group report with recommendations which consider scientific, political, economic, and social aspects. Prerequisites: Enrollment in the ESE program and ESE 6306 or permission of the ESE Program Director.

6308 Population Ecology (3-0)
This course will include discussions of population dynamics, factors limiting populations, population projection matrices, demography and life table analysis, stable and stationary populations, survivorship curves, competition, predation and multiple species assemblages. Prerequisite: Program approval.

6309 Community Ecology (3-0)
Interactions between populations, species assemblages, succession, species abundance relations, species richness and diversity, species distribution, niche overlap, resemblance functions, association analysis, ordination interpretation, community stability and structure. Prerequisite: Program approval.

6396 Doctoral Research (0-0-3)
Directed research on topics in environmental science and engineering related to the dissertation or conducted as component of the student's overall graduate program. Prerequisite: Admission to the ESE program or permission of the ESE Program Director.

6398 Dissertation (0-0-3)
Taken when preparation of the dissertation is begun. One enrollment required. Prerequisites: Admission to the ESE program and passage of the comprehensive examination.

6399 Dissertation (0-0-3)
Taken continuously during preparation of the dissertation. Prerequisites: Admission to the ESE program and ESE 6398.

6402 *Environmental Chemistry (3-3)
Review of classification and properties of chemical materials of environmental interest. Study of chemical principles pertaining to acidity, basicity, redox properties, solubility, partitioning and transport in the environment. Chemical reactions in aqueous, soil/sediment and atmospheric phases. Environmental analytical techniques. The laboratory emphasizes analytical protocols utilized in environmental laboratories. Prerequisites: Enrollment in the ESE program or permission of the ESE Program Director and one year of introductory work in chemistry.

6404 *Environmental Biology (3-3)
An examination of the theoretical and experimental aspects of the relationship between biological and physical environments at the individual, population, community, and ecosystem levels. This includes microbial ecology and biogeochemical cycling of nutrients. Prerequisites: Enrollment in the ESE program or permission of the ESE Program Director and one year of work in introductory biology.

6405 *Environmental Geoscience (3-3)
Application of earth science principles and processes to environmental issues. Topics will include fundamentals of physical geology and their applications to geohazards, engineering geology, surface and ground water, erosion, and environmental geochemistry. Atmospheric and climate topics will include global change issues. Labs will feature hands-on experience with earth materials, maps, analytical techniques, and environmental problem solving. Prerequisites: Enrollment in the ESE program or permission of the ESE Program Director and one semester of work in physical geology.

*Core Courses
INTERDISCIPLINARY DOCTORAL PROGRAMS

Materials Science and Engineering

Web site at: http://www.nurse.utep.edu/
M-201 Engineering
Phone: (915)747-5468
E-mail: fekberg@utep.edu

PROGRAM DIRECTOR: Lawrence Murr

Ph.D. in Materials Science and Engineering

The field of materials sciences and engineering is central to the technological, industrial, and economic development of Texas, the United States, Mexico, and other industrialized countries. The UTEP Ph.D. program is a multi-disciplinary program to prepare scientists and engineers to contribute to this vital field, with a range of skills linking materials, structure, properties, synthesis and processing, and performance. Students develop a research focus in a specialized area using one or more of these skills to study some class or classes of materials, including metals, polymers, ceramics, semiconductors, superconductors, composites, and other materials systems.

Students in the program take a common core:

- Advanced Concepts in Materials Sciences and Engineering
- Materials Applications and Engineering
- Microchemical and Microstructural Characterization of Materials
- Contemporary Topics in Materials Science and Engineering

Requirements for Admission

Admission to the Ph.D. program in materials science and engineering with a BS or MS degree in a related field requires a minimum 3.0 GPA and a minimum TOEFL score of 550 for applicants from countries where English is not the principal language. GRE scores will also be considered for all applicants.

Requirements for Degree

Degree requirements include a 20-hour core course sequence and a minimum of six hours of dissertation. Additional hours of specialization, individual studies, and research are also required to achieve a minimum of 85 hours beyond the BS degree. Materials research with a faculty mentor affords specialization that can serve as the basis for the dissertation. An acceptable dissertation must include a technical paper submitted to a refereed journal by the student as the senior author. A dissertation proposal and oral examination of subject area constitutes a Qualified Examination prior to engaging in dissertation research.

Students entering the program with a BS degree will normally take from 85 to 100 hours of graduate study for the Ph.D. Students entering with an MS degree would normally receive 30 hours of advanced standing toward the Ph.D. for their master's level work. There are no specific (non-English) language proficiency requirements.

Materials Science and Engineering (MASE)

5338 Mechanical Behavior of Materials (3-0)
The underlying principles of elastic and plastic deformation of metals, ceramics, polymers, and composite materials will be developed. Topics include dislocation theory, slip, twinning, microstructures, high and low temperature deformation behavior (tensile properties, creep, and fatigue) of crystalline and amorphous materials. Offered in alternate years. Prerequisite: MME 2303 or equivalent or instructor approval.

5340 Advanced Failure Analysis (3-0)
An advanced study of structural failure processes to include topics in fracture mechanics, fatigue, and environmental assisted cracking. Analysis of failures using metallographic, electron microscopy, and microanalytic techniques will be covered. Fracture of specific materials; steels, nonferrous alloys, composites, and nonmetallics will be included.

5343 Advanced Materials and Composites (3-0)
Properties and structures of composite materials and design of composite systems to yield desired combinations of properties. Metal, ceramic, and polymer composite systems as well as high-performance alloy systems or microcomposites. Applications of materials and composite fundamentals to manufacturing and processing. Offered in alternate years. Prerequisites: MME 5401, MME 5303 or equivalent, or instructor approval.

5344 Interfacial Phenomena in Materials Systems (3-0)
Thermodynamics of solid interfaces and interfacial equilibria. Interfacial free
energy concepts and measurements. Structure of interfaces: solid surfaces, grain boundaries, phase boundaries, and system interfaces. Properties of interfaces and their role in materials performance. Offered in alternate years. Prerequisites: MME 5401, MME 5303, MME 5304, and MME 5305 or equivalent, or instructor approval.

5372 Advanced Optoelectronic Devices (3-0)
Theory and application of advanced photonic devices including injection lasers, photodiodes, infra-red detectors, solar cells, and electroluminescent displays. Prerequisite: MASE 5371 or equivalent.

5389 High Speed GaAs Devices (3-0)
Advanced topics of contemporary interest in high speed GaAs devices. May be repeated for credit when topic varies. Prerequisite: Instructor approval.

5390 Special Topics in the Chemistry of Materials (3-0)
Synthesis of polymers and advanced materials by condensation, addition, and other types of polymerization. Solution methods of characterization. Solid state properties and their structural basis. May be repeated for credit when topic varies. Prerequisite: Instructor approval.

5391 Special Topics in the Physics of Materials (3-0)
Molecular and crystal structure of polymers and advanced materials. Brillouin-zones, nature of cohesive energy, thermal behavior, electrical and thermal transport magnetism, super conductivity, and optical properties. May be repeated for credit when topic varies. Prerequisite: Instructor approval.

6191 Individual Studies (0-0-1)

6291 Individual Studies (0-0-2)

6391 Individual Studies (0-0-3)

6294 Graduate Research Projects (0-0-2)

6394 Graduate Research Projects (0-0-3)

6301 Materials Applications and Engineering (3-0)
A blend of applied materials processing and synthesis, examination of selected materials performance, and fundamental issues examining materials analysis and modeling. The fabrication of selected materials will be covered in the context of specific applications, i.e., semiconductors and device applications, artificially structured materials (MBE, CVD, etc.), solidification and rapid solidification technologies, vapor deposition and surface processing, solid-state forming processes, joining, consolidation, materials removal, and electrolytic processing. The performance issues will include atomistic studies, micromechanics of strength and fracture and degradation damage, failure analysis, and life prediction.

6302 Contemporary Topics in Materials Science and Engineering: Materials Chemistry (3-0)
Selected topics from the contemporary materials chemistry literature presented in a variable format which normally involves a combination of topical lectures and critical review of the literature (including individual and student team critiques involving oral and written presentations). Usually team taught by department faculty.

6303 Contemporary Topics in Materials Science and Engineering: Materials Physics (3-0)
Selected topics from the contemporary materials physics literature presented in a variable format which normally involves a combination of topical lectures and critical review of the literature (including individual and student team critiques involving oral and written presentations). Usually team taught by department faculty.

6304 Contemporary Topics in Materials Science and Engineering: Materials Engineering (3-0)
Selected topics from the contemporary materials engineering literature presented in a variable format which normally involves a combination of topical lectures and critical review of the literature (including individual and student team critiques involving oral and written presentations). Usually team taught by department faculty.

6390 Contemporary Topics in Materials Science and Engineering (3-0)
Selected topics from materials science and engineering. Course may be repeated twice for credit as topic varies.

6398 Dissertation (0-0-3)
Initial work on the dissertation.

6399 Dissertation (0-0-3)
Continuous enrollment required while work on the dissertation continues. Prerequisite: MASE 6398.
6400 Advanced Concepts in Materials Science and Engineering (4-0)
A blend of contemporary solid state physics and chemistry emphasizing structure and properties and including processing (synthesis) and performance, illustrated by various classes of materials: structural, electronic, magnetic, photonic, and superconducting. Fundamental issues and applications will include: crystal structure and crystal chemistry; disorder/order imperfections; phase equilibria, phase diagrams, phase transformation; reaction rates, kinetics, thermodynamics; microstructures in processing and performance; materials design/materials by design.

6402 Microchemical and Microstructural Characterization of Materials (3-0)
The structure and composition of materials can be investigated at a variety of levels utilizing a variety of analytical techniques. It is imperative that the principles and applications of a range of these techniques be presented to students examining classes of materials. Techniques which can allow microscopic and macroscopic characterization should be presented as well as techniques for bulk, surface, and related interfacial characterization. This course will focus on a variety of microscopy and spectrometry techniques—optical, electron, acoustic, and ion. As many microanalysis areas as possible will be demonstrated by having students visit facilities on the campus which constitute a materials characterization and analysis network. Principal microanalysis areas will include: x-ray diffraction, electron microscopy (scanning and transmission), electron probes, surface and near surface microanalysis, and optical and acoustic microscopy.