The Office of the Graduate School, Academic Services Building, 601 West Schuster, Room 223 was created to serve UTEP graduate students and to respond to graduate student needs and issues. We encourage you to visit the office and meet the professionals who will be assisting you through your degree or personal program. Our office hours are 8:00 a.m.-6:00 p.m. daily; our telephone number is (915) 747-5491. We are pleased to respond to e-mail and can be contacted at GradSchool@utep.edu, or you can access our website at www.utep.edu/graduate.

Among the many and varied areas of responsibility within the Office are

- Graduate admissions
- Graduate recruitment
- Graduate orientation
- Maintenance of academic files of graduate students
- Preliminary and Final Degree Plans
- Academic status communication
- Graduate assistantships
- Application for graduation

We look forward to serving you.

Reference Telephone Numbers

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<tr>
<th>Department</th>
<th>Phone Number</th>
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<tr>
<td>Graduate School</td>
<td>(915) 747-5491</td>
</tr>
<tr>
<td>Registration and Records</td>
<td>(915) 747-5550</td>
</tr>
<tr>
<td>Financial Services</td>
<td>(915) 747-5806</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>(915) 747-5204</td>
</tr>
<tr>
<td>Office of International Programs</td>
<td>(915) 747-5664</td>
</tr>
<tr>
<td>Housing Services</td>
<td>(915) 747-5352</td>
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<td>Dean of Students</td>
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STATEMENT OF EQUAL EDUCATIONAL OPPORTUNITY

To the extent provided by applicable law, no person shall be excluded from participation in, denied the benefits of, or be subject to discrimination under, any program or activity sponsored or conducted by The University of Texas System or any of its component institutions on the basis of race, color, national origin, religion, sex, age, veteran status, or disability.

DISCLAIMER

This catalog is a general information publication only. It is not intended to nor does it contain all regulations that relate to students. The provisions of this catalog do not constitute a contract, express or implied, between any applicant, student or faculty member and The University of Texas at El Paso or The University of Texas System. The University of Texas at El Paso reserves the right to withdraw courses at any time, to change fees or tuition, calendar, curriculum, degree requirements, graduation procedures, and any other requirements affecting students. Changes will become effective whenever the proper authorities so determine and will apply to both prospective students and those already enrolled.
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Welcome to The University of Texas at El Paso (UTEP)! UTEP is an outstanding institution where the faculty and staff are wholly dedicated to your academic success. We are a university where a vast array of academic programs are offered, students are encouraged to become involved in the discovery and creation of knowledge, and relationships are easy to develop with fellow students, staff members, and faculty. The following pages of this catalog introduce you to our policies and procedures, degrees, majors, and minors, and curricula. Through your perusal of this catalog, we hope our commitment to you of offering the highest quality of education in a supportive community of faculty and staff is evident.

OUR HISTORY

The University of Texas at El Paso (UTEP) has created a foundation of academic excellence as strong as the rugged Rocky Mountain foothills that are the University’s home. Located on the U.S.-Mexico border in the world’s largest binational metropolitan area of more than two million people, UTEP is the largest Mexican-American-majority university in the United States. In this unique multicultural setting, the University offers a wide scope of academic programs and outstanding support services, providing academic excellence through opportunity for students of the Southwest.

UTEP, the second oldest academic institution of The University of Texas System, was founded by the Texas legislature in 1913 as the Texas State School of Mines and Metallurgy to train professionals in the mining industry. From its inception, the campus has featured architecture derived from the style of buildings in the Himalayan kingdom of Bhutan. UTEP’s unique buildings are the only examples of this ancient architecture in the Western Hemisphere. The motif, characterized by thick, sloped outer walls accented with a band of elaborate brickwork, was inspired by Kathleen Worrell, the wife of the college’s first dean, after seeing photographs of Bhutanese monasteries in an issue of National Geographic. Noted El Paso architect Henry Trost designed the first buildings, and architects have continued the theme through more than 80 years of campus expansion.

The college’s curriculum expanded in 1927 with the addition of liberal arts courses. The first master of arts degree was established in 1940. The institution was renamed Texas Western College in 1949 and the University of Texas at El Paso in 1967.

Since then, enrollment has grown to over 19,842, and the scope of programs has expanded to include 81 bachelor’s, 78 master’s, 13 doctoral degrees and 3 Combined degrees (Bachelors/Masters or Masters/Masters) to meet the needs of an increasingly industrialized West Texas region. The 367-acre UTEP campus consists of 81 buildings, including the 52,247-seat Sun Bowl Stadium, the 11,767-seat Don Haskins Center, a modern fine arts complex with galleries and recital halls, and a museum of natural and cultural history. A 125,000 square-foot Undergraduate Learning Center features multimedia-enriched computer and distance learning technology. The $11 million, 65,000-square foot Larry K. Durham Sports Center opened in 2002 and features a 10,000-square foot strength and conditioning center; a sports medicine center; a student-athlete lounge and computer center; a football locker room; football coaches’ offices; football positional meeting rooms; and a “Hall of Champions” which is utilized for numerous athletic department functions.

UTEP offers outstanding academic programs at the graduate and undergraduate levels. From its pivotal location on the U.S.-Mexico border, UTEP has developed an international reputation for excellence in education and research, marking UTEP as an innovative force in higher education for the 21st century.
OUR VISION

The University of Texas at El Paso (UTEP) commits itself to providing quality higher education to a diverse student population. Classified as a Doctoral/Research-Intensive university, UTEP seeks to extend the greatest possible educational access to a region which has been geographically isolated with limited economic and educational opportunities for many of its people. The University will ensure that its graduates obtain the best education possible, one which is equal, and in some respects superior, to that of other institutions, so that UTEP’s graduates will be competitive in the global marketplace. UTEP also envisions capitalizing on its binational location to create and maintain multicultural, inter-American educational and research collaborations among students, faculty, institutions, and industries, especially in northern Mexico.

The UTEP community -- faculty, students, staff, and administrators-- commits itself to the two ideals of excellence and access. In addition, the University accepts a strict standard of accountability for institutional effectiveness as it educates students who will be the leaders of the 21st Century. Through the accomplishment of its mission and goals via continuous improvement, UTEP aspires to be an educational leader in a changing economic, technological, and social environment: a new model for Texas higher education.

OUR MISSION

The University of Texas at El Paso (UTEP) is dedicated to teaching and to the creation, interpretation, application, and dissemination of knowledge. UTEP prepares its students to meet lifelong intellectual, ethical, and career challenges through quality educational programs, excellence in research and in scholarly and artistic production, and innovative student programs and services, which are created by responsive faculty, students, staff, and administrators.

As an institution of The University of Texas System, UTEP accepts as its mandate the provision of higher education to the residents of El Paso and the surrounding region. Because of the international and multicultural characteristics of this region, the University provides its students and faculty with distinctive opportunities for learning, teaching, research, artistic endeavors, cultural experiences, and service.

OUR GOALS

Goal 1 — Learning and Teaching: To prepare UTEP students to meet lifelong intellectual, ethical and career challenges and to be the leaders of the 21st Century.

Student Achievement: To graduate students who have a command of communicative, mathematical, and computer skills; core knowledge in the natural and social sciences, humanities, and arts; knowledge, attitudes, and skills of their academic major or profession; and additional knowledge and skills to be gained from capitalizing on UTEP’s special setting.

Curriculum: To maintain a core curriculum for all undergraduate students and major/professional curricula which provide students with the knowledge, attitudes, and skills to be productive citizens and to meet future intellectual, ethical, and career challenges.
Educational Programs: To provide a wide array of quality academic programs appropriate to a comprehensive university and the educational requirements of El Paso’s binational metropolitan area and to develop new graduate degree programs based on needs and opportunities of our setting and institutional strengths.

Faculty: To recruit, orient, support, and retain a highly qualified, diverse faculty which is dedicated to teaching and which uses effective instructional practices, such as directed practical experiences and technological innovations, for the enhancement of student learning.

Student Services: To provide comprehensive programs and services which strengthen UTEP students’ academic achievement and develop their leadership skills.

Pre-College Preparation of Students: To work collaboratively with schools, the community, and employers to ensure that young people and their families are informed about the necessity of higher levels of academic preparation for admission to and success in the University, and to support collaborative efforts to improve pre-college education.

Student Recruitment: To inform and assist qualified potential students in seeking admission to the University in order to fulfill their aspirations for higher education.

Goal 2 - Research, Scholarship and Artistic Production: To create, interpret, evaluate, apply, and disseminate knowledge; to encourage the addition of perspectives based on UTEP’s geographic and social setting; and to contribute to the formation of a broader intellectual and artistic foundation for the 21st Century.

Generation of Knowledge: To advance knowledge through research, scholarship, and artistic production.

Application of Knowledge: To develop research, scholarship, and artistic activities which apply UTEP’s expertise and resources to the search for solutions to regional, national, and international problems.

Integration with Teaching: To expand the linkages between University instruction with research, scholarship, and artistic activities whenever appropriate and to expand opportunities for both graduate and undergraduate students to participate in these endeavors.

Faculty: To recruit, orient, support, and retain a highly qualified, diverse faculty dedicated to the advancement, dissemination, and application of knowledge.

Goal 3 - Public Service: To work in partnership with public and private agencies, institutions and organizations, including business and industry, to improve the quality of life in our region and world by providing appropriate University expertise and leadership.

Community Education: To encourage lifelong learning and to provide educational courses and activities in response to local and regional needs.

Preparation of Professionals in Critical Areas: To educate and prepare for licensure and certification of critically needed professionals, such as teachers and providers of health care and human services.

Economic Development Analysis and Technical Assistance: To provide needs assessment services, data collection and analyses, training, and technical assistance supportive of regional economic development.

Culture: To provide cultural activities consistent with the goals of the University and to work collaboratively with other groups supportive of regional cultural activities.
Recreation: To provide recreational activities consistent with the goals of the University and to work collaboratively with other groups in the support of regional recreational activities.

Athletics: To provide intercollegiate athletic activities consistent with the goals of the University and to work collaboratively with other groups in the support of regional athletic activities.

Goal 4 - Administration: To support the achievement of UTEP’s mission in learning, teaching, research, scholarship, artistic production and public service through responsive, effective and efficient administrative and staff services.

Strategic Planning: To contribute to the achievement of UTEP’s mission and goals through the University’s planning, institutional research, and evaluation system.

Financial and Material Resources: To plan, manage, and supervise the physical facilities and grounds, materials management, purchasing, and campus security in order to provide the necessary support services conducive to learning, teaching, research, artistic production, and public service.

Institutional Advancement: To advance academic and co-curricular programs through voluntary support of university initiatives, increase alumni participation in the life of their University, and enhance on-campus and public visibility of UTEP successes.

Information and Telecommunications Services: To expand and integrate state-of-the-art technology and telecommunications throughout the campus, emphasizing their application to instruction and student learning, and to improve information and telecommunication services for essential administrative functions (e.g., student and alumni records, purchasing, facilities management).

Staff: To hire, train, support, and retain well-qualified staff members who work to ensure the achievement of the University’s mission and goals.

OUR COLLEGES

UTEP has eight colleges that work collaboratively to insure that students experience a positive college environment and have the opportunity to explore a myriad of academic disciplines: University College, Graduate School, College of Business Administration, College of Education, College of Engineering, College of Health Sciences, College of Liberal Arts, and College of Science.

The University College is an administrative unit that is wholly dedicated to the needs of entering students and providing them with a seamless blend of student support services to enhance their success as they enter the University. The Graduate School is wholly dedicated to serve and respond to the needs and issues of graduate students.

UTEP’s six academic colleges—business administration, education, engineering, health sciences, liberal arts, and science—comprise some 44 academic departments and offer 81 baccalaureate degrees. Graduate degrees offered by UTEP include 78 master's degrees in disciplines from all six colleges. Doctoral degrees are offered in Biological Sciences, Civil Engineering, Computer Engineering, Computer Science, Rhetoric and Composition, Environmental Science and Engineering, Geological Science, History, Interdisciplinary Health Sciences, International Business, Materials Science and Engineering, Psychology, and an Ed.D. degree is offered in Educational Leadership and Administration.
Each of the six colleges contributes to UTEP’s vast array of academic programs:

- With programs accredited by AACSB – the International Association for Management Education, the **College of Business Administration** plays a dynamic role in preparing UTEP students to compete in a global economy.

- The **College of Education** plays an active role in several local, regional, and national projects to improve teacher education and public school administration, including the graduation of better-prepared science and math teachers.

- Strengthening its roots in the fields of **science** and **engineering**, UTEP added its first doctoral program in geological sciences in 1974 and developed a Ph.D. in computer engineering in 1991. Capitalizing on major grants from the National Science Foundation and other bodies, UTEP has concentrated in recent years on developing state-of-the-art science laboratories, where undergraduate and graduate students participate in research that is relevant to the border region.

- The **College of Health Sciences** and several cooperative programs with other institutions provide the region with a broad spectrum of degree opportunities in Clinical Laboratory Sciences, Family Nurse Practice, Health Sciences, Kinesiology, Nursing, Occupational Therapy, Pharmacy, Physical Therapy, Public Health, and Speech-Language Pathology.

- UTEP also continues to develop its **liberal arts and social sciences** offerings in response to the needs of the bilingual/bicultural community the University serves. To serve this goal, UTEP has added a Ph.D. program in History that focuses on the U.S./Mexico Borderlands.

**OUR STUDENT BODY**

Students who attend UTEP come from a varied mix of social, cultural, and economic backgrounds that closely mirror the population of the El Paso/Ciudad Juárez region. Approximately 70 percent of UTEP’s students are Hispanic, almost 70 percent work while in college, and about half are first-generation college students. UTEP students typically represent more than 45 states and 82 countries, with about 10.6 percent coming from Mexico.

**ACCREDITATION**

The University of Texas at El Paso is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097/ telephone number: 404-679-4500) to award bachelor’s, master’s, and doctoral degrees. Information concerning accreditation by separate accrediting bodies for specific programs is shown in the related college section of this catalog.
Board of Regents

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RITA C. CLEMENTS, Vice-Chairman
CYNDI TAYLOR KRIER, Vice-Chairman
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Terms expire February 1, 2011
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* The actual expiration date of the term depends on the date the successor is appointed, qualified, and takes the oath of office

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GERI H. MALANDRA, Interim Executive Vice Chancellor for Academic Affairs
KENNETH I. SHINE, Executive Vice Chancellor for Health Affairs
SCOTT C. KELLEY, Executive Vice Chancellor for Business Affairs
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ROBERT E. BARNHILL, Vice Chancellor for Research and Technology Transfer
BARRY D. BURGDORF, Vice Chancellor and General Counsel
RANDA S. SAFADY, Vice Chancellor for External Relations
WILLIAM H. SHUTE, Vice Chancellor for Federal Relations
BARRY McBEE, Vice Chancellor for Governmental Relations
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B.S., U.S. Military Academy, West Point

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B.S., M.S., Kansas State University

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B.A., M.A., The University of Texas at El Paso

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B.S., M.S., Ph.D., Texas A & M University

RICHARD PADILLA, Vice President for Student Affairs
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B.A., M.A., State University of New York, Fredonia; Ph.D., Rensselaer Polytechnic Institute

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B.S., M.S., The University of Nevada at Reno; Ph.D., Washington State University

ROBERT NACHTMANN, Dean, College of Business Administration
B.S., City College of New York; M.B.A., Long Island University; D.B.A., Indiana University

THE UNIVERSITY OF TEXAS AT EL PASO
JOSEFINA V. TINAJERO, Dean, College of Education
B.S., M.Ed., The University of Texas at El Paso; Ed.D., Texas A & M University

STEPHEN W. STAFFORD, P.E., Interim Dean, College of Engineering
B.S.Met.E., The University of Texas at El Paso; Ph.D., Rice University

HARRY J. MEEUWSEN, Interim Dean, College of Health Sciences
B.S., Catholic Academy of Physical Education, Tilbury, Netherlands; M.S., The University of New Hampshire; Ph.D., Louisiana State University

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

MICHAEL EASTMAN, Dean, College of Science
B.A., Carleton College; Ph.D., Cornell University

ROBERT L. ANDERS, Dean, School of Nursing
B.S., Union College; M.S., Dr.P.H., The University of Hawaii
Listed below are the tentative 2006-2008 academic calendars. For detailed information or changes, students should refer to the academic calendar website found at http://www.utep.edu/register.

For mini term dates, students should refer to each term’s printed **Class Schedule**, or access the term calendars found at http://www.utep.edu/register, or contact the Registrar’s Office at (915) 747-5550/5544.

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<tr>
<th>Event</th>
<th>Fall 2006</th>
<th>Fall 2007</th>
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<tr>
<td>Graduate admission application deadline ($15.00 late fee begins)</td>
<td>July 1</td>
<td>July 1</td>
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<tr>
<td>Graduate admission deadline for international applicants</td>
<td>July 1</td>
<td>July 1</td>
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<tr>
<td>Telephone and Web Registration</td>
<td>-July</td>
<td>-July</td>
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<tr>
<td>Late Registration and schedule adjustment prior to classes</td>
<td>Aug. 17-18</td>
<td>Aug. 16-17</td>
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<tr>
<td>Classes begin</td>
<td>Aug. 21 (Mon.)</td>
<td>Aug. 20 (Mon.)</td>
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<tr>
<td>Late Registration and schedule adjustment – continued</td>
<td>Aug. 21-24</td>
<td>Aug. 20-23</td>
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<tr>
<td>Last day of class</td>
<td>Nov. 30 (Thurs.)</td>
<td>Nov 29 (Thurs.)</td>
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<tr>
<td>Last day of Final Examinations</td>
<td>Dec. 8</td>
<td>Dec. 7</td>
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<tr>
<td><strong>Wintermester 2006 and Spring 2007</strong></td>
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<tr>
<td>Graduate admissions application deadline ($15.00 late fee begins)</td>
<td>Nov. 1</td>
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<tr>
<td>Graduate admission deadline for international applicants</td>
<td>Nov. 1</td>
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<tr>
<td>Late Registration for Wintermester</td>
<td>Dec. 8</td>
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<td>Last day of class</td>
<td>Dec. 21</td>
<td>Dec. 20</td>
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<td>Last day of Final Examinations for Wintermester</td>
<td>Dec. 22</td>
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<td>Late Registration and schedule adjustment prior to classes for Spring</td>
<td>Jan. 11-12</td>
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<td>Jan. 14-17</td>
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<td>Last day of class</td>
<td>May 3 (Thurs.)</td>
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<td>May 12</td>
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<td>March 1</td>
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<td>Telephone and Web Registration for Maymester and Summer I and II</td>
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* Individual graduate programs often have earlier application deadlines or may accept applications only for specific semesters. Applicants should contact the departmental graduate advisor or the Graduate School.
## THE GRADUATE SCHOOL

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Since the awarding of the first master’s degree in History in 1942, the graduate program at UTEP has experienced significant growth. In 1967, a Graduate School was organized, and in 1974, the first doctoral-level degree program, the Doctor of Philosophy in Geological Sciences, was approved by the Coordinating Board of the Texas College and University System, with the first degree awarded in 1979. Today, the Graduate School offers Doctor of Philosophy degrees in Biological Sciences, Civil Engineering, Computer Engineering, Computer Science, Environmental Science and Engineering, Geological Sciences, History/Borderlands History, Interdisciplinary Health Sciences, International Business, Materials Science and Engineering, Psychology, Rhetoric and Composition and the Doctor of Education in Educational Leadership and Administration, and master’s degrees in over 70 areas.

The Graduate School is comprised of professors and scholars designated as Members of the Graduate Faculty and of students duly admitted to pursue their studies beyond the baccalaureate degree. The Graduate School faculty and administration award all graduate degrees conferred by the University under authority delegated by the Board of Regents of The University of Texas System.

PABLO ARENAZ, Vice Provost for Graduate Studies and Dean of the Graduate School
B.S., M.S., University of Nevada, Reno; Ph.D., Washington State University

CHASTITY BRADFORD, Assistant Dean for Retention and AGEP Coordinator
B.S., Spelman College; Ph.D., University of Alabama at Birmingham

YVONNE LOPEZ, Assistant Dean for Graduate Student Services
B.A., The University of Texas at Pan-American; M.Ed., The University of Texas at El Paso

THE GRADUATE COUNCIL

The Graduate Faculty of The University of Texas at El Paso exercises its legislative functions through a Graduate Assembly. The Graduate Assembly is the final faculty authority for recommending policies concerned with academic standards for admission and retention of students, for furthering the development of the graduate program, and other matters affecting graduate study. The Assembly accomplishes most of its responsibilities through its elected representatives to the Graduate Council. Terms expire on August 31 of the year indicated in parentheses.

PABLO ARENAZ
Vice Provost of Graduate Studies and Dean of the Graduate School
Ex-Officio Member

MEREDITH ABARCA (2008)
Assistant Professor of English
College of Liberal Arts
Member-At-Large
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and College/Position (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARIA ALVAREZ-AMAYA</td>
<td>Professor of Nursing, School of Nursing, Member-At-Large (2006)</td>
</tr>
<tr>
<td>LANCE BROUGHTERS</td>
<td>Professor of Marketing and Management, College of Business Administration Representative (2007)</td>
</tr>
<tr>
<td>WILLIAM C. CORNELL</td>
<td>Associate Professor of Geological Sciences, College of Science Representative (2006)</td>
</tr>
<tr>
<td>STEPHEN L. CRITES, JR.</td>
<td>Assistant Professor of Psychology, College of Liberal Arts Representative (2006)</td>
</tr>
<tr>
<td>JORGE GARDEA-TORRESDAY</td>
<td>Professor of Chemistry, College of Science Representative (2008)</td>
</tr>
<tr>
<td>L. ANTONIO GONZALEZ</td>
<td>Associate Professor of Teacher Education, College of Education Representative (2007)</td>
</tr>
<tr>
<td>VIRGILIO GONZALEZ</td>
<td>Assistant Professor of Electrical and Computer Engineering, Member-At-Large (2007)</td>
</tr>
<tr>
<td>ANA HUERTA-MACIAS</td>
<td>Associate Professor of Teacher Education, College of Education Representative (2006)</td>
</tr>
<tr>
<td>STEPHEN W. JOHNSON</td>
<td>Associate Professor of Educational Psychology and Special Services, Chair of Graduate Council (2006)</td>
</tr>
<tr>
<td>KATE MANGELSDORF</td>
<td>Professor of English, College of Liberal Arts Representative (2007)</td>
</tr>
<tr>
<td>THOMAS OLSON</td>
<td>Associate Professor of Nursing, School of Nursing, College of Health Sciences Representative (2008)</td>
</tr>
<tr>
<td>ARUNKUMAR PENNATHUR</td>
<td>Assistant Professor of Mechanical and Industrial Engineering, College of Engineering Representative (2008)</td>
</tr>
<tr>
<td>RICHARD POSTHUMA</td>
<td>Assistant Professor of Marketing and Management, College of Business Administration (2008)</td>
</tr>
<tr>
<td>GREGORY ROCHA</td>
<td>Associate Professor of Political Science, College of Liberal Arts, President of the Faculty Senate (Voting)</td>
</tr>
</tbody>
</table>
DOCTORAL PROGRAMS

Doctor of Education
   Educational Leadership and Administration

Doctor of Philosophy
   Biological Sciences
   Civil Engineering
   Computer Engineering
   Computer Science
   Environmental Science and Engineering
   Geological Sciences
   History
   Interdisciplinary Health Sciences
   International Business
   Materials Science and Engineering
   Psychology
   Rhetoric and Composition

MASTER’S PROGRAMS

Master of Accountancy

Master of Arts
   Art
      Art Education
      Studio Art
   Communication
   Education
   English
      English and American Literature
      Rhetoric and Writing Studies
   History
      History
      US/Mexico Border
   Interdisciplinary Studies
   Latin American and Border Studies
   Leadership Studies
Linguistics
Political Science
Psychology
  Clinical
  General Experimental
Sociology
Spanish
Theatre Arts

Master of Arts in Teaching
  English
  Mathematics

Master of Business Administration
  Business Administration

Master of Education
  Educational Administration
  Educational Diagnostician
  Educational Psychology and Guidance
  Guidance and Counseling
  Instructional Specialist
  Reading Education
  Special Education

Master of Engineering in Environmental Engineering

Master of Fine Arts
  Creative Writing

Master of Information Technology

Master of Music
  Music Education
  Performance

Master of Occupational Therapy

Master in Physical Therapy

Master in Public Administration

Master of Science
  Bioinformatics
  Biological Sciences
  Chemistry
  Civil Engineering
  Computer Engineering
  Computer Science
  Economics
  Electrical Engineering
  Engineering
Environmental Engineering
Environmental Science
Geological Sciences
Geophysics
Health Promotion
Industrial Engineering
Interdisciplinary Studies
Kinesiology
Manufacturing Engineering
  Computer Aided Manufacturing
  Design Controls
  Planning
Mathematics
Mechanical Engineering
Metallurgical and Materials Engineering
Physics
Speech-Language Pathology
Statistics

Master of Science in Nursing
  Family Nurse Practitioner
  Nursing Administration
  Nurse Clinician Educator
  Women’s Health Care-Nurse Practitioner

Additional doctoral and master’s degree programs are pending final approval. For information, students should contact the graduate advisor for a specific academic area or the Graduate School, (915) 747-5491.

COMBINED PROGRAMS

BBA/MAcc  Bachelor of Business Administration (Acct.)/Master of Accountancy

BBA/MBA  Bachelor of Business Administration (Acct.)/Master of Business Administration (Acct.)

MBA/MPA  Master of Business Administration/Master of Public Administration

ON-LINE PROGRAMS

Master of Business Administration
Master of Science in Kinesiology/UT Telecampus

CERTIFICATES AND NON-DEGREE PROGRAMS

College of Business Administration
  International Business Certificate
  MBA Plus Program

College of Engineering
  International Manufacturing
College of Education
Texas Initial Teaching Certificate
Alternative Certification
Endorsement Program
Mid Management Professional Certification

College of Health Sciences
Post-Master’s Nursing

College of Liberal Arts
Women’s Studies
Urban and Regional Planning

Institute for Policy and Economic Development
Border Administration
Economic Development
Leadership Studies
Urban and Regional Planning

Non-Degree Option
Students selecting the non-degree option are placed in an unclassified status, indicating no particular major or program of study has been selected. Course work is usually for personal, professional, or educational enrichment only. Students often select the non-degree option to complete prerequisite undergraduate work or to demonstrate their ability to do graduate level coursework. Students may enroll in graduate-level course work only with the permission of the graduate advisor for the department in which the courses belong. Should a non-degree student subsequently be admitted into a degree program, the departmental graduate advisor may recommend to the Graduate School that up to nine (9) hours completed prior to formal admission to the program be used toward the graduate degree.

All post-baccalaureate students are required to maintain a minimum cumulative grade point average of 2.5. Students whose cumulative GPA drops below a 2.5 are placed on academic probation and have nine (9) semester hours in which to return the GPA to 2.5. Failure to do so will result in dismissal.

COOPERATIVE PROGRAMS

UTEP enthusiastically participates in cooperative degree programs with the University of Texas at Austin and the UT Health Sciences Center in Houston. Applicants to such programs are required to submit separate applications to the degree-granting institution and are classified as post-baccalaureate students for any UTEP enrollment. Students are asked to be aware that admission to UTEP as a post-baccalaureate student neither offers nor implies admission to the degree-granting institution.

Doctor of Pharmacy/UT Austin
The University of Texas at Austin (UT Austin) in cooperation with the University of Texas at El Paso grants the degree of Doctor of Pharmacy. The first two years of the prepharmacy curriculum is available on the UTEP campus. Students then apply for admission to the College of Pharmacy at UT Austin. At least the first two years, of the approximate four years, of course work in pharmacy school must be taken on the UT Austin campus. It is anticipated that about 1.5-2.0 of the final years of the professional curriculum should be available at UTEP.
Doctorate of Science in Nursing/ UT Health Science Center, Houston

Students can contact the College of Health Sciences for information about this cooperative program.

Master of Public Health/ UT Health Science Center, Houston

The University of Texas Health Science Center at Houston offers the Master of Public Health degree (MPH) at UTEP. This program was developed to provide students with a basic foundation in public health and an understanding of the unique health problems of the US-Mexico border through course work and applied research. Courses are provided by the University of Texas - Houston School of Public Health faculty in residence at the El Paso campus, as well as through interactive television courses taught by faculty at both the Houston and San Antonio campuses. In addition, some upper-division and graduate courses offered by UTEP academic departments may be taken concurrently and be considered in fulfillment of degree requirements. The program is fully accredited by the Council on Education for Public Health.

This El Paso satellite program provides students with the opportunity to study and conduct research in a binational and multicultural region. Students are expected to gain a competency in the five basic disciplines of public health (administration, behavioral sciences, biometry, environmental health, and epidemiology) with a focus on border health. Degree requirements include the completion of a minimum of 36 credit hours, including a master’s thesis in which students examine a specific health issue in depth. The University of Texas - Houston Health Science Center School of Public Health is the degree-granting institution. For additional information, students can call (915) 747-8500.

General Degree Requirements

PRELIMINARY DEGREE PLAN

During the first semester of graduate study, each master’s student must submit to the Graduate School for approval a Preliminary Degree Plan signed by the departmental graduate advisor. The Preliminary Degree Plan should show the courses required by the department that the student must complete prior to graduation. The selection of a supervising thesis committee, composed of at least two departmental representatives and one member from outside the department (all members of the Graduate Faculty), may be delayed to the second semester of graduate study. The Degree Plan must be approved by the Graduate School.

For doctoral students, the Preliminary Degree Plan must be submitted during the first year of graduate study. For composition of the supervising committee, the student should refer to the section in this catalog that describes his/her respective doctoral program.

TIME LIMITS AND CATALOG CHANGES

All requirements for a master’s degree must be completed within one six-year period, including any transfer work or work completed prior to admission to the program. Work over six years old is lost and can be reinstated only by special permission of the Dean of the Graduate School upon the recommendation of the committee on graduate studies. For the policy on time limits for completing requirements for doctoral degrees, students should consult the section on specific master’s programs.
General and specific requirements for degrees in the Graduate School may be altered in successive catalogs. Provided the requisite courses continue 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 a six-year limit, unless, with the approval of the Dean 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.

**COURSE WORK REQUIREMENTS**

**Course Load**

Registration in excess of 15 semester hours during a long semester, or 6 semester hours in a summer term requires the approval of the departmental graduate advisor and the Graduate School.

At least 30 semester hours of upper-division and/or graduate instruction are required for any master’s degree. Nine semester hours of upper-division undergraduate courses approved for graduate credit are the maximum allowable in any individual's program. Undergraduate courses taken for graduate credit will require additional work, the amount and nature of which to be determined by the instructor. Every proposed program of work needs the approval of the Graduate School. The Graduate School discourages students from working toward more than one graduate degree at the same time.

**Fall and Spring**

<table>
<thead>
<tr>
<th></th>
<th>Full-time</th>
<th>Part-time</th>
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<tbody>
<tr>
<td></td>
<td>9 or more hours per semester</td>
<td>8 or less hours</td>
</tr>
<tr>
<td>Maximum course load is 15 semester hours.</td>
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</tbody>
</table>

**Maymester and Wintermester**

<table>
<thead>
<tr>
<th></th>
<th>Full-time</th>
<th>Part-time</th>
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<tbody>
<tr>
<td></td>
<td>3 or more hours per term</td>
<td>2 or less hours</td>
</tr>
<tr>
<td>Maximum course load is 6 hours.</td>
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</tbody>
</table>

**Summer and 10 weeks**

<table>
<thead>
<tr>
<th></th>
<th>Full-time</th>
<th>Part-time</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>3 hours or more per term</td>
<td>2 or less hours</td>
</tr>
<tr>
<td>Maximum course load is 6 hours.</td>
<td></td>
<td></td>
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</tbody>
</table>

Thesis and dissertation students refer to the Enrollment Verification Guide.

**Enrollment Verification Guide**

For enrollment verification to financial aid, loan agencies, insurance companies, scholarships, etc., the following categories will be followed. Students are encouraged to enroll in the appropriate number of credit hours as required by the agencies, etc. Veterans Affairs (VA) students are recommended to consult with the campus VA Office.

Students who participate in the **Career and Professional Development Services Cooperative Education Program** and who are only enrolled in a CO-OP course will be classified as full-time for the semester/term.

The classification of full-time status applies to criteria for employment as teaching and research assistants and for receipt of stipends and scholarships. It represents a minimum standard and individual programs may require students to enroll in more hours to qualify for support.
Fall and Spring  
- Full-time = 9 or more hours per semester  
- 3/4 time = 6-8 hours  
- 1/2 time = 4-5 hours  
- Less than 1/2 = 3 or fewer hours  

Maymester and Wintermester  
- Full-time = 3 or more hours per term  
- 1/2 time = 2 hours  
- Less than 1/2 = 1 hour  

Summer and 10 weeks  
- Full-time = 3 or more hours per term  
- 1/2 time = 2 hours per term  
- Less than 1/2 = 1 hour per term  

Master’s degree students who have completed all requirements for the degree except the second semester of the master’s thesis (5399) and who were full-time students in the immediately preceding fall or spring semester are classified by the Graduate School as full time if enrolled in 3 hours of thesis. This applies to a single final semester only.  

Doctoral degree students who have completed all requirements for the degree except the dissertation (6398/6399 or 6320/6321) and who were full-time students in the immediately preceding fall or spring semester are classified by the Graduate School as full time if enrolled in 3 hours of dissertation. This applies to two final semesters of dissertation work only.  

Graduate students enrolled in 3 hours during one of the summer semesters are classified by the Graduate School as full time for the entire summer.  

This full-time classification is a criteria for employment as teaching and research assistants and for receipt of stipends and scholarships. It represents a minimum standard and individual programs may require students to enroll in more hours to qualify for support.  

Students participating in the Career and Professional Development Services Cooperative Education Program and are only enrolled in a CO-OP course will be classified as full-time.  

Prerequisites  
Every master’s degree program is based on the assumption that the student participating in it already possesses a general college education through the baccalaureate level. Accordingly, the first prerequisite for the entering student is a baccalaureate degree from an accredited institution (or, for international and special students, proof of equivalent training). A second prerequisite is that the entering student must have taken at least 12 semester hours of advanced undergraduate courses in the area of study in which he or she proposes to pursue a graduate major. Some areas may require more semester hours of undergraduate preparation. Students must earn at least a 3.0 grade point average in any deficiency work required. If a student without adequate preparation is admitted to a given graduate program, admission will be conditional until such time as the student has completed the courses of preparatory work designated by the graduate advisor. These courses will be in addition to the 30 hours (or more) required for the master’s degree itself.  

Thesis Requirements  
The candidate must be accepted into a graduate program prior to pursuing the thesis. The candidate for the master’s degree writes a thesis under the direction of a supervising committee, consisting of at least two departmental representatives and one member from outside the department. The thesis is subject to the approval of the committee and ultimately to the approval of the Dean of the
Graduate School. The researching and writing of the thesis involves 6 semester hours of credit. In order to earn the 6 credit hours for the thesis, the student must register for course 5398 when work on the thesis is begun. Thereafter, the student must register for 5399 during each semester or term in which work on the thesis is being done. Students may not enroll in 5398 and 5399 simultaneously, nor may they enroll in more than three hours of thesis at any one time, and must be enrolled during the semester of graduation.

One complete copy of the thesis in PDF electronic format, turned in on a CD, prepared according to the GUIDE book (available through the Graduate School), must be presented to the Graduate School prior to the deadline date published in the Class Schedule and on the Graduate School web-site for the semester in which the student intends to graduate. The student must also turn in a hard copy of the signature page with original signatures of the members of the thesis committee. The signature page must be included in the PDF file, but it should not be signed.

If a student has not completed thesis work at the end of two years after the subject has been approved and recorded, the supervisor may require the choice of another subject. Credit in the thesis course will not be granted until the thesis is completed and approved. Information on thesis preparation can be obtained from the Graduate School. Theses are regarded as publications and will be made public once they are approved and submitted.

Substitutions for Thesis

Some programs do not require a thesis. Among such non-thesis options are internship reports (where the internship is approved as an essential part of the graduate program by the Dean of the Graduate School), professional reports, and reports or formal papers prepared in certain graduate seminar or conference-type courses.

Reports should be comparable to the thesis in every respect except for the evidence of original research. Reports and other formal papers are normally completed just as theses are; they must be reviewed and accepted by the supervising committee and, upon acceptance of the report by the committee, the candidate submits two complete copies of the thesis in PDF electronic format turned in on a CD, consistent with theses in all respects, to the Graduate School for approval.

DISSERTATION REQUIREMENTS

A doctoral candidate must be accepted into a graduate program prior to pursuing the dissertation. The candidate for the doctoral degree writes a dissertation under the direction of a supervising committee. For composition of the supervising committee, the student should refer to the section in this catalog that describes his/her respective doctoral program. The student must register for the dissertation course (6320 or 6398) when work on the dissertation is begun. Thereafter, the student must register for course 6321 or 6399 during each semester or term in which work on the dissertation is being done. Students may not enroll in 6320 and 6321, or in 6398 and 6399 simultaneously nor may they enroll in more than three hours of dissertation at any one time, and must be enrolled during the semester of graduation.

A copy of the dissertation in PDF or Word electronic format must be submitted to the Graduate School for a format check. This must be submitted prior to the deadline date published in the Class Schedule and the Graduate School web-site for the semester in which the student intends to graduate. The dissertation must be prepared according to the GUIDE book (available through the Graduate School). Once the format has been approved, the student will receive a confirmation from the Graduate School that the format
has been approved. The student must submit to the Graduate School, one complete copy of the dissertation in PDF electronic format on a CD and one hard copy of the signature page with original signatures.

The student must also submit the Graduate School approved dissertation to the University Microfilms International website (http://dissertations.umi.com/utep). The student is required to pay the cost of microfilm reproduction to the Graduate School. Dissertations are regarded as publications and will be made public once they are approved and submitted.

**FINAL EXAMINATION**

All graduate degree candidates are required to complete satisfactorily an oral or written examination or both. The examining committee, consisting of at least three graduate faculty members, will normally be the student's supervising committee. The committee will have one representative from the minor area, if the program has one. If there is no minor, one member of the committee must be from another department. Individual departments may elect to drop a student after a first or second failure of the examination upon the recommendation of the examining committee, but under no circumstances will a student be permitted to take the examination more than three times. A student failing such an examination for the third time will be dropped from the program.

**GRADUATION REQUIREMENTS**

Degrees are conferred at the end of each semester and at the end of the summer session. For summer graduates, regardless of the summer session that you are enrolled in, the degree is conferred at the end of the last summer session. Formal commencement ceremonies are held in May for all candidates who complete degree requirements during the spring semester and in December for fall candidates and graduates of the previous summer.

Graduation requirements are as follows:

1. Completion of all required course work as listed on the approved Preliminary Degree Plan;
2. Acceptance of thesis, dissertation, or reports by the Graduate School;
3. Satisfactory completion of an oral or written exam or both; and
4. Filing of an approved and paid Application for Graduate Degree with the Student Business Services Office for processing by the Records Office.

**Degree Application Procedures**

Graduate degree candidates must submit an Application for Graduate Degree in the semester in which they expect to graduate and by the deadline date stated in the *Class Schedule*. This form must be completed by the student and approved by the graduate advisor. The student must bring the advisor-approved form to the Graduate School two to three weeks before the published deadline date to allow a complete review of the academic record. The degree application process is completed by payment of the graduation fee by the candidate and the filing of the approved and paid application in the Student Business Services Office, which will be forwarded to the Records Office for processing. The Application for Graduate Degree is only valid for one semester and this fee is not refundable if the student does not graduate on the date specified in the application.
Posthumous Degree

A posthumous degree may be awarded only if the student was enrolled in courses that would have allowed the student to complete all work for the degree, and if the student had the appropriate grade point average (GPA) in the required areas. For further details, students should contact the Graduate School at (915) 747-5491.
ACADEMIC REGULATIONS

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Qualified graduate applicants may apply for admission to The University of Texas at El Paso as either degree-seeking (master’s or doctoral degree) or for post-baccalaureate study (certification or endorsement, completing prerequisite course work for later graduate study, or taking courses for personal or educational enrichment. All applications of students who hold a baccalaureate degree, or its equivalent, must be submitted through the Graduate School except for applicants pursuing a second or subsequent undergraduate degree. Degree programs differ in the specific requirements and guidelines for admission. The Graduate School makes determinations regarding admissions on the basis of recommendations from the relevant master’s or doctoral program.

GENERAL ADMISSION REQUIREMENTS

The following documents must be submitted to the Graduate School for consideration for admission into a graduate degree program:

1. Completed application for admission.

2. Application/processing fee ($15 US citizens or Permanent residents/Mexican nationals, $65 International applicants).

3. An official transcript, with the baccalaureate degree posted, from the degree-granting institution and copies of transcripts for all other relevant upper-division and graduate work at accredited U.S. institutions or equivalent work and degrees at foreign institutions. The application process can begin with copies of transcripts. Individual programs may have additional requirements. Students who will apply to receive educational benefits through the Department of Veterans Affairs should, in addition to the above requirements, submit copies of transcripts from all other colleges and universities previously attended.

4. For graduates of institutions outside of the United States where English is not the first language, a minimum score of 213 (550 paper based exam) on the Test of English as a Foreign Language (TOEFL). Particular programs may have different minimum score requirements and in some cases alternative assessments of English language competency may be considered. Applicants should note that appointment to a graduate assistantship usually requires a score of 250 (600 paper based). Official test scores must be sent directly from the testing agency to the Graduate School.

5. Evidence of satisfactory academic achievement and potential. This will usually be assessed by review of performance in upper division (junior and senior level) courses as well as any graduate-level courses completed. In addition, many programs consider results on standardized tests, including the GRE, GMAT, and MAT, in making recommendations for admission. Official test scores must be sent directly from the testing agency to the Graduate School. Specific programs may require other evidence of academic performance and promise including interviews, personal statements, and letters of recommendation. Programs that consider results on standardized tests will also consider other information regarding the applicant’s background where that is available.

6. Evidence of adequate subject preparation for the proposed graduate major.
The Graduate Studies Committee of the proposed graduate major will recommend to the Graduate School acceptance, conditional acceptance, or rejection of the application after all required documents have been received and reviewed by the Graduate School. The Graduate School approves these recommendations and notifies the applicant of the final decision.

**Graduate Entrance Examinations**

As part of their graduate admission requirements, students may be required to take one or more standardized tests:

**Graduate Record Examination General Test**

The General Test of the Graduate Record Examination (GRE) is designed to test preparation and aptitude for graduate study. Many degree programs require the GRE for admission. The GRE is taken at the applicant's expense at licensed sites. The exam is not offered on campus.

**Graduate Management Admission Test**

The Graduate Management Admissions Test (GMAT) is an aptitude test designed to measure certain mental abilities important in the study of management at the graduate level. The GMAT is taken at the applicant’s expense at licensed sites. The exam is not offered on campus.

**Test of English as a Foreign Language**

The TOEFL is designed to measure proficiency in understanding the English language. For graduates of institutions outside of the United States where English is not the first language, a minimum score of 213 is required (550 paper based exam) on the TOEFL. Particular programs may have higher minimum score requirements and in some cases alternative assessments of English language competency may be considered. Applicants should note that appointment to a graduate assistantship usually requires a score of 250 (600 paper based). Official test scores must be sent directly from the testing agency to the Graduate School.

**Student Assessment and Testing Office**

The Student Assessment and Testing Office provides a wide array of testing services for admissions, professional certification, course placement, and credit by examination purposes. Institutional administrations of the TOEFL are offered throughout the year; TOEFL tests taken at UTEP are only valid at UTEP.

**Transfer of Credit**

Except for shared/co-operative programs, most work done for a graduate degree must be done at the University. For a master’s degree, usually 6 semester hours of graduate work may be transferred from another accredited institution. All course work transferred from other institutions requires both the approval of the committee on graduate studies in the student's major area and the Dean of the Graduate School. In cases where such transfer is approved, the student must still meet the residence requirements of two full semesters or the equivalent and fall within the six-year period. Courses for which a grade of “C” or lower was earned may not be transferred to UTEP. Correspondence courses are not accepted for graduate credit.

All documents submitted to the University for transfer work purposes become part of the official files of the University and cannot be released or returned to the student or another institution.
Academic Fresh Start Program

Undergraduate Programs

An applicant for undergraduate admission who is a Texas resident may elect to enter this institution pursuant to the Academic Fresh Start statute, *Texas Education Code*, §51.931. When the applicant informs the Admissions Office in writing of the election, the institution will not consider in the admissions decision any academic course credits or grades earned by the applicant 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll. An applicant who elects to apply under this statute may not receive any course credit for courses taken 10 or more years prior to enrollment under Academic Fresh Start.

Postgraduate/Professional Programs

An applicant who has earned a baccalaureate degree under the Academic Fresh Start statute, *Texas Education Code*, §51.931, and applies for admission to a postgraduate or professional program, will be evaluated on only the grade point average of the course work completed for that baccalaureate degree and the other criteria stated herein for admission to the postgraduate or professional program.

POST-BACCALAUREATE ADMISSION

An individual who has received a baccalaureate degree but who does not wish to apply for admission into a graduate degree program may apply for admission as a post-baccalaureate student. This type of admission is available to individuals who

1. are not seeking a graduate degree and wish to enroll in courses to enrich their educational background;
2. intend to enter a graduate program at some future date, but need a substantial number of hours of prerequisite course work;
3. wish to obtain teacher certification or endorsement or post-master’s endorsement.

Interested individuals must complete an application for admission and must submit to the Graduate School an official transcript with the baccalaureate degree posted. If several institutions were attended, copies of those transcripts are required from each institution from which relevant junior/senior level credit and any graduate level credit were earned. UTEP transcripts are not required of students who received their baccalaureate degree from UTEP. Admission as a post-baccalaureate student does not constitute admission into a graduate degree program of the Graduate School. Post-baccalaureate admission is not available to international students who need a student visa (I-20) to attend school in the United States unless approved by the Office of International Programs.

Post-baccalaureate students may register for graduate courses only with the permission of the graduate advisor for the graduate program to which the courses belong. However, no more than nine semester hours of courses taken prior to acceptance or conditional acceptance to the Graduate School may be approved for use toward a graduate degree. Such approval is given only for courses with a grade of “B” or better upon the recommendation of the graduate advisor.

Initial teacher certification and professional certification for classroom teachers can also be earned. Eligibility for these programs includes a minimum 2.5 cumulative grade point average from an accredited college or university, successful completion of THEA (Texas Higher Education Assessment), 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. The Certification Office and the College of Education are responsible for course scheduling and may require a minimum enrollment per term for admitted students. This Office additionally will develop a plan of study for each student in keeping with the requirements set forth by the Texas Education Agency (TEA). The certification or endorsement will be earned upon successful completion of all requirements.

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 nine (9) semester hours in which the grade of “B” or higher has been earned within the time limits and other restrictions detailed in this catalog. Additional information on certification and endorsement programs is available from the Certification Office within the College of Education and the Graduate School.

ACCEPTANCE INTO A GRADUATE PROGRAM

Acceptance

Applicants who are judged to meet the requirements for admission into a graduate degree program may be accepted into the program without conditions.

Conditional Acceptance

Conditional acceptance is offered to students who do not meet all of the specific criteria for admission but who show promise of success in graduate study. Applicants who lack sufficient foundation in the proposed area of study may be required to successfully complete designated courses before qualifying for unconditional admission. Other applicants may be required, on the recommendation of the graduate advisor, to meet particular conditions during the first 12 semester hours of study. Among the factors that programs may take into account in recommending conditional admission to the Graduate School are the applicant’s academic record, the socio-economic background of the applicant, the native language of the applicant, the applicant’s involvement in relevant community or extracurricular activities, a personal interview, and other material that the candidate may submit that provides evidence that the candidate would make an important contribution to the program or university’s objectives and mission.

Rejection

An applicant who fails to meet the minimum requirements for admission to a degree program will usually be denied admission into that program. An applicant meeting the requirements for admission may be denied by the Graduate Studies Committee of the proposed major if the number of qualified applicants exceeds the number of students that can be accommodated in the available facilities or that can be adequately instructed by the available faculty. A student who has been rejected may reapply at a later time, may apply to another program, or may apply as a post-baccalaureate student.

Incomplete Admission File

A citizen or permanent resident of the United States who has applied for admission into a graduate program and has furnished official transcripts but who has not furnished the official test scores required for admission is eligible
to enroll for one semester, but the admission file will not be forwarded by the Graduate School for departmental consideration until all official documents have been received.

A student whose file is incomplete may register for graduate courses only with the permission of the graduate advisor; such enrollment however, does not constitute admission into a graduate program. Courses taken prior to formal admission into a graduate program cannot be counted toward a graduate degree without the specific recommendation of the departmental committee on graduate studies and approval of the Graduate School. Students will be denied further enrollment after their first semester if all admission documents have not been received and evaluated by the Graduate School and an admissions offer made.

RE-ADMISSION INTO GRADUATE SCHOOL

An application for readmission is required for a student who

- has not enrolled for two years or more,
- was not accepted to an earlier date and wants to pursue admission into the same or a different field based on revised criteria or more current documentation, or
- was eligible to enroll, and failed to do so.

A student already accepted into a program and interested in changing the major field of study should submit a Change of Major form rather than an application for readmission. In either case, normal fees are assessed.

READMISSION OF STUDENT WHO WITHDRAWS TO PERFORM ACTIVE MILITARY SERVICE

(a) This section applies only to a student who withdraws from an institution of higher education to perform active military service as a member of the United States armed forces or the Texas National Guard. This section does not apply to a student who withdraws from an institution solely to perform one or more training exercises as a member of the Texas National Guard.

(b) For any academic term that begins after the date a student described by Subsection (a) is released from active military service but not later than the first anniversary of that date, the institution of higher education from which the student withdrew shall readmit the student, without requiring reapplication or charging a fee for readmission, if the student is otherwise eligible to register for classes at the institution. On readmission of the student under this subsection, the institution shall:

1. provide to the student any financial assistance previously provided by the institution to the student before the student’s withdrawal if the student meets current eligibility requirements for the assistance, other than any requirement directly affected by the student’s service, such as continuous enrollment or another similar timing requirement; and

2. allow the student the same academic status that the student had before the student’s withdrawal, including any course credit awarded to the student by the institution.

(c) An institution of higher education may adopt rules requiring reasonable proof from a student of the fact and duration of the student’s active military service.
The Registration and Records Office houses several functions: 1) Scheduling coordinates faculty and classroom assignments; 2) the Registration and Records Office is responsible for the maintenance of student records and all registration transactions. Including enrollment verifications, transcript requests, graduation applications, and diplomas; and 3) the Veterans Affairs Office serves the needs of students who are veterans or dependents of veterans. This office is also responsible for creating and maintaining records that support certification of a student’s status with the Veterans Administration. The office is located in the Academic Services Building, Room 123. The office telephone number is (915) 747-5342; the office e-mail is veterans@utep.edu.

REGISTRATION

Registration is a process every student must successfully complete each semester. Although every effort is made to advise students academically, final responsibility for registration rests with the student. Students can attend only those classes for which they are officially enrolled. A student is not enrolled in a course and will not receive a grade for it unless the proper fees are paid by the deadlines published in the Class Schedule or unless arrangements have been made for deferral of payment with the Student Business Services Office. After registration, class enrollments can be verified with the Registration and Records Office.

LATE REGISTRATION

Any student who, with proper permission, registers after the appointed days for regular registration will be required to pay a special charge of $20.00 for the late telephone/Web registration process, $30.00 for in-person late registration, and $50.00 on or after the first official school day for the term. A new student will have the late registration fee waived as long as registration is made prior to the first official school day for the term. Late registrants are subject to the same regulations and course requirements as students who enroll on time. Classes missed because of late registration will be counted as an absence, and class or laboratory work missed will be counted as a zero unless the instructor grants permission to make up the work.

AUDIT REGISTRATION

Courses may be audited under the following provisions:

1. Do not register for the course(s) you plan to audit. Course registration will not guarantee you a seat as an auditor. If you register for a course, you may be liable for a portion of the tuition and fees assessed in addition to the audit fees listed below.
2. Submit a completed and signed Audit Registration form for each course you want to audit to the Registration and Records Office after classes have begun and prior to the ‘Census Day’ of the long semester.

3. No grades will be provided, and no credit will be awarded for audited courses. The extent of class participation is at the discretion of the instructor.

4. Credit by examination for audited courses will not be permitted unless tuition and all appropriate fees are paid before the exam is taken.

5. The following courses cannot be audited: clinical, laboratory, studio activity, any physical activity class, (such as PE or Dance), individual instruction, private lessons, or courses specified in your degree plan. It is your responsibility to verify that the course you are asking to audit is not within the excluded categories. Audit Registration fees will not be refunded if you submit this form for a class in an excluded category.

6. Audit-only students will have to purchase a Library community user card and a parking decal to park on UTEP property. You will not receive other student benefits such as an ID (if you have one, it will not be activated for any semester in which you are in “audit only” status), tickets to events, student health services, or the Swimming and Fitness Center.

7. Audit Fees:
   a. $10.00 per course for students concurrently enrolled at UTEP.
   b. $30.00 per course for students not concurrently enrolled at UTEP.
   c. No charge for persons over 65 years of age.

8. This form must be signed by you, by the instructor teaching the course, and by the Department Chair.

9. Once you have obtained all the signatures, take the form to the Cashiers, Academic Services Building, for payment.

10. Student Business Services will give the paid original to the Registration and Records Office.

11. Registration and Records Office will send a copy of the paid form to the instructor.

REGISTRATION CHANGES

Students should refer to the on-line Academic Calendar at http://academics.utep.edu/Default.aspx?tabid=11145 or to the Class Schedule to identify the period during which adds, drops, withdrawals, and pass/fail registration changes may occur.

Grade Assignment for Drops and Withdrawals

Students may drop individual courses or completely withdraw from the University as described below. Upon withdrawal, grades will be assigned as follows:

1. If a student drops from a course before the official census date of a semester, neither the course nor a grade will appear on the student’s academic record.

2. If a student drops from a course after the census date but before the student-initiated course drop deadline listed in the Class Schedule, a grade of “W” will be assigned.

3. If the student drops after the student-initiated course drop deadline, instructors will determine a grade of “W” or “F” for each course. A grade of “W” is considered only under exceptional circumstances and must be approved by the instructor and department chair for the course. A student may petition for a grade of “W” in writing with the necessary supporting documentation.
Dropping Courses

Student-initiated Drops
It is the student’s responsibility to officially drop from a course that s/he no longer wishes to attend. Failure to do so may result in a grade of “F” on the student’s academic record. Students may drop from a course based on the policy described above. Athletes must receive permission from the Miner Athletic Advising Center before dropping a course. International students with F or J visas must receive permission from the Office of International Programs before dropping a course.

Administrative Drops
Students will be dropped from preregistered courses for failure to meet prerequisites or corequisites. This will occur after final grades have been posted for the current semester and before the beginning of late registration for next semester. A student may petition the department chair of the course in question for a prerequisite or corequisite waiver.

At the discretion of the instructor, a student may be dropped from a course because of excessive absences or lack of effort. Students may also be administratively withdrawn from a course during the semester for other reasons, with the concurrence of the academic dean or department chair. A grade of “W” will be assigned before the course drop deadline and a grade of “F” after the course drop deadline. A grade of “F” received due to disciplinary action imposed by the University overrides a grade of “W” received through a student-initiated or faculty drop. Students will be notified of their drop through their UTEP e-mail account.

Complete Withdrawal from All Courses for the Semester
Students who drop all courses for the semester must do so in person through the Registration and Records Office, with grade assignment as described above. Students who cannot drop in person may submit a fax with signature or an e-mail using their UTEP e-mail account. Athletes must receive permission from the Miner Athletic Advising Center before dropping all classes. International students with F or J visas must receive permission from the Office of International Programs before dropping all classes. A student who drops all classes for the semester immediately loses access to services and privileges available to enrolled students.

Complete Withdrawal Due to Academic Performance
After final grades have been posted for the current semester, and before late registration begins for the next semester, students whose academic standing makes them ineligible to re-enroll will be withdrawn from all their classes for the next semester. For further details, refer to the Standards of Academic Performance section in this catalog.

Complete Withdrawal Due to Medical Reasons
A student who must withdraw completely due to medical reasons must submit a letter to the Registration and Records Office from the attending physician, clinical psychologist, or licensed clinical practitioner on official letterhead with an original signature, stating the date(s) within the semester that the student was under medical care and that the student must withdraw due to the medical condition. This letter must be submitted within the semester, or no later than 90 days after the end of the term for which the withdrawal is being requested. If the student is unable to act on his or her own behalf, a representative may do this for the student.
Complete Withdrawal Due to Medical Conditions of a Family Member

A student who must withdraw completely due to medical conditions of an immediate family member must submit a letter to the Registration and Records Office from the family member’s attending physician, clinical psychologist, or licensed clinical practitioner. The letter must be submitted on official letterhead with an original signature, state the date(s) within the semester that the student’s immediate family member was under medical care, and confirm that the student must withdraw to attend to the immediate family member’s medical condition. This letter must be submitted within the semester, or no later than 90 days after the end of the term for which the withdrawal is being requested. If the student is unable to act on his or her own behalf, a representative may do this for the student. “Immediate family member” may be defined as a husband, wife, parent, sibling, child, legal guardian, or grandparent and other relationships may be considered on a case by case basis.

Complete Withdrawal Due to Death of a Family Member

A student who must withdraw because of the death of an immediate family member must submit an official death certificate to the Registration and Records Office during the semester or no later than 90 days after the end of the term for which the withdrawal is being requested. “Immediate family member” is defined as a husband, wife, parent, brother, sister, son, daughter, legal guardian, or maternal/paternal grandparent. Once documentation has been received, the student will be withdrawn and grades assigned as described above.

Complete Withdrawal Due to Death of Student

Upon the death of a student, the student’s parent, spouse or legal guardian must submit an official death certificate to the Registration and Records Office within the semester or no later than 90 days after the end of the term, so that the student can be withdrawn from all classes. Grades will be assigned as described above. Information concerning a refund can be found in the Refund of Tuition and Fees section of this catalog.

Complete Withdrawal Due to Active Military Service

Students who have to withdraw because they have been called to active military service must provide a copy of their military orders covering the affected semester. Grades will be assigned as described above. Military personnel may select one of the withdrawal options below according to the Texas Education Code, Chapter 54, Subchapter A, Sec. 54.006:

1. receive a refund of the tuition and fees paid for the withdrawn semester (see NOTE below);
2. if eligible, receive grades of Incomplete (I) from instructors, with the notation “Withdrawn – Military” appearing on the academic transcript (see section on Incomplete or In-progress Work in this catalog); or
3. receive an appropriate final grade or credit if the instructor determines that a substantial amount of coursework has been satisfactorily completed and sufficient mastery of the course material has been demonstrated.

Students who drop all courses for the semester re-enroll based on their academic standing as described in the Standards of Academic Performance section of this catalog. Students who were enrolled in professional programs such as Social Work, Clinical Laboratory Science, Nursing, Occupational Therapy, Physical Therapy, and Speech Language Pathology should check with their major department to determine their eligibility for re-enrollment in the program.

Financial information concerning drops and withdrawals can be found in the Refund of Tuition and Fees section of this catalog.
COURSE INFORMATION

Course Numbering System

Each course offered by The University of Texas at El Paso is identified by a four-digit course number. The first number indicates the level: 0 = pre-college or remedial, 1 = freshman, 2 = sophomore, 3 = junior, 4 = senior, 5 or 6 = graduate. The second number indicates the semester hour value of the course. The last two numbers identify the course within its particular department.

- **Lower-Division Courses** are designated by a 1 or 2 as the first digit of the course number.

- **Upper-Division/Advanced Courses** are designated by a 3 or 4 as the first digit of the course number. The student should refer to the departmental and college requirements for specific conditions, if any, imposed on registration in advanced courses.

- **Graduate Courses** are designated by a 5 or 6 as the first digit of the course number.

Courses Taken on a Pass/Fail Basis

A student may elect to take an S or U (Pass/Fail) grade in a course, but this course cannot count as deficiency work or as a part of the minimum requirements for a degree except for internships and practica when designated by the department. The Pass/Fail option must be requested by or before the date listed in the Class Schedule and is not available for all courses. Check with the appropriate academic department for a listing of these courses.

Courses Counted for Another Degree

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

Reserving Courses for Graduate Credit

Undergraduates are not eligible to take graduate courses. There is one exception to this. It is possible for seniors to register for graduate courses in their last semester under the following conditions:

1. The undergraduate must not lack more than 12 semester hours (or six semester hours in summer session) of work to complete all requirements for the baccalaureate degree and must have a grade point average of at least 3.0 in junior and senior-level courses.

2. These 12 hours (or less) must all be completed in the same semester or summer session in which the graduate course(s) are taken.

3. Total enrollment for all work must not exceed 15 semester hours (or 9 hours in a summer session).

4. All enrollments in graduate courses must be approved prior to registration by the departmental graduate advisor and the Graduate School.

5. This option is limited to one term.

Credit for graduate courses cannot be counted toward a baccalaureate degree; it can be reserved for credit toward a graduate degree. A student who has a baccalaureate degree is not eligible to reserve courses for graduate
credit unless enrolled at the undergraduate level working toward a second baccalaureate degree. The form for reserving courses is available in the Graduate School. Approval to reserve work for graduate credit neither constitutes nor implies admission to any graduate program.

Class Attendance

The student is expected to attend all classes and laboratory sessions. It is the responsibility of the student to inform each instructor of extended absences. When in the judgment of the instructor, a student has been absent to such a degree as to impair his or her status relative to credit for the course, the instructor may drop the student from the class with a grade of “W” before the course drop deadline and with a grade of “F” after the course drop deadline.

Excused Absences for University-Recognized Activities

Students who will be absent while representing the University in officially recognized University activities (sports, band, professional conferences, etc.) must notify the Dean of Students not less than ten days prior to the absence. The Dean of Students will provide the student with a letter of excuse for the professor. It is the student’s responsibility to give the letter to the professor prior to the official recognized activity. Students following these procedures will be permitted to make up both assignments and examinations in consultation with instructors.

Absence for Religious Holy Days

“Religious holy day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20, Tax Code. Section 51.9111 of the Texas Education Code related to absences by students for observance of religious holy days states that the institution shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. The student must provide written notice to the instructor of each course that he/she will be absent for a religious holy day not less than 10 days prior to the absence. If a student and an instructor disagree about the nature of the absence being for the observance of a religious holy day as defined therein, or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the Provost or his or her designee. The student and instructor shall abide by the decision of the President of the Provost or his/her designee.

Military Leave

Section 51.9111, Texas Education Code, provides that students be excused from scheduled classes or other required activities if the student is called to and participates in active military service for a reasonably brief period and that the student shall be allowed to complete an assignment or exam within a reasonable time after the absence. Students called to active military service must provide a copy of their military orders to the instructor of each course.

Absence from Examinations

A student absent from a test during the semester is graded zero unless another policy is set by the instructor.
Dead Day

This specific day will be scheduled one day after the last day of classes only during the fall and spring semesters. The Following policy will be observed:

1. No classes will be held on this day, except classes which meet once a week on that day;
2. Make-up exams should be left to the discretion of each individual instructor;
3. All student work (i.e., research papers, lab reports, term paper, etc.) should be due prior to this day;
4. If a comprehensive final is given, no new material, quizzes, or exams should be given two calendar days prior to Dead Day and attention should be given to reviewing of semester material. Implementation of this recommendation is to be left to the discretion of the individual instructor.

Academic Integrity

The University of Texas at El Paso prides itself on its standards of academic excellence. In all matters of intellectual pursuit, UTEP faculty and students must strive to achieve excellence based on the quality of work produced by the individual. In the classroom and in all other academic activities, students are expected to uphold the highest standards of academic integrity. Any form of scholastic dishonesty is an affront to the pursuit of knowledge and jeopardizes the quality of the degree awarded to all graduates of UTEP. It is imperative, therefore, that the members of this academic community understand the regulations pertaining to academic integrity and that all faculty insist on adherence to these standards.

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, and any act designed to give unfair advantage to a student or the attempt to commit such acts. Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures (HOP) and available in the Office of the Dean of Students and the homepage of The Dean of Students at www.utep.edu/dos, may result in sanctions ranging from disciplinary probation, to failing a grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others.

GRADES AND GRADE POINT AVERAGES

Graduate students must maintain a 3.0 or higher GPA in both their major field and in any and all upper-division and graduate-level work. Credit is given in the Graduate School for the grades “A,” “B,” and “C” only. Grades of “A” in thesis or dissertation courses, or in seminar, conference, or research courses are not used to compute the GPA. Although all work will be listed on the transcript and used in the transcript GPA calculation, only upper-division and graduate-level courses taken in graduate status at the University or reserved in the senior year for graduate credit (except as noted above) are counted in the average.

In some courses, the standard grading system is not practical; such courses are not used to compute the GPA. These grades include “I” (incomplete), “P” (in progress), “W” (withdrawal), and “S” or “U” (pass/fail).

For information on the grade appeal process, students should refer to the Student Grievance Procedures in the Student Life Policies and Procedures section of this catalog.
Incomplete or In-Progress Work

Assignment of the grade “I” (incomplete) is made only in exceptional circumstances and requires the instructor to file with the Graduate School an outline of the work to be completed and the time span (not to exceed one calendar year) allowable for the work’s completion. In no case may repetition of the course be assigned as work to be completed. If the work has not been completed at the end of the specified time, the “I” will be changed to an “F.” Students will not be cleared for graduation until all incompletes, regardless of whether or not the courses are required for the degree, have been eliminated from their record. The grade of “P” (in progress) is limited to specific courses in which re-enrollment is required. This includes all thesis/dissertation courses (5398-5399, 6320-6321, 6398-6399), graduate internships, and a few specified graduate courses. In appropriate courses, a standard grade may be assigned instead of a “P” to a student enrolled in graduate internship courses.

Grade Changes

Graduate students must submit a written request for a grade change to the faculty of record as soon as possible after the receipt of the grade but not later than one year after the semester in which the course in question was taken. A graduating student must request a grade change within three months after the last day of final examinations of the last semester enrolled. After this time, all grades become part of the student’s official academic history and cannot be altered. A grade change must be approved by both the faculty of record and the department chair. Additional approval is required from Graduate School for thesis/dissertation courses (5396-5397, 5398-5399, 6320-6321, 6398-6399). Students will receive notification of approved changes.

Grades may be changed as a result of (1) grade changes initiated by the instructor and approved by the appropriate department chair, (2) grade change initiated by the department chair for cases where the instructor cannot be contacted and there exists clear and convincing evidence for a grade change, (3) grade change due to disciplinary action imposed by the Dean of Students or Hearing Officer for violation of university rules, or (4) action taken by the Student Welfare and Grievance Committee in grade appeal procedures.

Grades determined as a result of actions taken in items (3) or (4) above are final and not subject to change. No other grade change shall occur without the consent of the instructor. The Registrar shall notify the student and the instructor of any change of grade.

Academic Standing

Students admitted into graduate programs must remove all admissions conditions within the time required and must maintain, in addition to the overall grade point average, a 3.0 or better average in all upper-division and graduate courses in the major. Individual departments may impose more rigorous grading standards. High grades in courses outside the major will not serve to bring up these averages. Post-baccalaureate students must maintain an overall grade point average of 2.5 or higher.

Academic Probation and Dismissal

A student admitted into a graduate program whose cumulative grade point average drops below 3.0 will be placed on academic probation and must return his or her grade point average to at least 3.0 by the completion of the next nine semester hours of work. Failure to meet the 3.0 grade point average requirement during the probationary period will result in the student’s dismissal from the Graduate School. A student may also be placed on academic probation if (a) the major GPA drops below 3.0, or (b) the GPA is below the minimum
required for unconditional admission. A student who has been dismissed may be readmitted for further graduate study in the same or in a different program only upon the recommendation of the relevant graduate studies committee and the approval of the Graduate School.

Post-baccalaureate students whose cumulative grade point averages drop below 2.5 will be placed on academic probation and must bring their grade point averages up to at least a 2.5 by the end of their next nine credit hours of enrollment. Failure to meet the 2.5 grade point average requirement during the probationary period will result in the student’s dismissal from the University. Dismissed post-baccalaureate students seeking re-admission must petition directly to the Dean of the Graduate School.

**Student Educational Records**

**FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)**

The Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. §1232g and the Texas Public Information Act, Texas Government Code, § 552.001 et seq. are respectively a federal and state law that provide students with the following rights with respect to their student educational records:

- to inspect and review the student’s education records;
- to consent to disclosure of the student’s education records to third parties, except to the extent that FERPA authorizes disclosure without consent;
- to request amendment of the student’s education records to ensure that they are not inaccurate or misleading;
- to be notified of the student’s privacy rights under FERPA;
- to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA.

The University of Texas System and each University of Texas component educational institution has implemented a student records policy pursuant to these laws.

**Annual Notification**

Students in attendance at each University of Texas component educational institution will be notified annually of their rights pursuant to FERPA. This notice will be provided by the University of Texas component educational institution in a manner reasonably likely to inform students of their rights and the procedures for exercising their rights.

**Definitions**

“Student” means an individual who is or who has been in attendance at a University of Texas System component institution. It does not include persons who have been admitted but did not attend the U.T. component. For the purposes of this policy “attendance” includes attendance in person or by correspondence (including electronic correspondence) and the period during which a person is working under a work-study program.

“Education Records” include records directly related to a student that are maintained by the University Education records do not include:

- Records of instructional, administrative, and educational personnel that are in the sole possession of the maker (i.e. file notes of conversations),
are used only as a personal memory aid, and are not accessible or revealed to any individual except a temporary substitute;

- Records of the University campus police;
- Student medical and counseling records created, maintained, and used only in connection with provision of medical treatment or counseling to the student, that are not disclosed to anyone other than the individuals providing the treatment. (While a student may not inspect his or her medical records, these records may be reviewed by a physician of the student’s choice);
- Employment records unrelated to the student’s status as a student; or
- Alumni records.

“Directory Information” means information in a student’s education record that would not generally be considered harmful or an invasion of privacy if disclosed. The University of Texas System component institutions’ policies will designate the following minimum information as directory information: student’s name; local and permanent address; email address; telephone number; date and place of birth; field of study; dates of attendance; enrollment status; student classification; degrees, certificates and awards (including scholarships) received; photographs; participation in officially recognized activities and sports; weight and height of members of athletic teams; and the most recent previous educational agency or institution attended.

“University official with a legitimate educational interest” is a person employed by the University in an administrative, supervisory, academic, or support staff position (including law enforcement unit and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a member of Board of Trustees; or a person assisting another university official in performing his or her tasks; who needs to review an education record in order to fulfill his or her professional responsibility.

Disclosure of Education Records

Disclosure without Prior Consent of the Student

The University will not disclose personally identifiable information from a student’s education records without prior written consent of the student, except as authorized by FERPA. FERPA’s authorizations for release without consent include the following:

Directory Information. Directory information (as defined above) may appear in public documents and may otherwise be disclosed without student consent unless a student submits a written request to the registrar during the first 12 days of class of a long semester, or the first day of the minimester, or the first four class days of a summer session, to withhold such information from disclosure. Requests to withhold directory information will be honored by the University for only the current enrollment period; therefore, a request to withhold Directory Information must be filed each semester or term in the Registration and Records Office.

University Officials. University officials with legitimate educational interests in the student’s education records are allowed access to student education records. Inter-institutional disclosures may be made between institutions that administer or participate in joint programs or activities, in accordance with legitimate educational interest criteria. For example, if a student is concurrently enrolled in one component of the University of Texas and in another institution, or in two components of the University, or receives services from one component of the University and from another institution, or from two components of the University (or UT System), information from the student records of that individual may be disclosed by one University component to the other, or by
the University component to the other institution, without obtaining the written consent of the student in accordance with legitimate educational interest criteria. This provision includes institutions participating in UT TeleCampus Programs.

Other Institutions. The University may release a student’s education records to officials of other educational institutions in which that student seeks or intends to enroll or is enrolled.

Audit or Evaluation of Federal or State education programs. Authorized representatives of the Comptroller General of the United States, the Attorney General of the United States, the Secretary of Education and state and local educational authorities may have access to student records in connection with the audit and evaluation of Federal or State supported education programs, or in connection with the enforcement of Federal law which relates to such programs.

Financial Aid. The University may release a student’s education records to persons or organizations in connection with that student’s application for, or receipt of, financial aid, but only to the extent necessary for such purposes as determining eligibility, amount, conditions, and enforcement of terms or conditions of such financial aid.

State and local officials pursuant to statute concerning juvenile justice. The University may release education records to state and local officials that are authorized by statute to access student education records to efficiently serve the student.

Organizations conducting studies. To organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction, if such studies are conducted in a manner which will not permit the personal identification of students and/or their parents by individuals other than representatives of the organization, and the information will be destroyed when no longer needed for the purposes for which the study was conducted. The term “organizations” includes, but is not limited to, Federal, State, and local agencies, and independent organizations.

Accrediting Organizations. To accrediting organizations in order to carry out their accrediting functions.

Parents of Dependents. Parents of a student who is a dependent for federal tax purposes, as defined by Section 152 of the Internal Revenue Code of 1954, may have access to that student’s education records without prior consent of the student. Parents may demonstrate the tax dependency of a student only by submitting to the University a copy of their most recently filed federal income tax return. Alternatively, a student may demonstrate tax dependency, and thus allow parental access to the student’s records without prior consent of the student, by submitting to the University a signed statement of his or her tax dependency. If a dependent student’s parents are divorced, both parents may have access to the student’s records, so long as at least one parent claims the student as a dependent.

Judicial order or subpoena. Information concerning a student shall be released in response to a judicial order or lawfully issued subpoena. The University will make reasonable efforts to notify the student of an order or subpoena before complying with it, except that the University shall not notify a student of a subpoena if it is from a federal grand jury or is for law enforcement purposes, and it provides that the University shall not disclose to any person the existence or contents of the subpoena or any information furnished in response to the subpoena. Education records may be disclosed to the U. S. Attorney General or his or her designee in response to an ex parte order concerning an authorized investigation or prosecution of domestic or international terrorism, without prior notice to the student.
Health and Safety. The University may disclose student information to persons in an emergency in order to protect the health and safety of the student or others in the University community.

Research Papers and Thesis. The University may disclose research papers and thesis authored by the student to interested members of the public.

Disciplinary Hearing Results

Disclosure to Victims: The University may disclose to an alleged victim of any crime of violence (as that term is defined in Chapter 1, Section 16 of Title 18, United States Code), or a non-forcible sex offense, the final results of any disciplinary proceeding conducted by the University against the alleged perpetrator of such crime or offense with respect to such crime or offense, regardless of whether the alleged perpetrator was found responsible for violating the University’s rules or policies with respect to such crime or offense.

Disclosure to Third Parties: The University may disclose the final results of any disciplinary proceeding against a student who is an alleged perpetrator of any crime of violence or non-forcible sex offense (as those terms are defined in 34 C.F.R. 99.39), if the student is found responsible on or after October 7, 1998, for violating the University’s rules or policies with respect to such crime or offense. Such disclosure shall include only the name of the student, the violation committed, and any sanction imposed by the University on that student. Such disclosure may include the name of any other student, such as a victim or witness, only with the written consent of that other student.

Alcohol and Drug Violations. The University may disclose to a parent or legal guardian of a student, information regarding any violation of any Federal, State, or local law, or of any rule or policy of the University, governing the use or possession of alcohol or a controlled substance, regardless of whether that information is contained in the student’s education records, if the student is under the age of 21 at the time of disclosure to the parent, and the University determines that the student is responsible for a disciplinary violation with respect to such use or possession.

Disclosure to the Student

The student has the right, on request to the appropriate University official, to review all materials that are in the student’s education records, except:

- Financial information submitted by the student’s parents;
- Confidential letters and recommendations associated with admissions, employment or job placement, or honors, to which the student has waived rights of inspection and review (the University is not required to permit students to inspect and review confidential letters and recommendations placed in their files prior to January 1, 1975, provided those letters were collected under established policies of confidentiality and were used only for the purposes for which they were collected);
- Education records containing information about more than one student, in which case the University will permit access only to that part of the record that pertains to the inquiring student.

Student education records are maintained at several locations on campus. Principal locations are shown below. Requests for access to specific student records should be made to the university office or agency concerned with the particular record. The Chief Business Officers at The University of Texas System institutions have been designated as the official custodians of records. Requests for assistance in locating individual student records should be directed in writing to the particular custodian of records. Records covered by FERPA will be made available, within forty-five days of the request.

THE UNIVERSITY OF TEXAS AT EL PASO
A list of education records and those officials responsible for records shall responsible for the records shall be maintained at the Office of the Chief Business Office.

1. Academic Records
   Admissions Office: Director
   Graduate School: Dean
   Registration and Records: Registrar
   College, Division, Department, and Faculty Offices

2. Student Services Records
   University Counseling Services: Director
   Student Activities Center: Director
   Student Services: Dean of Student

3. Financial Records
   Business Office; Vice President for Finance and Administration
   Financial Aid Office: Director
   Scholarships Office: Director

Students may have copies of their educational records and this policy. These copies will be made at the student’s expense at rates authorized in the Texas Public Information Act except that official transcripts will be $5.00. Official copies of academic records or transcripts will not be released for students who have a delinquent financial obligation or financial “hold” at the University.

Disclosure with Prior Consent of the Student
   With the student’s prior consent, the University will release personally identifiable student information in education records or allow access to those records. Such consent must be written, signed and dated, and must specify the records to be disclosed, the party to whom the records are to be disclosed, and the purpose of the disclosure.

   *Research papers and thesis authorized by the student will be available to interested members of the public.

Record of Disclosures
   The University will maintain with the student’s education records a record for each disclosure request and each disclosure, except disclosures:
   - to the student himself or herself;
   - pursuant to the written consent of the student;
   - to University officials with legitimate educational interests;
   - pursuant to a law enforcement subpoena and the issuing court or other issuing agency has ordered that the existence or the contents of the subpoena or the information furnished in response to the subpoena not be disclosed or the order is concerning an authorized investigation or prosecution of domestic or international terrorism; or
   - of directory information.

Requests to Amend Records
   A student who believes that his or her education records are inaccurate or misleading, or that the records violate his or her privacy rights, may informally discuss amendment of the record with the university office or agency concerned with the particular record. If agreement is reached with respect to the student’s
request, the appropriate records will be amended. [Note: The substantive judgment of a faculty member about a student's work, expressed in grades and/or evaluations, is not within the purview of this right to seek amendment of education records.] If the record is not amended pursuant to the student’s request, the university will inform the student of its decision and of the student's right to request a formal hearing.

The request must be made in writing to the Chief Business Officer at the University component who within a reasonable period of time after receiving such request, will inform the student of the date, place, and time of the hearing. A student may present evidence relevant to the issues raised and may be assisted or represented at the hearing by one or more persons of the student’s choice, including attorneys, at the student’s expense. The hearing officer that will adjudicate such challenges will be appointed by the president. The decision of the hearing officer will be final, will be based solely on the evidence presented at the hearing, and will consist of a written statement summarizing the evidence and stating the reasons for the decision, and will be delivered to all parties concerned. If the decision is in favor of the student, the education records will be corrected or amended in accordance with the decision of the hearing officer. If the decision is unsatisfactory to the student, the student may place with the education records a statement commenting on the information in the records or a statement setting forth any reasons for disagreeing with the decisions of the hearing officer, or both. The statement will be placed in the education records, maintained as part of the student’s records, and released whenever the records in question are disclosed. Students who believe that the adjudications of their challenges were unfair or not is keeping with the provisions of the Act may request in writing, assistance from the President of the institution.

DISCLOSURE FOR DIRECTORY INFORMATION TO THE TEXAS HIGHER EDUCATION COORDINATING BOARD (THE STATE OF TEXAS EDUCATIONAL GOVERNING ENTITY)

FERPA allows, with the student’s consent, for the Texas Higher Education Coordinating Board to disclose the number of semester credit hours that the student has taken at The University of Texas at El Paso to other institutions of higher education for the purpose of confirming these hours for transfer and related issues. Students may have all directory information withheld by notifying the Registrar and Records Office in writing each semester during the first 12 days of class of a long semester, or the first day of the minimester, or the first four class days of a summer session. Requests to withhold directory information will be honored by the University for only the current enrollment period; therefore, a request to withhold directory information to THECB must be filed each semester or session in the Registration and Records Office.

Collection of Personal Information

With few exceptions, you are entitled on your request to be informed about the information the University of Texas at El Paso collects about you. Under Sections 552.021 and 552.023 of the Texas Government Code, you are entitled to have the University of Texas at El Paso correct information about you that is held by us and that is incorrect, in accordance with the procedures set forth in the University of Texas System Business Procedures Memorandum 32. The information that the University of Texas at El Paso collects will be retained and maintained as required by Texas records retention laws (section 441.180 et seq. of the Texas Government Code) and rules. Different types of information are kept for different periods of time.
FINANCIAL INFORMATION

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Financial Assistance

UTEP’s graduate students can finance their education by working and/or by taking advantage of the University’s financial assistance awards and programs. Financial aid is divided into the following types: merit-based and need-based. Merit-based awards are granted on the basis of the student’s previous academic performance. Need-based aid is awarded according to the level of the student’s financial need, with some consideration of the student’s past academic performance.

Students subject to selective service registration will be required to file a statement that the student has registered or is exempt from selective service registration in order to be eligible to receive financial assistance funded by State revenue in accordance with Texas Education Code Section 51.9095.

MERIT-BASED AWARDS

Merit-based awards consist of scholarships and fellowships. Scholarships are primarily awarded on the basis of the student’s previous academic work but may consider any required test scores. Fellowships are generally awarded according to a student’s exceptional academic work and/or previous or proposed research in the student’s field of study. For further information, students should contact the Graduate School.

NEED-BASED AWARDS

The Financial Aid Office processes need-based awards. The amount and type of financial assistance provided will be by means of educational loans, grants, need-based scholarships, and student employment (Federal College Work-Study). Certain emergency loan funds or fee exemptions may also be available. Students admitted into graduate programs are eligible if they have documented need, meet academic eligibility criteria, enroll at least half-time basis, and meet the March 15th financial aid application priority date. Financial aid recipients must make satisfactory academic progress in order to maintain award eligibility. Information about financial aid application procedures and standards for academic progress may be obtained from the Financial Aid Office.

FINANCIAL SUPPORT

Limited financial support is also available through educational stipends to participants in sponsored research or other projects, or fellowship programs. Stipend support generally does not qualify for a waiver of non-resident status for tuition purposes. For stipend eligibility, students should contact the academic department’s research programs office and the Graduate School, or, for international students, the Office of International Programs, Union Building, East Wing Room 203, (915) 747-5664.

The publication Graduate Assistantships Guide, available from the Graduate School, provides additional information.

Graduate Assistantships

Teaching and Research Assistantships may be available based on merit qualifications. Teaching assistants perform assigned instructional duties under the supervision of a faculty member. Research assistantships are highly

THE UNIVERSITY OF TEXAS AT EL PASO
variable and usually involve assisting a faculty member in the accomplishment of certain research projects. The total of all on-campus student employment is limited to 20 hours per week or less. The application form is available at academic departments, colleges, and the Graduate School and should be completed by the student and submitted to the academic department of the student’s major. The *Graduate Assistantships Guide* provides detailed information on eligibility, benefits, and procedures for appointments and is available at the Graduate School.

**Additional Employment Opportunities**

Information about other forms of employment which may include the Cooperative Education Program, Internships, summer employment, or part-time employment may be obtained from the Career Services Office, Union West Building.
# Tuition and Fees

## THE UNIVERSITY OF TEXAS AT EL PASO
### Summary of Tuition and Fee Charges**
#### 2005-2006

<table>
<thead>
<tr>
<th>Name of Charge</th>
<th>Classification</th>
<th>Residency</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tuition:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>Resident</td>
<td></td>
<td>$131/sch</td>
<td>Tuition revenue is used to fund general university instructional and operating expenses.</td>
</tr>
<tr>
<td></td>
<td>Non-Resident</td>
<td></td>
<td>$407/sch</td>
<td></td>
</tr>
<tr>
<td>Graduate in Liberal Arts or Education</td>
<td>Resident</td>
<td></td>
<td>$159/sch*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-Resident</td>
<td></td>
<td>$435/sch**</td>
<td></td>
</tr>
<tr>
<td>Graduate in Engineering, Science, MASE &amp; ESE Majors</td>
<td>Resident</td>
<td></td>
<td>$159/sch*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-resident</td>
<td></td>
<td>$435/sch*</td>
<td></td>
</tr>
<tr>
<td>Graduate in Business or Nursing</td>
<td>Resident</td>
<td></td>
<td>$169/sch*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-Resident</td>
<td></td>
<td>$445/sch**</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Fees:</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Services Fee</td>
<td>All Students</td>
<td>All Students</td>
<td>$13.50/sch up to a maximum of $162</td>
<td>A compulsory fee to fund student-related services such as intramural activities, student government, disabled student organizations, career services, cheerleaders, student publications, health services, inter-collegiate athletics, others.</td>
</tr>
<tr>
<td>Name of Charge</td>
<td>Classification</td>
<td>Residency</td>
<td>Amount</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
<td>-----------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>Library Fee</td>
<td>Graduate Students</td>
<td>All Students</td>
<td>$5/sch</td>
<td>A fee to purchase library materials, to replace maintain and acquire new equipment, and to provide technical support for personal computers and terminals.</td>
</tr>
<tr>
<td>Student Union Fee</td>
<td>All Students</td>
<td>All Students</td>
<td>$30/semester</td>
<td>Fee for the finance, construction, operation, and maintenance of a student union building and its programs.</td>
</tr>
<tr>
<td>International Education Fee</td>
<td>All Students</td>
<td>All Students</td>
<td>$3/semester</td>
<td>For funding an international education financial aid fund for University students.</td>
</tr>
<tr>
<td>Recreation Fee</td>
<td>All Students</td>
<td>All Students</td>
<td>$12/semester</td>
<td>Fee for financing, constructing, maintaining, and operating new and existing recreational facilities and programs.</td>
</tr>
<tr>
<td>Registration Fee</td>
<td>All Students</td>
<td>All Students</td>
<td>$5/semester</td>
<td>To defray the costs associated with technology services for telephone registration.</td>
</tr>
<tr>
<td>Technology Fee</td>
<td>All Students</td>
<td>All Students</td>
<td>$13/sch, up to a maximum of $195</td>
<td>Fee to provide for development of campus computers and network facilities for students.</td>
</tr>
</tbody>
</table>
### Required Fees:

<table>
<thead>
<tr>
<th>Name of Charge</th>
<th>Classification</th>
<th>Residency</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Center Fee</td>
<td>All Students</td>
<td>All Students</td>
<td>$12/semester</td>
<td>Fee to provide support and medical services to the student population.</td>
</tr>
</tbody>
</table>

### Incidental Fees:

<table>
<thead>
<tr>
<th>Name (See below)</th>
<th>Classification</th>
<th>Residency</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety</td>
<td>All Students</td>
<td>All Students</td>
<td>Variable</td>
<td>To defray the cost of providing specific services such as late registration, library fines, add/drop fees, bad check charges, application processing fees, and other services as approved by the governing board.</td>
</tr>
</tbody>
</table>

### Laboratory Fees:

<table>
<thead>
<tr>
<th>Name (See below)</th>
<th>Classification</th>
<th>Residency</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety</td>
<td>All Students</td>
<td>All Students</td>
<td>Variable</td>
<td>Mandatory charges for certain laboratory courses; may not be less than $2/semester nor more than $30/semester and must not exceed the cost of actual materials and supplies used by a student.</td>
</tr>
</tbody>
</table>

### Course Fees:

<table>
<thead>
<tr>
<th>Name (See below)</th>
<th>Classification</th>
<th>Residency</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety</td>
<td>All Students</td>
<td>All Students</td>
<td>$10-$50</td>
<td>Charges in addition to regular tuition for certain course-related materials and/or for individual instruction.</td>
</tr>
</tbody>
</table>

### Supplemental Fees:

<table>
<thead>
<tr>
<th>Name (See below)</th>
<th>Classification</th>
<th>Residency</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety</td>
<td>Students needing specific services</td>
<td>All Students</td>
<td>Variable</td>
<td>To defray the costs of providing certain services to students. May include such items as parking fees, orientation fees, and installment tuition fees.</td>
</tr>
</tbody>
</table>

* Tuition and fees are subject to change due to legislative and/or institution action and become effective when enacted.**

** Non-resident/international students will be assessed the actual cost of education per semester hour as determined by the Texas Higher Education Coordinating Board.
### THE UNIVERSITY OF TEXAS AT EL PASO

#### Estimated Summary of Tuition and Fee Charges for a Semester

**2005-2006 Academic Year**

#### Tuition and Fees

<table>
<thead>
<tr>
<th>Name of Charge</th>
<th>Undergraduate in Business, Education, Liberal Arts, or Science</th>
<th>Undergraduate Engineering, Nursing</th>
<th>Graduate in Education or Liberal Arts</th>
<th>Graduate in Engineering, or Science MASE/ESE</th>
<th>Graduate in Business, or Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12 SCH</td>
<td>12 SCH</td>
<td>9 SCH</td>
<td>9 SCH</td>
<td>9 SCH</td>
</tr>
<tr>
<td>Resident tuition ¹</td>
<td>1,572.00</td>
<td>1,572.00</td>
<td>1,431.00</td>
<td>1,431.00</td>
<td>1,521.00</td>
</tr>
<tr>
<td>Add: Required Fees ²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Services Fee</td>
<td>162.00</td>
<td>162.00</td>
<td>121.50</td>
<td>121.50</td>
<td>121.50</td>
</tr>
<tr>
<td>Library Fee</td>
<td>48.00</td>
<td>48.00</td>
<td>45.00</td>
<td>45.00</td>
<td>45.00</td>
</tr>
<tr>
<td>Student Union Fee</td>
<td>30.00</td>
<td>30.00</td>
<td>30.00</td>
<td>30.00</td>
<td>30.00</td>
</tr>
<tr>
<td>Registration Fee</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>International Education Fee</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Recreational Fee</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Technology Fee</td>
<td>156.00</td>
<td>156.00</td>
<td>117.00</td>
<td>117.00</td>
<td>117.00</td>
</tr>
<tr>
<td>Health Center Fee</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Major Fee</td>
<td>0.00</td>
<td>103.00</td>
<td>0.00</td>
<td>60.00</td>
<td>103.00</td>
</tr>
<tr>
<td><strong>Subtotal-Required Fees</strong></td>
<td>2,000.00</td>
<td>2,103.00</td>
<td>1,776.50</td>
<td>1,836.50</td>
<td>1,969.50</td>
</tr>
<tr>
<td>Add: Average for college and course related laboratory, incidental, and supplemental fees, and/or optional student services fees ³</td>
<td>75.00</td>
<td>75.00</td>
<td>75.00</td>
<td>75.00</td>
<td>75.00</td>
</tr>
<tr>
<td><strong>Total Charges:</strong> Tuition plus subtotal required fees plus averages for college and course related fees and/or optional student services fees</td>
<td>2,075.00</td>
<td>2,178.00</td>
<td>1,851.50</td>
<td>1,911.50</td>
<td>2,044.50</td>
</tr>
<tr>
<td><strong>AVERAGE COST PER SEMESTER CREDIT HOUR</strong></td>
<td>172.92</td>
<td>181.50</td>
<td>205.72</td>
<td>212.39</td>
<td>227.10</td>
</tr>
</tbody>
</table>

¹ Resident undergraduate tuition as established by the Texas Legislature is $131/semester credit hours (SCH); non-residents undergraduate tuition is $407/SCH. Graduate tuition might be twice the statutory rates for undergraduate students. For graduate rates, consult the University *Graduate Catalog* or the most current *Class Schedule*. 

GRADUATE CATALOG 2006-2008
2 Required fees, those charged to all students, may be based on semester credit hours or may be per semester. Descriptions of these fees may be found on the following page or in the University catalog.

3 Averages are given for course-related, laboratory, incidental, and voluntary fees since changes vary according to courses and services chosen. Actual fees are published in the University catalogs and in the Class Schedules.

**Note:** Although unlikely, changes in tuition and fee charges may occur after the information is first published; updated information may be obtained from the Student Business Services Office at (915) 747-5116.

**Note:** The Texas Legislature does not set the specific amount for any particular student fee. The student fees are authorized by state statute; however, the specific amounts and the determination to increase fees are made by the University administration and the University of Texas System Board of Regents.

### Tuition and Fees Increase

Tuition and fees provided herein represent the figures at the time of publication, are subject to change by regental or legislative action and become effective on the date enacted. The Texas Legislature does not set the specific amount for any particular student fee. The student fees assessed above are authorized by state statute; however, the specific fee amounts and the determination to increase fees are made by the university administration and the University of Texas System Board of Regents. Policies governing the payment or refund of tuition, fees and other charges are approved by the Board of Regents of The University of Texas System and comply with applicable state statutes.

### ADDITIONAL REQUIRED FEE

**GRADUATE STUDENT SERVICE FEE** for AMBA PROGRAM - $60.00 per semester credit hour.

### TUITION AND REQUIRED FEES 2005-2006

<table>
<thead>
<tr>
<th>Hrs</th>
<th>Resident Graduate in EDUC/ LA</th>
<th>Resident Graduate in ENG/ MASE, ESE/ SCI</th>
<th>Resident Graduate in BUS/ NURS</th>
<th>Non-Resident Graduate in EDUC/ LA</th>
<th>Non-Resident Graduate in ENG/ MASE/ ESE/ SCI</th>
<th>Non-Resident Graduate in BUS/ NURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>252.50</td>
<td>252.50</td>
<td>262.50</td>
<td>553.50</td>
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THE UNIVERSITY OF TEXAS AT EL PASO
* This table of Tuition and Required Fees does not include incidental fees, course-related fees, or individual major fees. Please refer to other sections in this catalog.

**Tuition and fees are subject to change due to legislative and/or institution action and become effective when enacted.

In addition to the above quoted tuition and fees, the following must be added as appropriate:

**SUPPLEMENTAL FEES**

**New Student**
- Student ID Fee - $6.00 one time issuance fee
- Student ID Replacement Fee - $20.00
- Student General Property Deposit - $10.00 per student (one time deposit) fee assessed at the time of the student’s initial registration at the University. This fee is refundable to the student at the end of his or her University enrollment less any loss, damage, or breakage caused by the student. A property deposit which remains without call for refund for a period of four years from the date of last attendance at the University will be forfeited and will become the property of the Student General Property Deposit Endowment Fund. Such funds will be invested and the income will be used for scholarship purposes.

**Certain Declared Majors**
- Business Graduate Major Fee - $25.00 per semester with a declared major within the College of Engineering.
- Clinical Laboratory Science Major Fee - $130.00 per semester with a declared major in Clinical Laboratory Science.
- College of Engineering Major Fee - $60.00 per semester with a declared major within the College of Engineering.
- Nursing Major Fee - $103.00 per semester with a declared major in Nursing.
- Occupational Therapy Major Fee - $75.00 per semester with a declared major in Occupational Therapy.
- Physical Therapy Major Fee - $50.00 per semester with a declared major in Physical Therapy

**International Student (ONLY)**
- International Student Services Fee - $25.00 per student per semester

**LABORATORY FEES**

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INCIDENTAL FEES

ADD/DROP FEE - A fee of $10.00 is assessed per transaction each time a change is made to the initial registration.

AUDIT FEE - A fee of $10.00 per audited course will be assessed to a student who is currently enrolled at the University. For a person who is not enrolled at the University, a fee of $30.00 per course will be assessed.

CATALOG FEE - A fee of $3.00 will be assessed to students who pick up the University Catalog. A fee of $4.50 will be assessed to students that request a University Catalog be mailed. A fee of $1.00 per catalog on CD.

CERTIFICATION DEFICIENCY PLAN PREPARATION FEE - A fee of $20.00 is assessed to defray administrative costs of processing certification deficiency plans for those pursuing teacher certification.

COURSE FEES - A fee of $2.00-$180.00 per course will be assessed to defray the costs of materials. (See above)

DIPLOMA REPLACEMENT FEE - Diplomas are replaced at student’s request, if the student has lost the diploma or if the student’s name has changed. A fee of $30.00 will be assessed to a student requesting a replacement after one year. A fee of $10.00 is requested within one year of order.

DISSERTATION FEE - A fee of $55.00 will be assessed to defray costs of microfilming and mailing graduate dissertations.

DISTANCE EDUCATION FEE - A $50.00 per semester credit hour will be assessed to defray costs associated with providing distance learning facilities and support for students enrolling in distance learning classes or other off-campus course(s).

EMERGENCY LOAN PROCESSING FEE - A fee of $15.00 will be assessed to defray administrative costs incurred in processing and collecting emergency loan payments.

EQUIPMENT SUPPORT FOR ELECTRICAL AND COMPUTER ENGINEERING - A fee of $25.00 per semester to support cost of open laboratory operations for Electrical and Computer Engineering and Computer Science.

GRADUATE SCHOOL ADMISSION APPLICATION FEE - A fee of $15.00 will be assessed to all non-international graduate students who apply for admission.

GRADUATE SCHOOL ADMISSION APPLICATION LATE FEE - A fee of $15.00 will be assessed to cover costs of processing late applications.

GRADUATION APPLICATION LATE FEE - A fee of $15.00 will be assessed to all candidates for graduation who make application for graduation after the regular processing period has been completed. This fee is paid each time an application for degree is filed after the processing period deadline and under no circumstances is subject to refund. Veterans attending the University under an exemption defined elsewhere in this section are not exempt from payment of this fee.

GRADUATION FEE - A fee of $30.00 is required of candidates for graduation. This fee must be paid each time an application for degree is filed and under no circumstances is subject to refund. Veterans attending the University under an exemption as defined elsewhere in this section are not exempt from payment of this fee.

GRADUATE STUDENT SERVICES FEE - A fee of $60.00 per semester credit hour assessed to students enrolled in the Accelerated MBA program.

HEALTH INSURANCE FEE - (A mandatory insurance required of international students holding nonimmigrant visas and living in the United States.) The amount assessed will match the University Texas System Student Insurance Plan premium.
IN ABSENTIA GRADUATION FEE - A fee of $25.00 per semester will be assessed to graduate students who have completed the degree requirements, including submission of the thesis or dissertation, after the semester deadline, but prior to registration for the following semester, and wish to register for the sole purpose of receiving the degree.

INSTALLMENT TUITION HANDLING FEE - A fee of $17.00 per academic term will be assessed to cover costs related to providing the installment payment option.

INSTALLMENT TUITION DELINQUENCY FEE - A fee of $15.00 per delinquent payment will be assessed to defray costs of handling delinquent installment tuition payment.

INSTRUMENT USERS FEE - Music - A fee of $15.00 will be assessed to students per semester who wish to use musical instruments that are available through the Music Department.

INTERNATIONAL STUDENT APPLICATION FEE - A fee of $65.00 is assessed of all international students who apply for admission to UTEP. Applications not accompanied by a $65.00 check or money order, payable in U.S. funds, will not be considered. An individual who has applied, paid the fee, and been accepted but who does not enroll, will be considered for later admission only upon reapplication including payment of this fee again.

INTERNATIONAL STUDENT SERVICE FEE - $25.00 per long semester and $12.50 per summer session. This fee is assessed to international students to defray the costs of operating the Office of International Programs and supporting the programs that are unique to international students.

LATE ADMISSION APPLICATION FEE - A fee of $15.00 will be assessed to applicants that file after the scheduled deadlines to submit applications for admission to the University.

LATE REGISTRATION FEE - Any student who, with proper permission, registers after the appointed days for registering will be required to pay a special charge of $20.00 for the late telephone registration process, $30.00 for in-person late registration, and $50.00 on or after the first class day. The fee is to defray the cost of the extra services required to effect the late registration.

LIBRARY FEES - To cover costs associated with handling special items, damaged, and/or overdue books, the library charges the following fees:

Overdue Charges:
- Regular Checkouts: $0.25/day ($25.00 max)
- Reserve Items: $1.00/day-$1.00/hr ($25.00 max)
- Inter-Library Loans: $1.00/request plus any charges from the lending library
- Lost Books: Cost of book plus $10.00 processing fee and any fines accrued
- Inter-Library Loans: All costs charged by suppliers plus $0.50/request (or $2.00 per request for rush fee)
- Computer Searches: 115% of connect time plus any off-line print charges
- Damaged Book Fee: $10.00
- Recall Fee: $1.00/day ($25.00 max)
- Media-Charges: Varies depending on type of equipment/service
- Photocopier: $0.05 to $0.50/copy
- $0.15/microfilm or fiche
- Architectural Drawings and Blueprint Reprographic Fee: $5.00 per item plus actual costs
- Special Collection Photographic Reproduction Preservation Fee: $5.00 plus actual costs
- Student Fee: $5.00 per semester credit hour/graduate
PROFESSIONAL LIABILITY INSURANCE FEE - A fee of $10.00-$80.00 will be assessed to defray costs of insurance for students working in clinical settings in courses in health science, nursing, speech-language pathology, and social work.

REINSTATEMENT FEE - A $30.00 fee will be assessed to cover costs related to reinstating an enrollment after students have been disenrolled for failure to meet University obligations.

REPEATED COURSE FEE - A $100.00 per credit hour fee will be assessed to all students attempting to complete a course for the third time and thereafter.

RETURNED CHECK FEE - A fee of $30.00 per check will be assessed to students that issue payment to the University with a check that is returned to the University for insufficient funds.

SCIENCE AND ENGINEERING ENRICHMENT EXPERIENCE - A fee of $50.00 will be assessed to all incoming freshman and transfer students attending the enrichment experience in the College of Science and College of Engineering to defray costs associated with the enrichment program.

SOCIAL WORK HANDBOOK FEE - A $2.00 fee will be assessed to students in Social Work for a handbook required by the Council of Social Work Education.

SPECIAL EXAMINATION FEE - A fee of $5.00 per examination is required of persons who wish to take an advanced standing examination, an examination to remove a condition, or an examination to be given at a time other than that for which it is regularly scheduled. Permission of the academic dean must be secured before payment is made.

STUDENT HOUSING DEPOSIT - A $200.00 deposit will be assessed to all students applying for Residence Hall housing. A Student Housing Deposit will be forfeited under any of the following conditions.

a. A Housing Deposit which remains without call for refund for a period of two (2) years from the date of last attendance at the University;

b. For any reason of non-payment of rent and will be applied to the outstanding balance owed to the University and/or applied for repairs and damages (except for reasonable wear and tear) to the unit leased; or

c. Failure of a student to abide by the Terms and Conditions of Occupancy and/or the University Regulations or Residence Hall Regulations resulting in the University terminating a Residence Hall Agreement.

STUDENT IDENTIFICATION CARD ISSUANCE FEE – A fee of $6.00 per student will be assessed for the new Miner Gold I.D. card. The fee is a one-time fee that is assessed only on initial issuance.

STUDENT IDENTIFICATION CARD REPLACEMENT FEE - A fee of $20.00 per card will be assessed students for reissuing a Student I.D. Card due to loss or destruction. Malfunctioning cards or cards that fail to operate will be replaced at no charge.

STUDENT TEACHING FEE - A fee of $50.00 will be assessed to students approved for Student Teaching during the Fall and Spring semesters.

TEACHER CERTIFICATION CREDENTIALS FEE - A fee of $10.00 will be assessed to students enrolled in the Teacher Education Program who are having their academic credentials evaluated for meeting certification requirements set by the Texas Education Agency.

TEST FEE - Students requesting administration of graduate or undergraduate admission testing, professional certification testing, GED testing, or placement and credit testing will be assessed a fee ranging from $5.00 to $42.00 per test based on the test subscription costs.

TRANSCRIPT FEE - A fee of $2.00 will be assessed to students for an unofficial copy of their transcript. A fee of $5.00 will be assessed for an official copy. A fee of $7.00 will be assessed for an official copy with immediate processing.
DISTANCE LEARNING TUITION AND FEES*

(M.B.A., M.Ed., UT TeleCampus Offerings)

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$131.00 sch</td>
</tr>
<tr>
<td>Differential Tuition</td>
<td>$38.00 sch</td>
</tr>
<tr>
<td>Distance Learning Fee</td>
<td>$50.00 sch</td>
</tr>
<tr>
<td>Institutional Fees (estimate)</td>
<td>$62.00</td>
</tr>
</tbody>
</table>

Assessments based on 3 semester credit hours $719.00 (total)

If enrolled only in Distance Learning courses, the following fees are waived under this program:

- Activity Fee
- Union Fee
- Recreation Fee

* Distance Learning Tuition and Fees subject to change by action of the Texas Legislature and Texas Higher Education Coordinating Board. Changes will be effective as determined by the governing body.

Tuition for Resident Doctoral Student in Excess of 100 or More Credit Hours

Beginning Fall 1999 semester, a resident doctoral student who has a total of 100 or more semester credit hours of doctoral work at an institution of higher education may be required to pay nonresident doctoral tuition rates. Students should contact the Graduate School for more information at (915) 747-5491.

STUDENT MINER GOLD CARD

Card Issuance

All students must have a Miner Gold Card (identification) issued by the University of Texas at El Paso. The card will be issued upon admission to the university. A current photo I.D. (e.g., license, state I.D., passport) must be shown before the card is issued. The card is the official identification card for the University of Texas at El Paso and will automatically activate with each semester enrollment and will deactivate when not enrolled. The card is valid as long as enrollment in courses exists for the term.

The name printed on the Miner Gold Card is the individual’s official name as recorded in the university database. Names on cards will not carry titles. No article of clothing, hats, or sunglasses that, in the judgment of the carding staff, will obscure physical features will be allowed when the photograph is taken for the card.

The Miner Gold Card is the property of the University of Texas at El Paso and is nontransferable. It must be carried at all times and presented and/or surrendered to university officials upon request. Unauthorized use warrants confiscation and/or disciplinary action.

The Miner Gold Card Office is located in the Academic Services Building, Room 122. The center’s telephone number is (915) 747-7334, or e-mail: studentid@utep.edu. The center's web site can be found at: http://minergold.utep.edu/minergold. The Miner Gold Card Office hours are: Monday-Thursday 8:00 a.m. to 6:00 p.m. and Friday 8:00 a.m. to 5:00 p.m.
Charges

A one-time nonrefundable processing fee of $6.00 will be assessed per student at registration.

The Miner Gold Card must be kept in working condition. If it becomes damaged, lost or stolen, the replacement fee is $20.00. If the card is replaced, the replaced card is automatically deactivated and cannot be reactivated. A charge of $6.00 will be assessed for a request of a name change, resulting in the issuance of a replacement card. If it is determined that a name is incorrect due to the university’s error, no charge will be assessed to the cardholder for a replacement.

Magnetic Strip

The magnetic strip on the back of the Miner Gold Card can be used in several ways: 1) validation for enrollment or employment; 2) access to campus facilities and activities; and 3) storing funds in your Miner Gold Card declining balance account. The Miner Gold Card offers three plans: 1) Bookstore Plan to purchase books and materials; 2) Food Plan to purchase food from any of the Sodexho food areas; and 3) General Plan allows students to purchase from the Bookstore, Sodexho and the Ticket Center. Deposits may be made to your Miner Gold Card account by cash, check or credit card at the Miner Gold Card Office during normal business hours.

Bookstore Loans through the Financial Aid Department are automatically deposited onto your Miner Gold Card for immediate use. These funds can only be used at the University Bookstore.

Safeguards

Protect the Miner Gold Card from damage by keeping it in the protective card sleeve provided by the Miner Gold Card Office when the card is not in use. Do not punch holes, affix stickers, or in any other way make modifications to the card. Such practices may create problems when trying to use the card. Report lost, stolen, or damaged cards immediately to the Miner Gold Card Office or by using my.utep.edu to avoid unauthorized use. Miner Gold Card funds on a card not reported lost or stolen is not refundable. Therefore, the card should be treated as cash and kept in a secure place at all times. Do not lend the card to others. Student’s can check the balance on the Miner Gold Card by logging onto my.UTEP.edu under My UTEP Home.

PARKING FEE

The Board of Regents has approved parking fees as follows for those students desiring to park on the campus:

Classes of Permits and Annual Fees

Perimeter Parking Lots

Allows the holder to park in any perimeter area designated for their particular class of permit.

Class A-P

$65.00 All Students (including Graduates)
$45.50 If purchased during the Spring Semester
$26.00 If purchased during the Summer Session
Remote Parking Lots

Allows the holder to park in any remote area designated for their particular class of permit.

Class E $25.00 All Students

Other Class Permits

Class H $ -0- No charge if vehicle is in compliance
Class M $65.00 All Student motorcycles
   $45.50 If purchased during the Spring Semester
   $26.00 If purchased during the Summer Session
Class MV $ -0- No charge for residents of UTEP Miner Village

Replacement Decal
With remnants of decal (Fee of $5.00)
Without remnants of decal (Fee of $20.00)

METHODS OF PAYMENT

Cash, Checks, Master Card, Visa, American Express, and Discover will be accepted for payment of tuition and fees. The University offers the following two payment methods during long semesters (Fall and Spring) only.

1. Full payment of tuition and all fees at the time of registration.
2. One half payment of tuition, mandatory and course-related fees at the time of registration, with the remaining two quarters due in equal installments by the sixth and eleventh week of classes.

Items for which payment CAN be deferred under Method 2 include the following:

- Tuition
- Mandatory Fees (Library Fee, Student Services Fee, Student Union Fee, Health Center Fee, International Studies Fee, Technology Fee, Recreational Fee)
- Laboratory Fees
- Course-related Fees (such as Equipment Fees)
- Supplemental Fee for Fine Arts
- Major Fees

Items for which payment MAY NOT be deferred include the following:

- Student General Property Deposit
- Discretionary Fees (Liability Insurance, Health Insurance)
- Optional Fees (such as Parking Decal Fees)
- Amounts due for financial holds or from prior periods
- Optional Incidental Fees (such as Late Registration, Add/Drop, Installment Tuition Handling Fees, etc.)

The following additional policies will apply to deferral of payments:

1. All student account balances due from prior semesters, including items associated with deferred payment, must be paid in full before a student may begin registration for a subsequent semester.
2. A payment plan selected at the time of registration will be binding and will be applied in any subsequent add/drop activities; however, pre-payment of outstanding balances will be accepted. The University shall
assess the Installment Tuition Handling Fee of $17.00 for those students choosing payment Method 2; this charge is payable at the time of registration. An Installment Tuition Delinquency Fee of $15.00 will be assessed at the end of the sixth and eleventh week of classes if the payment due for that period is not paid in full.

3. The Office of Student Business Services will send e-mail notifications during the fourth and ninth weeks, as appropriate, to students paying tuition and fees under Method 2.

4. The courses for which a student is enrolled on the official census date-12th class day in a long semester-will be the basis for the student’s tuition and fees assessment. Except for students who officially withdraw up to the end of the refund period as indicated in the Class Schedule, no reduction in amounts due will be made after this date; further, the student is obligated to pay the assessed amounts whether or not class attendance is subsequently interrupted or terminated.

5. A student who fails to provide full payment of tuition and fees, including any late fees assessed, to the University when the payments are due is subject to one or more of the following:
   a. Bar against registration at the institution;
   b. Withholding of grades, degree, and official transcript; and
   c. All penalties and actions authorized by law.

**REFUND OF TUITION AND FEES**

Refund policies are established by, and are subject to change by, the Legislature of the State of Texas and are applicable to withdrawals and dropped courses. Refunds of tuition, laboratory fees, general fees, and student services fees will be made under the following conditions.

**Withdrawals**

Students withdrawing during a long semester will be refunded applicable tuition and fees as follows:

- Prior to the first class day: 100% less $15.00
- During first five class days: 80%
- During second five class days: 70%
- During third five class days: 50%
- During fourth five class days: 25%
- After fourth five class days: No Refund

Students withdrawing during a summer term will be refunded applicable tuition and fees as follows:

- Prior to the first class day: 100% less $15.00
- During the first, second, or third class day: 80%
- During the fourth, fifth, or sixth class day: 50%
- Seventh day of class and thereafter: No Refund

**Note:** Percentage of refund is based on total tuition and fees, not on amount paid.

**Note:** Unless students do a complete withdrawal from school prior to the first official class day, he/she is responsible for a percentage of total tuition and fees. Students should contact the Student Business Services Office at 747-5116 or (915) 747-5105 to address any questions.
Dropped Courses

Refunds of applicable tuition and fees will be made for courses from which students drop within the first twelve class days of a long session semester or an appropriately shorter period for a summer session term, provided the student remains enrolled for that semester or term. Refund of tuition for dropped courses will be made only if the original payment exceeds the established minimum amount.

Refunds of tuition and fees paid on the student’s behalf by a sponsor, donor, or scholarship will be made to the source rather than directly to the student who has withdrawn or dropped courses, if the funds were made available through the University. Students who withdraw or drop courses must, in order to qualify for a refund, surrender all applicable privileges, including identification cards and athletic and cultural entertainment tickets. Refunds provided for above will be granted if applied for by the end of the semester in which the withdrawal or drop was appropriately completed. Refunds for students who owe balances in deferred payment of tuition/fees will be credited to the student’s account, reduced by the amount of any unpaid charges and a reasonable administrative fee not to exceed the lesser of 5% of the tuition, fees, room and board, and other charges that were assessed for the enrollment period, or one hundred dollars.

Refunding for Student in Title IV Programs

As an institution participating in programs under Title IV of the Higher Education Act of 1965 as amended (“Act”), The University of Texas at El Paso is required to refund unearned tuition, fees, room and board, and other charges to certain students attending the institution for the first time who have received a grant, a loan, or work assistance under Title IV of the Act or whose parents have received a loan on their behalf under 20 U.S.C. Section 1087-2. The refund is required if the student does not register for, withdraws from, or otherwise fails to complete the period of enrollment for which the financial assistance was intended. No refund is required if the student withdraws after a point in time that is sixty percent of the period of enrollment for which the charges were assessed. A refund of tuition, fees, room and board, and other charges will be determined for students who withdraw prior to this time. The refund is the larger of the amount provided for in Section 54.006, Texas Education Code or a pro rata refund calculated pursuant to Section 484B of the Act. If the student charges were paid by Title IV funds, a portion or all of the refund will be returned to these programs.
### Tuition and Fee Exemptions

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td><strong>Accredited School Scholarship (permissive), Texas Education Code §54.201</strong></td>
</tr>
<tr>
<td><strong>Children of Texas veterans, Texas Education Code §54.203</strong></td>
</tr>
<tr>
<td><strong>Texas ex-servicemen, Texas Education Code §54.203</strong></td>
</tr>
<tr>
<td><strong>Children of disabled/deceased Texas firefighters and peace officers, Texas Education Code §54.204</strong></td>
</tr>
<tr>
<td><strong>Disabled Peace Officers (permissive), Texas Education Code §54.2041</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELIGIBILITY</th>
<th>FEE EXEMPTED ***</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Highest ranking graduate of an accredited Texas high school</td>
<td>Tuition during first two semesters (long session) following graduation</td>
</tr>
<tr>
<td>- For Children of members of the armed forces who were killed in action, who die or died while in service, are MIA, or whose death is documented to be directly caused by illness or injury related to service in the armed forces as listed above</td>
<td>Tuition Laboratory fees General fee NOT TO EXCEED 150 CREDIT HOURS</td>
</tr>
<tr>
<td>- For orphans of members of the Texas National Guard killed since January 1, 1946, while on active duty</td>
<td></td>
</tr>
<tr>
<td>- Must be Texas resident and reside in the state at least 12 months immediately preceding date of registration</td>
<td></td>
</tr>
<tr>
<td>- Resided in Texas for 12 months prior to registration</td>
<td>Tuition Laboratory fees General fee NOT TO EXCEED 150 CREDIT HOURS</td>
</tr>
<tr>
<td>- A bonafide legal resident of Texas at time entered service</td>
<td></td>
</tr>
<tr>
<td>- Served in armed forces in World War II, Korean Conflict, the Cold War, Vietnam, Grenada era, Lebanon, Panama, Persian Gulf, the national emergency related to 9/11/01</td>
<td></td>
</tr>
<tr>
<td>- Honorably discharged</td>
<td></td>
</tr>
<tr>
<td>- Not eligible for federal education benefits</td>
<td></td>
</tr>
<tr>
<td>- For children under 21 years of age or 22 if the student was eligible to participate in special education under Texas Code §29.003) of disabled full-paid or volunteer firefighters, full-paid municipal, county, state peace officers, custodians of the Department of Corrections, or game wardens</td>
<td>Tuition Required fees not to exceed 120 undergraduate credit hours or any semester begun after age 26.</td>
</tr>
<tr>
<td>- Disability/death occurred in the line of duty</td>
<td></td>
</tr>
<tr>
<td>- Texas resident who has resided in Texas for 12 months immediately preceding registration</td>
<td>Tuition Fees excluding class and laboratory fees NOT TO EXCEED 12 SEMESTERS IN UNDERGRADUATE PROGRAM</td>
</tr>
<tr>
<td>- Permanently disabled as a result of injury sustained in performance of duties as Texas peace officer</td>
<td></td>
</tr>
<tr>
<td>- Unable to continue duties as peace officer</td>
<td></td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>ELIGIBILITY</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| Blind and deaf students, Texas Education Code §54.205                     | • A blind disabled person, or a person whose sense of hearing is nonfunctional  
• Must be a Texas resident                                                                                                                     | Tuition  
Required fees  
General property deposit |
| **Good Neighbor Scholarship (permissive), Texas Education Code §54.207       | • A limited number (as prescribed by the Coordinating Board) of native-born citizens and residents from nations of the Western Hemisphere other than the United States                                               | Tuition                   |
| Firefighters enrolled in fire science courses, Texas Education Code §54.208 | • Firefighters enrolled in course offered as a part of fire science curriculum                                                                                                                                  | Tuition  
Laboratory fees |
| Prisoners of War, Texas Education Code §54.219                             | • Is a resident of Texas and was a resident of Texas at the time of original entry into the armed forces;  
• Was first classified as a POW on or after January 1, 1999;  
• Is enrolled for at least 12 semester credit hours.                                                                                           | Tuition  
Required Fees  
Student Housing and Food  
Contract Cost  
Textbook Costs |
| Children of prisoners of war or persons missing in action, Texas Education Code §54.209 | • Dependent person under 25 years of age who receives majority of support from parent, and whose parent is a resident of Texas active duty military and classified by Department of Defense as a Prisoner of War or Missing in Action at time of the student's registration | Tuition  
Required fees |
| **Senior citizen (permissive), Texas Education Code §54.210                 | • Individuals 65 years of age or older on space available basis                                                                                                                                                | Tuition  
NOT TO EXCEED 6 CREDIT HOURS PER SEMESTER |
| Foster Children Texas Education Code §54.211                               | • For individuals who were in foster care or other residential care under the conservatorship of the Department of Protective and Regulatory Services on or after the day preceding the individual’s 18th birthday, the day of the student’s 14th birthday if the student was eligible for adoption on or after that day, or the day the student received a high school diploma or equivalent  
• Enrolls not later than the 3rd anniversary of date of discharge from that care or the 21st birthday  | Tuition  
Required fees |

NOT TO EXCEED 120 HOURS

NOT TO EXCEED 6 CREDIT HOURS PER SEMESTER
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ELIGIBILITY</th>
<th>FEES EXEMPTED ***</th>
</tr>
</thead>
</table>
| Adopted Children formerly in Foster or other Residential Care, Texas Education Code §54.2111 | • For individuals who were adopted; and  
• Were subject of an adoption assistance agreement under Subchapter D, Chapter 162, Family Code | Tuition and Fees |
| **Fully Funded Courses (permissive), Texas Education Code §54.217 | • Individuals enrolled in courses that are fully funded by federal or other sources | Tuition and fees for particular course |
| ROTC Students, Texas Education Code §54.212 | • For individuals admitted to the institution and its Reserve Officers’ Training Corps program  
• Selected by ROTC Selection Committee must become a member of the Texas Army National Guard or the Texas Air National Guard and maintain status as a member in good standing  
• Possess and maintain academic and personal conduct standards established by institution  
• Maintain full-time enrollment status  
• Enter into a contract to serve no less than four years after graduation as a commissioned officer with Texas Air or Army National Guard  
• Pass the physical examination and police records background check | Tuition  
Fees  
Lodging and Board (1st two years of enrollment)  
**NOT TO EXCEED 4 YEARS** |
| TANF Students, Texas Education Code §54.212 | • For students who, during the last year of public high school in this state, was a dependent child receiving financial assistance under Chapter 31, Human Resources Code, for not less than six months  
• Successfully completed the attendance requirements under Section 21.032  
• Younger than 22 years of age on the date of enrollment  
• Enrolls at the institution as an undergraduate student not later than the second anniversary of the date of graduation from a public high school in this state  
• Has met the entrance examination requirements of the institution before the date of enrollment  
• Must be a Texas resident | Tuition  
Fees  
**NOT TO EXCEED FIRST ACADEMIC YEAR** |
<table>
<thead>
<tr>
<th>Description</th>
<th>Eligibility</th>
<th>FEES EXEMPTED</th>
</tr>
</thead>
</table>
| Educational Aides, *Texas Education Code* §54.214                          | • School employee who worked as an educational aide for at least one year during the 5 years preceding the semester of the exemption  
• Establish financial need  
• Pursuing teacher certification  
• Maintain acceptable GPA  
• Resident of Texas                                                    | Tuition  
Fees excluding class and laboratory fees                                    |
| Economic Hardship, *Texas Education Code* §54.503 (e)                      | • When payment of fee causes undue economic hardship--number of exceptions limited to 5 percent of total enrollment | General fee                                                                   |
| Early High School Graduates, *Texas Education Code* §56.201-209            | • Completed Texas high school in not more than 36 consecutive months  
• Texas resident                                                            | Tuition up to $1,000                                                        |
| Surviving Spouse and minor children of *certain police, security or emergency personnel killed in the line of public duty. *Texas Government Code* §615.0225 | • For the surviving spouse or children of certain public peace officers, probation officers, parole officers, jailers, police reservists, fire fighters, and emergency medical personnel. *Texas Gov't Code* §615.003  
• Death occurred in the line of duty as a result of a risk inherent in the duty.  
• Must be enrolled full time. | Tuition up to $1,000  
Student Housing and Food contract costs  
Textbook costs  
**NOT TO EXCEED BACHELOR’S DEGREE OR 200 HOURS**                                |

* This information is provided in summary form. For more information, students should contact the Admissions Office and/or refer to *Texas Education Code Section* §54.201, et seq.

** Must have Regental approval.

*** Required fees are those required as a condition of enrollment. They do not include room, board, books, transportation, lab fees, or other course specific fees or optional fees. *Last updated November 12, 2004.*

**GENERAL DEBTS OF STUDENTS OR ORGANIZATIONS**

The University is not responsible for any debts contracted by individual students or by student organizations. The University will not assume the role of collection agency for any organization, firm, or individual to which students may owe money, nor will the University adjudicate disputes between students and creditors over the existence or amounts of debts.
DEBTS OWED TO THE UNIVERSITY

In the event of non-payment of debts owed to the University, one or more of the following actions may be taken by the University:

- Bar against registration
- Withhold the student’s grades and official transcripts
- Withhold a degree to which the student might otherwise be entitled
- Delinquent accounts will be referred to a Collection Agency and Credit Bureau
- Other penalties and actions authorized by law

RETURNED CHECKS

A student who pays the University a check, draft, or money order for services or goods that is not subsequently honored by payor’s bank and the fault is not that of the bank, and who does not pay the University the amount due within ten class days after the receipt of written notice that the bank has refused payment, may be subject to disciplinary action. A student who pays tuition and fees with a check, draft, or money order that is not subsequently honored by payor’s bank, the fault not being that of the bank, may be withdrawn from the University for non-payment of tuition and fees if the student fails to pay the University the amount due plus a $30 returned check fee within ten class days after receiving written notice, student’s check will be referred to the County Attorney for collection. Additional collection fees will be assessed by the County Attorney’s Office. All check writers whose check is returned will be assessed a $30 fee for each check not honored by payor’s bank. This assessment is subject to change without prior notice.

On-Campus Housing Expenses

Department of Residence Life
Miner Village
2401 North Oregon Street
El Paso, TX 79902
(915) 747-5352
housing@utep.edu

UTEP offers some of the finest and most affordable on-campus housing facilities available. Opened in Fall of 2001, Miner Village provides a state of the art living environment designed to help students succeed academically. Located a brief 5 minute walk from the UTEP Library, most academic buildings and the Sun Bowl Stadium, Miner Village offers many opportunities for students to get involved on-campus.

Students may choose from four different styles of apartments: efficiencies for one or two students or two bedroom and four bedroom units. Each bedroom is a private room and all apartments feature high speed internet, cable television connections and have private telephone lines. They are fully furnished (Living room: couch, chair, coffee table, end table, kitchen table and chairs. Bedroom: bed, dresser, desk and desk chair).
One low monthly payment includes all utilities (electricity, refrigerated air, gas, water, sewer and trash removal), high speed internet, basic cable television and a parking permit.

To reserve a space, students must submit a Miner Village application and a $200 deposit. A $30, once a year telephone maintenance fee is required upon check-in. Variable lease options are available which enable students to live at Miner Village during the academic year only or on a year round basis if they choose.

For information on current rates or to take a tour please give us a call or come by.

Residency for Tuition Purposes

The Office of Admissions and Recruitment is responsible for determining residency status of students for tuition purposes. The Office is guided by the Texas Education Code, the Rules and Regulations for Determining Residence Status of the Texas Higher Education Coordinating Board, and University regulations. Under the State statutes and regulations, a student or prospective student is classified as a resident of Texas, non-resident, or a foreign student.

- A resident is an individual who is either a U.S. citizen, national, permanent resident alien, or an alien who has been permitted by Congress to adopt the U.S. as his or her domicile while in the United States and who has otherwise met the State requirements for establishing residency for tuition purposes.
- A non-resident is a citizen, national, or permanent resident of the U.S. or an alien who has been permitted by Congress to adopt the U.S. as his or her domicile while in this country and who has not met the State’s requirement for establishing residency for tuition purposes.
- A foreign student is an alien who is not a permanent resident of the U.S. or has not been permitted by Congress to adopt the U.S. as his/her domicile.

While these State requirements for establishing residency are complex and should be referred to in each particular circumstance, they generally require that an independent individual (18 years of age or older) establish a domicile in Texas and reside in the State for a period of 12 months prior to the census date of the academic term in which the person is enrolled. For minors and dependents, the parents or court-appointed legal guardian must have established a domicile and meet the residency requirements. The minor or dependent must be eligible to be claimed by the parent or court-appointed legal guardian on their federal income tax.

An individual may also be classified as a Texas resident if the individual (1) graduated from a public or private high school or received the equivalent of a high school diploma in Texas; and (2) resided in Texas for at least three years as of the date the person graduated from high school or received the equivalent of a high school diploma; and (3) continuously resided in Texas for one year prior to the census date of the academic term in which the person is enrolled. An individual is classified as a Texas resident until the individual establishes a residence outside of the state of Texas.

The following visa holders are eligible to establish a domicile in the United States and have the same privilege of qualifying for Texas residency as U.S. citizens: A-1, A-2, A-3, E-1, E-2, G-1, G-2, G-3, G-4, G-5, H-1B, H-4, dependents
of H-1B, I, K-1, K-2, K-3, K-4 L1a, L1b, L-2, NATO 1-7, O-1, O-2, O-3; dependents of O-1, R-1, R-2, V, OP-1, I-551, or I-688/A/B visas that have not expired. In order for these cardholders to be eligible for resident tuition, residency must be established.

An individual who is classified as a non-resident or foreign student may qualify, under certain exceptions, for resident tuition rates and other charges while continuing to be classified as a non-resident or a foreign student.

Military

Certain military personnel, spouse and dependent children are eligible to pay resident tuition rates as provided through Texas Education Code Section 54.058 (b)-(c). These provisions provide for nonresident members of the U.S. Armed Forces, members of Texas units of the Army or Air National Guard, or Commissioned Officers of the Public Health Service who are assigned to duty in Texas to pay the resident tuition rate for themselves, their spouses and dependent children. To qualify, the student must submit a statement once a year from an authorized officer in the services, certifying that he or she (or a parent or court-appointed legal guardian) will be assigned to duty in Texas at the time of enrollment and is not a member of the National Guard or Reserves who will be in Texas only to attend training with Texas units.

In addition, Texas Education Code Section 54.058 (d) also provides resident tuition rates for a spouse or dependent child of a member of the Armed Forces of the United States, who is not assigned to duty in Texas but who has previously resided in Texas for a 6 month period if the member has provided at least one year preceding the first day of the term or semester a document with the applicable military service that is in effect on the first day of the semester. The document must indicate the member’s permanent residence address in Texas and designates Texas as the member’s place of legal residence for the purpose of income tax purposes. In addition, the member provides documentation that he or she has been registered to vote in Texas for the entire year preceding the first day of the semester and satisfies at least one of the following requirements: 1) has owned real property in Texas for the entire year preceding the first day of the semester and 2) has had an automobile registered in Texas for the entire year preceding the first day of the semester or at least one year preceding the first day of the semester executed a will that has not been revoked or superseded indicating that the member is a resident of Texas and deposited the will with the county clerk of the county of the member’s residence under Section 71, Texas Probate Code.

Other Exceptions

Waivers of non-resident tuition for non-residents and foreign students are available for

- Participants in the Academic Common Market
- Residents of the eight New Mexico counties that border on Texas
- Recipients of competitive University scholarships of $1,000 or more
- Students whose families transferred to Texas as part of the state’s plan for economic development
- U.S. Foreign Service Officers assigned to posts in Mexico
- Mexican citizens with demonstrated financial need
- Military stationed in Texas and their dependents
- NATO forces stationed in Texas and their dependents
• Teaching and research assistants and their dependents
• Higher education teachers and professors and their dependents
• Registered nurses enrolled in postgraduate nursing degree programs

STUDENT RESPONSIBILITIES

Reclassification as a Non-Resident
Persons who have been classified as residents of Texas will be reclassified as non-resident students whenever they report, or there is found to exist, circumstances indicating a change in legal residence to another state. If students who have been classified as residents of Texas are found to have been erroneously classified as a result of an omission or falsification will be reclassified as non-residents and will be required to pay the difference between resident and non-resident fees for the semesters for which they were erroneously classified.

Reclassification as a Resident
Persons classified as non-residents upon first enrollment may request reclassification. In order to have residence status reconsidered, students must complete the Core Residency Questions and submit it with appropriate documentation regarding residency to the Office of Admissions and Recruitment prior to the first day of class of the semester for which the change is sought. After the form and documentation are reviewed, students are notified in writing of the residence decision.

If students have been erroneously classified as non-residents and subsequently prove to the satisfaction of the University’s residency official that they should have been classified as resident students, they will be reclassified as residents of Texas and will be entitled to a refund of the difference between the resident and non-resident fees for the semesters in which they were erroneously classified.

All students are expected to pay the tuition assessed on or before the payment date for each semester as established by the University. All residence questionnaires and forms verifying non-resident tuition exemption status must be submitted prior to the first day of class of the term for which the change is sought. To prevent any delay in enrollment, students are encouraged to submit all forms at least two weeks before registration. Students should consult the Class Schedule for specific information concerning the submission of non-resident exemption forms.

Non-Compliance with Institutional Rules and Regulations
If students have obtained residency classification by virtue of deliberate concealment of facts or misrepresentation of facts, they may be required to repay the difference in tuition rates and may be subject to appropriate disciplinary action, in accordance with the rules and regulations of The University of Texas at El Paso. For questions on residency or to update residency status, please contact the Office of Admissions and Recruitment at (915) 747-5890.
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General Regulations

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://hoop.utep.edu. 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 at www.utsystem.edu/bor/rules. The President has delegated responsibility for the administration of student discipline to the Dean of Students.

STUDENT CONDUCT

While enrolled at the University, a student neither loses the rights nor escapes the responsibilities of citizenship. Any student who engages in conduct that is prohibited by the Board of Regents’ *Rules and Regulations* or University rules, or by federal, state, or local law is subject to discipline whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct. All students are expected and required to obey the law, to show respect for properly constituted authority, and to observe correct standards of conduct.

The University of Texas at El Paso administers student discipline according to established procedures of due process. Procedures are defined and described in the *Rules and Regulations* of the Board of Regents, Series 50101, and in the *Handbook of Operating Procedures* (HOP).

Students should check with appropriate departments whose policy or regulation is of concern. If necessary, students need to refer to the rules as contained in the Regents’ Rules and the *Handbook of Operating Procedures* (HOP). The Office of the Dean of Students can assist on this matter. This set of rules is available at http://hoop.utep.edu.

OTHER PROHIBITED CONDUCT

Computer usage violations, use of alcoholic beverages, dishonesty, gambling, defacing of property, endangering the health or safety of others, use of obscene and threatening language, altering of records, possession or use of firearms, failure to respond promptly to official notices, etc. will subject the student to disciplinary action.

Penalties, which may be imposed in conjunction with the approved disciplinary procedures, include the following: written warning, disciplinary probation, withholding of grades, withholding of official transcript or degree, restitution, failing grade, denial of degree, suspension and expulsion, revocation of degree and withdrawal of diploma, or other penalty as deemed appropriate under the circumstances. In addition, certain privileges may be withdrawn consistent with the severity of the offense and the rehabilitation of the student. These penalties may be imposed singularly or in any combination upon individuals, groups, or organizations.

ILLEGAL SUBSTANCES POLICY

The use, possession, or sale of any illegal drugs or narcotics including any amount of marijuana on the campus of the University is a violation of Regents’ *Rules and Regulations* and of University policies governing student conduct, as well as a violation of State Law. In addition to possible criminal prosecution, student offenders will be subject to disciplinary action by the...
University. The minimum disciplinary penalty that will be imposed is suspension from the University for a specified period of time and/or suspension of rights and privileges.

**DISRUPTIVE ACTS POLICY**

The obstruction or disruption of any teaching, research, administrative, disciplinary, public service, or other authorized activity on campus or under the authority of the University or on property owned or controlled by the University is prohibited and will subject the student or group of students to disciplinary action.

**HAZING POLICY**

Hazing in state educational institutions is prohibited by both state law (Sections 51.936 and 37.151 et seq., *Texas Education Code*) and by the Regents' *Rules and Regulations* (Series 50101, sec. 2.8). Individuals or organizations engaging in hazing could be subject to fines and charged with criminal offenses. Additionally, the law does not affect or in any way restrict the right of the University to enforce its own rules against hazing.

The law defines hazing as any intentional, knowing, or reckless act, occurring on or off the campus of an educational institution, by one person alone or acting with others, directed against a student, that endangers the mental or physical health or safety of a student for the purpose of pledging, being initiated into, affiliating with, holding office in, or maintaining membership in any organization whose members are or include students at an educational institution. Hazing includes but is not limited to:

1. Any type of physical brutality, such as whipping, beating, striking, branding, electronic shocking, placing of a harmful substance on the body, or similar activity;
2. Any type of physical activity, such as sleep deprivation, exposure to the elements, confinement in a small space, calisthenics, or other activity that subjects the student to an unreasonable risk or harm or that adversely affects the mental or physical health or safety of the student;
3. Any activity involving consumption of food, liquid, alcoholic beverage, liquor, drug, or other substance which subjects the student to an unreasonable risk or harm or which adversely affects the mental or physical health of the student;
4. Any activity that intimidates or threatens the student with ostracism; that subjects the student to extreme mental stress, shame, or humiliation; or that adversely affects the mental health or dignity of the student or discourages the student from entering or remaining registered in an educational institution; or that may reasonably be expected to cause a student to leave the organization or the institution rather than submit to acts described in this subsection;
5. Any activity that induces, causes, or requires the student to perform a duty or task which involves a violation of the Penal Code.

Activities which under certain conditions constitute acts that are dangerous, harmful, or degrading, in violation of Rules include but are not limited to:

- calisthenics, such as sit-ups, push-ups, or any other form of physical exercise;
- total or partial nudity at any time;
- the eating or ingesting of unwanted substance;
- the wearing or carrying of any obscene or physically burdensome article;
• paddle swats, including the trading of swats;
• pushing, shoving, tackling, or any other physical contact;
• throwing oil; syrup, flour, or any other individual interrogation;
• forced consumption of alcoholic beverages either by threats or peer pressure;
• lineups intended to demean or intimidate;
• transportation and abandonment (road trips, kidnaps, walks, rides, drops);
• confining individuals in an area that is uncomfortable or dangerous (hot box effect, high temperature, too small);
• any type of personal servitude that is demeaning or of personal benefit to the individual members;
• wearing of embarrassing or uncomfortable clothing;
• assigning pranks such as stealing, painting objects, harassing other organizations;
• intentionally messing up the house or room for clean up;
• demeaning names;
• yelling and screaming; and
• requiring boxing matches or fights for entertainment.

The University regards any form of hazing as a major violation, and any individual and/or registered student organization participating in such activities will be held responsible for those actions. According to the law, a person can commit a hazing offense not only by engaging in a hazing activity, but also by soliciting, directing, encouraging, aiding, or attempting to aid another engaging in hazing; by intentionally, knowingly, or recklessly allowing hazing to occur; or by failing to report first-hand knowledge that a hazing incident is planned or has occurred in writing to the Dean of Students or other appropriate university officials. The fact that a person consented to or acquiesced in a hazing activity is not a defense to prosecution for hazing under this law.

An organization can commit a hazing offense if the organization condones or encourages hazing or if an officer or any combination of members, pledges, or alumni of the organization commits or assists in the commission of hazing.

In an effort to encourage reporting of hazing incidents, the law grants immunity from civil or criminal liability to any person who reports a specific hazing event in good faith and without malice to the Dean of Students or other appropriate University Officials, and it immunizes a person from participation in any judicial proceeding resulting from that report.

SOLICITATION

In general, solicitation is prohibited in any building, structure, or facility of the UTEP campus. Certain university activities are permitted as defined in the Handbook of Operating Procedures. This handbook is available for review in the Office of the Dean of Students and on the homepage of the Dean of Students at www.utep.edu/dos.

STUDENT TRAVEL POLICY

Purpose

It is the policy of the University of Texas at El Paso (UTEP) to promote safe travel by students who participate in certain university organized and sponsored activities or events.
Policy and Procedure

1. This Policy is applicable to student travel undertaken by one or more currently enrolled students to reach an activity or event that meets all of the following criteria:
   a. **An activity or event organized and sponsored by the university.**
      An activity or event is considered to be organized and sponsored if it has been planned and funded by the University and approved in writing by the designated administrator. The types of activities and events covered by this policy include course related field trips, recreational sports club trips, departmental sponsored trips, the activities of sponsored student organizations, and meetings of academic organizations where a student is officially representing the university; and
   b. **The activity or event is located more than 25 miles from the University; and**
   c. (i) **Travel to the activity or event is funded and undertaken using a vehicle owned or leased by the University; or**
      (ii) **Attendance at the activity or event is required by a registered student organization and approved in accordance with this Policy.**

2. Registered student organizations that require their members to travel 25 miles or more from the university to attend an activity or event covered by this Policy must obtain prior written approval for the proposed travel by the designated administrator.

3. The following provisions will apply to all travel covered by this Policy.
   a. **All Motor Vehicle Travel.**
      **Seat Belts:**
      Occupants of motor vehicles shall use seat belts or other approved safety restraint devices required by law or regulation at all times when the vehicle is in operation.
      **Alcohol and Illegal Substances Prohibited:**
      Occupants of motor vehicles shall not consume, possess, or transport any alcoholic beverages or illegal substances.
      **Passenger Capacity:**
      The total number of passengers in any vehicle at any time it is in operation shall not exceed the manufacturer’s recommended capacity or the number specified in applicable federal or State law or regulations, whichever is lower. Where applicable, all travel participants are required to comply with The University of Texas System Business Procedure Memorandum 16-05-02, including, but not limited to, provisions concerning vehicle passenger capacity.
      **License and Training:**
      Each operator of a motor vehicle shall have a valid operator’s license and be trained as required by law to drive the vehicle that will be used.
      **Proof of Insurance, Inspection, and Safety Devices:**
      Each motor vehicle must have a current proof of liability insurance card and State inspection certification, be equipped with all safety devices or equipment required by federal or State law or regulation, and comply with all other applicable requirements of federal or State law or regulations.
      **Legal Operation of Vehicle and Driving Schedule:**
      Operators of motor vehicles shall comply with all laws, regulations, and posted signs regarding speed and traffic control and shall not
operate the vehicle for a continuous period that is longer than the maximum provided by federal or State law or regulations or guidelines promulgated by the University, whichever is lower, without scheduled rest stops or overnight stops.

b. Travel Using a Vehicle Owned or Leased by the University.

Service and Maintenance:
In addition to those provisions in Item 3.a., each vehicle owned or leased by the university must be subject to scheduled periodic service and maintenance by qualified persons and comply with all applicable requirements of The University of Texas System Business Procedure Memorandum 16-05-02.

Operators of Vehicles:
All operators of vehicles owned or leased by the University shall be employees of the university and shall have a valid operator’s license for the operation of the particular vehicle. In addition, operators shall have a current Motor Vehicle Record on file with the designated office of the university.

c. Travel Using Rented Vehicles.
In addition to those provisions specified in Item 3.a., the rental, use, and operation of all rented vehicles shall comply, where applicable, with the State contracts for rental cars and all applicable requirements of The University of Texas System Business Procedure Memorandum 16-05-02.

d. Travel by Common Carrier.
When a common carrier (bus, airline, etc.) is used for student travel covered by this Policy, all reasonable steps will be taken to assure the travel is undertaken in conformance with this Policy and all applicable federal, State, local, and university regulations.

4. Students are responsible for abiding by the rules and regulations contained in the UTEP Student Code of Conduct while they are traveling. The sponsoring department may promulgate additional rules concerning expectations of students while on the trip.

5. As part of the approval process, all participants must sign an appropriate Release and Indemnification Agreement. All persons driving personal vehicles for travel covered by this policy must agree to comply with the requirements of 3.a. and produce some evidence of a valid operator’s license for the vehicle to be used, current proof of liability insurance and Texas State inspection certificate.

COMPULSORY INSPECTION OF VEHICLE

It is mandatory for all students enrolled in public institutions of higher education in the State of Texas to be in compliance with Vehicle Emissions Testing Laws before privileges may be granted to park or drive a motor vehicle that is not registered in this state on institutional property.

For further details, please consult the Transportation Code, Chapter 548, Subchapter F: Motor Vehicle Emissions Inspection and Maintenance. A full copy of the legislation is available in the University’s Parking Rules and Regulations.

IMMUNIZATION REQUIREMENT

The health and safety of students is paramount to the University. Although certain immunizations are required only of students enrolled in specific health-related courses and programs, all students are strongly encouraged to obtain
them for their own protection. Students may obtain information regarding the consequences of outdated immunizations for certain diseases, the age groups most vulnerable to these vaccine preventable diseases, and local providers of immunization services from the Student Health Center located on campus. Immunizations are available at the Student Health Center. To obtain information call (915) 747-5624. Students are responsible for the full cost of any immunizations for which a fee is charged.

In accordance with State law, the following immunizations are required for all students enrolled in health-related courses which will involve direct patient contact in medical or dental care facilities or who come in contact with human biological fluids or tissue. Students enrolled at UTEP will assume the cost of all vaccinations.

- **Measles**: proof of two doses of measles vaccine administered on or after the first birthday and at least 30 days apart or proof of immunity;
- **Mumps**: proof of one dose of mumps vaccine administered on or after the first birthday or proof of immunity;
- **Rubella**: proof of one dose administered on or after the first birthday or proof of immunity;
- **Tetanus/diphtheria**: proof of one “booster” dose of tetanus/diphtheria (within 10 years);
- **Hepatitis B virus (HBV)**: proof of serologic immunity to HBV or certification of immunization with a complete series of Hepatitis B vaccine. Students will be required to present a letter or other suitable written certification.

**Note**: Some colleges or academic departments may require additional immunizations. Certain exemptions are allowed from the immunization requirements. For further information, students should contact the Student Health Center or the academic department responsible for the courses or programs requiring immunizations.

A form on which the required immunizations can be documented is available from the Admissions Office or the Student Health Center. Since most secondary schools are required by law to maintain similar records, a copy of the high school immunization record may be submitted.

The Student Health Center is responsible for maintaining a record of those students who comply with these requirements and may recommend the placement of an administrative hold on records if they have not been met. The Student Health Center provides the required immunizations for all academic programs; however no X-ray screening is available. The HB vaccine is also available for a nominal charge for students enrolled in medical-related programs.

**AIDS, HIV, AND HEPATITUS B INFECTION POLICY**

The University of Texas at El Paso recognizes Acquired Immune Deficiency Syndrome (AIDS), Human Immunodeficiency Virus (HIV), and Hepatitis B Virus (HBV) as serious public health threats and is committed to encouraging an informed and educated response to issues and questions concerning AIDS, HIV, and HBV. To demonstrate its commitment, UTEP has adopted a policy and procedural steps to protect both the rights and well being of those students, employees, and patients who may be infected with HIV or HBV as well as to prevent the spread of infection. No individual with HIV or HBV infection will be discriminated against in employment, admission to academic programs, health benefits, or access to facilities. Students with HIV or HBV infection may attend all classes without restriction, as long as they are physically and mentally able to participate and perform assigned work and pose no health risks to others. All information regarding the medical status of UTEP, faculty, staff, and students is confidential.
A complete copy of the “AIDS, HIV and Hepatitis B Infection” policy can be found in the institutional Handbook of Operating Procedures (HOP) available in the Dean of Students Office, the Library, and the Student Health Center. This policy is applicable to all students of UTEP as they pursue their academic (and clinical) endeavors. An educational pamphlet on HIV infection developed by the U.S. Department of Health and Human Services and the Public Health Service will be made available to all students from the Student Health Center.

**BACTERIAL MENINGITIS**

This information is being provided to all new college students in the state of Texas. Bacterial Meningitis is a serious, potentially deadly disease that can progress extremely fast so take utmost caution. It is an inflammation of the membranes that surround the brain and spinal cord. The bacteria that causes meningitis can also infect the blood. This disease strikes about 3,000 Americans each year, including 100-125 on college campuses, leading to 5-15 deaths among college students every year. There is a treatment, but those who survive may develop severe health problems or disabilities.

**What are the symptoms?**

- High fever
- Rash or purple patches on skin
- Light sensitivity
- Confusion and sleepiness
- Lethargy
- Severe headache
- Vomiting
- Stiff neck
- Nausea
- Seizures

There may be a rash of tiny, red-purple spots caused by bleeding under the skin. These can occur anywhere on the body.

The more symptoms, the higher the risk, so when these symptoms appear, seek immediate medical attention.

Further information concerning Student Right-To-Know and Campus Security can be found at the following web site: www.campussafety.org.

**How is Bacterial Meningitis Diagnosed?**

- Diagnosis is made by a medical provider and is usually based on a combination of clinical symptoms and laboratory results from spinal fluid and blood tests.
- Early diagnosis and treatment can greatly improve the likelihood of recovery.

**How is the disease transmitted?**

- The disease is transmitted when people exchange saliva (such as by kissing, or by sharing drinking containers, utensils, cigarettes, toothbrushes, etc.) or come in contact with respiratory or throat secretions.

**How do you increase your risk of getting Bacterial Meningitis?**

- Exposure to saliva by sharing cigarettes, water bottles, eating utensils, food, kissing, etc.
- Living in close conditions (such as sharing a room/suite in a dorm or group home).
What are the possible consequences of the disease?
- Death (in 8 to 24 hours from perfectly well to dead)
- Permanent brain damage
- Kidney failure
- Learning Disability
- Hearing loss, blindness
- Limb damage (fingers, toes, arms, legs) that requires amputation
- Gangrene
- Coma
- Convulsions

Can the disease be treated?
- Antibiotic treatment, if received early, can save lives and chances of recovery are increased. However, permanent disability or death can still occur.
- Vaccinations are available and should be considered for:
  - Those living in close quarters
  - College students 25 years old or younger
- Vaccinations are effective against 4 of the 5 most common bacterial types that cause 70% of the disease in the U.S. (but does not protect against all types of meningitis).
- Vaccinations take 7-10 days to become effective, with protections lasting a minimum of 8 years.
- The cost of the vaccine varies, so check with your health care provider.
- Vaccination is very safe-most common side effects are redness and minor pain at injection site for up to two days.
- Vaccination is available at UTEP Student Health Center, on a walk-in basis.
- The City County Health Department, Immunization Outreach at (915) 591-2050
- Pro Action-Tillman Health Center at (915) 533-3414

How can I find out more information?
- Contact your own health care provider.
- Contact your Student Health Center at (915) 747-5624
- Contact your local or regional Texas Department of Health Office at (915) 834-7853
- Contact websites: http://www.dcd.gov/ncidod/dbmd/diseaseinfo; http://www.acha.org

Requirement to obtain information on Bacterial Meningitis
- All incoming undergraduate and graduate students are required to obtain information about Bacterial Meningitis and sign an acknowledgement form with the Records Office, located in the Academic Services Building.
In compliance with the Jeanne Clery Disclosure of Campus Security Police and Campus Crime Statistics Act of 1998. The University of Texas at El Paso collects specified information on campus crime statistics, campus security policies, and institutional completion or graduation rates. Pursuant to the federal law, alleged victims of violent crime are entitled to know the results of campus student disciplinary proceedings concerning the alleged perpetrators.

UTEP makes timely reports to the campus community on crimes considered to be a threat to students and employees, and crimes are reported to campus police or local police agencies.

Every October, UTEP publishes and distributes an annual report of campus security policies and crime statistics to all current students and employees, provides copies of the report to applicants for enrollment or employment upon request, and submits a copy of the report to the Secretary of Education upon request. The annual campus crime statistics report references crimes which occur on the campus property owned or controlled by UTEP or within a contiguous geographic area of the institution. Statistics for off-campus buildings or property owned by student organizations that are registered by the institution are also reported when such statistics are available from local police departments.

In addition, UTEP publishes in the annual security report its policy regarding sex-related offenses, including sexual assault prevention programs, education programs to promote awareness of sex offenses, administrative disciplinary procedures and sanctions for offenders, and counseling and student services for victims.

UTEP annually calculates and discloses institutional completion or graduation rates for undergraduate students to all prospective and current students. (The federal requirement for calculation of a completion or graduation rate applies only to institutions of higher education that admit undergraduate students who are enrolling for the first time at an institution of higher education and have not enrolled previously at any other institution of higher education.) Prior to the offer of athletically-related student aid to a potential student athlete, UTEP provides certain information on graduation rates specified by the Act to the prospective student and to the student’s parents, guidance counselor, and coach.

Further information concerning Student Right-To-Know and Campus Security Act can be found at the following web site: www.campussafety.org.

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. Students should contact the Dean of Students for specific information or download a copy of the grievance form and instructions on the Dean of Students web page at http://studentaffairs.utep.edu/dos. Click on Student Conduct.

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 Provost within 10 working days of the questioned decision or interpretation.

EQUAL EDUCATIONAL OPPORTUNITY

To the extent provided by applicable law, no person shall be excluded from participation in, denied benefits of, or be subject to discrimination under any program or activity sponsored or conducted by the University of Texas at El Paso on the basis of race, color, national origin, religion, sex, age, veteran status, disability, or sexual orientation.

Complaints regarding discrimination should be reported to the University’s Equal Opportunity/Affirmative Action Office. The University’s full policies including complaint resolution procedures, on equal opportunity, sexual harassment and misconduct and accommodations for individuals with disabilities are available in the Handbook of Operating Procedures (HOP) and on the webpage of UTEP's Equal Opportunity/ Affirmative Action Office. Inquiries regarding applicable policies should be addressed to the University’s Equal Opportunity/Affirmative Action Office, Union Building, East, Room 306, or at (915) 747-5662.
# FACILITIES AND STUDENT SERVICES

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Academic and Research Facilities

The property, buildings, or facilities owned or controlled by The University of Texas at El Paso are not open to the general public for assembly, speech, or other activities, and such uses by students and employees are subject to reasonable regulation.

No person, organization, group, association, or corporation may use property, buildings, or facilities owned or controlled by The University of Texas at El Paso for any purpose other than in the course of the regular programs or activities related to the role and mission of the University, unless authorized by the Rules and Regulations of the Board of Regents of the University of Texas System. Any authorized use must be conducted in compliance with the provisions of the Regents’ Rules and Regulations, the rules and regulations of The University of Texas at El Paso, and applicable federal, state, and local laws and regulations.

BORDER BIOMEDICAL RESEARCH CENTER (BBRC)

The Border Biomedical Research Center (BBRC), developed and supported by grants from the National Institutes of Health, was established in 1992 as a basic biomedical research center in Infectious Diseases, Toxicology, and Neurological and Metabolic Disorders. The mission of the BBRC is to enhance the capability for biomedical research at the University of Texas at El Paso relevant to the Border region and to promote the progress of minority scientists in biomedical research. Laboratories in Biomolecule Characterization and Separations, DNA Sequencing and Analysis, Cell Culture, Analytical Cytology, and an Aquatic Laboratory all have state-of-the-art instrumentation. The BBRC also has an active Statistical Consulting Laboratory, and a modern Bioinformatics Laboratory. The BBRC will soon move to new facilities following the construction of the new Biosciences Building. For more information visit our web site at http://www.utep.edu/bbrc.

CENTER FOR CIVIC ENGAGEMENT (CCE)

The mission of the Center for Civic Engagement (CCE) at the University of Texas at El Paso is to engage faculty and students in the community through community-based teaching and learning in order to enhance student learning, promote civic engagement and actively improve the El Paso-Cd. Juárez Region.

The CCE, born in 1998, works with faculty and students in all colleges and collaborates with a wide variety of public agencies, schools, non-profit and community-based organizations. It aims to foster collaborative leadership, civility and deepen democracy in the region through what may be alternatively known as hands-on/action-oriented learning, civic education, Service Learning, and/or active citizenship.

The CCE is predominantly grant funded, and offers faculty members Border Research Engagement opportunities through modest summer awards. Programs under the Center for Civic Engagement also include: Community Partnerships, Service-Learning in Action, Student Internships, Volunteerism, Summer Programs, the Grant Library, and a series of workshops and conferences available to the public.
CENTER FOR EFFECTIVE TEACHING AND LEARNING (CETaL)

The Center for Effective Teaching and Learning (CETaL) is a resource for University faculty. CETaL provides faculty with workshops, confidential consulting on issues of course and curriculum design, assessment and documentation of effective teaching, 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.

CENTER FOR ENVIRONMENTAL RESOURCE MANAGEMENT (CERM)

The Center for Environmental Resource Management (CERM) coordinates faculty and student research addressing the environmental problems affecting the border region of the southwestern United States and northern Mexico, including water supply and water quality; air quality; detection, analysis and remediation of hazardous substances; and environmental health. Students receiving support through CERM get hands-on experience on research, policy and outreach projects addressing a variety of issues such as management of water resources, measurement and characterization of air pollution, methods of containment and remediation of soil-borne and water-borne contaminants, development of alternative energy technologies such as wind energy, and development of community-based training programs to help disadvantaged communities to restore and maintain environmental health. CERM also coordinates education, outreach and policy development programs, as well as UTEP’s doctoral program in environmental science and engineering.

CENTER FOR INTER-AMERICAN AND BORDER STUDIES (CIBS)

The Center for Inter-American and Border Studies (CIBS) coordinates UTEP’s degree programs in Latin American and Border Studies. These include the undergraduate major and minor, and an interdisciplinary MA. CIBS also conducts research and assists other units with research on the Border, in Mexico, and Latin America. It sponsors events and publications addressing Border and Latin American issues, and works to forge linkages between UTEP and other institutions and agencies in the Border region, in Mexico, and in Latin America.

CENTER FOR RESEARCH ON EDUCATIONAL REFORM

Established in 2002, the Center for Research on Educational Reform (CRER) does broad-based and multidisciplinary applied research on issues of educational reform in the public schools and in higher education. The university-wide Center builds on more than a decade of K-16 educational reform efforts at the University of Texas at El Paso. A significant element of the Center’s initial work is research that addresses critically important questions about the impact of these and similar reform efforts. Through large and small studies, the Center addresses both specific questions about the impact of particular reforms as well as more general questions. The Center also provides opportunities for faculty and graduate students to do significant research.
The Center for Transportation Infrastructure Systems (CTIS), formerly Center for Highway Materials Research, coordinates basic and applied research related to the nation’s transportation infrastructure. CTIS is internationally known for its research excellence in nondestructive testing of transportation facilities. The center is also one of the few entities in the U.S. with advanced dynamic vehicular traffic modeling capabilities related to Intelligent Transportation Systems. The staff can perform the most advanced tests related to asphalt, concrete, aggregates and soils using the comprehensive laboratory facilities and modern testing equipment. The large-scale simulation and computational capabilities of CTIS have facilitated interdisciplinary research with several other universities. Other emerging research agenda of the Center include advanced design, management and risk assessment of critical transportation infrastructure, and intelligent vehicle communication and navigation systems. For more information visit our web site at http://ctis.utep.edu.

The Hispanic Health Disparities Research Center (HHDRC) provides leadership to research-based innovations that will reduce Hispanic health disparities. Funded by the National Institutes of Health, National Center on Hispanic Health and Health Disparities, the mission of the HHDRC is multi-faceted. The Center has developed collaborative relationships between the University of Texas at El Paso, College of Health Sciences and The University of Texas Houston School of Public Health that foster sustainable mechanisms for scholarship development in Hispanic health disparities. The HHDRC mentors health researchers through learning institutes, funding for pilot research studies, and dissemination of new knowledge. These mentored health researchers will begin the development of a knowledge base of innovation in Hispanic health research.

The mission of the HHDRC is guided by a conceptual framework that makes explicit the variables of interest that influence Hispanic health disparities. The HHDRC acts as a catalyst for research on the variables affecting health disparities. The mechanisms include the recruitment, selection and mentoring of faculty using the expert knowledge of the external Advisory Committee and senior faculty of both institutions. The HHDRC continues to knit together a set of pilot studies each year that advance the knowledge of Hispanic health disparities and knowledge about best practices to eliminate health disparities in Hispanics. The HHDRC channels the knowledge discovered via its mentoring and dissemination cores. The primary research interests of the Center are: metabolic processes and disorders (including studies of diabetes, obesity, nutrition, and physical activity); psychosocial and behavioral research (including studies of acculturation and immigration; mental health and mental health care (including studies of acute mental illness, rehabilitation, prevention, and quality of care).

The Institute for Manufacturing and Materials Management (IM³) focuses University resources to improve the competitiveness of industry. IM³ provides technical assistance to industry and supports manufacturing related research and education. IM³ serves as an access point for industry to the full range of UTEP’s growing manufacturing related resources. IM³ engineers and professional staff assist manufacturers in technology utilization, product development and commercialization, and process and facility modernization.
The Institute for Policy and Economic Development (IPED), located at The University of Texas at El Paso, is a key component in the university’s commitment to deepen public understanding of the issues that face the culturally diverse community of tomorrow. The Institute’s interdisciplinary approach to research design, data collection, and analysis provides the Institute’s clientele with objective, timely information that forms the framework needed for public policy investigation.

The Institute includes the programs and activities that represent the primary funded research and outreach activities related to policy issues and economic development in West Texas, the Paso del Norte region, and the U.S. Mexican border.

The Institute activities are primarily broken down into the following activities: Economic Development; Technology and Business Development; Trade and Transportation; Regional Modeling; Survey Research; and, Policy Analysis.

INSTRUCTIONAL SUPPORT SERVICES

Instructional Support Services (ISS) serves as an academic resource and campus support unit for UTEP faculty, students, and staff engaged in asynchronous and distance delivered instruction. The services of the ISS office are focused on technical production, instructional design and pedagogical guidance and training-development programs for faculty engaged in the design and adaptation of instructional materials for fully online and hybrid courses at a distance as well as classes and meetings convened through interactive video conferences. Through its new Faculty Instructional Technology (F.I.T.) Lab, the ISS office provides UTEP faculty with state-of-the art professional development and training opportunities. The F.I.T. Lab offers a well equipped self-service computer lab in which faculty can develop digital materials for instruction and research, as well as provides walk-in services and assistance to faculty in learning instructional technologies including access to a broad selection of specialized production software.

Distance Learning and Hybrid Courses

ISS is committed to providing 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 in a distance learning environment. ISS offers distance learning opportunities in hybrid and completely on-line formats for the UTEP campus. Through ISS the UTEP campus is also an active partner of the UT System TeleCampus (http://www.telecampus.utsystem.edu).

At their website you will find: online study programs, and courses, a digital library, free online student tutorial services, 24/7 technical support “helpdesk”, links to various admissions and registrar offices throughout the UT System and full program descriptions for the available online courses and degrees the UT TeleCampus facilitates.

Students interested in undertaking distance courses through UTEP and the UT TeleCampus must be fully admitted to UTEP or to one of the other UT System academic university campus components by completing the Inter-Institutional Distance Education Admission and Registration (IDEAR) from online at the UT TeleCampus website (www.telecampus.utsystem.edu). Once admitted to one of the 15 University of Texas campuses, students can select courses offered through the distance education delivery options of the UT TeleCampus. Students are required to abide by the host university policies,
procedures, and requirements regarding the course selection process, and student qualifications. Additional new on-line courses and program degree study options are routinely being added at UTEP and as a result, interested students are encouraged to consult the ISS website at UTEP for the most recent information: http://iss.utep.edu.

The Mediated and Distance Learning Group (MDL) at ISS also works in cooperation with UTEP faculty across the six academic colleges in the design, delivery, course management, and evaluation of distance education and online instructional programs. It also promotes and implements campus policies and practices to appropriately guide the growth and development of all UTEP distance education programs. In carrying out its mission, the ISS office collaborates with public and private institutions to meet the expanding needs for higher education and workforce retooling in the region. MDL and ISS staff works with UTEP faculty to develop instructional programs that integrate a variety of technology-based and electronic digital media materials, face-to-face instruction, World Wide Wed (WWW), Internet, interactive videoconferencing, CD ROM, and other telecommunications technologies for teaching and learning.

Administrative offices for ISS are located in the Undergraduate Learning Center, Suite 308 and can be contacted by phone at (915) 747-6675.

MATERIALS RESEARCH AND TECHNOLOGY INSTITUTE (MRTI)

The Materials Research and Technology Institute (MRTI) seeks to advance interdisciplinary research in materials science by providing an interactive environment and providing “state of the art” research facilities such as access to the Stanford Synchrotron Radiation Laboratory through the DOE BES funded Gateway Program. Additionally, MRTI provides the latest in materials computer simulation with a full range of CERIUS² software. Research and training at MRTI is designed to make regional MAS&E students competitive worldwide, to improve technology and technical skills in the El Paso/Juárez area, and to develop local careers for our world-class students. This is accomplished through “cutting edge” basic and applied research, leading to commercial projects that will enhance both the environmental and economic conditions of the region. MRTI has successfully started companies based on intellectual property developed through research at UTEP.

PAN AMERICAN CENTER FOR EARTH AND ENVIRONMENTAL SCIENCE (PACES)

Established in 1995, the Pan American Center for Earth and Environmental Science (PACES) is an interdisciplinary research center whose primary research objective is to expand the scientific knowledge of the Earth system using the unique vantage point of space, with an emphasis on the Southwestern United States and Northern Mexico border region. Significant remote sensing, geophysical, geological, and environmental data generated by NASA, other agencies, and institutions have been assembled to support this objective. In addition, PACES investigators conduct studies aimed at adapting and developing intelligent software and support tools to support the storage, fusion, manipulation, and analysis of remotely sensed and other data. The Center seeks to provide expanded educational opportunities about NASA technology and the Earth system to a diverse population of students at all levels.

UNIVERSITY LIBRARY

The University Library, housed in an elegant six-story building with seating capacity for 1,343 users, is open on a daily basis, 94.5 hours a week. It
houses over one million books and government publications, as well as close
to two million microforms. In addition to the 9,000+ electronic journals,
subscriptions are maintained to 2,833 periodicals 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 as well as campus offices, and from home. In addition,
the Library provides access to 12,517 CD ROM and remote databases in all
major areas of study at the University. These databases provide bibliographic
information as well as selected abstracts and full text research articles and
reports. Internet access to the 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 the specialized collections in departments such as
Government Documents, which receives over 60% 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, in
addition to microforms. Support for students and faculty, who are involved in
distance education, is also provided by the library. This support includes
delivery of books and other materials by surface mail, subject consultation
with librarians, and access to electronic resources via the Internet.

The Library Technology Center provides IBM and MacIntosh Desktops,
Laptops, and PC’s for student use. Standard word processing and other
software packages are available. In addition, the Center has an extensive
collection of educational non-print media 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.
Academic success for UTEP students is the goal of the Tutoring and Learning Center (TLC). Services made available by the TLC 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, and helping students make up learning deficiencies in course content to prepare themselves for regular college courses. Most services are free to enrolled, eligible UTEP students.

The TLC offers the following services:

**Free Peer Tutoring** at posted hours in most content areas on a walk-in basis, but especially math, writing, and business and accounting courses. Appointment tutoring is available in foreign languages, and science.

**Computer Assisted Instruction** in math, reading, writing, standardized test preparation, and other areas is open to all students on a walk-in basis.

**Individualized Assistance** with learning and study problems is available to all students in the Learning Assistance Lab on a walk-in or appointment basis.

**Collaborative Small Group Learning Activities** facilitated by trained Peer Tutors provide special topic classes, content study groups, skills workshops, focused labs, language conversation classes, content reviews, and test preparation. Scheduled activities are open to all students. Others may be implemented on demand, resources permitting.

**Facilities for Students with Disabilities:** All rooms are accessible by wheelchair, and special equipment is available for mobility, vision, and hearing impaired students. Appointment tutoring is available for learning disabled students in any tutoring area, upon referral from the Disabled Student Services Office.

**Non-Credit Courses:** The TLC offers non-credit courses in college study skills and Supplemental Instruction. Students are placed in these courses by the Academic Advising Center. The following courses are available:

### Tutoring and Learning Center (TLC)

- **0009 Supplemental Instruction (0-0-3)**
  Provides specialized supplemental instruction to students as part of a START learning community. Prerequisite: Department approval.

- **0101 College Study Skills (0-0-3)**
  Provides help with goal setting, time management, note-taking, and other basic techniques needed for academic success for START students. Prerequisite: Department approval.

- **0102 Lab for Extended START Students (0-0-3)**
  Provides Extended START students instruction in study skills. Prerequisite: Department approval.

THE UNIVERSITY OF TEXAS AT EL PASO
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 TLC.

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 and GMAT 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 TLC. 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.

A 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 TLC. Non-enrolled students must sign up in the Department of Continuing Education and pay a fee.

Support for Faculty: Faculty will find the TLC staff eager to assist them in any way possible. The TLC staff encourages class tours of their Center, presentations to classes about their services, and adjunct study groups. The TLC will consider any reasonable request from a faculty member for assistance or service that can be provided within the limits of their resources and expertise. The TLC will gladly arrange a meeting between faculty and the tutors if there are special procedures or information the tutors should know when working with their students. The TLC depends on faculty referrals for tutors to ensure the quality of tutoring assistance that will meet their academic standards, and welcomes advice and suggestions from the faculty that will help the TLC improve their services to students.

Student Support Services (SSSP)

300 Library Building
(915) 747-5349/8602
www.sssp.utep.edu

DIRECTOR: Gladys Shaw

This federally funded TRIO program provides intensive academic and personal support for first-generation, economically disadvantaged students. Students may apply for the program in Room 300 of the UTEP Library. The two following courses are open to students in the program.

Student Support Services (SSSP)

0021 SSSP Study Skills (0-0-3)
For students in the Student Support Services Program only. Course authorization required for enrollment.

0023 SSSP College Reading and Critical Thinking (0-0-3)
For students in the Student Support Services Program only. Course authorization required for enrollment.
The University of Texas at El Paso offers a wide array of services for students to ensure that student needs, concerns, and interests are addressed.

CAMPUS LIFE

Miner Village-On-Campus Housing
Miner Village offers some of the finest and most affordable on-campus housing facilities available. Opened in Fall 2001, Miner Village offers residents fully furnished apartments in a variety of styles including: efficiencies for one or two people, two bedroom and four bedroom units. Students will enjoy being part of a community where they can make friendships that last a lifetime.

Monthly payments include all utilities (refrigerated air), local telephone service, basic cable service, Internet connections, and a parking sticker for the Miner Village living area. Laundry facilities, a sand volleyball court, and barbeque pits are available to residents on site. The great location of Miner Village provides easy access to the Union, Academic Buildings and the Sun Bowl Stadium. A brief walk off-campus provides easy access to shops and restaurants on Mesa Street.

Applications for admission to The University of Texas at El Paso and application for Miner Village are separate transactions. To reserve a space at Miner Village, submit an application and a $200 deposit to:

Department of Residence Life
Miner Village, Summit Hall
2401 N. Oregon Street
El Paso, TX 79902
(915) 747-5352

Food Services Managed by Sodexho Services
A whole new dining experience is located throughout the University Campus. The Union Food Court is home of the original chicken sandwich: Chick-Fil-A, the Firehouse Grill, El Cazo (comida Mexicana), Pizza Hut Express, Tortugas (tortas), Chopsticks (Asian food) and a campus C-Store. An upscale beverage and pastry shop located on the 1st floor of the Union building features world famous Starbucks Coffee and Freshens (fresh yogurt).

The El Paso Natural Gas Conference Center features a Food Court, home of Quiznos, Starbucks #2 and Delicious Mexican Express, and Miner Grill. Kiosk refreshments are located throughout campus, Café-A-La-Cart (Education Building), Miner Stop (Business Building), and The Healthy Corner (College of Health Sciences). UTEP Catering by Sodexho offers a full range of services for banquets, receptions, meetings, conferences, and private functions. Sodexho also offers complete Concession services to all UTEP sporting and special events.

The Union
The Union Building is the community center for the University of Texas at El Paso. Its primary goal is to provide services and facilities for the university community in support of the academic and student development mission of the University.

As the “epicenter” of the campus, the Union Building not only serves as a “gathering” place but also provides an atmosphere that fosters the exchange of ideas representing the diverse backgrounds of members of the university community.
The Union Services office located in the Union East Room 307 is responsible for the maintenance of the building, the scheduling of facilities, including technical services in the Union Building and at the El Paso Natural Gas Conference Center. Union Services is also responsible for the Union Recreation Center, Union Cinema, Union Coffee House, Union Cyber Cafe and the Union Lost and Found.

The following offices can be found in the Union East: Disabled Student Services, Hard Copy Station, Post Office, Student Publications, Wells Fargo Cyber Store, International Programs, Equal Opportunity/Affirmative Action, Institutional Compliance, Special Events, Student Government Association and the Vice President for Student Affairs.

The following offices can be found in the Union West: Career Services, Counseling Center, Dean of Students, Information Technology, Student Development Center, Student Organization Offices and Women's Resource Center.

For further information call (915) 747-5711 or visit online at www.utep.edu/union.

University Bookstore

The University Bookstore, located on the first floor Union East, is responsible for having required academic textbooks and supplies for students. The Bookstore also provides the University community a large variety of reference books, school and office supplies, computer software and accessories, calculators, UTEP apparel and gift items, commencement apparel and invitations, magazines, book buy backs, special book and software orders, specialty plaques and computer hardware orders. The Fall and Spring operating hours are Monday-Thursday 8:00 a.m.-7:00 p.m. Friday 8:00 a.m.-5:00 p.m. and Saturday 10:00 a.m.-5:00 p.m. The University Bookstore's telephone number is (915) 747-5594 and their web address is www.utepbookstore.com.

PERSONAL SUPPORT

Counseling Center

The University Counseling Center provides a variety of free and confidential services to the UTEP community. These services include both personal and career counseling, and educational workshops designed to enhance performance for registered UTEP students. Personal counseling is available to help students find solutions to emotional and situational problems that are interfering with their ability to succeed at UTEP. Career counseling aims to assist students in choosing an academic major or occupation. The Center also offers free access to a computerized occupational and academic decision-making program and to Alcohol 101, an interactive, computer-based program about alcohol education. The University Counseling Center’s Internet Home Page, accessible at www.utep.edu/counsel (or through the Student Services Branch of the UTEP Home Page), describes the Center’s services in more detail and provides links to mental health resources worldwide. The University Counseling Center is located in Union West, Room 104. The telephone number is (915) 747-5302.

Women’s Resource Center

The Women’s Resource Center provides opportunity and location where women’s concerns can be voiced, dealt with directly, and/or be referred to other resources within the University and local community.

The mission of the Women’s Resource Center is to support the advancement of the educational purpose and institutional values of the University of
Texas at El Paso. The Center serves to foster the personal growth and development of women as competent, independent, and confident individuals as well as to increase understanding of social, personal, and political issues that are of concern and interest to women and men.

The Center strives to ensure a campus community in which women and men can live and work together in a mutually respectful and supportive environment, fostering and encouraging a sense of equality, responsibility, and personal empowerment. Through an extensive amount of deduction, we work toward recognizing and affirming the abilities as well as accomplishments of UTEP women. The center is continuously committed to being a resource through which women of varying race, ethnicity, sexual orientation, age, and ability are encouraged to utilize our services and participate in our many programs and events.

The Women’s Resource Center is located in 112 West Union and is open Monday through Friday from 8:00 a.m. to 5:00 p.m. For more information, students should call 747-5291, fax 747-5215, or e-mail wrc@utep.edu. The Women’s Resource Center is a Department of the Division of Student Affairs.

University Child Care Center

Child care is available for children of all students, staff, and faculty of the University. The University Child Care Center is located at 1825 Hawthorne and is managed and operated by Sara Care Child Care Center, Inc. Hours are Monday through Thursday, Fall and Spring semesters from 7:15 a.m. to 9:00 p.m., Fridays 7:15 a.m. to 6:00 p.m., Summer hours are 6:45 a.m. to 6:00 p.m., Break hours are 7:15 a.m. to 6:00 p.m. Children aged three months to 12 years are accepted, depending on space availability (hourly, daily, weekly care available; Summer Camp for school age children). Age appropriate early childhood developmental programs are offered in the curriculum. The University Child Care Center is licensed by the Texas Department of Protective and Regulatory Services. Financial assistance is available for qualifying parents through Child Care Services. The Center’s phone number is (915) 747-5270.

Disabled Student Services Office (DSSO)

Disabled Student Services Office (DSSO) provides a program of support to students with physical, or mental impairments, as well as those who become temporarily disabled due to an injury or recent surgery, and to women with “at risk” pregnancies. The department provides the following services to eligible students registered with DSSO: note taking, sign language interpreter and reader services, priority registration, use of adaptive technology, alternative test format and location, testing accommodations and advocacy. To receive services, students need to schedule an intake interview with the director of DSSO and provide medical and/or diagnostic documentation verifying a disability and need for an accommodation. The documentation must clearly state symptoms and limitations that adversely affect academic performance. All information provided to DSSO is treated as confidential and is not disclosed without written consent or a compelling need to know. Students should be aware that faculty are not obligated to provide accommodations without proper notification from DSSO. If a student has or suspects a hearing loss, and/or a learning disability that is adversely affecting academic performance in math and/or foreign language requirements for a degree and may require a course substitution, he/she should contact this office immediately to discuss available options. For needed accommodations, students should contact DSSO at (915) 747-5148 Voice/TTY or e-mail dss@utep.edu. Students can also visit the department’s website at www.studentaffairs.utep.edu/dsso or office located in Room 106 East Union Building.
Disabled Student Services Grievance Policy and Procedures

All Students with disabilities are guaranteed by law, (Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA)), a learning environment that provides reasonable accommodations. In general, university policy calls for reasonable accommodations to be made to students with known disabilities on an individual basis. However, should the student have questions or concerns about accommodations received at the university, the following steps should be taken to address them:

STEP 1:
• Submit questions or concerns in writing to the Director of Disabled Students Services Office (DSSO) via letter in Room 106 Union East Building, e-mail at dss@utep.edu, or by fax (915) 747-8712.
• The Director of DSSO shall give written response within 10 working days.

STEP 2:
• To appeal decision of DSSO director, the student should contact the ADA Coordinator in the Equal Opportunity Affirmative Action office within 10 working days in Room 306 Union East Building, at (915) 747-5662 or by fax at (915) 747-8701.
• The ADA Coordinator shall review the appeal and give a determination and suggested resolution within 10 working days.

STEP 3:
• To appeal the decision of the ADA Coordinator, the student should submit written appeal to the Vice President for Student Affairs within 10 working days in Room 301 Union East Building or by fax at (915) 747-5476.
• The Vice President for Student Affairs shall review decision of ADA Coordinator and give written response within 15 working days from the date received.
• The decision of the Vice President shall be final.

Further grievance can be pursued through Section 504 and/or ADA by contacting the Office of Civil Rights at http://www.ed.gov/about/offices/list/ocr/index.html or at 1-800-421-3481.

Inter-American Program (Programa Inter-Americano)

The Inter-American Program (Programa Inter-Americano) is designed for students from Spanish-speaking countries who wish to attend UTEP but who need to improve their English. The Inter-American Program coordinates first-level content courses taught in Spanish (for example, U.S. History) that students take while enrolling in other courses to increase their English language proficiency. After sufficiently improving their English skills, students may enroll in any undergraduate degree program offered by the University and use the courses taken through Inter-American Program toward their graduation requirements.

Office of International Programs

The Office of International Programs serves as the primary source of information and assistance for the international community at UTEP. Its services include advising and programming for international students and scholars, coordinating and promoting study abroad experiences for students, managing the PASE (Programa de Asistencia Estudiantil) programs, and supporting international and multicultural activities on campus. The Office provides international students with financial, immigration, cross-cultural, and personal assistance through one-on-one counseling and regularly scheduled social and cultural activities. International scholars visiting UTEP on short-term teaching or research assignments also participate in the programs of the
Office and receive advising assistance. For U.S. and international students seeking to broaden their studies by spending a period abroad, the Office provides counseling and materials on international educational opportunities and offers financial support to UTEP students in the form of Study Abroad Scholarships. Throughout the year, the Office of International Programs highlights the multicultural nature of El Paso and UTEP through cultural events focusing on the University’s diverse nationalities.

Exchange Courses (EXCH)

5100 **Student Exchange Program (1-0)**
Approved graduate study at a foreign university for UTEP credit. Course subjects determined by program selected and course availability. This course may be repeated for credit. **Prerequisite:** Office of International Programs approval.

5200 **Student Exchange Program (2-0)**
Approved graduate study at a foreign university for UTEP credit. Course subjects determined by program selected and course availability. This course may be repeated for credit. **Prerequisite:** Office of International Programs approval.

5300 **Student Exchange Program (3-0)**
Approved graduate study at a foreign university for UTEP credit. Course subjects determined by program selected and course availability. This course may be repeated for credit. **Prerequisite:** Office of International Programs approval.

5400 **Student Exchange Program (4-0)**
Approved graduate study at a foreign university for UTEP credit. Course subjects determined by program selected and course availability. This course may be repeated for credit. **Prerequisite:** Office of International Programs approval.

CAREER AND PROFESSIONAL DEVELOPMENT

**Career Services**

The Department of Career Services is committed to helping UTEP students explore and prepare for the best career opportunities during and after their college years. Students often find career decisions challenging or confusing. However, regardless of a student’s classification, career goals, or employment-related needs, Careers Services can be of assistance.

Career Services offers a variety of programs to help meet students’ diverse employment needs. We provide one-on-one assistance for students who seek guidance with their career paths, who are unsure of the opportunities in their field of study, who need help with their resume or who want to practice for an upcoming interview. Additionally, the department has a resource library: CIRCUS (Career Information Resource Center for UTEP Students) that holds information on employers visiting the UTEP campus, market trends, graduate schools, career opportunities, resume writing and interviewing resources guides. CIRCUS also has a career guidance software program that can help students narrow their career choices. The Department offers special workshops on a variety of career-related topics and hosts career fairs throughout the year.

**Student Employment**

Student Employment is available to help students locate part-time jobs in the El Paso area that do not require a degree. The only requirement to accessing the online system is UTEP enrollment. Students can create their Career Services online account by visiting our web site at www.utep.edu/careers.
Cooperative Education (Co-op) Program and Internships

Students can gain pre-professional work experience during college through the Co-op or Internship Program. Both programs are designed to give students an insight into their chosen area of study and to equip them with the knowledge and work experience needed upon graduation. The Co-op program exposes students to local and national employers and offers two work options: alternating and parallel. Students participating in the alternating work option are considered full-time UTEP students while at work; this includes local or out-of-town work assignments. The parallel work option requires that the student be enrolled at UTEP for additional course work.

Professional Placement

Every year, Career Services links countless local and national corporations, and government agencies with graduating UTEP students for employment purposes. Students are strongly encouraged to register with professional placement two semesters prior to their graduation.

At Career Services we understand that our students have diverse interests and career paths, and therefore we strive to provide programs and services that meet students’ individual needs. For more information, visit our office at Room 103 West Union, or contact us at (915) 747-5640, or online at www.utep.edu/careers.

Professional and Continuing Education (PACE)

Professional and Continuing Education offers a broad range of seminars, short courses, institutes, and programs for the general public, business and industry, professionals, and government agencies. The role of the PACE is to offer a variety of continuing education and professional development opportunities, along with credit course offerings that transfer to accredited degree programs at UTEP. Professional and Continuing Education consists of nine major program areas:

1. **Credit Courses** are designed to meet the needs of students at various stages of their careers and education attainment levels. Courses may be offered at convenient non-traditional times and at off-campus locations throughout the city. All credit courses are accredited and are transferable to degree programs at UTEP.

2. **Community Programs** offer short courses quarterly for personal and professional enrichment in areas such as language instruction, money management, arts, crafts, music, dance, writing, health, college preparation, youth programs, and summer camps. Skill enhancement and cultural and recreational activities promote individual success, provide creative outlet, and offer a vehicle for community involvement. These lifelong learning, non-traditional programs encourage active participation, exploration of new ideas, and a sharing of common interests.

3. **Career Development Programs** offer courses that provide individual professional growth. Career opportunities are enhanced through one-day seminars and short courses. Individuals learn skills that will enhance their ability to advance professionally in a variety of careers. Spanish language programs and others are available for on-site training.

4. **Business, Manufacturing, and Professional Programs** offer opportunities for individuals of varying levels of experience from both the public and private sectors to develop new skills, meet license or certification renewal requirements, and update knowledge. These include seminars, certificate programs, and short courses in the areas of accounting, communication, customer service, human resources, management, purchasing, inventory control, quality assurance, supervision, production
operations, legal assistance, ISO/QS 9000, ISO 1400, and more. All can be customized for in-house/on-site delivery and many are available in Spanish.

5. **Technology Education Programs** provide critical training for a broad range of computer software and user levels to the general public and business community. UTEP is now a Microsoft Certified Solution Provider and a Microsoft Certified Technical Education Center. Specific program areas include Microsoft Office, operating systems, graphic design, multimedia applications, web design, programming, database administration, and much more. New computer certificate programs will become available throughout the year. Customized contract training is available for businesses and organizations with special training or software needs.

6. The **English Language Institute (ELI)** conducts intensive English training on a full-time basis. Students from all over the world attend UTEP’s ELI to study for the TOEFL to enter UTEP or other higher education institutions within the USA. Many students are individuals who want to improve their English skills for business or personal reasons. The Institute also provides English language proficiency testing as well as intensive English classes on site for business and other organizations.

7. **Faculty and Staff Training and Development** provides training offerings to University employees through the One-Stop Training Shop offered in collaboration with the University’s Human Resource Services office. These programs provide opportunities for UTEP employees to develop management and leadership skills through an organized training curriculum that builds business competencies, enhances performance potential and contributes to the success of the university.

8. **Summer Camps/Athletic Programs** consist of a wide variety of youth outreach activities including, camps in cheerleading, soccer, women’s and men’s basketball, and women’s volleyball. Other summer programs for youth include acting/drama, fencing, ballet, and a variety of other classes.

9. The **Advanced Placement Program (AP)** enables students to complete college-level studies while still in high school, and to obtain college placement or credit, or both, on the basis of their performance on rigorous AP Examinations. The Advanced Placement Summer Institute hosted by Professional and Continuing Education and co-sponsored by the College Board trains teachers and administrators to prepare students for the AP exam.

10. The **Center for Lifelong Learning (CLL)** is an educational program planned and operated by and for individuals fifty years of age or older. The CLL provides learning opportunities for those eager and willing to learn and take an active role in renewing or expanding their education and enriching their lives. Managed by an elected board and administered by volunteer members, its membership numbers 1000+. Employed staff provides administrative support, with assistance from Professional and Continuing Education staff. CLL’s class catalog and registration are available in Miner’s Hall, Suite 209, 500 W. University, El Paso, TX 79968-0602. Their phone number is (915) 747-6280.

For more information contact PACE at (915) 747-5142 or visit the office at Miners Hall, Room 108.

**HEALTH AND FITNESS**

**Student Health Center**

The Student Health Center offers confidential health care services and activities to all University students presenting a validated UTEP I.D. The staff includes one physician, two nurse practitioners, registered nurses, a
pharmacist, a dietician and a physical therapist. The majority of services are provided at no cost, however, laboratory tests, and pharmacy services are provided at minimal fees. Referrals outside the Student Health Center, including x-ray referrals, are at the student’s own expense. Student insurance is available and highly recommended for every student without coverage by some hospitalization policy. Information may be obtained by calling ECA Associates at (915) 533-9891.

Services of the Student Health Center include primary health care, health promotion with emphasis on physical fitness, and women’s health issues. Confidential HIV/AIDS testing and counseling are available every Wednesday from 11:00 a.m. to 1:00 p.m. Student identification is NOT required or requested for HIV/AIDS testing.

The Student Health Center facilitates compliance with the University’s requirement that all students must submit proof of immunization, or be immunized, for Tetanus-Diphtheria, Measles, Mumps, and Rubella by providing the required immunizations. In addition, the Student Health Center offers Tuberculosis screening. A form on which the required immunizations can be documented is available from the Admissions Office or the Student Health Center. Since most secondary schools are required by law to maintain similar records, a copy of the high school immunization record may be submitted. Students not in compliance with the immunization requirement may be denied registration.

All emergencies are referred to adjacent hospitals, and University police are available to administer first aid. Minor illness, injury, or health concerns are treated by the Student Health Center’s professional staff.

The Student Health Center is located at 2001 Wiggins, directly across from the University Library. The Center is closed on Friday between noon and 1:00 p.m. For additional information, students should call the Center at (915) 747-5624 for information concerning walk-ins, appointments, and general hours of operations.

Recreational Sports Department

The Recreational Sports Department provides an opportunity for each member of the University community to voluntarily participate in a wide variety of sports and recreational activities. For further information, students should call (915) 747-5103 or visit the department’s website www.utep.edu/rsd.

The Intramural Sports Program includes approximately 30 activities for men and women. There are team sports such as flag football, volleyball, basketball, sand volleyball, 3 on 3 basketball, swim meet, 3-point, badminton, bowling, and indoor soccer, as well as individual and dual sports such as tennis, racquetball, and wallyball. Many activities include “Co-rec” leagues for teams comprised of equal numbers of men and women participants. Activity schedules are printed each semester and are available at Memorial Gym Room 103; the department’s website is http://www.utep.edu/rsd.

Open Recreation involves leisure time use of recreational facilities for basketball, volleyball, indoor racquetball, outdoor racquetball, tennis, and table tennis. Sports equipment is available for checkouts with a valid UTEP ID. Reservations for UTEP’s playing fields must be made by registered student organizations at the Recreational Sports Department office. Racquetball reservations must be made Monday through Friday between the hours of 8:00 a.m. and 3:00 p.m. with a one-hour reserve time between 3:00 p.m. and 10:00 p.m.; Saturdays and Sundays 10:00 a.m. to 3:00 p.m.; courts are open on a first come first serve basis. A validated UTEP ID must be carried at all times.

Sport Clubs are open to all students. Many clubs compete against other schools, while others exist for instruction and recreation. Current clubs include fencing, men’s soccer, water polo, and racquetball.
The Outdoor Adventure Program was established to provide the necessary resources to fully enjoy the great outdoors. The Program offers the equipment needed for camping, hiking, and water sports while also providing supervised ski, camping, and hiking trips at resorts located around the El Paso area. Our newest addition is the Challenge Course. The CHALLENGE COURSE is used by UTEP students, staff and faculty to explore various dimensions of leadership and group development. Participants will investigate different styles of communication, how decisions are made within a team and what role trust plays in group dynamics. For information, students should call (915) 747-5103 or drop by Memorial Gym Room 103.

If individuals can't find the right motivational partner or are just having a hard time getting a workout started, the Fitness Programs may be a good choice. Individuals are encouraged to try any of the five Fitness Programs offered at convenient times throughout the day/week. Individuals may choose from Aqua-Aerobics, Step-Aerobics, Kickboxing, Weightlifting, submission wrestling, power walking, yoga or T'ai Chi. UTEP students, faculty, or staff may participate at a very low cost of $35.00 per class. Each class is the duration of a semester with hours and days subject to change the following semester.

The Swimming and Fitness Center is where individuals can come enjoy a great cardio, weight, and/or aquatic workout. The facility offers individuals the opportunity to have a variety of mild to intense workouts. The Exercise Room has an assortment of cardio machines, free weights, and selectorized machines. The two swimming pools are temperature controlled and provide the opportunity for lap swimming. One pool has both 1-meter and 3-meter diving boards with depth at 13 feet. The second pool has a zero deck entry and also provides users the opportunity to enjoy water sports such as volleyball, basketball, and jungleball. The facility is open free of charge to current UTEP students who present their valid UTEP ID. Current students may purchase membership at a nominal fee for their spouse and children. Membership is also offered at nominal rates to UTEP faculty/staff, their spouse and children, members of the Alumni Association, their spouse and children age 17 and under. Children age 5 years and under are admitted at no charge with supervision of a parent or guardian member. The facility is equipped to service individuals with disabilities. Hours of operation are Monday through Friday 6:00 a.m. – 1:45 p.m.; Monday through Thursday 3:00 p.m.–10:00 p.m.; Friday 3:00 p.m.–8:00 p.m.; Saturday 9:00 a.m.–5:00 p.m. and Sunday 12:00 p.m.–5:00 p.m.

For further information, individuals can visit http://www.utep.edu/rsd or call the Swimming and Fitness Center (915) 747-8100.

Extracurricular Services

STUDENT DEVELOPMENT CENTER - “Get Involved!”

The Student Development Center (SDC) is a one-stop clearinghouse of information and resources for UTEP students involved, or who want to become involved, in campus life. The SDC provides students with opportunities to get involved in leadership activities, campus activities, health awareness, diversity initiatives, student organizations or Greek Life.

SDC Vision Statement

The Student Development Center (SDC) seeks to promote individual student growth and personal achievement through a wide range of programs and services specifically designed to complement and enhance the educational experiences of all students enrolled at The University of Texas at El Paso.
The SDC provides opportunities for student involvement, student development, and experiential learning which contribute to student success and satisfaction.

**SDC Goals**

- Support a University-wide effort to recruit and retain the best students from diverse backgrounds;
- Prepare students to become productive, capable citizens in a world of diverse cultures;
- Enhance the academic success of all UTEP students;
- Create multidimensional development opportunities through innovative programs and activities; and
- Develop modes of association outside the classroom through student organization involvement.

**SDC Mission and Responsibility Statement**

The Student Development Center (SDC) serves the broader academic mission of The University of Texas at El Paso through programs and services that enrich the learning environment outside the classroom. To that end, the SDC offers educational and entertaining opportunities through Leadership Development Programs, Greek Life, Campus Activities Board, Health Awareness, Student Organizations, and Diversity Initiatives. The Center promotes student growth and development and augments the overall educational process by:

- Fostering student development by providing and supporting programs which contribute to the education of students in various developmental areas, such as cognitive and aesthetic development, identity formation, physical self, moral reasoning, interpersonal relatedness, and social perspective;
- Assisting students with the transition into and out of the UTEP community;
- Helping remove personal obstacles, providing information, and teaching the competencies students need to benefit from the UTEP learning environment;
- Providing direct support and services to students to facilitate the attainment of an education; and
- Providing direct support for University, college, and department programs.

**Campus Activities Board (CAB)**

The Campus Activities Board (CAB) is responsible for programming a wide variety of social and educational activities. CAB’s goal is to provide daily activities for the enjoyment of the UTEP community. Students can have an impact on what kind of activities are presented by either attending these events or participating in CAB committees. Events include Minerpalooza, Homecoming, Pep Rallies, Minerfest, Monday Melodies and Coffee House Programs.

**Health Awareness Program**

Health Awareness focuses on alcohol and substance abuse prevention, sexual responsibility and HIV/AIDS awareness and education and other health related issues. In addition Health Awareness coordinates programs and workshops designed to help students make healthy and educated lifestyle choices throughout their college career. Programs include the annual Health Fair, National Collegiate Alcohol Awareness Week, World AIDS Day Candle Light Vigil, and the Healthy Miner Program.
Greek Life

Greek Life works with fraternities and sororities to develop campus events and community service programs. Throughout the year, Greek organizations will participate in many events including Homecoming, Greek Week, and Greek Formal. In addition, Greek Life brings speakers and programs to campus that enhances student life and helps students in becoming better citizens. Official recruitment for fraternities and sororities happens the first few weeks of the fall semester.

Leadership Development Program

With the assistance of student leaders, Leadership Development coordinates the Women’s Leadership Conference, the annual Leadership Retreat, and Leaders in Motion. A workshop is available at the start of every fall and spring semester and is designed to update organization presidents and advisors about university policies and procedures. In addition, Leadership Development offers workshops and trainings throughout the year to develop potential and existing student leaders.

Student Organizations

The Student Development Center works with over 180 student organizations on campus. These organizations can be categorized as follows: academic, advocacy, honor societies, service, professional, religious (spiritual), governing, recreational, international, and special interest organizations. SDC works with these organizations in different capacities, from advising them on any matters with which they might need assistance to creating training programs with them when deemed necessary.

- **Academic**: Academic organizations provide an opportunity for their members to have a support group in an area of study. These organizations also afford their members networking opportunities in their specific major or field.

- **Advocacy**: Advocacy organizations are heavily involved with local, national and international issues that are important to modern society. They participate in and organize rallies to bring important issues to the forefront of public discussion.

- **Special Interest**: This type of organization is formed by students sharing an extra-curricular interest. Special interest organizations participate in community service, recreational activities, and/or leadership activities.

- **Professional**: Professional organizations and professional fraternities give students the opportunity to meet others with similar career goals. As with other types of organizations, there is room to learn and to develop leadership skills. Professional organizations are particularly important for networking, as students make contacts with people in their field of study in school and in the El Paso area.

- **Honor Societies**: Honor societies are for those students who excel in their academic and extra-curricular involvement. In departmental honorary societies, students meet with the very best students of a particular major or field of study.

- **Recreational**: Recreational organizations are designed to bring a group of students together that enjoy similar activities or interests whether they are outdoor or sport related. The groups are designed to enhance recreational knowledge and provide a social outlet for students.

- **Service**: Service organizations, as their name indicates, are dedicated to volunteerism and service within the El Paso and University community.
• **Religious (Spiritual):** Religious organizations are formed by students of similar religious beliefs. However, organizations do not exclude students of other religions from membership. This type of organization usually sponsors different events such as religious retreats, Bible readings, and community service projects.

• **Governing:** These organizations are formed as coordinating bodies for student organizations that have a common interest. They serve as a liaison between the organizations and the University administration.

• **International:** These organizations provide support groups for students who are studying from abroad. They give emotional and academic support to individuals who are from various countries. They also educate their fellow students on their unique cultures and rituals.

The Student Development Center challenges all incoming and currently enrolled students to “redefine education” by joining or creating at least one organization and actively participating in University activities. Becoming actively involved in campus events and activities is one of the most important steps a student can take towards a rewarding college experience. Current information about the services, programs, and activities offered through the Student Development Center can also be found on the Internet at http://studentaffairs.utep.edu/sdc.

**OFFICE OF SPECIAL EVENTS**

There is no business like show business! For over a decade, the office of Special Events has been dedicated to bringing quality entertainment to the UTEP and El Paso communities.

We operate as a full production house in the booking of the UTEP special events facilities: Sun Bowl Stadium, Don Haskins Center, and Magoffin Auditorium. We provide multiple productions and marketing solutions as well as auxiliary services to artists and promoters. Our goal is to ensure the success of all the events that we proudly present such as Juanes, Aerosmith, Linkin Park, Fleetwood Mac, Cher, Shakira, The Eagles, Ricky Martin, NSYNC, The Rolling Stones, HBO’S Oscar de la Hoya Fight, WWE and international soccer Pumas vs. Tigres among many, many others.

Our office is also responsible for the programming of the Wednesday Music Café Concert Series, the Union Exhibition Gallery and the Art and Foreign Film series, host of the Cinema Novo Film Society of El Paso, the only art film society in our city.

We are a young and vibrant department where students and staff come together to bring the stars to El Paso’s sky. For more information, visit us on the web at http://www.utep.edu/events or call us at (915) 747-5481.

**THE UNIVERSITY TICKET CENTER**

We have got your ticket to all the excitement of athletic events, concerts, dinner theatre, music, theatre arts, and much more...

As a vital component of the University of Texas at El Paso, we serve the ticketing needs of the greater El Paso-Cuidad Juárez and southern New Mexico border-plex. Years of experience make us a leader in event ticketing and the number one source of event information in our area.

Our friendly staff is always ready to assist you. We open Monday through Friday from 10:00 a.m. to 6:00 p.m. and Saturdays from 10:00 a.m. to 2:00 p.m. We are located on the corner of Mesa and Baltimore right in front of the Don Haskins Center. Give us a call at (915) 747-5234. We’ll be happy to serve!
The Student Government Association (SGA) is the official voice through which students’ opinions and concerns are expressed by acting as the students’ representative before the local, state, and national governments on issues that affect the student population. Since its inception, SGA has served to communicate student needs, desires, and demands to UTEP administrators, the Board of Regents, and the Texas Legislature. SGA also serves to maintain a pleasant and exciting environment for student life. The range of activities of SGA, both on and off campus, is continually expanding as students increase their interest in the political process that affects their lives.

Each Spring, all UTEP students are eligible to participate in the election of Student Government Association officers and the Student Senate. Student Government is modeled after the United States Federal Government with executive, legislative, and judicial branches. The President, Vice President for Internal Affairs, and Vice President for External Affairs compose the Executive Branch that is responsible for the daily operations of the organization. The Legislative Branch consists of one Senator for each 1000 students enrolled and is vested with all SA legislative powers; SGA senate meetings are open to all students. Both the Executive and Legislative Branches are assisted in their many projects by student volunteers known as Legislative Assistants. The Judicial Branch is composed of three parts: the Supreme Court, the Traffic Court, and the Student Advocates.

The University of Texas System Advisory Council (UTSSAC) is an addition to the Student Government Association. Two SGA Executive members serve on this council and work on legislation that affects the entire UT System. The UTSSAC also serves as an advisory to the Board of Regents on student issues.

All UTEP students with a GPA of at least 2.0 and that are enrolled for at least 9 undergraduate-level hours or 6 graduate-level hours, may serve as reporters, editors, photographers, or advertising salespersons for the University’s student publications program. Those publications include The Prospector, the campus student newspaper; and a Spanish-language newspaper, El Minero.

At The Prospector, students learn professional newspaper reporting, editing, photography and production techniques that may be used to build up a resume or working portfolio for a journalism or advertising career.

To insure freedom of expression, a duly elected committee, composed of UTEP faculty, staff, and students, oversees the student newspapers.

A professional publications staff, comprised of a director, advertising manager, an editorial adviser, administrative secretary, and accounting clerk, directs the daily activities of the student editors, reporters, photographers, advertising representatives, and designers.

Student Publications strives to produce fine, professional journalists, photographers, and advertising professionals through quality training in a hands-on setting, using the latest computer publishing technology. Student Publications also strives to produce bilingual journalists (English/Spanish) that have the ability to work in Spanish-language media outlets.

UTEP is an NCAA Division I A school and is a member of Conference USA. Sponsored sports are football, men’s and women’s basketball, men’s and women’s cross country, men’s and women’s golf, men’s and women’s indoor track and field, men’s and women’s outdoor track and field, women’s tennis, women’s rifle, women’s soccer, women’s softball, and women’s volleyball.
Football is played in the 52,247-seat Sun Bowl Stadium, which is located on campus and nestled in the southern tip of the Rocky Mountains; men’s and women’s basketball plays in the 11,767-seat Don Haskins Center; and women’s volleyball plays at Memorial Gymnasium, which seats 3,000 people. Soccer plays at the university Soccer Field with the Rocky Mountains as a backdrop. The track program runs at Kidd Field, which seats 15,000 people. Teams nationally ranked in recent years include men’s basketball, football, men’s golf, cross country, indoor and outdoor track and field, and women’s rifle.

Mission
The UTEP Department of Intercollegiate Athletics is committed to providing a regionally and nationally competitive athletics program as an integral part of the educational mission of the University. Programs sponsored shall be in compliance with the University. Programs sponsored shall be in compliance with the highest recognized standards of the institution and its athletics governing bodies. Intercollegiate athletics operates in harmony with the University’s stated mission and is committed to the intellectual, cultural, physical, and social development of student-athletes. In particular, the intercollegiate athletics program shall serve as an educational opportunity for student-athletes and as a focal point to bring the student body, faculty, and community together. Opportunities for participation are provided without discrimination.

Cultural Services

CAMPUS CULTURAL ACTIVITIES
Each year the Departments of Art; Music; and Theatre, Dance, and Film; and the UTEP Student Association sponsor hundreds of campus cultural events including concerts, music theatre productions, plays, art exhibits, ballet and dance performances, films, and lectures.

Theatre and dance productions are performed in the Wise Family Theatre, the Studio Theatre in the Fox Fine Arts Center, and the Magoffin Auditorium. University Dinner Theatre productions are presented in the Student Union West Building. Music activities such as the University’s Symphony Orchestra, Symphonic Band, Opera, Jazz Bands, Pandemonium Steel Drums, Choral and Chorus, Jazz Singers, and chamber groups are held in the Fox Fine Arts Center’s Recital Hall or the Magoffin Auditorium. Faculty, student, and touring art shows are exhibited in the Stanlee and Gerald Rubin Center for Contemporary Art, the Glass Gallery in the Fox Fine Arts Center, and the Student Union Gallery in the Union East Building. A film series is also presented annually in the Student Union East Building.

Lectures and a variety of other public programs are part of the yearly schedules of all UTEP Colleges, Academic Departments and Centers as well as the University Centennial Museum and Chihuahuan Desert Gardens.

EL PASO CENTENNIAL MUSEUM/CHIHUAHUAN DESERT GARDENS
The El Paso Centennial Museum was built in 1936 with funds allocated by the Commission for the Texas Centennial Celebration. As the University’s museum, it serves students and the El Paso/Juárez communities. The mission of this natural and cultural history museum is to preserve, document, exhibit,
and educate about the Southwest and Mexico. Noteworthy collections pertaining to Geology, Anthropology, Archaeology, Paleontology, Ornithology, and Mammalogy include rocks, crystals, minerals, pottery, stone tools, shell jewelry, and baskets. The Chihuahuan Desert Gardens, dedicated in 1999, are located on the west side of the museum. They contain plants of the region in settings that can be adapted for area businesses and homes. Basic museum and special project classes are offered to UTEP students. Temporary exhibits, lectures, gallery talks, youth classes, adult workshops, and volunteer activities are educational offerings. The Museum is free and open to the public Tuesdays through Saturdays, 10:00 a.m. to 4:30 p.m., except on National and University holidays.

KTEP PUBLIC RADIO

KTEP 88.5 FM broadcasts news, information, and cultural programming 24 hours per day for the University as well as El Paso, Southern New Mexico, and Juárez. KTEP is a member of National Public Radio and Public Radio International. The station trains UTEP students in broadcasting, and students can work at the station either as interns or volunteers. KTEP is equipped with the latest in digital broadcast technology. KTEP began broadcasting in 1950 and was the first FM station in El Paso and one of the first in the Southwest. A quarterly program guide is available by calling (915) 747-5152.

TEXAS WESTERN PRESS

Texas Western Press is the 50-year-old book publishing entity of The University of Texas at El Paso founded by internationally known typesetter and book designer Carl Hertzog. Specializing in nonfiction books on the history and cultures of the Southwest, the press also publishes 2 series: Southwestern Studies, monographs on personalities and events of the American Southwest, and The Border/La Frontera, a series based on current research on the U.S.-Mexico borderlands. The Press’s award-winning books are sold nationally and internationally through chain bookstores, independent booksellers, and Texas Western Press. Texas Western Press is located in the Hertzog Building, on the corner of Rim and Wiggins Road.
## COLLEGES AND DEGREE PROGRAMS

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Dr. Robert Nachtmann, Dean
Dr. Steve A. Johnson, Associate Dean of Students

Business Bldg., Room 101
(915) 747-5241 (ph)
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coba@utep.edu

Degree Programs

BBA/MAcc  BBA-Accounting/MAcc+
BBA/MBA  BBA-Accounting/MBA-Accounting Concentration+
MAcc    Accounting

MBA       Accounting
          Computer Information Systems
          Economics
          Finance
          General Management
          Health Systems
          International Business
          Production and Operations Management

MBA/MPA   Business Administration/Public Administration+
MIT       Master of Information Technology*
MS        Master of Science in Economics
Ph.D.     Doctor of Philosophy in International Business

+Combined Program
*Interdisciplinary Program
The College of Business Administration at The University of Texas at El Paso shares with the University its fundamental mission to provide the highest quality education to the citizens of El Paso and the West Texas region, commensurate with AACSB International standards for business education. The border location of the University and the expertise developed by the faculty provide an environment that affords opportunities for students to become knowledgeable in international business.

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

- Broad-based programs which give students the background necessary for entry into, and advancement in, professional and managerial positions, for lifelong learning, career success and for responsible stewardship of our cultural, economic and environmental resources.
- Intellectual contributions that: extend the boundaries of knowledge; improve the application of existing knowledge to regional, national and international environments; and enhance the transfer of knowledge to students.
- Service that contributes to the personal and professional betterment of our students, the University, alumni, community 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 Bachelor of Business Administration (BBA), Master of Business Administration (MBA), Master of Accountancy (MAcc), and the BBA in Accounting are all accredited by the AACSB International, the Association to advance Collegiate Schools of Business.

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 includes the Texas Gas Service Student Center (TGSSC), an Investment Center, and a Computer Application Learning Center (CALC) laboratory. The TCSSC, located of the first floor of the College, provides facilities and equipment designed to enhance student learning. This wireless facility opened in the Fall, 2004 and has 17 meeting rooms and two large conference rooms, and is equipped with a number of computers, printers, and other technical equipment such as video cameras and projection equipment for student use. The Investment Center, which began operations in Spring, 2005 provides a state-of-the-art facility to acquaint students with best practices in the securities industry. The new investment center is located across the foyer from the TGSSC and boasts open viewing for its market ticker, quote board and multiple market data feeds. The Center is designed for hands-on investment capability through specially designed classes and seminar activities.

The CALC, located on the third floor of the College, includes three microcomputer laboratories and a fully equipped computer classroom. This
modern facility serves as the focal point for computer, audiovisual, and multimedia-based learning.

**Enrollment in Graduate Courses in the College of Business Administration for Non-Business Graduate Students**

Any graduate student who has not been admitted to one of the graduate degree programs must have written permission from the Graduate Advisor in the College of Business Administration in order to enroll in graduate courses offered by the College.

**Doctor of Philosophy in International Business**

The College of Business Administration, through the departments of Accounting, Economics and Finance, Information and Decision Sciences, and Marketing and Management, offers a Ph.D. Degree in International Business. The Ph.D. degree program is accredited by AACSB International-The Association to Advance Collegiate Schools of Business and is only one of about 25 such programs worldwide. The Ph.D. program in International Business will prepare a new generation of faculty, from diverse backgrounds, to meet critical challenges projected in business education across the State of Texas, in Mexico, and elsewhere. The objective of the Ph.D. program is to give students the opportunity to prepare for academic careers in colleges of business or institutions that use business techniques and policies in management and administration. The program meets this objective by providing students with strong theoretical knowledge and state of the art methodological skills. Course work is divided between theory driven, substantive courses and advanced methods courses.

**Requirements for Admission to the Ph.D. Program**

1. Transcripts according to the requirements of the Graduate School.
2. Official scores on the GMAT or GRE (GMAT preferred).
3. Two letters of reference, preferably from professors who are knowledgeable about the student’s ability to perform at the doctoral level.
4. A statement describing the applicant’s reasons for wanting to obtain a Ph.D. in International Business.
5. For international students, official scores for the TOEFL. International applicants are required to have a score of at least 250/600 on the TOEFL.
6. As part of the review of an applicant’s file, an interview or additional information may be required. In such a case, the applicant will be notified.
7. Students wishing to enter the Ph.D. program directly upon completion of a bachelor’s degree are expected to have completed at least 24 upper-division undergraduate semester credit hours in business administration.

Admission decisions are based on demonstration of academic performance and potential as measured by undergraduate GPA, graduate GPA (if applicable), standardized test scores, and other factors. Admissions decisions may also reflect consideration of candidates’ socio-economic background, publication record, and academic experience.

**Specific Requirements for the Ph.D. Degree**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Business Foundation</td>
<td>24</td>
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<tr>
<td>International Business</td>
<td>15</td>
</tr>
<tr>
<td>Quantitative and Survey Methods</td>
<td>12</td>
</tr>
<tr>
<td>Other Elective Graduate Course</td>
<td>9</td>
</tr>
<tr>
<td>Summer Research Requirement</td>
<td>6</td>
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<tr>
<td>Dissertation</td>
<td>6</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>72</strong></td>
</tr>
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GRADUATE CATALOG 2006-2008
Business Foundation Courses (24 semester hours)

ACCT 5311 Accounting for Management
CIS 5313 Strategic Information Systems
ECON 5311 Managerial Economics
ECON 5360 Global Economic Environment for Managers
FIN 5311 Financial Management
MGMT 5325 Management Strategy and Policy
MKT 5311 Marketing Management
POM 5308 Concepts of Production Management

Equivalent undergraduate courses may be substituted at the discretion of the College Ph.D. committee.

Students entering the Ph.D. program with a bachelor’s degree are expected to have knowledge of elementary calculus and statistics. Entering students must take the business foundation courses or demonstrate competency in the knowledge areas represented. It is anticipated that students entering the program with an MBA will have already taken these courses or their equivalent. Students can demonstrate achievement of proficiency in any or all of these areas by examination, subject to the approval of the Director of the Ph.D. Program.

Required Doctoral Courses

International Business Core Courses (15 semester hours)

Five core courses in International Business (each of which is a 3 credit hour course) must be taken by all doctoral students. Unless otherwise scheduled these must be successfully completed within the first year of full time enrollment.

IBUS 6301 Research Methodology
IBUS 6305 Doctoral Seminar in Applied International Business Research
IBUS 6311 Seminar in International Trade and Business Policy
IBUS 6313 Seminar in International Marketing
IBUS 6319 Seminar in International Business

Quantitative and Survey Methods Courses (12 semester hours)

Each student must complete twelve semester hours in the area of quantitative and research methods. Each student must complete the following applied research courses or their equivalent:

IBUS 6302 Applied Multivariate Methods
IBUS 6303 Advanced Regression Analysis
IBUS 6306 Multivariate Statistics/Applied Regression Analysis
IBUS 6307 Survey Research

Subject to approval by the Ph.D. Program Director, one of the four quantitative methods courses may be selected from appropriate alternative courses.

Elective Courses (9 semester hours)

Each student must complete nine semester hours of graduate-level College of Business Administration courses with approval of the Director of the Ph.D. Program and the Graduate School. Elective courses may be selected from the list below.

IBUS 6312 Seminar in International Financial Management and Monetary Economics
IBUS 6314 Seminar in International Management and Strategy
IBUS 6315 Seminar in International Accounting and Taxation
IBUS 6316 Seminar in International Production Operations and Supply Chain Management
IBUS 6317 Seminar in International Global Information
IBUS 6318 International Entrepreneurship
IBUS 6322 International Organization Behavior and Human Resource Management
IBUS 6330 Special Topics in International Business
IBUS 6389 Independent Study (with approval of Program Director)

Summer Research Requirement Courses (6 semester hours)
Each student must complete six semester hours in the area of summer research. IBUS 6305 or a similar designated course will be taken during each summer session.

Grade Point Average Requirements
The student must maintain at least a 3.00 grade point average over the five International Business Core courses. The student must also achieve a grade of at least a “B” in each of the courses. Students must maintain a 3.00 GPA over all graduate work attempted, excluding dissertation credit. Failure to maintain these averages constitutes unsatisfactory progress and will result in the student’s dismissal from the program.

Comprehensive Exams (0 semester hours)
After completing their coursework but prior to beginning their dissertation proposal each student must pass a series of comprehensive examinations. The Director of the Ph.D. Program will schedule the exams in consultation with the College of Business Administration’s Ph.D. committee.

Dissertation Courses (6 semester hours)
All students must complete a doctoral dissertation (a minimum of 6 semester hours) that presents original research at an advanced level on a significant problem in international business. Dissertation hours may be repeated as needed:
IBUS 6398 Dissertation I
IBUS 6399 Dissertation II

Other Requirements
In addition to all College of Business Administration requirements falling under this heading, please review the International Business Ph.D. Student Policy Handbook for more detailed information applying to all International Business doctoral students.

Typical Program of Study
The following represents the typical program of study for doctoral students majoring in International Business. Although exceptions to this suggested program can be expected, a majority of students’ programs of study will closely match this calendar of events.

Year 1
Fall
IBUS 6306 Multivariate Statistics/Applied Regression Analysis
IBUS 6313 Seminar in International Marketing
IBUS 6319 Seminar in International Business
Spring
IBUS 6301 Research Methodology
IBUS 6302 Applied Multivariate Methods
IBUS 6311 Seminar in International Trade and Business Policy

Summer (Summer Research Project)
IBUS 6305 Doctoral Seminar in Applied International Business Research

Year 2
Fall
IBUS 6303 Advanced Regression Analysis
IBUS 6314 Seminar in International Management and Strategy
IBUS 6322 International Organization Behavior and Human Resource Management

Spring
IBUS 6307 Survey Research
IBUS 6315 Seminar in International Accounting and Taxation
IBUS 6318 International Entrepreneurship

Summer (Summer Research Project)
IBUS 6305 Doctoral Seminar in Applied International Business Research
Statistics Qualifying Examination
International Business Qualifying Examination (if needed)

Years 3 and 4

Prepare and defend dissertation proposal (minimum of 9 dissertation hours per semester)
Completion of Dissertation

For Doctoral Students Only

International Business (IBUS)

6301 Research Methodology (3-0)
This course covers applications of statistical techniques and analysis of business and economic research related to problem specification, modeling and measuring phenomena, sampling and experimental design, testing of hypothesis, and use of non-parametric tools. The purpose of the course is to introduce students to the quantitative methods necessary to understand the current literature in international business and economics. Prerequisite: Department approval.

6302 Applied Methods I (3-0)
This course is an extensive review of quantitative methods used in international business and economic research which focuses on theoretical foundations of research design, methodology, and analysis as well as interpretation of univariate, bivariate, and multivariate data in business theory. Prerequisite: Department approval.

6303 Advanced Regression Analysis (3-0)
This course is a study of linear and nonlinear regression methodologies, elementary time series analysis, and other
introductory econometric topics. The course is designed to provide basic expertise in the application of econometric topics. The course is designed to provide basic expertise in the application of econometric techniques to hypothesis testing, model building, diagnostic testing, and simulations analysis. Prerequisites: IBUS 6301 with a grade of “B” or better and department approval.

6304 Business Time Series Analysis (3-0)
This course is a survey of univariate time series, single equation, and multi-equation systems approaches to applied econometric forecasting analysis. Topics to be covered include autoregressive-moving average (ARIMA) modeling, model identification, estimation, diagnostic checking and out-of-sample simulation. Applications will be drawn from Latin American business conditions, exchange rate, inflation, natural income, and balance of payments forecasting methods. Prerequisites: IBUS 6301 with a grade of “B” or better and department approval.

6305 Doctoral Seminar in Applied International Business Research (3-0)
In this course students research interdisciplinary international business problems and economics issues specific to border regions. Prerequisite: Department approval.

6306 Multivariate Statistics and Applied Regression Analysis (3-0)
This course provides coverage of a number of procedures developed for regression problems in business. Emphasis is on model building, validation and subsequent inferences; analysis or real data using major statistical software packages; examining and transforming data, linear least-square regressions, statistical inference for regressions, dummy variable, influential data, co-linearity and variable selection, generalized least squares, assessing sampling variations and factor analysis. Prerequisites: QMB 2301 (or equivalents) with a grade of “B” or better and department approval.

6307 Survey Research Methods (3-0)
This course teaches students how to plan, design, and execute international business surveys. Students will learn about cross-national problems associated with questionnaire development, item analysis, scale development, including reliability and convergent and discriminant validity. The course will also examine qualitative methods such as content analysis, event history analysis, and observation. Prerequisite: Department approval.

6311 Seminar in International Trade and Business Policy (3-0)
This course involves the study of the theory of trade, trade policy and trade agreements designed to eliminate tariff and non-tariff barriers to international business commerce. Topics include comparative advantage, specific factors of production and income distribution, economies of scale, imperfect competition, international trade, international factor movements, and trade policy. Prerequisite: Department approval.

6312 Seminar in International Financial Management and Monetary Economics (3-0)
This course is an in-depth study of foreign exchange risk management as it relates to the protection of future investment decisions, the cost of capital, and the firm’s financial structure, capital flows, balance of payment issues, exchange rate determination, and open economy macroeconomic issues. Topics include balance of payments, exchange rates and the foreign exchange market, price levels and the exchange rate, output and the exchange rate, fixed exchange rates, and floating exchange rates. Prerequisite: Department approval.
6313 Seminar in International Marketing (3-0)
This course focuses on the types of marketing decisions facing the international marketing manager in the multi-national firm. It examines international marketing in terms of exporting and importing as well as other modes of entry. Considerable emphasis is placed upon differences among markets because of geography, politics, economics, culture, commercial policy, legal matters, and trade practices. Areas of investigation include global management of the marketing mix and border/regional issues. Prerequisite: Department approval.

6314 Seminar in International Management and Strategy (3-0)
This course is a study of the global competitive and economic factors that shape the environment in which firms operate. The distinctive nature of the business environment in developing countries, and the managerial implications of same, will be highlighted. Topics include multi-national and global strategy, organizing international operations, international technology transfer, international human resource management, and evaluation of international operations. Prerequisite: Department approval.

6315 Seminar in International Accounting and Taxation (3-0)
This course is a study of comparative internal accounting systems, accounting practices, problems of multi-national enterprises, and the institutions and environments that affect them. Topics include transfer pricing, accounting for the effects of inflation, international accounting standards, foreign currency hedging, accounting for foreign subsidiaries, integrated tax systems, indirect taxes and minimization of global taxes. Prerequisite: Department approval.

6316 Seminar in International Production Operations and Supply Chain Management (3-0)
This course focuses on the issues related to the efficient and effective management of supply and material functions in an international context. The course primarily analyzes the management of materials and the control of materials costs in international businesses and institutional enterprises. Prerequisite: Department approval.

6317 Seminar in International Global Information (3-0)
This course addresses global information technology from the perspective of national governments, economic regions, multi-national corporations, corporation and consumers. The cross-cultural nature of information technology will be studied in terms of the impact of information flow on people in different cultures, the differences in information sought and used by people of different cultures, and the mechanisms for developing information systems to be developed and/or used by people of different cultures. Prerequisite: Department approval.

6318 International Entrepreneurship (3-0)
This course examines the creation, management and growth of independent firms that have intent of engaging in International commerce. The requirements of firms called “born-global” or “multinational start-ups” include the development of a business model, location pre-venture capital, building a venture team; identifying market-entry and exit strategies, and preparing for growth. The course also examines international small businesses with an emphasis on how they differ from large international firms. Prerequisite: Department approval.
Seminar in International Business (3-0)
Seminar in International Business offers a survey of contemporary international business research in a seminar format. Topics include the international business environment, entry mode choice, organizational theories of multinational enterprise, strategic alliances and networks, export strategies and international business in and from emerging economies. Prerequisite: Department approval.

International Organizational Behavior and Human Resource Management (3-0)
Emphasis is on mastery of classic and contemporary literature in international organizational behavior and human resource management. Both U.S. and international theories and research perspectives will be used to guide students in building their own research agendas. Prerequisites: MGMT 5311 or equivalent and IBUS 6301 each with a grade of “B” or better and department approval.

Topics in International Business (3-0)
Selected Topics in International Business may be taken up to three times with approval of the doctoral program director. Content of the course will vary with instructor. Course topics might include theories of: Emerging Markets and International Business, International Entry Mode Choice, Seminar in Importing/Exporting, International Product Strategy, Regional Trade Agreements and MNC behavior, etc. Prerequisite: Department approval.

Independent Study: International Business (0-0-3)
Independent study in International Business may be taken up to three times with approval of the doctoral program director. Content of the course will vary with the professor directing the independent study. Prerequisite: Department approval.

Dissertation I (0-0-3)
This course represents the development of original research at the frontier of knowledge to demonstrate excellence in the field. After successfully defending the dissertation proposal, students must register for 6398 when work on the dissertation is begun. Thereafter, students must register for 6399 during the semesters in which work on the dissertation is being accomplished. Prerequisite: Department approval.

Dissertation II (0-0-3)
This course represents the development of original research at the frontier of knowledge to demonstrate excellence in the field. After successfully defending the dissertation proposal, students must register for 6398 when work on the dissertation is begun. Thereafter, students must register for 6399 during the semesters in which work on the dissertation is being accomplished. Prerequisite: Department approval.

Requirements for Admission into Master’s Degree Programs in Business Administration
[Students should refer to the Economics and Finance Department section for admission requirements for the Master of Science in Economics.]

The College of Business Administration requires that all documents listed below be submitted prior to admission to any master’s degree program in the College.

1. Transcripts according to the requirements of the Graduate School.
2. Official scores on the GMAT or GRE (GMAT preferred). Applicants who have completed a master’s degree may not be required to submit test scores.
3. A statement, not to exceed one page, which may include a description of the applicant’s professional experience, educational background, career goals and/or socio-economic background.

4. For international students, official scores for the TOEFL. International applicants are required to have a score of at least 250/600 on the TOEFL.

Admissions decisions are based on demonstration of academic performance and potential as measured by undergraduate GPA, standardized test scores, and other factors. Admissions decisions may also reflect consideration of candidates’ socio-economic background, professional experience, and commitment to the program.

Non-Program Limited Enrollment in Graduate Courses

An individual who has completed an undergraduate degree at an AACSB International (or equivalent) accredited college or university with a minimum GPA of 3.00 (on a 4.0 scale) and who has the respective course prerequisites may enroll in graduate courses for a particular purpose such as, for example, completion of additional credit hours in order to qualify for professional certification in some field, or to obtain advanced knowledge in an area related to the individual’s job responsibilities. A maximum of six non-transferable credit hours of graduate courses may be taken under this rule. Persons desiring to enroll in additional courses must apply for and be accepted into a graduate Master’s degree program in the College of Business Administration before enrollment will be permitted.

College Academic Standards

Students whose GPA’s fall below 3.0 are normally placed on probation by the Graduate School. However, MBA students who would be unable to achieve a GPA of 3.0 during the probationary period will be immediately dismissed.

Master of Business Administration (MBA)

The College of Business Administration, through the departments of Accounting, Economics and Finance, Information and Decision Sciences, and Marketing and Management, offers a Master of Business Administration degree. The MBA degree program is accredited by AACSB International—the Association to Advance Collegiate Schools of Business. The objective of the MBA program is to give students the opportunity to prepare for executive careers in business or in institutions that use business techniques and policies in management and administration. The program meets this objective by being broad in nature and aimed at general competence in overall management and administration. The majority of the course work is devoted to a broad understanding of the environment, controls, and practices, which are common to most institutions. The remaining courses are determined by the student’s special area of interest or concern.

Requirements for Admission to the MBA Program

Students should refer to above paragraphs.

Specific Requirements for the Master of Business Administration Degree

1. All students must meet the Pre-Master of Business Administration (Pre-MBA) Common Body of Knowledge Requirements (leveling courses), and complete 36 credit hours of Course of Study for the Master of Business Administration (MBA) which includes the Required Graduate Core and the chosen MBA concentration course work. Courses in the Pre-MBA Common Body of Knowledge Requirements and the other courses indicated below may be waived if, according to the MBA Graduate Studies Committee, the student has the appropriate background either in previous undergraduate or graduate course work or work experience.
2. Students with an undergraduate degree in business administration can normally expect to complete their MBA degree program in any of the available concentrations in 36 semester hours.

3. Students with no undergraduate background in business administration and no business experience can expect to complete the MBA degree program in the General Management MBA concentration in 54 semester hours (18 Pre-MBA hours plus 36 Course of Study for the MBA hours). An additional 12 semester hours could be taken if the student chooses a concentration other than General Management.

4. Students earning a “B” or better in MGMT 5325 or MGMT 5335 will satisfy the comprehensive exam requirement. Students who earn a “C” will be required to pass a comprehensive exam.

5. No more than six hours in any concentration can be undergraduate courses available for graduate credit.

Pre-Master of Business Administration (Pre-MBA) Common Body of Knowledge Requirements (leveling courses)

Students entering the program without an undergraduate degree in Business are expected to have a foundation in Business equivalent to the following UTEP courses.

**Accounting:**
- ACCT 5301 Financial Accounting or
- ACCT 2301 Principals of Accounting I and
- ACCT 2302 Principals of Accounting II

**Business Law:**
- BLAW 5306 Business Law and Ethics or
- BLAW 3301 Legal Environment of Business

**Economics:**
- ECON 5304 Business Economics or
- ECON 2303 Principles of Economics © and
- ECON 2304 Principles of Economics

**Finance:**
- FIN 5305 Financial Concepts and Analysis or
- FIN 3310 Business Finance

**Marketing:**
- MKT 3300 Principles of Marketing

**Business Ethics:**
- BUSN 3304 Global Business Environment

Program of Study for the Master of Business Administration (MBA) (36 semester hours)

1. **Required MBA Core** (36 semester hours)

   - ACCT 5311 Accounting for Management
   - CIS 5311 Management Information Systems Theory and Practice*
   - CIS 5313 Strategic Information Systems
   - ECON 5311 Managerial Economics
   - ECON 5360 Global Economic Environment for Managers
   - FIN 5311 Financial Management
   - MGMT 5311 Organizational Management Seminar*
   - MGMT 5336 Effective Management of Human Resources
   - MKT 5311 Marketing Management
   - POM 5308 Concepts of Production Management*
   - QMB 5311 Quantitative Methods in Business*

   **And one** of the following: (taken during the student’s final semester)
   - MGMT 5325 Management Strategy and Policy
   - MGMT 5335 International Strategic Management
*These courses may be waived if the student has had the courses indicated below or the equivalents:

- CIS 5311 (CIS 2320 and CIS 3340 or 3345)
- MGMT 5311 (MGMT 3303)
- POM 5308 (POM 3321)
- QMB 5311 (MATH 2301, QMB 2301, and QMB 3301)

2. **Optional MBA Concentrations** (12 semester hours)
   
   Complete four of the following:

   a. **Accounting**
      
      - ACCT 4305 Not-For-Profit Accounting
      - ACCT 4321 Advanced Cost Accounting
      - ACCT 4325 International Accounting
      - ACCT 5312 Controllership
      - ACCT 5315 Taxation and Management Decisions
      - ACCT 5324 Computer Applications in Accounting and Auditing
      - ACCT 5391 Seminar in Managerial Accounting
      
      A minimum of 9 of the 12 hours in this concentration must be 5300 level accounting courses.

   b. **Computer Information Systems**
      
      - CIS 5340 Electronic Commerce in Business
      
      **And three** of the following:
      
      - CIS 4305 Advanced Business Systems Development
      - CIS 4365 Database Management
      - CIS 4368 Advanced Database Management
      - CIS 5317 Information Resources Policy and Management
      - CIS 5330 Expert and Decision Support Systems
      - CIS 5394 Current Issues in CIS

   c. **Economics**
      
      Complete **four** of the following:
      
      - ECON 5312 The Economic Environment
      - ECON 5320 Monetary and Fiscal Policy and Problems
      - ECON 5350 Industrial Organization and Policy
      - ECON 5365 Economic Development
      - ECON 5366 Latin American Economics
      - ECON 5370 Advanced Quantitative Methods in Economics

   d. **Finance**
      
      Complete **four** of the following:
      
      - FIN 5301 Theory of Financial Management
      - FIN 5315 Securities Analysis
      - FIN 5316 Derivative Instruments
      - FIN 5318 Capital Formation, Analysis and Budgeting
      - FIN 5325 International Financial Management
      - FIN 5370 Financial Modeling
e. General Management
Complete all of the 36 hours of Required MBA Core courses above. If some of these courses have been waived, other courses available for graduate credit will be substituted.

f. Health Systems
Complete four of the following:
- NURS 5300 Organizational Theory and Culture
- NURS 5335 Management Roles and Operations
- NURS 5337 Health Care Financial Management
- NURS 5338 Health Law, Policy and Ethics
- NURS 5357 Perspectives on Border Health (requires School of Nursing approval)
- NURS 5365 Managing Health Care Outcomes
- NURS 5366 Managing Diverse Work Teams

g. International Business
- MGMT 5345 Global Management
And three of the following:
- ACCT 4325 International Accounting
- BLAW 4325 International Business Law
- FIN 5322 International Financial Markets and Institutions
- MKT 5355 International Marketing

h. Supply Chain Management
- POM 5311 Inventory and Materials Management
- POM 5325 Global Operations and Supply Chain Management
And two of the following:
- POM 5310 Manufacturing Strategy
- POM 5330 Management of Service Operations
- POM 5394 Current Issues in Production/Operations Management
- CIS 5340 Electronic Commerce in Business
- MGMT 5346 Total Quality Management

MBA Online Degree
UTEP collaborates with seven other UT System universities to offer the courses necessary to earn the Online Master of Business Administration Degree via distance education over the internet through the UT System TeleCampus. The MBA Online degree and the traditional UTEP on-campus MBA degree are two separate programs with different curricula although many of the same subjects are covered.

The MBA Online curriculum consists of 16 courses (48 semester hours). Students with previous formal education in business administration subjects may be able to complete the program with as few as 12 courses (36 semester hours). More detailed information may be found at www.utep.edu.

The admission requirements for the MBA Online program are the same as for the traditional on-campus MBA program listed in this catalog. Detailed instructions for admission and for registration can be obtained by calling the College of Business Administration Advising Office at (915) 747-5174.
Master of Business Administration and Master of Public Administration: Two-Degree Option (MBA/MPA)

Students may also apply for a two-degree option MBA-MPA 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 MBA and MPA 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 the MBA-MPA program should consult with the Graduate Advisor for the College of Business Administration and with the Director of the MPA program in the College of Liberal Arts with regard to admission requirements and required courses.

The program consists of 60 hours of graduate study, of which 30 hours are in areas of Business Administration and 39 hours are in areas of Public Administration.

Specific Requirements for the MBA/MPA Two-Degree Option
1. Students must meet all admission requirements for both programs.
2. Students must meet the Pre-MBA requirements for the MBA degree. Students should refer to the description for the MBA degree program and the conditions for waiver.
3. The program consists of 24 hours of required MBA core courses, 6 hours of graduate business electives, 27 hours of MPA core courses, 3 hours of POLS 5367, and a comprehensive written exam in the core subject areas of public administration. 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 advisors 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 to and continuance in the program are administered separately by the MBA and MPA Graduate Committees and by the Graduate School.

MBA Plus Program
Students with MBA degrees may enroll as post-baccalaureate students and complete 12 semester hours in a concentration area. Students will receive MBA PLUS certificates upon completion of the concentration area courses that include:

- Accounting
- Computer Information Systems
- Economics
- Finance
- Health Systems
- Human Resource Management
- International Business
- Marketing Management
- Production and Materials Management

Additional information is available from the MBA Graduate Advisor in the College of Business Administration at (915) 747-7726.
The Department of Accounting, University of Texas at El Paso shares with the University its fundamental mission to provide the highest quality education to citizens of El Paso and the West Texas Region, commensurate with AACSB International standards for business and accounting accreditation. The objectives of the Master of Accountancy (MAcc) program are to: provide students with the necessary background for entry into, and advancement in, the public accounting profession; enhance the skills necessary for success in the public accounting profession; explore issues relevant to the professional accounting environment; and provide the educational requirements necessary to sit for the Uniform CPA Examination in the State of Texas. The MAcc program is accredited by AACSB International-The Association to Advance Collegiate Schools of Business.

Accounting (ACCT) courses and Business Law (BLAW) courses are included under the Accounting course section.

Master of Accountancy Program (MAcc)

The MAcc program consists of a three-hour business core, an eighteen-hour accounting option, a three-hour communications requirement, and six-hours of approved graduate business electives.

Requirements for Admission to the Master of Accountancy Program

Students should refer to the Introduction to the College of Business Administration section for information on admission.

Specific Requirements for the Master of Accountancy Degree

All students must meet the Pre-Master of Accountancy (Pre-MAcc) Requirements and complete thirty-three credit hours of Course of Study for the Master of Accountancy (MAcc).

Courses in Pre-MAcc Requirements, as described below, may be waived if, according to the Accounting Graduate Studies Committee, the student has the equivalent courses in previous undergraduate or graduate course work or the appropriate work experience. Waivers may also be given if the student can demonstrate proficiency through challenge examinations approved by the Committee.

Students earning a “B” or better in MGMT 5325 or MGMT 5335 will satisfy the comprehensive exam requirement. Students who earn a “C” will be required to pass a comprehensive exam.
Pre-Master of Accountancy (Pre-MAcc) Requirements

Common Body of Knowledge (21 semester hours)
(The courses in parentheses indicate the equivalent undergraduate course or course combinations.)

- 3 ACCT 5301 or Financial Accounting (ACCT 2301, 2302)
- 3 ECON 5304 or Business Economics (ECON 2303, 2304)
- 3 QMB 5311 or Quantitative Methods in Business (QMB 2301, 3301 and MATH 2301)
- 3 BLAW 5306 (3301) Business Law and Ethics
- 3 MKT 3300 (Principles of Marketing)
- 3 FIN 5305 (3310) Financial Concepts and Analysis
- 3 BUSNS 3304 Global Business Environment

Professional Core (18 semester hours)

- 3 ACCT 3320 Accounting Systems
- 3 ACCT 3321 Intermediate Accounting I
- 3 ACCT 3322 Intermediate Accounting II
- 3 ACCT 3323 Cost Accounting
- 3 ACCT 3327 Federal Income Tax-Individuals
- 3 ACCT 4304 Auditing Principles and Procedures

Course of Study for the Master of Accountancy (MAcc) (33 semester hours)

1. Business Core Requirements (3 semester hours)
   - 3 MGMT 5325 or MGMT 5335 (Taken last semester)

2. Accounting Major Requirements (21 semester hours)
   a. Tax Concentration
      - 3 ACCT 5311
      - 6 ACCT 4328*, 5322
      - 9 Choose three from ACCT 5320, 5321, 5325, 5326
      - 3 Choose one approved non-tax graduate accounting elective, excluding ACCT 4325
   b. Financial/Auditing Concentration
      - 3 ACCT 5311
      - 9 Choose three from ACCT 4301*, 5310, 5323, 5324
      - 9 Choose three approved graduate accounting electives

A minimum of 12 of the 21 hours in the area of concentration must be 5300-level accounting courses.

*Should be taken after being admitted to the Graduate School. If already taken prior to admittance to the Graduate School, three hours of a graduate accounting elective must be taken to fulfill this requirement.

3. Communications Requirement (3 semester hours)
   - 3 COMM 5362, ENGL 5311, ENGL 5312, ENGL 5314, or ENGL 5315

4. Approved Graduate Business Electives (6 semester hours)
   - 6 Choose two approved graduate business electives

ACCT 5397 (Professional Report in Accounting) if selected, must be written in the area of concentration.

Up to nine hours of specified, approved undergraduate courses for graduate credit may substitute for graduate hours in the Master of Accountancy degree plan. Those undergraduate courses required as part of the Accounting Major Option Requirements are counted in these limitations.
Combined Plans

The Department of Accounting and the College of Business Administration offer two combined plans: the concurrent award of the BBA in Accounting and the Master of Accountancy (BBA/MAcc) and the concurrent award of the BBA in Accounting and the Master of Business Administration with a concentration in accounting (BBA/MBA). Both plans require a 150-hour course of study. The BBA/MAcc requires 120 semester hours of undergraduate study, and 30 semester hours of graduate study. The BBA/MBA requires 114 semester hours of undergraduate study, and 36 semester hours of graduate study.

Requirements for Admission to Either Combined Plan

Students are admitted to the College of Business Administration and to the accounting major based on requirements listed in the Undergraduate Catalog. Students must be admitted to the Graduate School and the Master of Accountancy program or the Master of Business Administration program based on requirements listed in the Graduate Catalog except that the completion of a Baccalaureate degree is not required. There is no conditional admission to Graduate School under either combined plan.

1. Requirements related to undergraduate courses work:
   a. Completion of the Non-Business Foundation and Business Foundation Requirements with an average of 3.0 or better in ENGL 1312, MATH 1320, MATH 2301, ACCT 2301, ACCT 2302, ECON 2303, ECON 2304, and QMB 2301.
   b. Completion of nine hours of non-accounting Business Core Courses.
   c. Completion of nine hours of non-accounting courses including ACCT 3321, ACCT 3322, and two of the following: ACCT 3320, ACCT 3323, or ACCT 3327.
   d. Achievement of a minimum GPA of 2.7 in all junior and senior-level accounting courses taken prior to admission. These accounting courses are restricted to the ones listed in the Major Option Requirements for the BBA degree in Accounting.

2. Requirements for unconditional admission to the graduate program:
   a. Official scores on the Graduate Management Admissions Test (GMAT) or the Graduate Record Exam (GRE). GMAT preferred.
   b. A GPA of at least 2.7 on all undergraduate and graduate level work already completed.
   c. A statement, not to exceed one page, describing the applicant’s socio-economic and educational background, professional experience, and education and career goals.
   d. International students must achieve a minimum TOEFL of 250/600.

STUDENTS MUST BE ADMITTED TO THE GRADUATE SCHOOL BEFORE TAKING ANY COURSES FOR GRADUATE CREDIT.

STUDENTS SHOULD PLAN TO APPLY FOR ADMISSION TO THE GRADUATE SCHOOL DURING THEIR JUNIOR YEAR.

A GPA OF 3.0 ON ALL WORK TAKEN BEYOND THE 90TH SEMESTER HOUR OF CREDIT IS REQUIRED TO REMAIN IN THE GRADUATE PROGRAM.

Course of Study for the Combined Plans

The course of study for the combined BBA/MAcc plan and the combined BBA/MBA plan includes academic requirements both at the undergraduate and graduate level. The requirements are summarized below:
Undergraduate – BBA/MAcc Plan (120 semester hours)
Non-Business Foundation Requirements 51 semester hours
Business Foundation Requirements 15 semester hours
Business Core Requirements 30 semester hours
Accounting Major Requirements 21 semester hours
Electives 3 semester hours

Undergraduate – BBA/MBA Plan (114 semester hours)
Non-Business Foundation Requirements 48 semester hours
Business Foundation Requirements 15 semester hours
Business Core Requirements 30 semester hours
Accounting Major Requirements 21 semester hours

Graduate – BBA/MAcc Plan (30 semester hours)
Business Core requirements 3 semester hours
Accounting Major Requirements 21 semester hours
Electives 6 semester hours

Graduate – BBA/MBA Plan (36 semester hours)
MBA Core Requirements 24 semester hours
Accounting Concentration Requirements 12 semester hours

Combined Program Total 150 semester hours

Undergraduate Course of Study for the Combined Plans

Non-Business Foundation Requirements (48-51 semester hours)
All of these courses must be completed with a grade of “C” or better.
6 - ENGL 1311 and 1312
3 - COMM 1301 or 1302
6 - MATH 1320 and 2301
6 - POLS 2310 and 2311
6 - HIST 1301 and 1302
6 - Natural Science (See University Core Curriculum menu)
3 - PSYC 1301 or SOCI 1301
3 - Humanities (See University Core Curriculum menu)
3 - Visual and Performing Arts (See University Core Curriculum menu)
3 - ENGL 3355
3 - ENGL 3359 (Required for BBA/MAcc ONLY)
3 - UNIV 1301 or UNIV 2350

Business Foundation Requirements (15 semester hours)
All of these courses must be completed with a grade of “C” or better.
6 - ACCT 2301 and 2302
6 - ECON 2303 and 2304
3 - QMB 2301

Business Core Requirements (30 semester hours)
3 - ACCT 3321
3 - BLAW 3301
3 - QMB 3301
3 - CIS 3345
3 - MKT 3300
3 - FIN 3310
3 - ECON 3320
3 - MGMT 3303
3 - POM 3321
3 - BUSN 3304
Accounting Major Requirements (21 semester hours)

15 - ACCT 3320, 3322, 3323, 3327, and 4304
3 - Approved accounting elective
3 - Business computer applications elective: Choose one from CIS 3350, 4330, 4365, 4370, or 4398

Electives (3 semester hours)

3 - Upper-division free elective (BBA/MAcc ONLY)

Graduate Course of Study for the Combined BBA/MAcc Plan – (30 semester hours)

Business Core Requirements (3 semester hours)

3 - MGMT 5325 or MGMT 5335 (taken last semester)

Accounting Major Requirements (21 semester hours)

Financial Accounting /Auditing Concentration

3 - ACCT 5311
9 - Choose three from ACCT 4301*, 5310, 5323, and 5324
9 - Choose three approved graduate accounting electives

Tax Concentration

3 - ACCT 5311
6 - ACCT 4328* and 5322
9 - Choose three from ACCT 5320, 5321, 5325, or 5326
3 - Choose one approved non-tax graduate accounting elective, excluding ACCT 4325

*Should be taken after being admitted to Graduate School. If taken prior to admittance to Graduate School, three hours of a graduate accounting elective must be taken to fulfill this requirement.

Electives (6 semester hours)

6 - Choose three approved graduate business electives

A minimum of 12 of the 21 hours in the area of concentration must be 5300-level accounting courses.

ACCT 5397 (Professional Report in Accounting), if selected, must be written in the area of concentration.

Up to nine hours of specified undergraduate courses allowed for graduate credit may substitute for graduate hours in the graduate portion of the combined program. Those undergraduate accounting courses required as part of the Graduate Accounting Major Requirements are counted in these limitations.

Graduate Course of Study for the Combined BBA/MBA Plan (36 semester hours)

MBA Core Requirements (24 semester hours)

3 - ACCT 5311
3 - CIS 5313
3 - ECON 5311
3 - ECON 5360
3 - FIN 5311
3 - MGMT 5336
3 - MKT 5311
3 - MGMT 5325 or MGMT 5335 (taken during the last semester)
Accounting Concentration (12 semester hours)
Choose four from the following courses:
ACCT 4305
ACCT 4321
ACCT 4325*
ACCT 5312
ACCT 5315*
ACCT 5324
ACCT 5391

A minimum of 9 or the 12 hours in this concentration must be 5300-level accounting courses.
No more than 12 semester hours of tax courses may be counted in the degree plan.

For Undergraduate and Graduate Students

Accounting (ACCT)

4301 Advanced Accounting I
4305 Not-For-Profit Accounting
4321 Advanced Cost Accounting
4325 International Accounting
4328 Federal Income Tax - Partnerships and Corporations

Business Law (BLAW)

4325 International Business Law
4391 Business Law

For Graduate Students Only

Accounting (ACCT)

5301 Financial Accounting (3-0)
An introductory study of accounting procedures involved in recording transactions producing income statements and interpreting financial data prepared primarily for external users. This course examines the theory and practices related to recording assets, liabilities, owners’ equities, revenues and expenses in accordance with current accounting theory. May be counted only as a Pre-MAcc or a Pre-MBA course in the graduate degree programs offered by the College of Business Administration. Prerequisite: Admission to a graduate program.

5310 Contemporary Accounting Issues (3-0)
Development of accounting theory: controversial issues involved in the measurement and reporting of enterprise periodic income. Study of authoritative pronouncements. Prerequisite: ACCT 3322.

5311 Accounting for Management (3-0)
A study of accounting as related to making business decisions. Readings, cases, and problems dealing with accounting concepts, budgeting and cost control, use of accounting data in planning operations and policy formulation, and tax planning in business policies. Does not count as part of the Master of Accountancy degree. Prerequisites: ACCT 5301, or ACCT 2301 and ACCT 2302 each with a grade of “B” or better.
5312  **Controllership (3-0)**  
A study of the major phases of controllership practice, including organizational status, objectives, functions, duties, responsibilities and the managerial utilization of accounting and statistical data for planning and control. *Prerequisite:* ACCT 5311 with a grade of “B” or better.

5315  **Taxation and Management Decision (3-0)**  
A conceptual overview of the tax systems in the United States with an emphasis on tax planning and decision-making. May not be counted toward the Master of Accountancy.

5320  **Taxation of Partners, Partnerships and S Corporations (3-0)**  
The intensive study of federal income tax principles applicable to the formation, operation, sale and liquidation of partnerships. Special attention will be paid to the issues of distributions, basis and tax minimization opportunities. *Prerequisite:* ACCT 3327 or equivalent with a grade of “C” or better.

5321  **Advanced Topics in Federal Taxation (3-0)**  
Topics will vary depending on current developments, e.g., taxation of foreign persons and multinational operations, consolidated tax returns, state and local taxation, pension plans, charitable organizations, and tax reform proposals. *Prerequisite:* ACCT 3327 or equivalent.

5322  **Tax Concepts, Research and Procedure (3-0)**  
An in-depth study of tax issue identification, the location and analysis of tax authority, and the written communication of conclusions based upon the relevant authority. Includes coverage of tax procedure. *Prerequisite:* ACCT 3327 or equivalent.

5323  **Advanced Auditing (3-0)**  
A study of the important concepts of auditing including the nature of audit evidence, auditor independence, audit reports, the environment of auditing, and relevant current issues. *Prerequisite:* ACCT 4304.

5324  **Computer Applications in Accounting and Auditing (3-0)**  
Design and control of computerized accounting; use of computers in accounting and their applications to the auditing functions; stress is placed on E.D.P. control; internal auditing considerations. *Prerequisites:* ACCT 3320 and ACCT 4304.

5325  **Estate and Gift Taxation (3-0)**  
A comprehensive survey of principles involved in determining the federal estate tax and federal gift tax including the taxability and valuation of property and analysis of deductions, including the federal marital deduction. *Prerequisite:* ACCT 3327 or equivalent.

5326  **Advanced Corporate Taxation (3-0)**  
Reorganizations, net operating losses, and other advanced areas in the field of corporate taxation. *Prerequisite:* ACCT 4328.

5391  **Seminar in Managerial Accounting (3-0)**  
Advanced topics in managerial accounting. Topics will vary to reflect current literature. *Prerequisite:* ACCT 3314, ACCT 3323, or ACCT 5311.

5392  **Directed Individual Study in Accounting (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.
5194 Current Issues in Accounting (1-0)
5294 Current Issues in Accounting (2-0)
5394 Current Issues in Accounting (3-0)
A course organized to investigate special topics and current issues in accounting. May be repeated for credit when content varies. 
Prerequisite: Department approval.

5396 Internship in Accounting (0-0-3)
A practicum in accounting under the supervision of accounting practitioners. This course may count as a business elective or a free elective but not as an accounting elective in the accounting degrees. The internship must be completed prior to the last full semester of accounting coursework. Prerequisites: Completion of 6 hours of the Common Body of Knowledge courses and 6 hours of the Professional Core, which must include ACCT 3321; a minimum accounting GPA of 3.0; a minimum business GPA of 3.0; and department approval.

5397 Professional Report in Accounting (0-0-3)
In-depth research study into a current accounting or tax issue that culminates in a written report and formal presentation to faculty. Requires the supervision of a committee comprised of a minimum of three graduate faculty members. The professional report must be written within the selected area of concentration for the degree. The student must register for the course each semester until the professional report is completed and a grade of A, B, C, D or F is assigned; however, a maximum of 3 credit hours may be counted towards the degree. Prerequisites: Completion of 18 hours of Master of Accountancy program coursework for the area of concentration selected and department approval.

Business Law (BLAW)

5306 Business Law and Ethics (3-0)
A broad-based course covering an introductory study of the legal environment of business and of social and ethical considerations affecting business. May be counted only as a Pre-MAcc or a Pre-MBA course in the graduate degree programs offered by the college of Business Administration except the combined BBA/MAcc program. BLAW 3301 or BLAW 5306, but not both, may be counted toward degrees awarded in the College of Business Administration. Prerequisite: Admission to a graduate program in business.
Economics and Finance

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CHAIRPERSON: Timothy P. Roth
GRADUATE FACULTY: Ford, Fullerton, Gonzalez, Herbst, Holcomb, James, Johnson, Roth, Schauer, Smith, Sprinkle, Tollen, Wei, Xie

Master of Science Degree in Economics (MS)

The Department of Economics and Finance offers a Master of Science degree in economics with the opportunity for specialization in areas within economics and for course work in areas outside economics. Some suggested areas for specialization within economics are regulation, international economics, applied business economics, and border economics. Some suggested areas for the minor or for interdisciplinary work are border studies, finance, and computer information. All proposed degree plans must be approved by the Graduate Advisor and the Graduate School.

Thesis and non-thesis programs are available. Students enrolled in the thesis program must take 24 hours of course work in addition to completion of the thesis for which six hours of credit are given. The non-thesis option requires a total of 36 hours of course work.

The ability to take course work in areas outside economics is available either through completion of a minor, with as many as 12 hours and a minimum of 6, or through the interdisciplinary program. The interdisciplinary program is a 36-hour program with a minimum of 18 hours in economics.

Requirements for Admission to the MS Degree in Economics

Students should see the Introduction to the College of Business Administration. However, in addition to the requirements listed in the Introduction, students should complete the following courses or their equivalents:

[The course in parentheses indicates the equivalent undergraduate course.]

ECON 5304 (2303, 2304) Business Economics
ECON 5312 (3302) The Economic Environment
ECON 5311 (3303) Managerial Economics
QMB 5311 (QMB 3201,QMB 3301, and MATH 2301) Quantitative Methods

Course of Study for the MS in Economics

All candidates must complete the following courses:

ECON 5302 Microeconomic Theory
ECON 5303 Macroeconomic Theory
ECON 5305 Applied Mathematical Economics
ECON 5370 Advanced Quantitative Methods in Economics

And one of the following options:

1. Thirty-hour Thesis Option (18 semester hours)
   12 - Graduate course hours in Economics or an approved minor.
   6 - ECON 5398 - Thesis and ECON 5399 – Thesis
2. **Thirty-six hour Non-Thesis Option** (24 semester hours)
   24 - Graduate course hours in Economics
   or
   12 graduate course hours in Economics plus 12 hours of an approved minor.

3. **Interdisciplinary Option** (24 semester hours)
   18 - Graduate course hours in an approved minor
   6 - ECON 5398 and ECON 5399

The Department of Economics and Finance also participates in the Master of Business Administration and the Master of Accountancy degrees, the requirements for which are found under the College of Business Administration and Accounting sections in this catalog.

For Undergraduate and Graduate Students

**Economics (ECON)**

- 3334 Regional Economics
- 3335 Urban Economics
- 4330 Public Sector Economics
- 4340 Economics of Labor
- 4368 Economy of Mexico

**Finance (FIN)**

- 4311 Commercial Bank Management (3-0)
- 4312 Current Issues in Banking (3-0)
- 4316 Speculative Markets (3-0)
- 4318 Financial Statement Analysis (3-0)
- 4328 Central Banking (3-0)

For Graduate Students Only

**Economics (ECON)**

*General Prerequisite:* All graduate courses listed below require twelve hours of economics or departmental approval.

- 5301 Research Methodology (3-0)
  Concentrated study of data gathering methods, research design and analytical and statistical techniques used in economics research. The purpose of the course is to master the quantitative methods necessary to understand current literature in economics. *Prerequisites:* ECON 3302 and ECON 3303, or ECON 5311 and ECON 5312.

- 5302 Microeconomic Theory (3-0)
  The determination of prices and output. The theory of markets ranging from perfect competition through monopolistic competition and oligopoly to monopoly. The theory of the firm and the industry. Welfare implications of price determination. *Prerequisite:* ECON 3303 or ECON 5311.

- 5303 Macroeconomic Theory (3-0)
  The analysis of the determination of total income in the economy and related problems. Strong emphasis is given the theory of income determination, studies in the demand and supply of money, and the
relationship between government policy and economic activity. Prerequisites: (1) ECON 3302 or (2) ECON 5312 and MATH 2301 or (3) the equivalent.

5304 Business Economics (3-0)
An intensive, in-depth study of economics with emphasis upon the theory of the static profit maximizing firm and upon the effects of the economic environment upon the firm. May be counted only as Pre-MAcc or Pre-MBA courses in the graduate degree programs offered by the College of Business Administration. Prerequisite: Admission to a graduate program in business.

5305 Applied Mathematical Economics (3-0)
A problem oriented survey of the mathematical techniques utilized in economics, finance, and public policy analysis. Topics to be covered include matrix algebra, optimization problems, comparative statics, dynamics, and game theory. The purpose of the course is to introduce students to the quantitative methods necessary to understand the current literature in economics and finance. Prerequisite: MATH 2301, MATH 1411, QMB 5311, ECON 3372, or department approval.

5311 Managerial Economics (3-0)
An evaluative study of the theory of economic decision-making in individual firms, groups of firms, and industries under market conditions ranging from competition to monopoly. (Students in the MS program in Economics may not count this course for graduate credit.) Prerequisite: ECON 2304 or ECON 5304.

5320 Monetary and Fiscal Policies and Problems (3-0)
An analysis and critique of monetary and fiscal policies and problems designed to facilitate economic stability and economic progress. Emphasis is given development and application of techniques used for analysis of economic activity, in-depth studies of stabilization policies and their effects, and analysis of problems inherent in the economic system. Prerequisite: ECON 3302 or 5312 with a grade of “C” or better or department approval.

5334 Urban Economics (3-0)
This course provides an overview of urban and regional economics. Spatial theory, growth patterns, and business cycle impacts on metropolitan development provide the basic framework from which the various topics are to be covered. Additional topics receiving coverage will include urban real estate markets, labor mobility, transportation, growth, public policy analysis, taxation, development, and regional income performance. Prerequisite: ECON 5305 with a grade of “C” or better or instructor approval.

5350 Industrial Organization and Policy (3-0)
Selected topics in structure, conduct, regulation of business and public policy toward business. Prerequisite: ECON 3303 or ECON 5311 each with a grade of “C” or better.

5360 Global Economic Environment for Managers (3-0)
Economic principles of the flow of goods, services, and capital funds across international borders. Analysis of existing national and international economic institutions influencing international trade and capital flow. Prerequisites: ECON 2303, ECON 2304, or ECON 5304, and department approval.
5361 Applied International Economics (3-0)
An applications oriented survey of international trade and balance of payment issues, exchange rate modeling and analysis, and regional agreements designed to eliminate tariff and nontariff barriers to international commerce in the Americas. Prerequisites: Graduate standing and department approval.

5365 Economic Development (3-0)
A critical analysis of policies designed to achieve economic growth in less developed countries. Topics include monetary and fiscal measures, development of human resources, capital formation, investment allocation, introduction of new technologies and coordination of domestic policies with the international economy. Prerequisite: ECON 3302 or ECON 5312.

5366 Latin American Economics (3-0)
A study of the existing economic institutions in Latin America. Application of economic principles to Latin American economic problems and policy. The emphasis is institutional rather than analytical. Prerequisite: ECON 3302, ECON 5312, or department approval.

5367 Country Risk Analysis (3-0)
The application of national income and product account statements, international balance of payment statements, and external indebtedness calculations to international business decisions is studied. Advanced economic and financial ratio analysis utilization in loan repayment likelihood estimation is also developed. Prerequisites: ECON 2303, or ECON 5304, or instructor approval.

5368 Border Economics (3-0)
This course provides an introduction to the field of international border economics with special emphasis on issues and topics dealing with the border zone between Mexico and the United States. Coverage will include border crossings, exchange rates, international migration, water economics, regional economic trends, relative economic performance measures, and applied econometric analysis. Econometric techniques to be utilized include cross section, system of simultaneous equations, and time series methodologies. Prerequisites: ECON 5303 with a grade of “C” or better or instructor approval.

5370 Applied Econometrics (3-0)
Linear and nonlinear regression methodologies, elementary time series analysis, and other introductory econometric topics will be treated. The course is designed to provide basic expertise in the application of econometric techniques to hypothesis testing, model building, diagnostic testing, and simulation analysis. Prerequisite: ECON 5305.

5371 Econometric Forecasting (3-0)
A survey of univariate time series, single equation, and multi-equation systems approaches to applied econometric forecasting analysis. Topics to be covered include autoregressive-moving storage (ARIMA) modeling, model identification, estimation, diagnostic checking and out-of-sample simulation. Applications will be drawn from Latin American business conditions, exchange rate, inflation, national income, and balance of payments forecasting methods. Prerequisites: ECON 5370 and department approval.
Directed Individual Study in Economics (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: Instructor approval or Graduate Advisor approval.

Thesis (0-0-3)
Initial work on the thesis. Prerequisite: Graduate Advisor approval.

Thesis (0-0-3)
Continuous course enrollment required while work on the thesis continues. Prerequisites: ECON 5398 and Graduate Advisor approval.

Finance (FIN)

Financial Concepts and Analysis (3-0)
An intensive, in-depth study of finance with emphasis on the managerial implications of financial concepts. May be counted only as Pre-MAcc or Pre-MBA courses in the graduate degree programs offered by the College of Business Administration. Prerequisites: Admission to a graduate program in business and ACCT 5301.

Financial Management (3-0)
A study of the financial manager in executive decision making, involving financial planning and analysis in the allocation of the financial resources of a firm; investment decision-making, capital budgeting, and financial problems of growth. Prerequisite: FIN 3310, FIN 5305, or department approval.

Securities Analysis (3-0)
An in-depth study of the techniques of market and security analysis. Special emphasis is placed on the development of portfolio theory, application of the theory to real-world situations, and the evaluation of portfolio management. Prerequisite: FIN 4310, FIN 5311, or department approval.

Risk Management and Derivative Markets (3-0)
A study of the nature, functions, and applications of the various futures and options markets and contracts. Basis, long and short term hedging, spreading, normal and inverted markets are examined, along with theoretical considerations. Prerequisite: FIN 4310 or FIN 5311, with a grade of “C” or better or department approval.

Capital Formation, Analysis, and Budgeting (3-0)
This course is designed to provide an in-depth study of the cost of capital and arguments concerning the appropriate specification of capital costs; analysis of the capitalization package of the firm; study of cash flows as they relate to the investment decision; risk analysis in the capital budgeting process and a study of techniques of capital budgeting under various constraints. Prerequisite: FIN 4310, FIN 5311, or department approval.

International Financial Markets and Institutions (3-0)
An in-depth study of the markets and institutions that influence the flow of goods and services among nations, exchange rate determination, and international monetary problems. Subject matter may vary at the discretion of the instructor. Prerequisite: FIN 4310, FIN 5311, or department approval.
5325  **International Financial Management (3-0)**
An in-depth study of foreign exchange risk management as it relates to the protection of future investment decisions, the cost of capital, and the firm’s financial structure. Subject matter may vary at the discretion of the instructor. **Prerequisite**: FIN 4310, FIN 5311, or department approval.

5370  **Financial Modeling (3-0)**
Study of classical and contemporary financial models. Emphasis on examining theoretical foundations, testing and modification of existing models, and inferences they provide for decision-making. Among topics covered are simulation models of financial processes of the firm, modeling and testing securities market behavior, risk management strategies, valuations, and sensitivity analysis of financial decisions. **Prerequisites**: FIN 4310 or FIN 5311 or department approval.

5392  **Directed Individual Study in Finance (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. **Prerequisites**: Instructor approval and Graduate Advisor approval.

5394  **Current Issues in Finance (3-0)**
A course organized to investigate special topics and current issues in finance. May be repeated for credit when content varies. **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 Financial Economics degrees. The requirements of these degrees are found under the College of Business Administration, Accounting, and Finance and Economics sections in this catalog. In addition, the department co-administers the Master of Information Technology (MIT) degree with the Computer Science department in the College of Engineering. Information pertaining to the MIT degree can be found in the Interdisciplinary Programs section of this catalog.

The following courses are included under the Information and Decision Sciences department section: Computer Information Systems (CIS) courses, Production/Operations Management (POM) courses, and Quantitative Methods (QMB) courses.

For Undergraduate and Graduate Students

**Computer Information Systems (CIS)**

- 4305 Advanced Business Systems Development
- 4365 Database Management
- 4368 Advanced Database Management

**Production/Operations Management (POM)**

- 3333 Production Planning and Control
- 4371 Transportation and Warehousing Systems

For Graduate Students Only

**Computer Information Systems (CIS)**

- 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.

5340 Electronic Commerce in Business (3-0)
The course will provide students with a well-defined set of business perspectives and good technical background in the electronic commerce (e-commerce) area. The course will also cover international, legal, ethical, and tax issues in the e-commerce area. The students will gain hands-on experience in designing, developing, deploying, and operating e-commerce dynamic Web sites using appropriate Web application construction software.

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)

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  **Inventory and Materials Management (3-0)**  
This course addresses the issues and approaches associated with managing the inventory and flow of raw materials, work-in-process, finished goods, and supplies to ensure/enhance the organization’s competitiveness and profitability. Topics will include outsourcing and make-or-buy decisions, international/global sourcing, and computer-based inventory/materials systems, as well as the formulation and application of quantitative models for inventory analysis and decision-making. The concepts, principles, and strategic impact of some of the more significant approaches in production/inventory planning and control, such as just in time systems, material requirements planning, and enterprise resource planning, will be discussed. **Prerequisites:** POM 5308 and QMB 5311 (or equivalents).

5325  **Global Operations and Supply Chain Management (3-0)**  
This course is designed to present and discuss concepts, issues and problems critical to global operations, with some emphasis on those that pertain to the operation and improvement of global supply chains. Innovations in global operations management and technology, as well as the opportunities and challenges posed by such innovations, will be investigated. Coverage will include successful approaches in the areas of product design, quality management, and project management, among others, that have led to dramatic improvements in global business performance. Important recent developments and approaches for the effective and efficient operation of global supply chains will be identified and discussed. **Prerequisites:** POM 5308, QMB 5311, MKT 5311, and CIS 5311 each with a grade of “B” or better, or equivalents.

5330  **Management of Service Operations (3-0)**  
The major concepts of service, the design and implementation of service systems, the operational issues, and the tools for managing a service operation are covered to provide understanding of the broader role of service at both the service and goods firms. Service strategies, service quality, and other emerging service issues are discussed. Special attention will be given to service operations in maquiladora environment. **Prerequisite:** POM 5308 or equivalent with a grade of “C” or better.

5392  **Directed Individual Study in Production/Operations Management (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.

5394  **Current Issues in Production/Operations Management (3-0)**  
A course organized to investigate special topics and current issues in production/operations management. **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)**

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.
The Department of Marketing and Management participates in the Master of Business Administration and the Master of Accountancy degrees. The requirements of these degrees are found under the College of Business Administration, Accounting, and Finance and Economics sections in this catalog.

For Undergraduate and Graduate Students

Management (MGMT)

- 4304 Human Resource Training and Development
- 4306 Franchising
- 4315 Human Resource Staffing and Planning
- 4325 International Management
- 4337 Compensation and Benefits

Marketing (MKT)

- 4325 International Marketing
- 4356 Logistics and Supply Chain Management
- 4390 Industrial Marketing
- 4391 Services Marketing

For Graduate Students Only

Management (MGMT)

- 5311 Organizational Management Seminar (3-0)
  An experiential study of management processes and problems associated with the social system of organizations including individual and group behavior, behavior among groups, and behavior of organizations in an international context interacting with external and internal environments.

- 5314 Corporate Entrepreneurship (3-0)
  Corporate entrepreneurship is the process of creating new ventures and generating innovation within existing organizations. This course examines organizational culture characteristics that facilitate or inhibit corporate venturing. Emphasis is placed on the process by which new venture opportunities are identified, launched and managed. The course focuses on the behaviors of venture team members associated with success. Prerequisite: MGMT 5311.
Management Strategy and Policy (3-0)
A seminar devoted to an investigation, analysis, and discussion of American business problems, trends, policies, and major issues. To be taken in the last semester. Prerequisite: Department approval.

International Strategic Management (3-0)
A study of the global competitive and economic factors that shape the environment in which firms operate. The distinctive nature of the business environment in developing countries, and the managerial implications of that, will be highlighted. Prerequisites: Department approval and to be taken in the last semester; fulfills the requirements for MGMT 5325.

Effective Management of Human Resources (3-0)
A study of methods to effectively utilize and manage human resources in a rapidly changing business environment. Topics covered include planning, staffing, appraising, compensating, training, career management, improving the work environment, and establishing and maintaining effective work relationships. Prerequisite: MGMT 5311 or department approval.

Global Management (3-0)
This course seeks to provide students with a synthesis of knowledge about globalization and organizational life. Additionally, it deals with the manner in which organizations orient themselves in order to respond to issues that stem from differing cultural logics. Prerequisite: MGMT 5311.

Total Quality Management (3-0)
Analysis of the philosophy of total quality, world class, and productivity management theories. Students will be exposed to “real world” practitioners and problems to build a perspective on problems faced by businesses, of all sizes and forms, in light of global competition. Prerequisites: QMB 5311 and (1) MGMT 5311 or (2) department approval.

Directed Individual Study in Management (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.

Current Issues in Management (3-0)
A course organized to investigate special topics and current issues in management. May be repeated for credit when topic varies. Prerequisite: MGMT 5311 or department approval.

Professional Report in Management (0-0-3)
May be taken only once for credit. Prerequisite: Department approval.

Marketing (MKT)
Marketing Management (3-0)
Analysis of policy formulation by marketing management with special emphasis on the influence of internal and external environment factors that affect the competitive strategies of a marketing firm.

International Marketing (3-0)
This course focuses on the types of marketing decisions facing the international marketing manager in the multinational firm. It examines international marketing in terms of exporting and importing as well as
other modes of entry. Considerable emphasis is placed upon
differences among markets because of geography, politics,
economics, culture, commercial policy, legal matters and trade
practices. Areas of investigation include global marketing of the
marketing mix and border/regional issues. Restricted to majors:
ACCT, BSAD, and ECON. Prerequisite: MKT 5311.

5392 Directed Individual Study in Marketing (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 Marketing (3-0)
A course organized to investigate special topics and current issues in
marketing. May be repeated for credit when content varies. Restricted
to majors: ACCT, BSAD, and ECON. Prerequisite: MKT 5311 or
department approval.

5397 Professional Report in Marketing (0-0-3)
May be taken only once for credit. Continuous enrollment required
while work on the professional report continues. Prerequisite:
Department approval.
COLLEGE OF EDUCATION

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Degree Programs

EdD    Educational Leadership and Administration

MA    Education

MEd    Education
      Educational Administration
      Educational Diagnostician
      Guidance and Counseling (School or Community)
      Instructional Specialist
      Reading Education
      Special Education
The College of Education has as its mission the preparation of education professionals and the investigation of problems and opportunities associated with schools and other youth-serving agencies, especially those in multicultural communities. Graduate programs in Education are based on established educational research and essential knowledge of sound professional practice. All programs in the College are approved by the Texas Higher Education Coordinating Board.

Graduate degree programs offered by the College of Education include a Master of Arts degree in Education and the Master of Education degree. Students may major in Education, Educational Administration, Educational Diagnostician, Guidance and Counseling, Special Education, Instructional Specialist, and Reading. Students should see the Graduate Advisor in the appropriate department. Graduate courses are offered through three departments: Educational Leadership and Foundations, Educational Psychology and Special Services, and Teacher Education. In addition to the aforementioned graduate programs, the Doctor of Education in Educational Leadership and Administration is offered which gives students the opportunity for doctoral study.

It is also possible for students to take post-baccalaureate course work leading to certification by the State Board for Educator Certification as Professional School Supervisor, Professional Principal, Professional School Superintendent, all-levels Reading Specialist, and Master Reading Teacher, Master Mathematics Teacher, Master Science Teacher, and Master Technology Teacher. Professional certification for classroom teachers can also be earned.

In addition, the College of Education, in partnership with local area school districts, offers an Alternative Teacher Certification Program. In this program, candidates teach full-time in an elementary or secondary public school and complete summer and evening course work toward initial (provisional) teacher certification in Texas. Certification in Career and Technology Education is also available. For more information, contact the Department of Teacher Education, Education 801. For students separately admitted to the Master of Education degree, Instructional Specialist major, some course work may apply toward the graduate degrees in Teacher Education or Educational Psychology. For more information, students should contact the Director of Alternative Teacher Certification, Education 801, or the Director of Career and Technology Education, Education 601, and the Graduate Advisors for the Teacher Education and Educational Psychology Departments.

Individuals seeking information about teacher certification in Texas should contact the Student Services Office, Education 412.

**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
Admission Requirements

- At least 12 semester hours of upper-division course work in Professional Education.
- A satisfactory undergraduate grade point average (GPA).
- International students whose first language is not English must score 213 (550 paper based) or higher on the TOEFL (Test of English as a Foreign Language).

Plan of Study

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 of Studies

The program consists of 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 for Post-Baccalaureate Students

Initial teacher certification can be earned by candidates who possess an undergraduate or advanced degree. Eligibility for these programs includes a minimum 2.50 cumulative GPA in the last 60 hours from an accredited college or university, successful completion of the THEA (Texas Higher Education Assessment test), and development of an approved plan of study. Eligible applicants for certification 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.

Professional certification is available in the following areas: Principal, Superintendent and Supervisor (Educational Leadership and Foundations Department), Educational Diagnostician, School Counselor, Community Counselor and Special Education Counselor (Educational Psychology and Special Services Department) and all-levels Reading Specialist and Master Reading Teacher (Teacher Education Department).

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 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 Catalog.

Additional information on certification programs is available from the Certification Office within the College of Education and the Graduate School.
The Department of Educational Leadership and Foundations offers a M.Ed. in Educational Administration (36 credit hours) with focus areas in K-12 or higher education administration and participates through the College of Education in offering an MA in Education in Educational Leadership (30 credit hours and 6 credit hour thesis). The department also offers an Ed.D. in Educational Leadership and Administration with focus areas in: (a) Central Office Leadership, (b) School Site Leadership, (c) Leadership in Higher Education and other Educational Settings, and (d) Leadership in Policy, Evaluation and Technology. In addition to these degree programs, for students already possessing a master’s degree in education, the Department offers course work leading to certification by the State Board for Educator Certification in the following areas:

- School Principal
- School Superintendent

For additional information see the Department of Educational Leadership and Foundations website.

**Master of Education**

Students who wish to pursue graduate study directed toward developing leadership and skills may pursue a major in educational administration.

**Admission Requirements**

Students seeking admission to any of the graduate degree or certification programs in the Department must complete the following prior to the semester in which they first plan to enroll. Application deadlines for the department may differ from those of the Graduate School.

1. Application for admission to the Graduate School
2. Submission of two letters of recommendation
3. Written letter of intent outlining prior experience, career objectives and statement of personal educational philosophy
4. Evidence of teacher certification and teaching experience (required only for those seeking principal certification)
5. An appointment with a Department Faculty Advisor: (915) 747-5300

**Educational Administration**

This 36-semester hour master’s degree plan is intended primarily for students who also wish to complete requirements for certification as a Professional Principal. The student should confer with a Department Faculty Advisor to determine additional requirements for State Board of Educator Certification as a Professional Principal.
Requirements for the M.Ed. with certification (36 credit hours)

EDAD 5310 Introduction to Educational Administration
EDAD 5345 Multicultural School Leadership
EDAD 5380 School Organization, Reform and Renewal
EDRS 5307 Data-Based Decision Making
EDAD 5346 Educational Program Planning and Evaluation
EDAD 5312 Instructional Leadership and Supervision I
EDAD 5342 Educational Law
EDAD 5348 Administration of School Personnel
EDAD 5314 School-Based Budgeting
SPED 5380 Leadership for Special Populations
EDAD 5375 School Management Internship I
EDAD 5376 School Management Internship II (includes TExES Prep Seminar)

* ILD/PDAS training
*TExES Exam

*ILD/PDAS and TExES are SBEC requirements that must be met before the College may make certification recommendations.

Successful completion of the TExES Qualifying Examination
Prerequisite: Completion of all required EDAD courses or department approval.

Requirements for certification only (for students already possessing a master’s degree in education)

Must demonstrate competency in each of the areas identified for the M.Ed. with certification as outlined above. Competency may be demonstrated through coursework, documented work experience, or other means as determined by program faculty.

Requirements for the M.Ed. without principal certification (36 credit hours)

EDAD 5345 Multicultural School Leadership
EDAD 5310 Introduction to Educational Administration
or
EDAD 5390 Introduction to Higher Education

Research Methods
EDRS 5305 Educational Research and Statistics
EDRS 5306 Qualitative Research

Electives selected in consultation with advisor
24 credit hours

Master of Arts in Education

The Master of Arts degree is designed for students wishing to pursue research and to continue studies beyond the master’s degree. Students may work with the Department of Educational Leadership and Foundations, specifically in the area of Educational Leadership, to develop a plan of study.

This 30-semester hour thesis program is described under the College of Education Introductory section. Six to 12 hours of course work may be taken in a related discipline of which at least three semester hours must be taken in residence. Students must make an appointment with a Department Faculty Advisor: (915) 747-5300.
Ed.D. in Educational Leadership and Administration

The Doctor of Education (Ed.D.) degree program in Educational Leadership and Administration offers students opportunities to develop the added knowledge, skills, and experiences necessary for leadership roles in contemporary and future positions in educational settings. Students select one of the following focus areas: (a) Central Office Leadership, (b) Leadership in Policy, Evaluation, and Technology, (c) School Site Leadership, or (d) Leadership in Higher Education and Other Educational Settings.

Requirements for Admission

Admission to this program involves the review of a wide array of data concerning each applicant. While many factors are considered, each applicant must provide certain required information of both a quantitative and qualitative nature.

Quantitative Measures

1. **Completion of a Master’s Degree:** Students entering the program should have completed a master’s degree in educational administration or leadership or an equivalent field. In cases where the degree was not in the field of educational administration or leadership, students may be required to enroll in master’s level courses and other learning experiences as determined by the program faculty advisor. Courses required to remove deficiencies or meet prerequisites will not count toward meeting doctoral degree credit hour requirements. These requirements must be met before permission will be granted to enroll in the doctoral core courses.

2. **Graduate Record Examination:** Candidates must provide scores from the Graduate Record Examination (GRE) completed within the past five years.

3. **Grades in Previous Course Work:** All applicants must furnish official transcripts according to the requirements of the Graduate School, documenting satisfactory academic performance. Generally, a minimum GPA of 3.0 is required.

4. **Language Competency:** International applicants for whom English is not a primary native language must also provide an acceptable score (minimum of 550) attained on the Test of English as a Foreign Language (TOEFL).

Qualitative Information

1. **Letters of Recommendation:** Applicants must furnish at least 3 letters of recommendation from individuals who are able to assess scholarly potential, past academic performance, and leadership skills.

2. **Statement of Personal Professional Belief:** Candidates must provide a written statement addressing significant educational leadership issues.

3. **Statement of Purpose:** This statement should outline some relevant past experiences that have led the applicant to this point in his/her academic career and also a description of future goals as related to the completion of the doctorate. The statement of purpose serves to assess compatibility between applicant goals and the program focus and to determine writing ability. The statement must be written in English.

4. **Faculty Interview:** Applicants who have furnished sufficient evidence that quantitative and qualitative indicators are consistent with program standards are invited to meet with members of the Doctoral Faculty prior to the determination of final admission status.
Degree Program Requirements

Credit Hour Requirements: The minimum credit hour requirements are 60 semester hours beyond the master’s degree. Students may be required to take additional courses to address particular specialization interests. Credit hours are distributed as follows:

- Doctoral Core (EDAD 6301, EDAD 6302, EDAD 6303, EDAD 6304, EDAD 6305, EDAD 6310, POLS 6303) ........ 18 hours
- Program Focus Area Courses ........................................... 12 hours
- Research Design and Methodology ................................... 12 hours
- Electives ........................................................................... 6 hours
- Field-Based Learning ......................................................... 6 hours
- Dissertation ......................................................................... 6 hours

Doctoral Core: All entering students will enroll in one doctoral course for the summer (EDAD 6305), two Doctoral Core courses during the first Fall semester, two Core courses during the Spring semester, and one Core course the following summer.

Program Focus Area Courses: After the first year, each student identifies a program Focus Area (Central Office Leadership; Leadership in Policy, Evaluation, and Technology; School Site Leadership; or Leadership in Higher Education and other Educational Settings). The initial Faculty Program Advisor works with the student to select four courses to serve as a core of courses that provides the student with essential learning experiences related to the identified Program Focus Area.

Research Design and Methodology: Students must complete at least six semester hours of course work in the area of research design and methodology. The purpose of this requirement is to assist the student in developing the skills needed to complete the dissertation. In consultation with his or her advisor, the student will select from courses available throughout the Graduate Catalog. Courses taken to complete the master’s degree in this Department (EDRS 5305 and EDRS 5306) may not be used to satisfy this requirement.

Electives: The student and his or her advisor will select courses within the department or other academic units of the University, which will assist the student in achieving his or her academic goals. Courses must be at the graduate level. Courses used to attain prior academic degrees may not be used to meet their requirement.

Field-Based Learning: Students are to complete at least 6 semester hours in field-based learning activities that are designed to provide practical experiences to enhance theoretical learning in other courses. (NOTE: EDAD courses completed as part of a master’s degree or certification programs may not be re-taken to satisfy this requirement.) This requirement may be satisfied by taking the following pairs of field-based courses: EDAD 6350 and EDAD 6351, or EDAD 5389.

Dissertation: After completing all courses and the Qualifying Examination, students work with their research advisor and dissertation committee to plan, design, implement, and eventually present the results derived from independent scholarly research related to an area of special interest and importance to the candidate and the field of educational leadership. Six semester hours of credit are earned from enrolling in EDAD 6398 and EDAD 6399, consecutively, i.e., 6399 is taken only after successfully completing 6398.
Time for Completion of the Ed.D. Degree

Students in the Ed.D. program in Educational Leadership and Administration are expected to complete all requirements for the degree within one 8-year period that begins with the term of the first course listed on the student’s degree plan.

Advisement

An important part of any doctoral program is the advisement received by students as they proceed toward the accomplishment of their professional, academic, and personal goals.

Initial Program Advising: Throughout the first year of matriculation the student will be advised by the Director of the Doctoral program. Following the Interim Review, the Program Director in consultation with the student and identified faculty, will appoint a Program Advisory Chair and Committee. Chair and committee appointments will take into consideration faculty academic expertise in the student’s focus area and the Department’s interest in maintaining workload balance among faculty. The Program Advisory Committee shall include at least three faculty members (two of whom are members of the Department of Educational Leadership and Foundations).

Program/Research Advising: Upon being admitted to Doctoral Candidacy the student (with approval of the Director of the Doctoral Program) selects a Dissertation Committee Chair and committee members. Doctoral dissertation committees shall consist of a minimum of four faculty members. Faculty eligible to serve on dissertation committees include members of the Educational Leadership and Administration Doctoral Faculty, EDLF professors emeriti, UTEP graduate faculty members (with approval of the Director of the Doctoral Program), and faculty members from other colleges and universities who are experts in the area of the dissertation (with approval of the Director of the Doctoral Program and the Dean of the Graduate School). At least two members of each committee and the chair must be members of the Doctoral Faculty in Educational Leadership and Administration and at least one member must be from EDLF faculty. Also, each dissertation committee shall include a member from outside the EDLF Department.

Interim Review and Qualifying Exam

Upon completion of the first year of study, faculty will undertake Interim Review in order to provide the student with perceptions of strengths and areas for further development. This review is considered a formative evaluation. Upon completion of required coursework the student will challenge a comprehensive Qualifying Exam. Upon completing the Qualifying Exam the student is admitted to doctoral candidacy.

Language Proficiency

El Paso serves a multilingual population, with Spanish or English being the primary language of most residents. It is expected that doctoral students will acquire and demonstrate proficiency in two languages, English and Spanish, prior to receipt of the Ed.D. degree.

Additional Information

Prospective students are strongly urged to schedule an appointment with the Director of the Doctoral Program or other members of the Doctoral Faculty to learn more about the specific policies related to each of the above program requirements.
Educational Administration (EDAD)

5310 Introduction to Educational Administration (3-0)
An introduction to the roles and functions of the school administrator emphasizing administrative and organizational theory and practice; identifies the primary knowledge, skills, and competencies required to be an effective school administrator. Prerequisite: Department approval.

5312 Instructional Leadership and Supervision I (3-0)
An introduction to the roles and responsibilities of the supervisor or school administrator as an instructional leader; emphasizes systematic classroom observation, evaluation of teaching, and clinical supervision. Prerequisite: EDAD 5310 or department approval.

5314 School-Based Budgeting (3-0)
This course provides students with an overview of educational budgeting practices and issues, with a primary emphasis on school sites. The course includes an introduction to the planning, cost-effectiveness, and resource allocation issues that arise in the educational budgeting process. Students also have opportunities to consider the equity consequences of the budgeting process, as well as the relationship between educational goals and associated resource allocation decisions. Course readings, assignments, and activities encourage students to develop a conceptual understanding of site-based budgeting and practical skills to participate in the budget development process. Prerequisite: EDAD 5310.

5340 Human Factors in Education (3-0)
Treats interpersonal relations and human variables in groups and formal organizations with special emphasis on schools and organizations; identifies strategies for the school principal to improve work group effectiveness. Prerequisites: EDAD 5310 and EDAD 5312.

5342 Educational Law (3-0)
An introduction to the federal and state legal systems including constitutional provisions, federal and state regulations, and court decisions affecting public education; includes student and employee rights and responsibilities, statutory and assumed authority of school boards, relations with employee organizations, civil liability of school personnel, and elements of due process. Prerequisites: EDRS 5306, EDAD 5310, and EDAD 5312.

5345 Multicultural School Leadership (3-0)
Overview and systematic application of essential qualitative inquiry skills appropriate for use by school leaders to investigate issues of inclusion and diversity and generate effective curricular, instructional and administrative policies and practices. Corequisites: EDAD 5310.

5346 Educational Program Planning and Evaluation (3-0)
Opportunity to develop the knowledge, skills, and competencies required to plan and manage regular and special school programs; includes policy formulation, goal setting, and evaluation emphasizing data-based management systems; requires field-based component. Prerequisites: EDAD 5310 and EDAD 5312.

5348 Administration of School Personnel and Services (3-0)
Emphasizes school management tasks and responsibilities related to certified and non-certified staff including position descriptions, recruitment, selection, assignment, and compensation; treats EEO regulations, due process, grievance handling, and other legal requirements including collective bargaining. Prerequisites: EDAD 5310 and EDAD 5312.
5365  Directed Individual Study (0-0-3)
Area of study will be designated. May be repeated for credit when topic varies. Prerequisite: Department approval.

5370  Graduate Workshop in Educational Administration and Supervision (0-0-6)
Selected topics for graduate students, supervisors, and school administrators in such areas as grant writing, school discipline, computer utilization, and other special problems. May be repeated for credit when topic varies. Prerequisites: EDAD 5310, and EDAD 5312, or department approval.

5375  School Management Internship I (1-0-4)
First half of a two-course sequence including planned field experience and seminars for the Professional Principal Certification candidate; field experience includes working with a fully certified cooperating administrator in elementary, middle, and high school settings under the supervision of a university professor; includes administration of special programs, community education programs, student services, discipline management, scheduling, budgeting, and school business management. Prerequisites: Department approval.

5376  School Management Internship II (1-0-4)
Continuation of EDAD 5375. Prerequisites: EDAD 5375 and department approval.

5380  School Organization, Reform and Renewal (3-0)
Describes systems, cultural and community of learner approaches to the school organization; emphasizes institutionalization of organization development in school districts and essential competencies for organization reform and renewal. Prerequisite: Department approval.

5382  Educational Finance (3-0)
Basic concepts of the economics of education; uses the systems approach to analyze the issues of equity and equality in educational resource allocation and distribution; includes current Texas state funding policies. Prerequisite: Department approval.

5384  Educational Facilities Management (3-0)
Identifies the knowledge, skills, and competencies required of the school administrator to manage educational facilities; includes population projections and needs assessments, planning, developing educational specifications, site selection, capital outlay, and costs; covers rehabilitating existing buildings, maintenance and operations, and equipment management. Prerequisite: Department approval.

5385  Ethics of Leadership in Education (3-0)
This course examines classic to contemporary works in philosophy, political science, history, literature, and other disciplines in an attempt to understand the importance of ethics and to imbue the value and necessity of ethical principles in our educational leaders. Prerequisite: Department approval.

5386  Educational Policy Development (3-0)
Treats the techniques of describing and selecting among alternative problem solutions based on quantifiable predictions; application to both general and specific educational issues including socio-political factors. Prerequisite: Department approval.
5387 Higher Education Policy Analysis (3-0)
The course investigates the predominant theoretical and practitioner works in higher education policy research. The course provides a foundation for the critical analysis of postsecondary educational policy and the policy-making process. Prerequisite: Department approval.

5388 Central Office Administration (2-0-2)
Critical aspects of central office administration including personnel, programs, budget, planning, evaluation, school board relations, state and federal influences, and general administration of a school district; field experience required. Prerequisite: Department approval.

5389 School Superintendent Internship (1-0-4)
Planned field experience and seminars for the Professional School Superintendent Certificate candidate; field experience includes working with a fully certified cooperating administrator in school and central office settings under the supervision of a university professor; includes consideration of problems relating to overall school district operations. Prerequisites: Completion of all other course work required for the Superintendent Certificate and department approval.

5390 Introduction to Higher Education (3-0)
This course introduces students to the organization of higher education institutions, including two- and four-year colleges and universities. Students will explore the history and philosophy of higher education along with exposure to some of the main issues in higher education including governance, politics, finance and relationships with various constituent groups. Students will develop an understanding of the background, growth, purposes, and practices of higher education in the United States. Prerequisite: Department approval.

5391 History of Higher Education (3-0)
This course will examine historical trends in higher education that have affected faculty, staff, students, and trustees in terms of traditions, customs, values, and practice. Prerequisite: Department approval.

5392 The Community College (3-0)
This course provides a historical overview of the development of American community colleges. The course focuses on the social forces leading to the community college movement, educational philosophies, and multiple institutional missions. The roles and responsibilities of leaders in meeting the needs of diverse populations will be emphasized. Particular attention will be paid to the organizational structures and processes that shape administrative decision making and educational leadership. Prerequisite: Department approval.

5393 Higher Education Law (3-0)
This course will emphasize the legal environment of postsecondary education legal processes, and analysis of problems incurred in the American system of higher education. This course will also examine past and present legal precedence as established by state, federal, and supreme courts. Prerequisite: Department approval.

5394 Higher Education Governance (3-0)
The purpose of this course is to expose the student to the literature on management of higher education institutions. This course will help future higher education leaders understand the distinctive organization and behavioral features of colleges and universities, and use this knowledge to better manage and lead their institutions. Prerequisite: Department approval.
5395 Politics of Higher Education (3-0)
This course will examine the politics of educational organizations and leadership. It is designed for the educational leader and researcher who deal with the impact of political action on managing and leading educational institutions. It provides an introduction to the field of educational politics with special emphasis on theoretical and conceptual analysis of the political behavior of education’s stakeholders. Prerequisite: Department approval.

5396 Higher Education Finance (3-0)
This course will provide an overview of the economics and financing of postsecondary education in the United States. It will include an introduction to economic theory as applied to institutions of higher learning, financial trends in funding America’s college and universities, federal investments in higher education, tuition and fee trends, and state policy and budgeting processes. The course will briefly review the basic elements of fiscal management at the institutional level. Prerequisite: Department approval.

5397 Student Development Theory (3-0)
The purpose of this course is to examine a range of human development theories that offer insight into processes of student learning, growth, and development during the college years. Special focus will be directed toward understanding the implications of these theories for and practice of education in general and student affairs in particular. Prerequisite: Department approval.

6301 Historic and Philosophical Foundations of Education (3-0)
This course is organized around four central themes: 1) the moral dimensions of teaching and enculturation of the young in a democracy; 2) problems of access to knowledge; 3) the notion of pedagogical nurturing; and 4) the stewardship of schools in educative communities. Key readings include selections from Plato, Rousseau, Dewey, and Goodlad. Corequisites: EDAD 6303, EDAD 6304, and POLS 6303. Prerequisite: Department approval.

6302 Advanced Research Design and Data Analysis (3-0)
This course focuses on the use of quantitative research, data analysis, and inferential statistics in problem-solving in educational leadership. Applications of experimental or non-experimental research design, operational definitions, instrumentation, sampling methodology, hypothesis testing, and management and statistical analysis of large scale databases will be examined. Data collection and analysis methods will include interviews, focus group questions, surveys, regression, path analysis, and analysis of variance. Prerequisites: EDAD 6301, EDAD 6303, EDAD 6304, and POLS 6303.

6303 Seminar in Decision-Making and Problem Solving in Education (3-0)
Students will examine and conduct research about decision-making processes from the perspectives of educational institutions at local, state, and national levels. Corequisites: EDAD 6301, EDAD 6304, and POLS 6303. Prerequisite: Department approval.

6304 Organizational Theory and Development (3-0)
This course focuses on change and reform in education and the theories and professional practices used to create organizational change. Corequisites: EDAD 6301, EDAD 6303, and POLS 6303. Prerequisite: Department approval.
6305 **Educational Inquiry (3-0)**
This class is designed to help doctoral students explore major discourses in educational research and their methodological implications. Concepts and ideas will be introduced through lectures, seminars, and review of readings. Emphasis will be placed on the practical applications of the material discussed. **Prerequisite:** Department approval.

6307 **Advanced Legal and Ethical Aspects of Leadership (3-0)**
This course examines the legal and ethical issues that face educational leaders, including responsibilities, accountability, the public interests, and professionalism. Students will also analyze and synthesize the judicial interpretations of constitutions, statutes, rules, and regulations, and the common law with special focus on individual student's interests. **Prerequisites:** EDAD 6301, EDAD 6302, EDAD 6303, EDAD 6304, and POLS 6303, or department approval.

6308 **State and Local Educational Finance Policies (3-0)**
Examination of research, as well as theoretical and practical foundations of economic and social accountability in educational organizations. Students will conduct comparative analyses of state educational finance policies, with emphasis on the relationships between the principles of accountability, adequacy, equity, and quality. **Prerequisites:** EDAD 6301, EDAD 6302, EDAD 6303, and EDAD 6304; or department approval.

6309 **Seminar in Educational Leadership (3-0)**
Focus on alternative leadership styles and theories of leadership. Students will learn how to assess their own basic and preferred leadership styles. Each student will be encouraged to develop a personal growth plan in educational leadership. **Prerequisites:** EDAD 6301, EDAD 6302, EDAD 6303, and EDAD 6304, or department approval.

6310 **Evaluation, Accountability, and Policy Analysis Models (3-0)**
Students will learn to use appropriate multiple indicators and analytic frameworks for documenting, measuring, and evaluating changes in educational policy and practice. **Prerequisites:** EDAD 6301, EDAD 6302, EDAD 6303, and EDAD 6304, or department approval.

6312 **Educational Leadership in Metropolitan Areas (3-0)**
This course examines the social, economic, and political characteristics of urban communities and the relationship of education to social settings. The role of leadership, interest groups, and pressure groups are examined, as is the conversion processes and conflict resolution in a context of large, complex urban/minority school districts and the creation of alternative delivery systems. **Prerequisites:** EDAD 6301, EDAD 6302, EDAD 6303, EDAD 6304, and department approval.

6313 **Administration of Categorical Programs (3-0)**
This course examines the leadership roles in securing, administering, and evaluating categorical programs, sponsored projects, and grants. Guest lecturers will include directors of large projects. Team-taught. **Prerequisites:** EDAD 6301, EDAD 6302, EDAD 6303, and EDAD 6304 or department approval.

6315 **Qualitative Research Methodology (3-0)**
Students will examine qualitative and ethnographic research methods, including participant observation and open-ended interviewing to address problems of educational organizations. **Prerequisites:** EDAD 6301, EDAD 6302, EDAD 6303, and EDAD 6304; or department approval.
6316 Qualitative Research Methods II (3-0)
Building on qualitative research methodology, and ethnographic methods, this class will explore the variations and complexity of qualitative methods in addressing problem solving in educational settings. Prerequisites: EDAD 6302 and EDAD 6315 each with a grade of “C” or better, or the equivalent assessed and approved by the instructor.

6317 Mixed Methods (3-0)
This course is an advanced research course designed to expose students to the uses of mixed methods research in education. A strong focus will be placed on the potential complementary nature of qualitative and quantitative methodologies for mixed methods studies. Students will also learn about the critical issues involved in appropriately integrating methods, as warranted by the research projects undertaken. Prerequisites: EDAD 6302 and EDAD 6315 each with a grade of “C” or better.

6321 Multicultural Diversity in Educational Leadership (3-0)
Students will examine the impact of multicultural pluralism and diversity and how these concepts and practices impact leadership and administration in educational settings. Prerequisites: EDAD 6301, EDAD 6302, EDAD 6303, and EDAD 6304; or department approval.

6340 Administrative Implications from Cognitive Psychology and Learning Theory (3-0)
Implications from cognitive psychology and learning theory for students learning in multicultural diverse urban contexts of schooling. The course examines classical and contemporary learning theories as they affect program changes in schools and other educational settings. Prerequisites: EDAD 6301, EDAD 6302, EDAD 6303, and EDAD 6304; or department approval.

6350 Internship in Leadership (0-0-3)
With the joint guidance of a university faculty member and a practicing leader/administrator in an educational setting, students will be provided opportunities for supervised research and decision-making in a professional setting. Prerequisite: Permission of the Graduate Advisor.

6351 Internship in Leadership II (0-0-3)
The second semester of internship will provide continuation of supervised research and decision-making in a professional setting. Prerequisite: EDAD 6350 or permission of the graduate advisor.

6370 Graduate Workshop in Educational Leadership and Administration (3-0)
Selected topics for doctoral students in areas related to Central Office Leadership; School-site Leadership; Leadership in Other Educational Settings; or Leadership in Evaluation, Assessment, and Technology. May be repeated for credit when topic varies. Prerequisite: Departmental approval.

6398 Dissertation Research (0-0-3)
Under the direction of their Dissertation Committee Chair, students will prepare a dissertation proposal. Continuous registration is required until the proposal is approved by the Dissertation Committee. Prerequisites: Admission to doctoral candidacy, permission of Dissertation Committee Chair, and department approval.
6399  Dissertation Writing (0-0-3)
Students, under the direction of the Dissertation Committee Chair, will
write a dissertation. Continuous registration in EDAD 6399 is required
until the dissertation has been successfully defended and is accepted
by the Dissertation Committee. Prerequisites: EDAD 6398 and
department approval.

Educational Research and Statistics (EDRS)

5305  Educational Research and Statistics (3-0)
First of a two-course sequence to develop interrelated concepts and
skills of research methods, experimental design in education, and
statistical methods; includes computer applications and required
computer laboratory; requires development of a formal research
proposal.

5306  Qualitative Research (3-0)
An introduction to qualitative research, showing when it is appropriate,
what research questions it answers, and how to go about designing,
carrying out, analyzing, interpreting, and writing up qualitative research.
A practice research project is included. Prerequisite: EDRS 5305
with a grade of “C” or better.

5307  Data Based Decision Making (3-0)
Application of quantitative data analysis techniques for the examination
of national, state and local data bases to guide school level decision
making. Emphasis upon evidence based decision making, data analysis
and data display for various school stakeholders.

5340  Advanced Statistics (3-0)
Review of experimental design and computer applications; includes
linear regression, multivariate analysis; with an introduction to
nonparametric techniques. Prerequisite: EDRS 5306.
Graduate Programs and Plans

The Educational Psychology and Special Services Department offers two graduate degrees. The Master of Arts in Education degree is designed for students wishing to pursue research and to continue studies beyond the master’s degree level. The Master of Education degree is directed toward the professional who wishes to prepare for specialized professional practice as a school or community counselor, educational diagnostician, or special educator. Students pursuing this degree choose the Educational Diagnostician major, Guidance and Counseling major, or Special Education major.

In addition to these degree programs, the Department offers course work leading to School Counselor and Educational Diagnostician certification by the State Board for Educator Certification and the Special Education Counseling endorsement. Additionally, completion of the Master of Education in Guidance and Counseling (School Counseling Emphasis or Community Counseling Emphasis) prepares the student with the academic course work necessary for licensure (LPC) as a professional counselor in Texas.

Master of Arts in Education

The Master of Arts degree is designed for students who wish to pursue research and to continue studies beyond the master’s degree level. Students may work with the Department of Educational Psychology and Special Services, specifically in the areas of Educational Diagnostician, Guidance and Counseling, and Special Education, to develop a plan of study.

This thirty-semester hour thesis program is described under the College of Education Introductory section. Six to twelve hours of course work may be taken in a related discipline of which at least three semester hours must be taken in residence. Students must make an appointment with a Department Faculty Advisor: (915) 747-5221.

Master of Education

The Educational Psychology and Special Services Department offers the M.Ed. degree with the following majors:

- Educational Diagnostician
- Guidance and Counseling (School or Community)
- Special Education

Admission Requirements

Students seeking admission to a graduate program in the Department must:

1. Submit an application to the Graduate School
2. Have a grade point average (GPA) of: 3.0 (cumulative or in student’s major or in all upper division coursework)
3. Submit a resume and three letters of reference to the Department
4. Have an interview with Departmental Graduate Studies Committee
5. Complete a writing sample on site at the time of the interview

GPAs, interviews, references, and writing samples will be scored according to a set protocol. Lower total scores accepted for admission will be on conditional basis. Higher total scores accepted for admission will be full admission.

Additional admission requirements may be specified (see below).

Educational Diagnostician

This program is intended primarily for students who have concentrated their previous academic work in Special Education. A Texas Provisional Teaching Certificate is required. The applicant should confer with the Graduate Advisor to determine additional requirements for State Board of Educator Certification as a Professional Educational Diagnostician.

Additional Admission Requirements: Completion of a minimum of twelve semester hours of advanced professional special education with a grade of “B” or better. The following courses are required: SPED 4330 (Diagnosis and Placement in Special Education); SPED 4340 (Transition Education for Special Learners) or SPED 5370 (Teaching Secondary Learners with Mild Disabilities); SPED 5361 (Applied Behavior Analysis) or SPED 5363 (Interventions for the Severely Emotionally Disturbed). For teachers not certified in Special Education, SPED 5380, Leadership for Special Populations is also required. Two years of classroom teaching experience is required prior to admission to the program.

Program (36 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>SPED 5320</td>
<td>Special Education: Historical and Legal Basis</td>
</tr>
<tr>
<td>SPED 5330</td>
<td>Early Intervention for Young Children and Their Families</td>
</tr>
<tr>
<td>EDPC 5334</td>
<td>Classroom Based Appraisal</td>
</tr>
<tr>
<td>EDPC 5336</td>
<td>Advanced Educational Appraisal</td>
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<tr>
<td>SPED 5337</td>
<td>Assessment: Disability and Cultural/Linguistic Factors</td>
</tr>
<tr>
<td>SPED 5340</td>
<td>Learning Theories Across the Lifespan</td>
</tr>
<tr>
<td>EDPC 5344</td>
<td>Use and Interpretation of Cognitive Measures</td>
</tr>
<tr>
<td>SPED 5345</td>
<td>Remediating Students with Learning Disabilities</td>
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<tr>
<td>SPED 5347</td>
<td>Working with Parents of Learners with Special Needs</td>
</tr>
<tr>
<td>EDPC 5348</td>
<td>Application of Assessment for Decision Making</td>
</tr>
<tr>
<td>SPED 5371</td>
<td>Teaching Students with Severe Disabilities</td>
</tr>
<tr>
<td>EDPC 5375</td>
<td>Internship for Educational Diagnostics</td>
</tr>
</tbody>
</table>

Comprehensive Examination: Written comprehensive examination.

Prerequisite: Completion of all required courses or permission of Department.

Certification: TExES exam (Texas Examination of Educator Standards)

Total: 36 semester hours

Guidance and Counseling

School Counseling Emphasis

This plan is intended primarily for those wishing to be public school counselors.

Additional Admission Requirements: Completion of a minimum of nine semester hours of undergraduate upper-division course work in Professional Education, Behavioral Science (Psychology, Social Work, Sociology, Social Work and/or Criminal Justice) or Nursing with grades of “B” or better (must be completed prior to admission to the program). SPED 5320, Special Education: Historical and Legal Basis, also required, may be taken after admission to the program.
Core Requirements (6 semester hours)

EDPC 5317 Human Growth and Development
EDPC 5341 Theories of Counseling

Specialization (27 semester hours)

EDPC 5320 Lifestyle and Career Development
EDPC 5321 School Counseling
EDPC 5324 Ethical, Legal, and Professional Issues in Counseling
EDPC 5338 Group Counseling
EDPC 5339 Techniques of Counseling
EDPC 5345 Abnormal Human Behavior
EDPC 5346 Counseling Multi-Cultural and Diverse Populations
EDPC 5360 Introduction to Marriage and Family Therapy
EDPC 5362 Counseling Children, Adolescents and Their Families

Related Area (6 semester hours)

EDPC 5310 Applied Research Design for Educators
EDPC 5335 Principles of Appraisal and Assessment

Clinical Sequence (9 semester hours)

EDPC 5371 Counseling Practicum
EDPC 5372 Counseling Internship I
EDPC 5373 Counseling Internship II

Comprehensive Examination: During final semester of coursework.
Total: 48 semester hours

School Counselor Certification: In addition to the completion of the 48 hours master's degree program, a student must also have:

1. Valid Texas Teaching Certificate
2. Two years of classroom teaching experience
3. Satisfactory completion of the Texas Examination of Educator Standards (TExES) for school counselors

Licensure: For licensure as a Professional Counselor in Texas, in addition to the 48 hours Master's Program, a student must have:

1. 3,000 clock hours of supervised experience and
2. Satisfactory completion of the Texas State Board Examination of Professional Counselors

Community Counseling Emphasis

This plan is intended primarily for those pursuing employment as community counselors in a public and private agency or hospital settings.

Additional Admission Requirements: Completion of twelve semester hours of undergraduate upper-division course work in Professional Education or Behavioral Science (Psychology, and/or Social Work and/or Criminal Justice) or Nursing with grades of "B" or better (must be completed prior to admission to the program).

Core Requirements (6 semester hours)

EDPC 5317 Human Growth and Development
EDPC 5341 Theories of Counseling

THE UNIVERSITY OF TEXAS AT EL PASO
Specialization (27 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EDPC 5320</td>
<td>Lifestyle and Career Development</td>
</tr>
<tr>
<td>EDPC 5322</td>
<td>Community and Agency Counseling</td>
</tr>
<tr>
<td>EDPC 5324</td>
<td>Ethical, Legal, and Professional Issues in Counseling</td>
</tr>
<tr>
<td>EDPC 5338</td>
<td>Group Counseling</td>
</tr>
<tr>
<td>EDPC 5339</td>
<td>Techniques of Counseling</td>
</tr>
<tr>
<td>EDPC 5345</td>
<td>Abnormal Human Behavior</td>
</tr>
<tr>
<td>EDPC 5346</td>
<td>Counseling Multi-Cultural and Diverse Populations</td>
</tr>
<tr>
<td>EDPC 5360</td>
<td>Introduction to Marriage and Family Therapy</td>
</tr>
<tr>
<td>EDPC 5362</td>
<td>Counseling Children, Adolescents, and Their Families</td>
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</tbody>
</table>

Related Area (6 semester hours)

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EDPC 5310</td>
<td>Applied Research Design for Educators</td>
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<tr>
<td>EDPC 5335</td>
<td>Principles of Appraisal and Assessment</td>
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</table>

Clinical Sequence (9 semester hours)

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EDPC 5371</td>
<td>Counseling Practicum</td>
</tr>
<tr>
<td>EDPC 5372</td>
<td>Counseling Internship I</td>
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<tr>
<td>EDPC 5373</td>
<td>Counseling Internship II</td>
</tr>
</tbody>
</table>

Comprehensive Examination: During final semester of coursework.

Licensure: For licensure as a Professional Counselor in Texas, in addition to the 48 hours Master’s Program, a student must have:

1. 3,000 clock hours of supervised experience
2. Satisfactory completion of the National Counselor Exam as administered by the Texas State Board Examiners of Professional Counselors

Total: 48 semester hours

Special Education

This plan is intended primarily for students who have concentrated their previous academic work in any area of education. The applicant should confer with the Graduate Advisor to determine which specialization he or she will pursue.

Additional Admission Requirements: Valid Texas Teaching Certificate or equivalent; three years of teaching experience by time of program completion. All options require a valid Texas Teaching Certificate in Generic Special Education.

Core Requirements (12 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>EDPC 5310</td>
<td>Applied Research Design for Educators</td>
</tr>
<tr>
<td>SPED 5320</td>
<td>Special Education: Historical and Legal Basis</td>
</tr>
<tr>
<td>SPED 5322</td>
<td>Teaching Culturally and Linguistically Diverse Learners</td>
</tr>
<tr>
<td></td>
<td>with Special Needs</td>
</tr>
<tr>
<td>SPED 5347</td>
<td>Working with Parents of Learners with Special Needs</td>
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</tbody>
</table>

Specialization (24 semester hours in only one of the following options)

*Learning Disabled (Option 1)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EDPC 5334</td>
<td>Classroom Based Appraisal</td>
</tr>
<tr>
<td>SPED 5330</td>
<td>Early Intervention for Young Children and their Families</td>
</tr>
<tr>
<td>SPED 5370</td>
<td>Teaching Secondary Students with Mild Disabilities</td>
</tr>
<tr>
<td>SPED 5340</td>
<td>Theories of Learning Across the Lifespan</td>
</tr>
<tr>
<td>SPED 5345</td>
<td>Remediating Students with Learning Disabilities</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
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</tr>
<tr>
<td>SPED 5330</td>
<td>Early Intervention for Young Children and their Families or Bilingual Special Education (Option 2)</td>
</tr>
<tr>
<td>SPED 5360</td>
<td>Teaching Secondary Students with Mild Disabilities</td>
</tr>
<tr>
<td>SPED 5370</td>
<td>Theories of Learning Across the Lifespan</td>
</tr>
<tr>
<td>SPED 5361</td>
<td>Applied Behavior Analysis</td>
</tr>
<tr>
<td>SPED 5363</td>
<td>Interventions for Learners with Behavior Disorders</td>
</tr>
<tr>
<td>SPED 5369</td>
<td>Teaching Reading to Learners with Mild Disabilities</td>
</tr>
<tr>
<td>SPED 5373</td>
<td>Teaching Students with Autism</td>
</tr>
<tr>
<td>SPED 5321</td>
<td>Topics in Culturally and Linguistically Diverse Education for Learners with Special Needs</td>
</tr>
<tr>
<td>SPED 5378</td>
<td>Research and Applications in Special Education</td>
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</tbody>
</table>

*Severely Emotionally Disturbed (Option 2)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SPED 5370</td>
<td>Teaching Secondary Students with Mild Disabilities</td>
</tr>
<tr>
<td>SPED 5361</td>
<td>Applied Behavior Analysis</td>
</tr>
<tr>
<td>SPED 5363</td>
<td>Interventions for Learners with Behavior Disorders</td>
</tr>
<tr>
<td>SPED 5369</td>
<td>Teaching Reading to Learners with Mild Disabilities</td>
</tr>
<tr>
<td>SPED 5373</td>
<td>Teaching Students with Autism</td>
</tr>
<tr>
<td>SPED 5321</td>
<td>Topics in Culturally and Linguistically Diverse Education for Learners with Special Needs</td>
</tr>
<tr>
<td>SPED 5378</td>
<td>Research and Applications in Special Education</td>
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</tbody>
</table>

*Bilingual Special Education (Option 3)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SPED 5321</td>
<td>Topics in Culturally and Linguistically Diverse Education for Learners with Special Needs</td>
</tr>
<tr>
<td>BED 5331</td>
<td>Bilingual/Bicultural Curriculum</td>
</tr>
<tr>
<td>SPED 5337</td>
<td>Assessment: Disabilities and Cultural/Linguistic Factors</td>
</tr>
<tr>
<td>SPED 5345</td>
<td>Remediation Students with Learning Disabilities</td>
</tr>
<tr>
<td>SPED 5350</td>
<td>Special Topic: Diagnosis and Placement or Elective</td>
</tr>
<tr>
<td>SPED 5361</td>
<td>Applied Behavior Analysis or</td>
</tr>
<tr>
<td>SPED 5363</td>
<td>Interventions for Learners with Behavior Disorders</td>
</tr>
</tbody>
</table>

Elective: SPED 5330, or 5370.

**Comprehensive Examination:** Written comprehensive examination.

**Prerequisite:** Completion of all required courses or permission of the Department.

Total: 36 semester hours

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**Endorsement**

**Special Education Counseling Endorsement**

This plan is primarily for students who have completed the School Counselor’s program and wish to obtain the additional endorsement as a counselor for exceptional children.

**Admission Requirement:** Completion of all requirements in the School Counseling program and three years of teaching experience, at least one of which is in special education.

**Program** (12 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SPED 5345</td>
<td>Remediation of Learning Disabilities</td>
</tr>
<tr>
<td>SPED 5347</td>
<td>Parents of Exceptional Children</td>
</tr>
<tr>
<td>SPED 5363</td>
<td>Interventions for Learners with Behavior Disorders</td>
</tr>
<tr>
<td>SPED 5371</td>
<td>Teaching Students with Severe Disabilities</td>
</tr>
</tbody>
</table>

Total: 12 semester hours

A special certification plan must be on file and fee paid to the Certification Office.

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THE UNIVERSITY OF TEXAS AT EL PASO
EDUCATIONAL PSYCHOLOGY AND SPECIAL SERVICES / 171

Educational Psychology and Counseling (EDPC)

5170 Special Topics in Educational Psychology and Counseling (1-0)
Selected topics for graduate students, teachers, school counselors, and agency counselors in special areas. May be repeated when topic varies. Prerequisite: Department approval.

5310 Applied Research Design for Educators (3-0)
Course focuses on the use of qualitative research methods in educational settings which serve diverse and/or special populations. Research design will include descriptive statistics, single-subject and qualitative research methods. Prerequisite: Department approval.

5317 Human Growth and Development (3-0)
Descriptive analysis of basic theories, patterns and stages of human physical, social, emotional, moral, intellectual, cognitive, and personality growth and development.

5320 Lifestyle and Career Development (3-0)
An overview of the various theories of career counseling. Emphasis on incorporating an understanding of the goals accomplished by career, vocational, and occupational counseling. The connection between career choice and life style development will be examined. Prerequisites: EDPC 5317 and EDPC 5341 each with a grade of “B” or better. EDPC 5317 and EDPC 5341 may be taken concurrently with EDPC 5320.

5321 School Counseling (3-0)
Analysis of the organization and administration of school counseling programs and services, including professional orientation issues. Emphasis on developmental school guidance and counseling in accordance with both national and Texas standards. Prerequisites: EDPC 5317 and EDPC 5341 each with a grade of “B” or better.

5322 Community/Agency Counseling (3-0)
Analysis of the organization and administration of community and agency counseling programs and services, including professional orientation issues. Prerequisites: EDPC 5317 and EDPC 5341, each with a grade of “B” or better.

5324 Ethical, Legal, and Professional Issues in Counseling (3-0)
A study of ethical, legal and professional issues for counselors in public schools and community agencies. Potential ethical and legal dilemmas are studied to assist students in developing ethical decision-making skills as part of professional practice.

5334 Classroom Based Appraisal (3-0)
Theory and use of norm and criterion referenced instruments in the classroom, including curriculum based, performance, portfolio and informal assessments. Prerequisites: Completion of Special Education courses required with this degree and department approval.

5335 Principles of Appraisal and Assessment (3-0)
Principles of educational and psychological testing including purposes, methods, and procedures. An emphasis will be placed on analysis, evaluation, and administration of various educational and psychological instruments. Prerequisites: EDPC 5317, EDPC 5341, EDPC 5345, and EDPC 5346 each with a grade of “B” or better.
5336 **Advanced Educational Appraisal (3-0)**
Analysis, evaluation, and administration and interpretation of standardized achievement, diagnostic and adaptive behavior measures. Interpretation and evaluation of results through written educational reports are required. *Prerequisite:* EDPC 5334 with a grade of “B” or better.

5338 **Group Counseling (3-0)**
Description of the history, principles, theories, and techniques of group counseling. Emphasis on the open communication process, curative factors, stages of group development, and the role of therapeutic leadership, to include techniques, skills, and styles unique to the group process. Participation in a small group experience is an ungraded requirement for successful course completion. *Prerequisites:* EDPC 5317, EDPC 5341, each with a grade of “B” or better, and department approval.

5339 **Techniques of Counseling (3-0)**
Focus on the development and effective use of skills and techniques basic to the process of individual counseling as derived from the major theories of counseling. *Prerequisites:* EDPC 5338 with a grade “B” or better and department approval.

5341 **Theories of Counseling (3-0)**
Study and analysis of the major affective, cognitive, and behavioral theories and therapeutic approaches to individual counseling. Emphasis on historical perspectives and practical application.

5344 **Use and Interpretation of Cognitive Measures (3-0)**
Identifies techniques and procedures of standardized administration of verbal and nonverbal cognitive tests. Emphasis on interpretation of results and program recommendations required. *Prerequisite:* EDPC 5334, EDPC 5336, and SPED 5337, each with a grade of “B” or better.

5345 **Abnormal Human Behavior (3-0)**
A study of the development of abnormal human behavior patterns and characteristics to include the major mental and personality disorders with emphasis on the symptomatology and/or life circumstances and events described in the various diagnostic categories. *Prerequisites:* EDPC 5317 and EDPC 5341 each with a grade of “B” or better. EDPC 5317 and EDPC 5341 may be taken concurrently with EDPC 5345.

5346 **Counseling Multicultural and Diverse Populations (3-0)**
A study of societal changes and trends, human roles, societal subgroups, social mores and interactions, and differing life styles. Focuses on socio-cultural characteristics and concerns of subgroups and the application to multicultural counseling. *Prerequisites:* EDPC 5317 and EDPC 5341 each with a grade of “B” or better. EDPC 5317 and EDPC 5341 may be taken concurrently with EDPC 5346.

5348 **Application of Assessment for Decision Making (3-0)**
Pre-internship course. Includes supervised practice of testing procedures, comprehensive evaluations, psycho-educational report writing and side by side comparison of federal and state regulations for identifying and serving students in special education. *Prerequisites:* EDPC 5334, EDPC 5336, EDPC 5337 and EDPC 5344 each with a grade of “B” or better.
5360 Introduction to Marriage and Family Therapy (3-0)
A study of the major theoretical approaches to marriage and family counseling. Emphasis on the individual’s role in the family of origin and family of procreation and how family systems approaches to therapy impact each individual within the family. *Prerequisites:* EDPC 5317 and EDPC 5341 each with a grade of “B” or better.

5361 Family Theories (3-0)
This course is a comprehensive exploration of several major theories concerning family interaction. Primary emphasis is placed upon the fundamental concepts of General Systems Theory, The Family Life Cycle, and family processes and their application to marriage and family therapy. The role of theory in empirical investigation, conceptual frameworks and strategies of theory-building in the interdisciplinary study of marriage and family therapy will also be studied. *Prerequisites:* EDPC 5317 and EDPC 5341 each with a grade of “B” or better.

5362 Counseling Children, Adolescents and Their Families (3-0)
A focus on the dynamics, problems, and practical aspects underlying the behavior of children, adolescents and their families; provides a wide variety of intervention and treatment aspects for children, adolescents and their families in therapy. *Prerequisites:* EDPC 5317 and EDPC 5341 each with a grade of “B” or better.

5363 Marital Therapy (3-0)
An introduction to the theories and techniques of marital therapy and other types of therapy with couples. Emphasis will be placed on the processes necessary to identify, assess, and treat various forms of couple interaction. *Prerequisites:* EDPC 5360 with a grade of “B” or better, and department approval.

5364 Family Therapy (3-0)
This course provides students with advanced training assessment and intervention skills related to family therapy. Emphasis will be placed on the student’s conceptualization and application of system processes to their own therapeutic approach to family therapy. *Prerequisites:* EDPC 5360 with a grade of “B” or better and department approval.

5365 Directed Individual Study (0-0-3)
Area of study will be designated. May be repeated for credit when topic varies. *Prerequisite:* Department approval.

5370 Special Topics in Educational Psychology and Counseling (3-0)
Selected topics for graduate students, teachers, school counselors, and agency counselors in special areas. May be repeated when topic varies. *Prerequisite:* Department approval.

5371 Counseling Practicum (0-3)
Advanced training in the development of basic counseling skills and interventions in an on-campus laboratory setting to include actual work with clients. Students are required to complete 100 clock hours of supervised experience. To be taken during last semester of formal course work, immediately preceding enrollment in EDPC 5372. *Prerequisites:* EDPC 5321 or EDPC 5322; EDPC 5324, EDPC 5338, EDPC 5339, EDPC 5360 and EDPC 5362, each with a grade of “B” or better, and department approval.
5372 **Counseling Internship I (0-0-3)**
Practical application of counseling theories and techniques in a field-based community or school setting. Students are required to complete 300 clock hours of supervised on-site experience. **Prerequisites:** Satisfactory completion of all required course work (with the exception of EDPC 5373) to include a grade of “S” in EDPC 5371, and department approval. EDPC 5310 and EDPC 5335 may be taken concurrently with EDPC 5372.

5373 **Counseling Internship II (0-0-3)**
Practical application of counseling theories and techniques in a field-based community or school setting. Students are required to complete 300 clock hours of supervised on-site experience. **Prerequisites:** Satisfactory completion of all required course work with a grade of “S” in EDPC 5372 and department approval. EDPC 5310 and EDPC 5335 can be taken concurrently with EDPC 5373.

5375 **Internship in Educational Diagnostician (0-0-3)**
Supervised experience in public schools working with certified diagnosticians. Experiences include: completing comprehensive assessments, preparing written reports of assessments and other required paperwork, attending ARDs and presenting test data to educators and families. Periodic meeting with university faculty to establish progress will be required. **Prerequisites:** Completion of all core and specialization requirements with a grade of “B” or better and department approval.

5398 **Thesis (0-0-3)**
Initial work on the thesis. **Prerequisite:** Department approval.

5399 **Thesis (0-0-3)**
Continuous enrollment required while work on thesis continues. **Prerequisites:** EDPC 5398 and department approval.

**Special Education (SPED)**

5320 **Special Education: Historical and Legal Basis (3-0)**
Emphasis on litigation, legislation, and laws pertaining to definitions of exceptional children including learning and behavior disorders, physical, mental, and sensory handicaps and the exceptionally gifted and talented student.

5321 **Topics in Culturally and Linguistically Diverse Education for Learners with Special Needs (3-0)**
In-depth exploration of strategies and instructional services for students with disabilities who are from culturally and linguistically diverse backgrounds. Nationally recognized issues and practices for these individuals will be reviewed. **Prerequisites:** SPED 5337 with a grade of “B” or better and department approval.

5322 **Teaching Culturally and Linguistically Diverse Learners with Special Needs (3-0)**
Focuses on the needs of and teaching strategies for learners with special needs who have limited English proficiency and are from culturally diverse backgrounds.

5330 **Early Intervention for Young Children and Their Families (3-0)**
Focuses on recommended intervention strategies for children from birth to eight years of age who have disabilities or who are at risk of becoming disabled.
having developmental delays; emphasizes typical and atypical
development, family involvement, assessment, and natural setting
interventions. **Prerequisite:** SPED 5320 with a grade of “B” or better
or instructor approval.

**5337 Assessment: Disability and Cultural/Linguistic Factors (3-0)**
Course content will focus on language acquisition, assessment of
cultural variance in educational settings, selection of appropriate norm
referenced assessment tools, administration and analysis of selected
tests as it applies to students with, or suspected to have, a disability.
**Prerequisite:** Department approval.

**5340 Learning Theories Across the Lifespan (3-0)**
Analysis and application of learning theories, including cognitive,
behavioristic, social, and emotional learning processes in human
development, with special emphasis on children and adolescents.

**5345 Remediating Students with Learning Disabilities (3-0)**
Focuses on the role of the special educator in providing services to
students with disabilities in the least restrictive settings. Incorporates
strategies in team building, collaborative planning, and implementation
as well as instruction in curricular and instructional modifications.
**Prerequisite:** SPED 5320 with a grade of “B” or better.

**5347 Working with Parents of Learners with Special Needs (3-0)**
Relevant approaches and techniques for professionals to work with
parents of learners with special needs; includes strategies for
developing knowledge and skills associated with facilitating child
growth by cooperative home-school planning. **Prerequisite:** SPED
5320 with a grade of “B” or better.

**5350 Special Topics in Special Education (3-0)**
Selected topics for graduate students and teachers in special areas.
May be repeated when topic varies. **Prerequisites:** SPED 5320 with a
grade of “B” or better and department approval.

**5361 Applied Behavior Analysis (3-0)**
Focuses on analysis of how antecedents and consequences
influence behavior; how teachers can use this knowledge to plan and
implement desired changes in learner’s academic and social
behaviors. **Prerequisite:** SPED 5320 with a grade of “B” or better.

**5363 Intervention for Learners with Behavior Disorders (3-0)**
Focuses on methods for promoting behavior change and facilitating
affective development of children with behavior disorders or emotional
disturbance; provides a wide variety of intervention strategies.
**Prerequisites:** SPED 5320 and SPED 5361 each with a grade of “B”
or better, or department approval.

**5369 Teaching Reading to Learners with Mild Disabilities (3-0)**
Provides information on assessment of learners with mild disabilities
who have reading difficulties; includes information on strategies in
teaching decoding, word attack, comprehension, and other skills in
reading. **Prerequisites:** SPED 5320 with a grade of “B” or better.

**5370 Teaching Secondary Students with Mild Disabilities (3-0)**
Focuses on challenges of adolescents with learning problems, including
transition to post-secondary settings. **Prerequisite:** SPED 5320 with a
grade of “B” or better.
5371  Teaching Students with Severe Disabilities (3-0)
Characteristics of students with severe disabilities, including assessment, program development, teaching methodology, and design of learning environments; focuses on inclusionary/mainstreaming educational and community settings. **Prerequisite:** SPED 5320 with a grade of “B” or better or department approval.

5373  Teaching Students with Autism (3-0)
Characteristics of young children, elementary, and adolescent severely handicapped students with autism including assessment, program development, teaching methodology, and intervention techniques; includes programming for self-help, motor and language skills, reading, mathematics, and functional academic skills. **Prerequisite:** Twelve graduate semester hours in special education (SPED) or department approval.

5375  Technology, Assistive Tools and Issues of Access (2-1)
Distance learning for K-12 students, both in and out of the traditional school setting. Assistive technology tools and techniques for the classroom teacher, legal issues regarding technology access and equity. **Prerequisite:** EDT 5373 with a grade of “B” or better. (SPED 5375 is the same course as EDT 5375.)

5378  Research and Applications in Special Education (0-0-3)
Designed as a capstone course, this course will require students to conduct research and develop a project relevant to their local community or school with regard to the education of students with special needs. The research project should be suitable for distribution in the schools. **Prerequisite:** Minimum of 27 graduate hours in special education, with average of “B” or better.

5380  Leadership for Special Populations (3-0)
An exploration of traditional, emerging, and alternative perspectives in the field or special education, including legal issues and best practices in serving special populations, including bilingual education, and the gifted and talented. **Prerequisite:** Department approval.
Teacher Education

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http://academics.utep.edu/tegrad

CHAIRPERSON: Elaine Hampton
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GRADUATE ADVISOR: Miguel M. Licona
GRADUATE FACULTY:
PROFESSORS: Ainsa, Bixler-Marquez, Descamps, Huerta-Macias, Hurley, Reinhartz, Tchoshanov, Tinajero
ASSOCIATE PROFESSORS: Blake, Edwards, Gonzalez, Gunter, Hampton, Izquierdo, Luykx, Munter, Rossatto, Seda
ASSISTANT PROFESSORS: Awalt, Carrejo, Casas, Cashman, Chapman, De La Piedra, Giza, Jones, Kephart, Kosheleva, Licona, Peregrino, Reyes, Robertson, Ullman

The Teacher Education Department offers graduate programs that provide advanced professional education knowledge and 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 and the Master of Education. The Master of Arts is designed for students wishing to pursue research and/or continue studies beyond the master’s degree level. The Master of Education degree is directed toward mastery of professional education practice. Students pursuing the Master of Education may major in Instructional Specialist or Reading Education.

Admission Requirements

Before admission to the Teacher Education Graduate Program, applicants must comply with the General Admission Requirements section of the University’s Graduate Catalog. For admission to the Teacher Education Graduate Program, applicants must be certified teachers or have at least 12 semester hours of undergraduate upper-division education courses. Additional information:

- Applicants must provide 2 letters of recommendation to the department.
- No more than 6 semester hours of graduate work (with a grade of “B” or better required) may be transferred from another institution.
- Courses taken prior to formal admission into a graduate program cannot be counted toward a graduate degree without the specific recommendation of the departmental committee on graduate studies and approval of the Graduate School.
- Applicants may also be invited to an interview.

For more information about admission, please visit the Department’s Graduate Program website at http://academics.utep.edu/tegrad and read the College of Education and Graduate School sections of the Graduate Catalog.
Program Advising

- Students are advised to view the information on the Department website at http://academics.utep.edu/tedgrad or contact the Department for more specific information regarding admission, advising, degree options and requirements, and comprehensive exams.
- Students will be assigned a graduate faculty advisor at the time of admission to the program.
- Students should maintain a continuing advising relationship with the faculty advisor which includes preparing and updating their degree plan, making course selections, and requesting a comprehensive examination or thesis defense.

Degree Programs

1. Master of Arts in Education
   The Master of Arts in Education is a college-wide degree. It is designed for students wishing to pursue research and to continue studies beyond the master's degree. Students in the Master of Arts in Education submit a thesis and do not take a comprehensive exam. The Master of Arts involves:
   - A plan of study with 30 semester hours of course work
   - Thesis proposal describing research and approved by the committee
   - Thesis research for 6 semester hours
   - Successful defense of the thesis to faculty committee
   Students work with their Graduate Advisor to develop the plan of study. They select a committee of at least three professors (one of whom is outside the department) to guide the thesis study. The 36 semester hours of course work and thesis described above must be completed within 6 years.

2. Master of Education Instructional Specialist
   This program requires 36 semester hours, including at least 27 semester hours at the graduate level. Each student will have a Graduate Faculty Advisor to assist in developing the degree plan. All upper-division undergraduate course work proposed for inclusion in this graduate degree must be recommended for approval by the Graduate Faculty Advisor.
   Students may choose to concentrate course work in the areas of bilingual education, early childhood education, educational technology, math education, science education or reading education. Students who wish to focus in other subject areas may select courses from other UTEP departments with Graduate Faculty approval.
   All Master of Education Instructional Specialist plans include the following:
   - Professional Development Core: TED 5300, 5301, 5302 and 5303
   - Specialization Area: At least 12 semester hours of graduate level courses in a subject area for which the candidate has prior certification or in a subject area approved by the Graduate Faculty Advisor
   - Resource Area: 6 semester hours in courses approved for graduate credit, which provide support for the academic specialization area or for professional development
   - Electives: 6 semester hours in courses approved for graduate credit
3. Master of Education Reading Education

This program major follows State Board of Educator Certification guidelines and leads to the Professional All-Levels Reading Specialist Certificate. It includes the following:

- Professional Development: TED 5300, 5301, 5302, and 5303
- Reading Specialization: At least 12 semester hours of graduate-level courses in reading which must include RED 5341 or RED 5346 and RED 5347
- Resource Area: 3 semester hours of Linguistics and 3 semester hours of Multicultural Concepts at the graduate level

Students holding a Secondary Certificate/License will need six semester hours of graduate-level courses with Early Childhood or Middle Grades Education focus. Students holding an Early Childhood Certificate/License will also need six semester hours of graduate-level courses with Secondary or Middle Grades Education focus.

More specific information on all Teacher Education Graduate Programs is available at http://academics.utep.edu/tedgrad.

Master of Education Program Requirements

Students pursuing the Master of Education Instructional Specialist and Master of Education Reading Specialist must submit a scholarly paper and pass a comprehensive written exam in addition to successful completion of their coursework.

Scholarly Paper

All Master of Education degree candidates will be expected to write scholarly papers in their graduate courses. The student selects one of these course papers which, upon approval by the professor, will be presented to the Teacher Education Graduate program for inclusion in the student file. The scholarly paper reviews relevant research and cites and references the pertinent scholars using the APA recommended format.

Final Comprehensive Examination

During the final semester course work in the TED master’s program (Instructional Specialist or Reading Education degrees), the student will take a written comprehensive examination. The purpose is to synthesize the coursework showing an understanding of a master level teacher educator. Early in this final semester, the graduate faculty facilitates an orientation to the comprehensive exam to provide more specific information about the examination content and process. The following provides important details about the comprehensive exam.

- During the final semester of coursework, graduate students will submit an Application for Comprehensive Examination to the TED Graduate Advising Office and will apply for graduation with the University Graduate School office.
- The exam is given on a Saturday near the end of the semester in which the student is enrolled in her/his final courses.
- The questions for this examination are prepared by graduate faculty. Students respond to one question from the professional development core courses and one question from the area of specialization.
- Students also respond to an additional reflection question which will be written before the exam date. Students submit this response on the exam day.
Comprehensive Exams are not offered in the summer. However, a student may take courses in the summer after taking the exam in the spring. It is recommended that students take no more than one course in the same semester as the comprehensive exam. It is also recommended that students take no more than two courses in the summer after the comprehensive exam.

Master Teacher Certifications

The Teacher Education Department provides preparation course work for Texas Master Teacher Certification programs. These certification programs were developed as part of the Texas Master Teacher Initiatives (TExMAT), which offer educators assistance to improve student performance in the discipline. The certificates were designed to prepare teachers to teach in critical areas at the elementary, middle, or high school level and to mentor, coach, and consult with other teachers in these areas as well. The Master Certification programs are:

- Master Mathematics Teacher (MMT)
- Master Reading Teacher (MRT)
- Master Science Teacher (MST)
- Master Technology Teacher (MTT)

The Teacher Education Department offers the coursework to prepare teachers for Texas Master Teacher certification. This course work ranges from 15-24 hours of graduate level courses designed specifically to meet the state standards. The courses taken for the MMT, MRT, MST, or MTT certification may, if all graduate school requirements are met, be applied toward one of the Master’s degrees in Education. Students may enroll in the Master Teacher certification programs at UTEP at any time. State certification for one of the master teacher programs requires three years teaching experience, successful completion of the master teacher program, and a passing score on the appropriate Texas Master Teacher exam.

More specific information on all Teacher Education Graduate Programs is available at http://academics.utep.edu/tedgrad.

Teacher Certification

Please note that a degree program is not the same as a certificate program. This catalog does not include information on teacher certification requirements. The College of Education Certification Office and the Graduate Advisor of the department can provide more information in this area.

Courses included in a program for a first teaching certificate typically are not applied toward a graduate degree. Courses included in a program for advanced certificates may be applied toward a graduate degree, and most can be combined with a graduate degree program.

Bilingual Education (BED)

5330 Current Topics in Bilingual ESL (3-0)
An exploration of contemporary issues related to research and practice in the field of Bilingual/ESL. Prerequisite: BED 5331 with a grade of “B” or better.

5331 Bilingual/Bicultural Curriculum Design and Development (3-0)
Focus on the discourse of diverse paradigms in Bilingual/ESL Education. Includes discussion of current pedagogical, theoretical, historical, legislative, and other issues in the field. Identification of program models in Bilingual/ESL Education, including their philosophical
foundations, instructional frameworks, and the planning and design of program evaluation.

5332 **Literacy Development in Spanish (3-0)**
Focuses on the critical components in literacy development with a focus on the Spanish language and its conventions. Includes discussions of reading pedagogies and their historical foundations in various Spanish-speaking countries, as well as the integration of bilingual/multicultural literature throughout the curriculum. Course taught in Spanish. **Prerequisite:** BED 5331 with a grade of “B” or better.

5333 **Classroom Assessment in Bilingual/ESL (3-0)**
Issues in the assessment of language and academic achievement of students in Bilingual/ESL classrooms. Emphasis on alternative assessments. **Prerequisite:** BED 5332 with a grade of “B” or better.

5334 **Teaching Content in Spanish (3-0)**
Development of academic discourse in Spanish in the areas of mathematics, science, social studies, and language arts. Examines the state curriculum standards as well as the professional standards in each of the specializations. Course taught in Spanish. **Prerequisite:** BED 5331.

5336 **Literacy/Biliteracy Development (3-0)**
Identification of principles, problems, and issues of primary and second language acquisition, specifically the relationship between the development of these languages, to facilitate and promote literacy/biliteracy.

5337 **Mentoring for Literacy Educators (3-0)**
Development of competencies necessary to mentor, coach, and consult with the school community to develop, implement, and mentor high-quality literacy/biliteracy program; provide professional development for colleagues; and make decisions based on research evidence.

5343 **Sheltered English Instruction for Educators (3-0)**
Explores academic language socialization with Bilingual/ESL students. Focus is on academic and cognitive development through the teaching of subject matter via a second language. Examines theory and instructional approaches that can enhance learning for non-native speakers of English.

5348 **Issues in Adult Literacy (3-0)**
Exploration of issues in the field of adult literacy and biliteracy as relevant to diverse educational contexts. BED 5348 is the same course as RED 5348.

**Early Childhood Education (ECED)**

5350 **Current Topics in Early Childhood Education (3-0)**
Development of competencies necessary to deal effectively with early childhood instruction; includes curriculum, concepts, teaching strategies, and skills necessary to integrate content and teaching strategies. May be repeated for credit when topic varies.

5351 **Trends in Early Childhood Education (3-0)**
Research related to philosophies, objectives, and practices in early childhood education, including analysis through comparison and contrast of preschool programs, plus implications for designing such programs based on research and evaluation.
5352 Seminar in Early Childhood Curriculum (3-0)
Curriculum development for the early childhood teacher, which includes program design, activity planning, examination and construction of materials, and teaching and evaluation techniques.

5353 Development of Literacy Skills, Preschool to Grade 3 (3-0)
Emergent reading and writing behaviors in preschoolers; growth of reading and writing, kindergarten to grade three; attention to linguistically different and second-language learners, review of relevant research.

5354 Development of Mathematics and Science Foundations, Preschool to Grade 3 (3-0)
Preschool awareness of quantitative and scientific principles in the environment as a foundation for concept growth.

Education Career and Technology (EDCT)

5300 Instructional Design, Delivery and Assessment (3-2)
Basic principles of curriculum planning, instruction, and assessment in career and technical education settings, including methods of instruction for English language learners.

5301 Instructional Management, Safety and Relationships (3-2)
Management, safety, relationships, professional responsibilities and professional development for the career and technical educator.

5303 Instructional Coordination, Guidance and Technology for CATE (3-2)
Focus on fundamentals of establishing and maintaining an effective cooperative education program at the high school level. Federal and State Child Labor laws will be studied in relationship to appropriate placements, supervision, and assessment of on-the-job training for youth. Principles and practices of career and technology guidance will be covered as they pertain to establishing occupations orientation programs and developing student career pathways.

5304 History and Philosophy of Career and Technology Education (3-0)
An overview of the historical foundations, career-based philosophy and Federal legislation of career and technology.

5305 Teaching and Learning for Health Science Technology Teachers (3-2)
Methods and materials for teaching and learning the concepts of wellness, fundamentals of disease control, safety, roles of health care workers, technology, and the function of diagnostic, informational, and environmental systems of health care.

5306 Teaching and Learning for Business Education (3-0)
An overview of the knowledge and skill standards in Business and Marketing education. Emphasis on developing lesson plans, cooperative education, student labor laws and student organizations.

5308 Career and Technology Facility Development (3-0)
In-depth exploration of standards and designs for high tech laboratory environments. Strategies for development of long-range flexible curriculum and facility development.
5309 **Student Leadership Development in Career and Technology Education (3-0)**
Comprehensive study of information regarding activities and responsibilities of the career and technology student organization advisor. Decision-making methodologies and student interactions as they relate to leadership developments will be emphasized.

5310 **Techniques of Career and Technology Cooperative Coordination (3-0)**
In-depth exploration of problems, procedures, techniques in the operation of cooperative education. Assessment and verification of work-based techniques, tech-prep programs, and child labor laws will be covered.

5311 **Career and Technology Guidance and Placement (3-0)**
Comprehensive study of careers available through career and technology education, including methods of student identification, placement and follow-up.

5340 **Current Topics in Career and Technology Education (3-2)**
An examination of new trends and issues for career and technology teachers impacting the current transition from a mainly manufacturing-based workforce to a service-oriented workforce. Focus will be new ways of improving the teaching and learning process in career and technology education.

5344 **Seminar in Career and Technology Education (3-2)**
Course is designed for career and technology education students to read, study, and research pertinent emerging content in CATE. Students will choose topics of vital interest to the improvement of educational performance in all aspects of the career and technology curriculum.

**Educational Technology (EDT)**

5319 **Graduate Workshop in Educational Technology (2-1)**
Studies in a designated area of Educational Technology. May be repeated for credit when topic varies. **Prerequisite**: Department approval.

5370 **Integration of Curriculum and Educational Technology (3-0)**
Integration of curriculum and educational technology in the areas of Language Arts, Social Studies, and Math and Science; with emphasis on telecommunications, multimedia applications, and emerging technologies. May be repeated for credit when topic varies.

5372 **Web Tools for the Constructivist Classroom (2-1)**
Focus on web communication tools and production of web-based content in support of constructivist EC-12 classroom learning. Creation and implementation of web content as an instructional tool, a publishing venue for student work, and information source for parents. Portfolio development and peer mentoring strategies are addressed. **Prerequisite**: EDT 3371 with a grade of “B” or better or equivalent.

5373 **Advanced Productivity Technologies for the Classroom (2-1)**
Focus on curriculum strategies that utilize word processing, presentation programs, and spreadsheets for the EC-12 classroom; development and use of databases; extended web page creation integrating graphics, web-page scripts, and file transfer. Creation and
5374 Pedagogy in the Technology-rich Classroom (2-1)
Develop teacher knowledge and skill in using multimedia authoring programs; use of video editing, sound editing, and image editing; use of online discussion boards. Selection and use of appropriate technology-enhanced assessments, continued portfolio development, and peer mentoring experiences. **Prerequisite:** EDT 5372 with a grade of “B” or better.

5375 Technology, Assistive Tools and Issues of Access (2-1)
Distance Learning for EC-12 students, both in and out of the traditional school setting. Assistive technology tools and techniques for the classroom teacher. Legal issues regarding technology access and equity. **Prerequisite:** EDT 5373 with a grade of “B” or better. (EDT 5375 is the same course as SPED 5375.)

5376 Assessing, Planning, and Implementing Technology Programs in EC-12 (2-1)
Focus on real educational settings: Assessing and evaluating an educational institution’s current technology status; developing a technology plan; and building a budget with timelines for implementation.

5396 Independent Graduate Study in Educational Technology (0-0-3)
Studies in an area of Educational Technology approved by a sponsoring professor. May be repeated for credit when topic varies.

**Gifted Teacher Education (GTED)**

5301 Introduction to Gifted Education (3-0)
Nature and Needs; Identification and Assessment; Social and Emotional Needs; Creativity and Instructional Strategies; and Differentiating the Curriculum of Gifted and Talented Students. This course will provide students the opportunity to examine various plans for the education of gifted/talented students; historical, ethical, legal and fundamental issues with relation to current practices to serve culturally and linguistically diverse gifted students.

5302 Identification, Assessment and Program Options in Gifted Education (3-0)
Focus on variety of techniques used to identify gifted students, to include culturally and linguistically diverse students. Emphasis on identifying giftedness and screening tools, and proper program options to serve these students. A variety of formal and informal tools will be examined. Focus on identifying, assessing and placement. Review of program planning and current models. **Prerequisites:** GTED 5301 with a grade of “B” or better and department approval.

5303 Methods and Curriculum Differentiation for Teaching Gifted Learners (3-0)
Focus on curriculum and instructional strategies for teaching gifted students. Course includes curriculum differentiation, instructional process, student products, and learning environments. Models of curriculum for gifted students as well as differentiated and parallel curriculum/program components are considered and applied across content areas. **Prerequisites:** GTED 5301 with a grade of “B” or better and department approval.
5304 Research Trends in Gifted and Talented Education (3-0)
An exploration of contemporary issues and trends as related to research and practice in the field of Gifted and Talented Education. Topics may vary from one semester to another. Prerequisites: GTED 5301 with a grade of “B” or better and department approval.

5305 Practicum in Gifted and Talented Education (0-0-3)
Design, implementation and evaluation of instructional programs and classroom organization procedures through supervised practicum experience in programs for gifted and talented students. The practicum requires completion of supervised experience in addressing, responding to, and the demonstration of professional competencies in the gifted and talented education setting and the development of a research project on any of these areas related to gifted and talented education. Prerequisites: GTED 5304 with a grade of “B” or better and department approval.

Mathematics Education (MTED)

5300 Mentoring and Leadership in Mathematics Education (3-0)
Provide students with knowledge of mentoring theories and research, which will assist them in facilitating appropriate scientific research-based mathematics education practices through cognitive coaching, collaboration with education stakeholders, consulting with colleagues, and participating in professional development for mathematics educators.

5318 Current Topics in Mathematics Education (3-0)
Develops competencies necessary to deal effectively with mathematics instruction; includes curriculum, concepts, teaching strategies, and skills necessary to integrate content and teaching strategies. May be repeated for credit when topic varies.

5320 Research-Based Practices in Mathematics Classroom (3-0)
Course focuses on what teachers can learn from mathematics education research and how to bridge research and everyday mathematics classroom. Students develop a conceptual discourse on research related to teaching, learning, curriculum, and assessment in school mathematics.

5322 Pedagogical Content Knowledge in Teaching Mathematics (3-0)
Course topics include (but are not limited to) the following main content domains of school mathematics and their effective teaching and learning: Development of Quantitative Reasoning; Fostering Algebraic Thinking; Conceptual Foundations of Calculus; Development of Geometric Thinking.

5324 Authentic Assessment in Mathematics Classroom (3-0)
Authentic and performance-based assessment practices in mathematics classroom; use of instruments such as rubrics, portfolios, and individual and group projects as sources of assessment.

5326 Cultural History, Epistemology, and Pedagogy of Mathematics (3-0)
The course explores critical issues of the evolution and development of fundamental mathematical ideas from a cultural-historical perspective as well as implications for the teaching and learning of mathematics based on this perspective. The courses will also examine current topics in multicultural mathematics education and ethnomathematics.
Reading Education (RED)

5340 Current Topics in Reading Education (3-0)
Opportunity to develop competencies necessary to deal effectively with reading instruction; includes curriculum, concepts, teaching strategies, and skills necessary to integrate content and teaching strategies. May be repeated for credit when topic varies.

5341 Assessment in the Teaching of Reading (3-0)
Standardized and informal materials and techniques of diagnosing the reading strengths and weaknesses of individuals and groups, techniques and materials for building specific reading abilities, and methods of individualizing instruction and grouping according to student needs and interests. *Prerequisite:* RED 3340 or RED 3342.

5342 Content Literacy (3-0)
Methods and materials for developing maturity in reading and study skills, especially in the content areas from K-12. Special emphasis is given to the development of interest, the matching of students to proper materials, and instructional techniques for integrating the teaching of skills with the teaching of content.

5343 Psychology of Reading (3-0)
Psychological and linguistic foundations of the reading processes of beginning and skilled readers; special emphasis on problems of culturally different children, comprehension skills, and analysis of relevant research.

5344 Seminar in Reading (3-0)
In-depth exploration of ways of developing higher-level cognitive, affective, psychomotor, and psycholinguistic abilities of students through the use of printed materials and other media. Individual and/ or group creative projects and research findings will be shared. *Prerequisite:* RED 3340 or RED 3342.

5347 Clinical Reading Laboratory Experience (2-1)
Actual laboratory experience for application of concepts, media, and evaluation to meet the needs of disabled readers. May be repeated for credit when topic varies. *Prerequisite:* RED 4341 or RED 5341 or RED 5346.

5348 Issues and Problems in Adult Literacy (3-1)
Exploration of issues in the field of adult literacy and biliteracy as relevant to diverse educational contexts. RED 5348 is the same course as BED 5348.

5349 Literacy Education Internship (1.5-3)
An internship served with university faculty or a team of university and clinical faculty in an elementary, middle, secondary, community college, or university setting. Course content and requirements will be contracted on an individual basis.

5350 Mentoring for Literacy Educators (3-0)
Development of competencies necessary to mentor, coach, and consult with the school community to develop, implement, and mentor high-quality literacy/bi-literacy program; provide professional development for colleagues; and make decisions based on research evidence.
5351  Literacy/Biliteracy Development (3-0)
Identification of principles, problems, and issues of primary and second language acquisition, specifically the relationship between the development of these languages, to facilitate and promote literacy/biliteracy.

5352  Supervision and Implementation of Reading Program (3-0)
This course emphasizes the organization and supervision of reading programs. Students will examine the processes of leadership, staff development, grant writing, community outreach and action research from the perspective of the reading professional. Prerequisite: Graduate standing.

5353  Language Study for Literacy Educators (3-0)
Students will be introduced to Teaching and Learning theories and practices as they relate to broad areas of language study for literacy educators. Focus on construction of meaning, student-centered responses to reading, print and oral language development, based on the convergences of literacy research.

Secondary Education (SCED)

5326  Curriculum in the Secondary School (3-0)
Curriculum in subject areas in the secondary school, and the development of plans and procedures for instruction. Prerequisite: TED 5301.

Science Education (SIED)

5321  Science Tools, Standards, Technology, Safety, and Ethics (3-0)
Integrated, science-technology thematic learning. Develops understanding of important science teacher resources, basic science education and lab tools, state and national standards for science teaching, curriculum alignment, laboratory and classroom safety, and professional ethics for science educators.

5323  Societal Context of Science Education (3-0)
Develops and applies understanding of field, community, and cultural resources and develop family and community partnerships in a relevant science context. Students develop a learning unit based on instructional models such as the learning cycle lesson design and the 5-E model. Explores historical perspectives of science and the role of science in societal decisions. Includes research-based principles in science learning and technology integration.

5325  Inquiry Science Education in Bilingual Settings (3-0)
Provides a review of basic content in physical science, biology and chemistry. The content will be imbedded in activities that model the inquiry approach to teaching and learning with strategies to ensure content and language development in bilingual communities. Students learn to develop curriculum using instructional models such as sheltered instruction, the learning cycle, the 5-E model, and constructivism. Content directly related to the essential elements in the elementary, middle, and high school science curricula in Texas.

5327  Chemistry Education in a Feminist and Multicultural Context (3-0)
Chemistry learning experiences in a relevant cultural context. A conceptual understanding of basic chemistry content including the impact of chemistry in daily life. Develops competencies necessary to provide multicultural education instruction and inclusive pedagogy.
and the understanding of social, economic, and political influences on access issues in science education for all students. Includes environmental chemistry labs and an environment action project.

5329  **MST Leadership Practicum (3-0)**
Assessment and verification of the competencies in a practicum situation as required for MST Certificate. The students facilitate standards-based science instruction by: communicating and collaborating with educational stakeholders; exhibiting leadership, mentoring, coaching, and consulting with colleagues; facilitating professional development; and making decisions based on research. Includes a field practicum experience mentoring a new science teacher.

Social Science (SOSC)

5300  **Current Topics and Issues in Social Studies Education (3-0)**
This course is designed for social studies educators who seek further understanding of the significant foci and issues in the curriculum that influence the teaching of social studies content, resources, and methodology.

Teacher Education (TED)

5119  **Graduate Workshop in Education (1-0)**
Studies in a designated area. May be repeated for credit when topic varies.

5300  **Research for the Classroom Teacher (3-0)**
Research methodology to address the problems and needs of classroom teachers. Emphasis on interpreting professional literature and practitioner research in educational settings. **Prerequisite:** Admission to, or completion of, a Master’s degree program.

5301  **Learning Contexts and Curriculum (3-0)**
Examination of the theoretical frameworks and broad definitions of curricula, processes of curriculum alignment, pedagogy and assessment, State standards, curricular resources, curriculum integration, learning theory and lesson planning.

5302  **Managing the Student-centered Classroom (3-0)**
Theory and practice on how to manage instruction and relationships in a student-centered classroom. Emphasis on classrooms as communities of learning and on communication skills.

5303  **Authentic and Performance Assessment in the Classroom (3-0)**
Authentic and performance assessment practices in the constructivist classroom; use of instruments, such as rubrics, portfolios and individual and group projects as sources of assessment.

5306  **Inclusive Classroom/Learning Environments (3-0)**
Emphasis will be on learning theory, cultural/language issues that impact learning, modifications and best practice, classroom arrangements, curriculum variations, grouping students, collaborative learning, and classroom assessment.

5313  **Diversity in Educational Settings (3-0)**
Exploration of the social context of education and teaching in the pluralistic society. Examination of schools and society in relation to historical and contemporary issues of diversity.
5314 **Current Topics in Science Education (3-0)**
Opportunity to develop competencies necessary to deal effectively with science instruction; includes curriculum, concepts, teaching strategies, and skills necessary to integrate content and teaching strategies. May be repeated for credit when topic varies.

5318 **Current Topics in Mathematics Education (3-0)**
Course focuses on pedagogical applications of mathematical content knowledge and the use of learning theories that establish in-depth mathematical understanding through a variety of best practices supported by research-based evidence. Includes analysis of current topics related to classroom management techniques, as well as strategies for appropriate use of innovative instructional resources and learning technologies to help all students, including at-risk populations, in closing conceptual gaps in learning.

5319 **Graduate Workshop in Education (3-0)**
Studies in a designated area. May be repeated for credit when topic varies.

5322 **Field Resources in Science Education (3-0)**
Directed observation of selected field resources. Particular emphasis will be placed on the acquisition of knowledge that directly relates to the essential elements in the elementary, middle, and high school science curricula in Texas.

5324 **Inclusive Science Education (3-0)**
Explores theories that inform current understanding of equity and learning in science education. Examines issues to enhance science persistence.

5396 **Independent Graduate Studies (0-0-3)**
Studies in an area of the student’s choice that has been approved by the sponsoring professor. May be repeated for credit when topic varies.

5397 **Practicum for Master Teachers (0-0-11.5)**
Assessment and verification of the competencies in a practicum situation as required for the Master Teacher Certificate.

5398 **Thesis (0-0-3)**
Initial work on the thesis. *Prerequisite*: Permission of Graduate Advisor of Program.

5399 **Thesis (0-0-3)**
Continuous enrollment required while work on the thesis continues. *Prerequisites*: TED 5398 and permission of Graduate Advisor of Program.
COLLEGE OF ENGINEERING

Civil Engineering 194
Computer Science 205
Electrical and Computer Engineering 213
Industrial Engineering 221
Mechanical Engineering 226
Metallurgical and Materials Engineering 229

Dr. Stephen W. Stafford, Interim Dean
Dr. Walter W. Fisher, Associate Dean

Engineering/Science Complex
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Degree Programs

PhD
Civil Engineering
Computer Engineering
Computer Science
Environmental Science and Engineering*
Materials Science and Engineering*

MS
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering
Engineering
Industrial Engineering
Manufacturing Engineering
Mechanical Engineering
Metallurgical and Materials Engineering

MIT Master of Information Technology*
MEEEnE Environmental Engineering
MSEEnE Environmental Engineering

* Interdisciplinary Program
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. The College offers a Ph.D. degree in Civil Engineering, a Ph.D. degree in Computer Engineering and a Ph.D. in Computer Science. Multiplidisciplinary 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.

Doctor of Philosophy Degree in Computer Engineering

The Ph.D. in Computer Engineering is a program designed to prepare computer engineers for a meaningful and successful research career in academia, government or industry. The program emphasizes the advancement of knowledge in theoretical and applied computing that leads to innovation in this and related fields.

Doctor of Philosophy in Computer Science

The Ph.D. in Computer Science is a program designed to prepare scientists and engineers to advance the rapidly growing fields of hardware, software, and systems integration, and also to develop the underlying theories and models to underpin further advances. The program emphasizes a thorough grounding in the fundamental principles and practices of computer science, together with the skills necessary to apply them effectively and professionally in a wide range of disciplinary and social contexts.

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, students should consult the section for Interdisciplinary Studies after the College of Science 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 and Technology Institute (MRTI), 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, students should consult the section for Interdisciplinary Studies after the College of Science section.

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. Submission of official Graduate Record Examination (GRE) scores
4. TOEFL score of 213/550 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 in undergraduate course work

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.
Civil Engineering

Civil Engineering offers the degrees of Ph.D. in Civil Engineering, Master of Science in Civil Engineering (MS), Master of Science in Environmental Engineering (MSEnE), Master of Engineering in Environmental Engineering (MEEEnE), and an undesignated Master of Science with a major in Engineering.

Requirements for Admission

Students should consult the Introduction to the College of Engineering section for information on general admission requirements.

Doctor of Philosophy Degree in Civil Engineering

Educational Objectives

The objectives of the program are (1) to educate engineers, researchers, and scholar/teachers who will address the needs of 21st-century engineering infrastructure research and teaching, especially for the border region and the state of Texas; (2) to educate professionals who will not only be technically competent in emerging technologies, but also trained to address the long-term challenges to the transportation, environmental and urban infrastructure from global and systemic points of view. Graduates will have the ability to make meaningful decisions considering technical feasibility, monetary constraints, public policy issues, and a myriad of potential environmental consequences; and (3) to educate future educators, scholars, and professionals who are sensitive to the complex implications for infrastructure development and education of international boundaries, bi-national relationships, and shifting demographics.

Graduates from the program should have the technical background to contribute to improvements in the reliability, maintenance, and management of infrastructure systems. Graduates should be able to undertake integrated programs of research, education and technology transfer to produce new knowledge that will enhance the performance of transportation, environmental, and urban infrastructures.

Requirements for Admission

Applicants must have completed a bachelor’s or master’s degree in civil engineering or a closely related discipline. The admissions committee evaluates the preparation of non-civil engineering applicants and recommends leveling courses as appropriate. These courses are not part of the Ph.D. degree plan. Applicants who do not have degrees from English medium universities are required to submit scores on the Test of English as a Foreign Language (TOEFL). A score of 213/550 is required for admission and 250/600 for appointment to a teaching assistantship.

Recommendations for admission are made on the basis of the following:

- Grade point average in upper division or graduate work as appropriate.
- Scores on the verbal and quantitative section of the GRE.
• Research and professional commitment and interest as demonstrated by a personal statement, letters of recommendation, and other materials as available
• Letters of recommendation.

Students admitted at the bachelor’s level may elect to complete a master’s degree in Civil Engineering, but will be required to complete all of the requirements of the degree as indicated in this catalog.

Students admitted with a master’s degree or master’s course work may request to the admissions committee that up to 24 semester credit hours (taken at the graduate level with a grade of “B” or better) be applied to the Ph.D. degree plan. Credit hours earned in research, thesis, and independent study courses may not be applied.

Requirements for Degree

Each student must complete at least 72 credit hours beyond the bachelor’s degree or at least 48 hours beyond the master’s degree. Each student is expected to have a core knowledge in the key areas in the field. The program is designed so that degree plans will be developed individually beyond that core to reflect a student’s background and research interests.

Students in the program are required to complete 4 core courses (12 hours):
CE 6303 Engineering Analysis I
CE 6332 Modern Methods of Engineering Computations
CE 6301 Infrastructure Management
CE 6306 Infrastructure Engineering

Students are required to complete prescribed electives in three categories.

General electives: 4 courses (12 hours) chosen from the following:
CE 5307 Theory of Finite Element Analysis
CE 5310 Risk and Reliability Analyses of Engineering Systems
CE 5324 Construction Management
CE 5390 Special Topics in Civil Engineering
GEOP 5352 Geophysical Inverse Theory
GEOP 5354 Seismology
GEOP 5362 Reflection Seismic Data Interpretation
GEOP 5460 Geophysical Applications of Digital Signal Processing
MATH 5311 Applied Mathematics
MATH 5343 Numerical Solution to PDE
MECH 5312 Advanced Mechanics of Materials II
MECH 5318 Advanced Dynamics

Other appropriate course may be selected with the approval of the advisor and program director.

Management elective: 1 course (3 hours) chosen from the following:
CIS 5311 Management Information Systems Theory and Practice
CIS 5313 Strategic Information Systems
CIS 5340 Electronic Commerce in Business
ECON 5304 Business Economics
ESE 6301 Environmental Law and Policy
FIN 5311 Financial Management
POLS 5359 Seminar in Regional and Urban Planning
POLS 5364 Seminar in Public Policy Analysis

Other courses may be elected to fulfill this requirement as recommended by the advisor and program director.

Technical electives: 5 courses (15 hours) chosen from the civil engineering graduate course inventory. Students develop their specific
degree plans with the advice and approval of the advisor and program
director and they may take other engineering, science, or business
courses as appropriate.

Students in the program are expected to participate in the Civil
Engineering doctoral seminar (CE 6195) a one credit hour course that meets
every semester. Three semester credit hours of the seminar are required for
the degree.

Examinations

During the first semester new students will take an assessment test (set
by three members of the doctoral program committee appointed by the director)
to assess the student’s technical background and her or his ability to integrate
and apply that background to the solution of engineering problems. Based on
the results of the test, the committee may recommend specific coursework
for students to undertake. This coursework may or may not be applied to the
degree plan depending on the area and level of the courses proposed.

Students in the Ph.D. program must be admitted to candidacy prior to the
start of work on their doctoral dissertation. To be admitted to candidacy, a
student will be required to take a comprehensive examination administered by
his/her Doctoral Advisory Committee. The Program Director, in consultation
with the student, will appoint a Preliminary Dissertation Committee of five
members of the Doctoral Program Committee. The student will not be allowed
to register in dissertation courses until this requirement is satisfied. The
comprehensive exam will examine both the candidate’s breadth of knowledge
and understanding of basic principles related to the field of research and
knowledge and understanding of the topic that the candidate intends to develop
into a dissertation.

Doctoral Research

Students must complete 21 hours of independent research (CE 6396) under
the direction of a faculty mentor. The work will involve research on topics in
civil and infrastructure engineering related to the dissertation or conducted as
a component of the student’s overall graduate program.

Dissertation

Students must complete a dissertation in some area of infrastructure
engineering systems that is an original work of scholarship of a quality that
provides the basis for one or more technical publications. It should
demonstrate both the ability to conduct original independent research and
competence in scholarly exposition (6 semester credit hours, CE 6398 and
6399).

Final Oral Examination

Upon completion of the dissertation, as approved by the dissertation
committee, the student must defend, in public, his or her dissertation research. The dissertation committee will be responsible for administering the final oral
defense, which will be open to the public.

Requirements for the Master of Science in Civil Engineering Degree

For the Master of Science in Civil Engineering, thesis and non-thesis
programs are available. Students enrolled in the thesis program normally take
a minimum of 24 hours of course work plus six hours of CE 5398-CE 5399,
Thesis. Non-thesis students follow a 33-hour program which includes credit
for CE 5396-CE 5397, Graduate Design Projects.
Requirements for the Master of Science and Master of Engineering in Environmental Engineering Degrees

The Master of Science in Environmental Engineering requires 25 hours of course work, plus six hours of CE 5398-CE 5399, Thesis. The Master of Engineering in Environmental Engineering requires 31 hours of course work, plus the completion of a professional report as part of six hours of CE 5396-CE 5397, for a total of 37 credit hours.

Applicants wishing to pursue the Environmental program with a non-Civil Engineering background are welcome to apply and should request specific detailed information regarding admission policy.

Civil Engineering (CE)

For Undergraduate and Graduate Students

3325   Environmental Engineering Fundamentals
4153   Water and Waste Laboratory
4335   Structural Design I
4340   Transportation Engineering
4342   Water and Wastewater Engineering
4348   Geotechnical Engineering
4361   Structural Design II
4371   Engineering Problems
4456   Hydraulic Engineering

For Graduate Students Only

5191   Individual Studies (0-0-1)
5291   Individual Studies (0-0-2)
5391   Individual Studies (0-0-3)
       Individual variable-credit research design or analysis on advanced phases of Civil Engineering problems conducted under the direct supervision of a faculty member. A maximum of six credit hours may be applied towards the MS degree. Prerequisite: Permission of Graduate Advisor.

5194   Graduate Research (0-0-1)
5294   Graduate Research (0-0-2)
5394   Graduate Research (0-0-3)
5494   Graduate Research (0-0-4)
5594   Graduate Research (0-0-5)
5694   Graduate Research (0-0-6)
       Individual variable-credit research of contemporary topics in Civil Engineering. Cannot be used to satisfy minimum degree requirements. Grade of pass or fail. Prerequisite: Department approval.

5302   Groundwater Hydrology (3-0)
A general course in groundwater hydrology, emphasizing fundamental principles and their applications to practical problems. Topics included are hydrologic cycles, geologic environments and controls, unsaturated and saturated zones, Darcy’s law, continuity and energy principles, Navier-Stokes equations, flow equations, steady and unsteady hydraulics, aquifer tests, analytical and numerical models and computer codes. Prerequisite: Instructor approval.
5303  Engineering Analysis (3-0)
Formulation and solution of initial and boundary value problems arising in structural mechanics. Prerequisites: MATH 2326 or MATH 3326, and instructor approval.

5304  Advanced Reinforced Concrete (3-0)
Review of fundamental behavior of reinforced concrete structures. Design of reinforced concrete systems in accordance with ACI code. Topics include two-way slabs, plates, shells, continuous beams, frames, prestressed concrete, and composite design. Prerequisite: CE 4335.

5305  Advanced Structural Analysis (3-0)
Theory of finite element approximation, numerical solutions of a variety of problems in structural mechanics including beam-columns, grid beams and plates on linear and nonlinear foundations, and matrix structural analysis. May be repeated for credit. Prerequisites: CE 3343 and department approval.

5307  Theory of Finite Element Analysis (3-0)
Finite elements of structural mechanics problems, virtual work principle, plane trusses and frames, axial elements, beam bending, plane stress and plane strain, axi-symmetric stress analysis, three dimensional stress analysis, isoparametric finite elements, finite element computer project, and use of several finite element softwares to solve typical problems. Prerequisites: (1) CE 3343 or equivalent, (2) CS 1420 FORTRAN or C programming, and (3) instructor approval.

5308  Advanced Design of Steel Structures (3-0)
Design of structural steel systems using AISC LRFD code, welded and bolted connections of axial members, framed and seated shear connections, rigid and semi-rigid moment connections, base plate connections, beam and column splices, steel-concrete composite construction, and use of software to design typical systems. Prerequisites: CE 4361 and instructor approval.

5310  Risk and Reliability Analyses of Engineering Systems (3-0)
Quantitative risk and reliability analyses in engineering. Reliability methods applicable to design, component reliability, system reliability, parallel systems, series system, extreme value theory, fault tree and decision analysis, approximate methods for risk and reliability, and selected applications to civil engineering. Prerequisite: Department approval.

5311  Structural Buckling and Stability (3-0)
Buckling of columns, frames, arches, rings, plates, and shells, lateral and torsional buckling of beams. Numerical methods of buckling analysis, stability analysis of complex systems using specialized computer programs. Prerequisites: CE 3343 and department approval.

5312  Environmental Processes (3-0)
Critical study of fundamental theories and modeling approaches for physical, chemical, and biological processes that affect the fate of chemicals in the environment. Mass flow and diffusion, kinetics and equilibrium, solubility and precipitation, volatilization, oxidation-reduction, types of sorption, complexation, radiodecay, and biotransformation. Applications focus on waste disposal, soil and groundwater reclamation, and advanced water and wastewater treatment operations. Prerequisite: Instructor approval.
5318 Bridge Engineering (3-0)

5319 Structural Systems (3-0)
Application of systems engineering principles to planning, design, and construction of building and bridge structures with emphasis on performance requirements and economic factors. Prerequisite: Department approval.

5320 Advanced Geotechnical Engineering (3-0)
Advanced treatment of topics in geotechnical engineering, including the engineering response to loading, soil properties, earth pressure, shear strength, soil compaction and fabric, soil hydraulics, and consolidation and settlement analysis. Prerequisites: CE 4348 or department approval.

5322 Hazardous and Special Wastes Management (3-0)
A study of waste management from cradle to grave; generation, storage, transportation, treatment, disposal, exchanges and minimization. The program emphasizes legislative and technical aspects with focus on treatment and disposal technologies. Analysis and design covers physical, chemical, thermal or biological processes with general applications in the industrial and energy producing sectors. Special wastes, such as high-technology, infectious and radioactive, are addressed as case studies. Prerequisite: A BS degree in Engineering or Chemistry, graduate standing in engineering or chemistry, or department approval.

5323 Prestressed Concrete (3-0)
Theory, advantages, and limitations; various systems of prestressing; composite construction; continuous span theory. Prerequisite: Department approval.

5324 Construction Management (3-0)
Planning and management of construction or engineering organizations, including formation, organization, legal factors, marketing, financing, and human resource management. Prerequisite: Department approval.

5325 Design of Structures for Dynamic Loads (3-0)
Behavior of structural members under dynamic loads. Vibration theory, particular reference to structures, design of structural systems for dynamic loads, wind loads, and earthquakes. Prerequisite: Instructor approval.

5326 Air Pollution Control (3-0)
Effect of air pollution, classification of wastes, meteorological factors, sampling and analysis, abatement, and statistical analysis. Prerequisite: Instructor approval.

5327 Continuum Mechanics I (3-0)
Mathematical description of continuum mechanics principles, including; tensor analysis, generalized description of kinematics and motion, conservation laws for mass and momentum; invariance and symmetry principles. Prerequisite: Department approval.
5329 **Air Pollution Modeling (3-0)**
Atmospheric boundary layer, atmospheric turbulence, air pollution meteorology, turbulent diffusion in the atmosphere, Eulerian diffusion equations, Gaussian models, USEPA regulatory air pollution models, modeling considerations, urban air pollution, and recent developments in air pollution modeling. **Prerequisite:** Department approval.

5332 **Modern Methods of Engineering Computations (3-0)**
Methods of iterations, approximations, and numerical procedures used in solution of complex problems and optimizations such as occur in Engineering Design and Scientific Analysis. **Prerequisite:** Instructor approval.

5333 **Plates and Shells (3-0)**
The theory and design of plates and shell structures by the membrane and bending stress theories. **Prerequisite:** Instructor approval.

5335 **Soil Dynamics (3-0)**
Fundamentals of vibration, wave propagation in elastic homogeneous medium, shear modulus of soil, geophysical exploration, foundation vibration-half space theory, lumped parameter systems, dynamic lateral earth pressure, soil liquefaction. **Prerequisites:** CE 4448 and department approval.

5338 **Slope Stability (3-0)**
Properties of soils relevant to slope stability. Site investigation, instrumentation and monitoring of slopes. Methods of stability analysis for embankments, dams, natural and manmade cut slopes, rock falls, debris flow, mudslides, and submarine slopes. Stability of slopes under earthquake loading conditions. **Prerequisite:** Department approval.

5342 **Groundwater Contamination and Reclamation (3-0)**
Groundwater pollution sources and typical cases in hazardous and radioactive waste management. Fundamentals of flow and transport of chemicals in porous media. Modeling phase distribution of chemicals in subsurface environments. Use of state-of-the-art computer codes (mainframe- and micro-computers). Applications to either planning, case evaluation, remedial action or clean-up technologies. **Prerequisite:** Instructor approval.

5344 **Biological Unit Operations and Processes (3-0)**
Design course for biological waste treatment systems. Both anaerobic and aerobic processes are covered and include attached and suspended growth processes such as activated sludge and its variants, bio-towers, RBC’s, sequencing batch reactors, fluidized bed reactors and anaerobic digestion. The course will also address the biological removal and control of nitrogen and phosphorous for nutrient and ammonia toxicity control. **Prerequisite:** Instructor approval.

5345 **Advanced Water Treatment Processes (3-0)**
Design course focusing on the development of treatment trains for the removal of contaminants from water. Advanced design process development for filtration, adsorption, disinfection, ion exchange, membrane processes and inorganic residuals disposal. Class includes relevant field trips to advanced treatment facilities and a process design project. **Prerequisite:** Instructor approval.
5349 **Design of Filtration and Membrane Processes (3-0)**
Fundamentals of particulate and ion removal/rejection are reviewed and then applied to engineered systems. The design of multi-media filtration systems, ultra and nano filtration processes, reverse osmosis (RO), electro dialysis, are covered in depth. Brine concentrate disposal methods such as deep well injection, irrigation, and enhanced evaporation are examined. Products such as membranes and brine concentration systems and availability from manufacturers are reviewed. Site visits to industrial application sites, an engineering design office, and an Original Equipment Manufacturer (OEM) may be included. **Prerequisite:** Department approval.

5351 **Mechanistic Pavement Design and Analysis (3-0)**

5352 **Foundation Design II (3-0)**
Determination of lateral earth pressure. Design of traditional retaining structures, mechanically stabilized retaining walls and cofferdams. Stability of slopes, and dewatering. **Prerequisite:** CE 4348 or department approval.

5353 **Geotechnical Site Investigation (3-0)**
Scope of site investigation. Subsurface data requirements. Conduct of investigation. Field mapping. Engineering Geophysics. Laboratory and field investigation. Compilation and presentation of geotechnical information. **Prerequisite:** CE 4348 and instructor approval.

5355 **Advanced Civil Engineering Materials (3-0)**
Advanced topics in civil engineering materials, design and characterization of asphalt cement and asphalt concrete mixtures, design and characterization of Portland cement concrete, and application of composite materials to Civil Engineering projects.

5359 **Foundation Design I (3-0)**
Subsurface Exploration, Spread Footings, Mat Foundations, Pile Foundations, Drilled Shaft, Mechanics of Laterally and Axially Loaded Piles. **Prerequisite:** CE 4348 with a grade of “C” or better.

5360 **Highway Geometric Design (3-0)**
This course will provide students with an understanding of the basic principles and techniques of highway design. This will include laying out potential routes, detailed design of the alignment, and evaluation of drainage, earthwork, and intersection requirements. The student should be able to understand and apply these principles to highway design problems. The student will use existing computer tools to generate and analyze designs. Upon completion, students should be prepared to work in the field of highway design and to study advanced topics in roadway design.

5361 **Traffic Flow and Simulation Modeling (3-0)**
This is a comprehensive introductory course to traffic flow and simulation modeling. Topics include: basic microscopic; meso-scopic and macroscopic traffic flow theories; advanced traffic flow theories such as high-order traffic flow theories; analytical and simulation based traffic flow modeling; traffic simulation models and their applications. **Prerequisites:** Satisfactory completion of CE 4340 or equivalent and department approval.
202 / CIVIL ENGINEERING

5362 **Urban Transportation Planning (3-0)**
This course introduces the student to transportation planning and provides the student with an understanding of transportation planning models, including travel demand models of trip generation, trip distribution, mode choice, and traffic assignment. The course also provides instruction in econometric model estimation methods and use of behavioral models in service design, marketing and prediction. Practical problems are assigned to provide familiarity with models used and experience in data handling and estimation. **Prerequisites:** Satisfactory completion of CE 4340 or equivalent and department approval.

5363 **Advanced Travel Demand Analysis (3-0)**
This course addresses new developments in the econometric and behavioral aspects of demand analysis and forecasting, supply-demand interaction in transport systems, and dynamic models. Applications include passenger travel, urban activity decisions, user responses to information, intelligent transportation systems, freight transportation as well as the demand for other types of infrastructure facilities and services. **Prerequisites:** Satisfactory completion of CE 4340 or equivalent and department approval.

5364 **Infrastructure Network Flow Analysis and Optimization (3-0)**
The primary focus of this course is on the use of quantitative techniques of operations research to model system performance, design transportation services, and analyze transportation network problems through the design, analysis and implementation of algorithms. Topics include introductions to data structures, memory management and complexity analysis; queuing systems; application of graph theory and network analysis to transportation problems (including shortest path, vehicle routing and other problems arising in connection with scheduled and unscheduled systems); analytical approaches to the formulation of network equilibrium assignment problems and solution algorithms; and introduction to Intelligent Transportation Systems (ITS). **Prerequisites:** Satisfactory completion of CE 4340 or equivalent and department approval.

5365 **Decision Making in Infrastructure System Design and Evaluation (3-0)**
This course is aimed at providing students with methodologies and applications for complex decision making in infrastructure system design and evaluation in the presence of multiple criteria/objectives, multiple actors and uncertainty. In addition to the conceptual, mathematical and algorithmic aspects of the various approaches, limitations, implementation issues and case studies are addressed. **Prerequisites:** Satisfactory completion of CE 3373 or equivalent and department approval.

5390 **Special Topics in Civil Engineering (3-0)**
Advanced topics of contemporary interest in civil engineering. May be repeated for credit when topic varies. **Prerequisite:** Instructor approval.

5396 **Graduate Design Projects (0-0-3)**
Individual research, design, or analysis on advanced phases of civil engineering problems conducted under the direct supervision of a faculty member. The course, including a written report, is required of all students in the non-thesis option. **Prerequisite:** Instructor approval.

5397 **Graduate Design Projects (0-0-3)**
Individual research, design, or analysis on advanced phases of civil engineering problems conducted under the direct supervision of a
faculty member. The courses, including a written report, are required of all students in the non-thesis option. Prerequisites: CE 5396 and instructor 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: CE 5398.

5409 **Environmental Engineering Chemistry (3-3)**
Study and evaluation of the chemical characteristics of ground water, surface water, municipal waste waters, and industrial effluents. Acid base reactions, oxidation reduction reactions, gas solubility, adsorption, precipitation, and dissolution. Laboratory covers analysis of physical, chemical, and biological properties of water. Work with AA, GC, IC, TOC, and other instrumentation for water analysis. Prerequisite: Instructor approval.

6195 **Civil Engineering Seminar (1-0)**
Presentation and discussion of topics in infrastructure engineering by graduate students, faculty and visitors. Prerequisites: Permission of the CE program director and department approval.

6301 **Infrastructure Management (3-0)**
The basic concepts and principles of infrastructure management. Life and performance models required for a sound management system. The concepts of modeling performance (including maintenance and repair) for facilities such as roads, buildings, bridges, water supply systems, and others. Prerequisite: Department approval.

6303 **Engineering Analysis I (3-0)**
Series solutions of differential equations, Fourier Series and Fourier Integrals, Bessel’s Equations and Bessel Functions, Lagrange's equations and Lagrange’s polynomials, Sturm-Liouville problem and eigenfunction expansions. Formulation and solution of initial and boundary value problems arising in Civil Engineering. Prerequisite: Department approval.

6306 **Infrastructure Engineering (3-0)**
A hands-on course that provides information about the basic concepts of deterioration engineering, material science, testing and evaluation, project evaluation and planning and construction management and environmental impact. Prerequisite: Department approval.

6313 **Water Resources Management (3-0)**
Technological and institutional approaches for managing water resources; the planning process; systems analysis methods; comprehensive integration of engineering, economic, environmental, legal and political considerations in water resources development and management; issues and future directions. Prerequisite: Department approval.

6314 **Advanced Traffic Engineering (3-0)**
Human, vehicular, and traffic characteristics as they relate to driver-vehicle-roadway operational systems; traffic studies and methods of analysis and evaluation. Advanced theory and application of traffic control; signalization; and freeway operations. Prerequisite: Department approval.
6315 Infrastructure Planning (3-0)
Influence of infrastructure in shaping urban form; relationships between land use and transportation; trends in urban development; site development; circulation and relationships to the street system; guidelines for redevelopment of existing public infrastructure systems. Prerequisite: Department approval.

6316 Urban Transportation Analysis (3-0)
Characteristics of urban transportation systems, trends in urban mobility; the urban transportation modeling process, study design data collection, trip generation, trip distribution, mode choice and traffic assignment; use and interpretation of modeling results; alternatives analysis; intermodal transportation issues; intercity transportation, the transportation life cycle. Prerequisite: Department approval.

6332 Modern Methods of Engineering Computation (3-0)
Essential methods for computer-aided problem solving in infrastructure engineering areas. Topics may include computer operating systems concepts; the Internet and World Wide Web site design; advanced programming with C programming language; data structures; file manipulation and management; Monte Carlo simulation techniques; interfacing with spreadsheets, SQL databases, and computer-aided design packages; introduction to Geographic Information Systems. Team programming is emphasized. Prerequisite: Department approval.

6396 Doctoral Research (0-0-3)
Directed research on topics in civil and infrastructure engineering related to the dissertation or conducted as a component of the student’s overall graduate program. Prerequisites: Admission to the CE program or permission of the CE Program Director and department approval.

6398 Dissertation (0-0-3)
Taken when preparation of the dissertation is begun. One enrollment permitted. Prerequisite: Completion of comprehensive examination.

6399 Dissertation (0-0-3)
Taken continuously during preparation of the dissertation. Prerequisite: CE 6398.
Computer Science

234 Computer Science Building
(915) 747-5480
Fax: (915) 747-5030
http://www.cs.utep.edu

CHAIRPERSON: Ann Q. Gates

Computer Science offers a Master of Science in Computer Science, a Ph.D. in Computer Science, and a Master of Information Technology in collaboration with Information and Decision Sciences. The M.S. and Ph.D. programs emphasize active student involvement in research groups. Our goal is to produce graduates who possess an education of sufficient breadth and depth to qualify them as leaders in both the industrial and academic environments of Computer Science. Computer Science faculty members have particular expertise in the following areas: Applications of Theory, High Performance Computing, Interactive Systems, and Software Engineering.

Doctor of Philosophy Degree in Computer Science

Educational Objectives
The Computer Science Ph.D. program seeks to provide students with:

- a thorough grounding in the fundamental principles and practices of computer science;
- the ability to advance the state of the art of computer science;
- the skills to become researchers and teachers who can excel in both the academic and professional spheres of computer science;
- a clear understanding of the professional, ethical, and societal implications of computer science research; and
- the ability to work across disciplinary boundaries, both within and beyond computer science.

Requirements for Admission
Applicants will apply through the Graduate School at the University of Texas at El Paso. The applicant must meet the requirements set forth by the Graduate School. The application packet must include:

- Official scores on the Graduate Record Exam
- Official scores on the Test of English as a Foreign Language (TOEFL) for international applicants whose first language is not English, or who have not completed a university degree at an English-speaking institution.
- Statement of Purpose
- Two letters of recommendation, and any other material that supports the application, for example, published papers, conference presentations, or patents.
The Graduate School will forward the application packet to the Computer Science Graduate Admissions Committee which will assess the packet and make admission recommendations to the Graduate School. Applicants must have completed a bachelor’s or master’s degree in Computer Science or a closely related discipline. Exceptional students with non-computer science backgrounds may be conditionally admitted to the program.

Requirements for Degree

The Ph.D. program requires a minimum of 48 semester-credit hours of coursework beyond a Bachelor’s degree and 24 semester-credit hours of research and dissertation. Coursework includes a set of core courses and general, technical, and interdisciplinary electives. If the student enters the program with a Master’s degree in Computer Science, he or she will be required to take a minimum of 27 semester-credit hours of coursework. In order to ensure that the student is able to apply principles and techniques of computer science to software development, clearly communicate technical ideas in writing, and synthesize, organize and communicate technical material to an audience, the student must meet programming, written communication, seminar, and teaching requirements. The student also must pass a Qualifying Examination, a Comprehensive Examination, and defend his or her dissertation. Consult the Computer Science Graduate Program Handbook or program website for more detailed information about the program requirements.

Table 1 summarizes the degree requirements. The descriptions follow.

Table 1: Degree Requirements Summary

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses</td>
<td>15</td>
</tr>
<tr>
<td>General Electives</td>
<td>12</td>
</tr>
<tr>
<td>Technical Electives</td>
<td>15</td>
</tr>
<tr>
<td>Interdisciplinary Electives</td>
<td>6</td>
</tr>
<tr>
<td>Doctoral Research</td>
<td>18</td>
</tr>
<tr>
<td>Dissertation</td>
<td>6</td>
</tr>
<tr>
<td>Competency Requirements</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>72</strong></td>
</tr>
</tbody>
</table>

Core Courses (15 credit hours): The following five core courses are required:

- CS 5392 Graduate Research Methods
- CS 5303 Logical Foundations of Computer Science
- CS 5315 Theory of Computation
- CS 5341 Advanced Computer Architecture
- CS 5350 Advanced Algorithms
General Electives (12 credit hours): The purpose of the general elective requirement is to provide the student with a broad foundation of computer science. Courses are categorized according to major areas and students are required to take four courses that are outside their major area of study.

Technical Electives (15 hours): The technical electives are used to provide the student with depth in an area. The student must take courses in his or her specific area of study as approved by the Graduate Advisor.

Interdisciplinary Electives (6 hours): The interdisciplinary requirement enables the student to acquire a more detailed understanding of a field related to his or her research. The student is required to take senior-level or graduate-level courses outside of Computer Science.

Doctoral Research (18 hours): The student must take 18 hours of doctoral research. The student can register for doctoral research hours only after passing the Qualifying Examination.

Dissertation (6 hours): The student will be able to register for dissertation hours only after passing the Comprehensive Examination. The dissertation must demonstrate competence in scholarly exposition and the ability to do independent research. It should present original investigations at an advanced level on a significant problem in computer science and should provide the basis for a publishable contribution to the research literature in the field. The rules for the dissertation and dissertation defense will follow the guidelines set forth by the Graduate School at UTEP.

Examinations

The Qualifying Examination is designed to ensure that students have graduate-level mastery of the basic Computer Science undergraduate material. Although the only knowledge required is that learned in undergraduate courses, the examination tests the ability to synthesize, integrate, and apply that knowledge at an advanced level.

The Comprehensive Examination is given to ensure that the student has identified a research topic and has acquired a sufficient depth of knowledge in the topic area to perform new and significant research and that the proposed research is feasible. The Comprehensive Examination will be taken after completion of the Qualifying Examination, typically within two years from that time. The student will prepare a written research proposal. The Comprehensive Examination will be an oral examination before the student’s Doctoral Advisory Committee, covering the student’s research proposal and other topics in his or her general area of study. Upon successful completion of the examination, the chair of the student’s Doctoral Advisory Committee will inform the Graduate School that the student is ready to begin work on his or her final dissertation, and the student will be admitted to candidacy.
Master of Science in Computer Science

Requirements for Admission to the M.S. Program

See the introduction to the College of Engineering for information about general requirements. Additionally, to be admitted, applicants must submit evidence of successful completion of the following undergraduate courses or their equivalent:

- MATH 1411 Calculus I
- MATH 2300 Discrete Mathematics
- CS 2402 Data Structures
- CS 3350 Automata, Computability and Formal Languages
- CS 3320 Computer Architecture II: Advanced Computer Design and Implementation
- CS 3360 Design and Implementation of Programming Languages

Exceptional students who have taken Math 2300 and CS 2402, or equivalent courses, may be conditionally admitted to the program. In such cases, students will be required to complete the undergraduate leveling courses specified by the department with a grade of “B” or better in each course. After one year, students who fail to meet this requirement will not be allowed to register for graduate courses.

Requirements for M.S. Degree

Thesis and non-thesis programs are available under this degree. Students enrolled in a thesis program must take 27 semester hours of course work plus 6 semester hours of CS 5398-CS 5399 Thesis. Non-thesis students follow a 30 semester-hour program plus six semester hours of CS 5396-CS 5397 Graduate Projects.

All students are required to complete the following four core courses with a “B” average or better and with no more than one “C”.

- CS 5303 Logical Foundations of Computer Science
- CS 5315 Theory of Computation
- CS 5341 Advanced Computer Architecture
- CS 5350 Advanced Algorithms

Students who have not taken CS 4375 Theory of Operating Systems (or its equivalent) are required to include this course or CS 5340 Advanced Operating Systems in their program of study. In addition, those who have not taken CS 4342 Database Management (or its equivalent) are required to include this course or CS 5322 Topics in Advanced Database Systems in their program of study.

A maximum of six hours from the following list of undergraduate courses may be applied toward the Master of Science degree in Computer Science:

### Computer Science (CS)

**For Undergraduate and Graduate Students**

- **4310** Software Engineering: Requirements Engineering (3-0)
- **4311** Software Engineering: Design and Implementation (3-0)
- **4316** Computer Networks (3-0)
- **4320** Artificial Intelligence (3-0)
- **4342** Database Management (3-0)
- **4352** Compilers and Interpreters (3-0)
- **4365** Topics in Soft Computing (3-0)
- **4375** Theory of Operating Systems (3-0)
- **4390** Special Topics in Computer Science (3-0)
- **4392** Research Methods in Computer Science (3-0)
For Graduate Students Only

5303 **Logical Foundations of Computer Science (3-0)**  
A presentation of fundamental tools required in advanced computer science, including topics such as propositional and first order logic, topological properties of networks, managing tasks in parallel systems using graphs as well as modeling, simulations and queuing processes.  
*Prerequisite:* MATH 2300 with a grade of “B” or better.

5310 **Computer Graphics (3-0)**  
Computer representation and display of graphical information including line, character, and curve generation, two-dimensional and three-dimensional graphical techniques, interactive methods, and advanced topics.  
*Prerequisite:* CS 3370.

5314 **Artificial Intelligence I (3-0)**  
A study of first-order logic, including an introduction to Prolog, knowledge representation including semantic networks and logical representations, query answering, and reasoning methods.  
*Prerequisite:* CS 4320 or equivalent.

5315 **Theory of Computation (3-0)**  
A review of formal languages and models of computation such as Turing machines, followed by an in-depth study of undecidability, computational complexity theory, and intractability.  
*Prerequisite:* CS 3350 or equivalent.

5317 **Human-Computer Interaction (3-0)**  
Models and methods of human-computer interaction, theory of human-computer interaction, development methods for interfaces such as user-centered design, prototyping, and participatory design, evaluation and testing techniques, such as heuristic evaluation, the cognitive walkthrough, and usability testing, user-interface programming, and ethical and societal issues.

5318 **Topics in Interactive Systems (3-0)**  
Advanced study of human-computer interaction. In-depth treatment of topics such as theoretical models of interaction, evaluation of interfaces, dialogue modeling, next-generation interfaces, user interface management systems, participatory design, groupware, and design of procedures and documentation. May be repeated for credit when topic varies.  
*Prerequisite:* CS 5317 with a grade of “B” or better.

5319 **Topics in Language Processing (3-0)**  
Concepts and techniques of computational processing of human language. Topics may include natural language processing, spoken language understanding, natural language generation, machine translation, and dialogue systems. May be repeated for credit when topic varies.  
*Prerequisite:* CS 3350 with a grade of “B” or better.

5322 **Topics in Advanced Database Systems (3-0)**  
A review of relational algebra followed by study of datalog and its extensions (negation as failure, aggregates), query optimization, dependencies, and object-oriented databases.  
*Prerequisite:* CS 4342 and CS 5303 each with a grade of “B” or better.
5333 Logic Programming (3-0)  
This course will include advanced logic programming technique as well as an in-depth study of the semantics of Prolog, more advanced logic programming systems, and deductive databases. **Prerequisite:** CS 5314 or equivalent.

5334 Parallel and Concurrent Programming (3-0)  
The study of software and hardware architectures for parallel and distributed systems, including techniques for task partitioning and allocation, interprocess communication and synchronization, load balancing, and performance issues, in particular, task granularity, locality, and scalability. **Prerequisite:** CS 2402 with a grade of “C” or better or department approval.

5336 Scientific and Program Visualization (3-0)  
In-depth treatment of scientific and program visualization techniques, including a survey of visualization, fundamentals of visualization and visualization systems, applications of color to visualization, and applications of data and program visualization techniques. **Prerequisite:** CS 2402 with a grade of “C” or better or department approval.

5337 Advanced Interconnection Networks (3-0)  
An in-depth treatment of both electrical and optical interconnection networks that may be used for parallel processing algorithms and systems. Topics covered include interconnection architectures, switching and routing techniques and algorithms, optical buses and metrics.

5340 Advanced Operating Systems (3-0)  
A review of process synchronization, deadlocks and memory allocation paradigm, followed by in depth coverage of distributed systems, computer security, and queuing theory. **Prerequisite:** CS 4375 or instructor approval.

5341 Advanced Computer Architecture (3-0)  
A review of the fundamentals of computer design and instruction set principles, followed by the study of the basic principles underlying the design of today’s computers, including advanced pipelining, instruction-level parallelism, memory-hierarchy design, storage systems, interconnection networks, and multiprocessors. Real examples, measurements on real machines, cost/performance tradeoffs, and good engineering design is emphasized. **Prerequisite:** CS 3320 with a grade of “C” or better.

5350 Advanced Algorithms (3-0)  
Review of mathematical techniques for analysis of computer algorithms, and techniques for design of efficient algorithms, description and analysis of both well-established and recently developed algorithms. **Prerequisite:** CS 2402 with a grade of “C” or better, or department approval.

5351 Interval Computations (3-0)  
An overview of interval computations that take into account how input uncertainties influence the computation result. A review of the main ideas behind interval computations, main interval techniques, and applications to practical problems such as robotics, computer graphics, control, and bioinformatics.

5352 Computer Security (3-0)  
General concepts and applied methods of computer security, especially as they relate to confidentiality, integrity, and availability of information assets. Topics include system security analysis, access control and
various security models, identification and authentication, protection against external and internal threats, communication protocols and internet security.

5353 **Topics in Emerging Computing Paradigms (3-0)**
Introduction to emerging, revolutionary computing paradigms, such as quantum computing, and to the design and development of highly efficient algorithms in these paradigms. Topics may include quantum, chemical, and biological computing. May be repeated for credit when topic varies.

5354 **Topics in Intelligent Computing (3-0)**
Introduction to advanced concepts and techniques of intelligent and soft computing and their applications. Topics may include neural computations, fuzzy computations, evolutionary computations, intelligent control and intelligent web design. May be repeated for credit when topic varies.

5356 **Validation Analysis and Interval Computations for Bioinformatics (3-0)**
Introduction to numerical algorithms with automatic results verification and to interval computations – methodology that provides guaranteed error estimates for the results of indirect measurement and data processing. Topics include reliable methods for equation solving, global optimization, etc. All topics are illustrated by bioinformatics examples (such as protein folding). Computer usage fee required.

5381 **Topics in Software Design (3-0)**
The study of methods and approaches to software design. Topics may include advanced object-oriented design, meta-object protocols, software architectures, and design patterns. May be repeated for credit when topic varies. **Prerequisites:** CS 4311 with a grade of “B” or better or instructor approval.

5382 **Topics in Software Development (3-0)**
The study of the production of high-quality software systems. Topics may include process improvement models, deductive and inductive program synthesis, clean-room programming, and software project management. May be repeated for credit when topic varies.

5383 **Topics in Software Assurance (3-0)**
The study of methods and approaches to software quality assurance particularly as it applies to high-assurance, high-consequence, and safety critical systems. Topics may include software specification methods, formal methods of software development, formal methods in software verification, and high-assurance software engineering and system safety. May be repeated for credit when topic varies. **Prerequisites:** CS 4311 and CS 5303 each with a grade of “B” or better.

5390 **Special Topics (3-0)**
Advanced topics of contemporary interest in Computer Science. May be repeated for credit when topic varies. **Prerequisite:** Instructor approval.

5391 **Individual Studies (0-0-3)**
Individual variable-credit research, design, or analysis on advanced phases of Computer Science problems conducted under the direct supervision of a faculty member. A maximum of three credit hours of CS 5391 or CS 4371 may be applied towards the MS degree. **Prerequisite:** Permission of Graduate Advisor.
Graduate Research Methods (3-0)
Introduction to research methods, including research paradigms and methodologies across computer science, research question formulation, design of research approach, literature search and presentation of related work, analysis of results, verbal and written presentation skills, and research ethics. Students prepare and defend a thesis proposal or project in an area of their choice.

Graduate Research (0-0-3)
Graduate Research (0-0-6)
Individual variable-credit research of contemporary topics in computer science. Prerequisite: Permission of Graduate Advisor.

Graduate Projects (0-0-3)
Individual research, design, or analysis on advanced phases of computer science conducted under the direct supervision of a faculty member. The courses, including a written report, are required of all students in the non-thesis option. Prerequisites: Instructor approval.

Graduate Projects (0-0-3)
Individual research, design, or analysis on advanced phases of computer science conducted under the direct supervision of a faculty member. The courses, including a written report, are required of all students in the non-thesis option. Prerequisites: CS 5396 and instructor approval.

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

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

For Doctoral Students Only

Doctoral Research (0-0-1)
Doctoral Research (0-0-2)
Doctoral Research (0-0-3)
Doctoral Research (0-0-6)
Individual research in Computer Science. Prerequisite: Department approval.

Special Topics (3-0)
Advanced topics of contemporary interest in Computer Science. May be repeated for credit when topic varies. Prerequisite: Department approval.

Individual Studies (0-0-3)
Individual study of a specific topic advanced in computer science under the direct supervision of a faculty member. A maximum of three credit hours may be applied toward the Ph.D. degree. Prerequisite: Department approval.

Dissertation (0-0-3)
Initial work on the dissertation. Prerequisite: Department approval.

Dissertation (0-0-3)
Taken continuously during preparation of the dissertation. Prerequisite: CS 6398.
Electrical and Computer Engineering

Electrical and Computer Engineering 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 a Ph.D. degree in Computer Engineering.

Doctor of Philosophy Degree in Computer Engineering

Requirements for Admission

1. Bachelor’s or Master’s degree from an accredited institution in the United States or proof of equivalent education in an international institution
2. Undergraduate or graduate degree in Electrical Engineering, Computer Engineering, Computer Science, or a related field
3. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework (normally 3.5/4.0 GPA) from all Master’s work or, if applying without a completed MS, a 3.6 GPA from an ABET or CSAB accredited program)
4. A TOEFL score of 213/550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S.
5. Other evidence of background, knowledge, research or work experience in Computer Engineering that may be available.

While some exceptional students may enter the Ph.D. program immediately upon completion of the bachelor’s degree, more typically students enter the program after the conclusion of the MS degree.

Requirements for Degree

The specific course work required of each student will be determined by his/her Advisory Committee. However, each student must complete at least 90 credit hours beyond the bachelor’s degree or at least 60 hours beyond the master’s degree. Thirty semester credit hours are devoted to dissertation and research, the primary requirement of the degree. (If master’s degree was granted at UTEP, 57 hours are required.)

Each student’s course work must include:

1. At least 3 courses from the following:
   - EE 5300  Advanced Math for Engineers I
   - EE 5301  Advanced Math for Engineers II
   - CS 5315  Theory of Computation
   - CS 5350  Advanced Algorithms
2. At least 3 courses from the following:
   EE 5374 Advanced Digital System Design I
   EE 5375 Advanced Digital System Design II
   EE 5376 Computer Architecture I
   EE 5377 Computer Architecture II
   EE 5378 Advanced VLSI Design

3. At least 3 courses from the following:
   EE 5330 Data Communications
   CS 5352 Parallel and Concurrent Computing
   CS 5314 Artificial Intelligence I
   EE 5370 Operating Systems or
   CS 5340 Advanced Operating Systems

4. At least 3 courses from an approved list of computer engineering/computer science courses.

An additional 24 credit hours of supporting work will be required of each student. These courses will be selected from advanced offerings in engineering, physical science, and mathematics. The remaining 30 credit hours will be earned in dissertation and research as stated above.

Foreign Language Requirement

Under exceptional circumstances, the candidate may be required to demonstrate reading proficiency in a foreign language if the Doctoral Advisory Committee considers it necessary for his/her dissertation research.

Committees

For each degree candidate, a Doctoral Advisory Committee will be formed consisting of a dissertation advisor and at least three additional faculty with expertise in areas related to his/her program of study and research. At least one committee member must be from a department other than Computer Science or Electrical Engineering. The Doctoral Advisory Committee will be appointed in consultation with the candidate after completion of 9-12 hours of course work applicable to the doctoral degree. The appointment must be approved by the Graduate School and either the Graduate Advisor of the Department of Electrical and Computer Engineering or the Department of Computer Science. The Doctoral Advisory Committee will administer the candidate’s Comprehensive Examination and, together with an additional faculty member from outside the College of Engineering, approved by and representing the Dean of the Graduate School, will conduct the Final Dissertation Examination.

Examinations

Upon entering the program, each student will be required to complete a Qualifying Examination. To pass this examination, a student must demonstrate competency in the fundamentals of computer engineering. Upon completion of all course work, each student will take a Compréhensivé Examination administered by his/her Doctoral Advisory Committee. Upon completion of the dissertation research, each student will be examined with regard to the outcome of the research project.

Dissertation

The dissertation must demonstrate both the ability to do independent research and competence in scholarly exposition. It should present original investigations at an advanced level of a significant problem in computer engineering and should provide the basis for a publishable contribution to the research literature in the field.
Dissertation topics will deal with the structure, function, and application of computer systems and/or digital information processing. Problems may emphasize digital architecture, hardware structures, functions, system design and analysis, or software.

Draft copies of the dissertation must be submitted to the Doctoral Committee at least six days before the defense and any suggested corrections must be made. Two copies of the final bound dissertation, and the unbound original, must be submitted to the Graduate School by the posted deadlines. Two bound copies must also be submitted to the Graduate Advisor.

Microfilming of the 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.

Along with the dissertation, the student must also 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 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 to be secured in the Graduate School. 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 the degree must be completed within one eight-year period preceding the awarding of the doctoral degree. 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 readmission within an eight-year limit, unless, with the approval of the Dean of the Graduate School, the student elects to be bound by the course requirements of a subsequent catalog. This regulation applies to course requirements only.

Master of Science in Computer Engineering or Electrical Engineering

Requirements for Master of Science Admission

Students should consult the Introduction to the College of Engineering and Graduate School sections for information on general admission requirements.

Requirements for Master of Science Degrees

Two options, thesis or non-thesis, are available for students. Master’s students are normally admitted into the non-thesis option. A student may transfer (or may be required to transfer depending upon source of support) to the thesis option. Such transfer must be approved by the student’s advisor, the graduate advisor, and the Program Head.
Students enrolled in the thesis option are required to take at least 24 hours of course work plus thesis (EE 5398-EE 5399). Students in the non-thesis option are required to take 36 hours of course work and pass a comprehensive examination. At least 24 hours must be in graduate course work in either Electrical Engineering or Computer Engineering including at least three sets of 6 hour sequences. (Current course sequences are available from the Program.)

**Specific Requirements for the Master of Science with a Major in Electrical Engineering Degree**

All students enrolled in the MS Electrical Engineering program are required to take EE 5300 and at least 12 hours of graduate course work in Electrical Engineering. No more than 6 semester hours of approved advanced undergraduate course work may be used to satisfy degree requirements.

**Specific Requirements for the Master of Science with a Major in Computer Engineering Degree**

All students enrolled in the MS program in Computer Engineering will be required to take at least 15 hours of graduate course work in areas with a strong emphasis in or applicability to Computer Engineering. These must include EE 5300 and either EE 5330, EE 5374, or EE 5376. No more than 6 semester hours of approved advanced undergraduate course work may be used to satisfy degree requirements. The thesis or project work should be in a computer related area.

**Computer Engineering (COMP)**

For Doctoral Students Only

- **6194** Graduate Research (0-0-1)
- **6294** Graduate Research (0-0-2)
- **6394** Graduate Research (0-0-3)
- **6494** Graduate Research (0-0-4)
- **6594** Graduate Research (0-0-5)
- **6694** Graduate Research (0-0-6)
  Individual variable credit research in computer systems engineering. Cannot be used to satisfy minimum degree requirements. Grade of pass or fail. *Prerequisites*: Doctoral standing and instructor approval.

- **6390** Special Topics (3-0)
  Advanced topics of contemporary interest in computer systems engineering. May be repeated twice for credit when topic varies. *Prerequisites*: Doctoral candidacy and department approval.

- **6391** Individual Studies (0-0-3)
  Individual research in advanced phases of electrical engineering conducted under the direct supervision of a faculty member. A maximum of three credit hours may be applied toward the Ph.D. degree.

- **6398** Dissertation (0-0-3)
  Dissertation course for doctoral students. Initial work on the dissertation.

- **6399** Dissertation (0-0-3)
  Dissertation course for doctoral students. Continuous enrollment required while work on dissertation continues. *Prerequisite*: COMP 6398.
Electrical and Computer Engineering (EE)

For Undergraduate and Graduate Students

4142 Laboratory for Electrical Engineering 4342
4178 Laboratory for Electrical Engineering 4378
4341 Communication Systems
4342 Digital Systems Design II
4347 Electromagnetic Energy Transmission and Radiation
4350 Integrated Circuits and Semiconductor Devices
4352 Power Electronics
4356 Real Time Signal Processing and Communication
4361 Fiber Optic Communications
4364 Systems and Controls
4365 Topics in Soft Computing
4372 Microcontroller Applications
4374 Operating System Design
4375 VLSI Design I
4378 Microprocessors Systems II
4379 Computer Architecture
4380 Microwave Communications
4381 Electro-Optical Engineering
4382 Antenna Engineering
4383 Digital Signal Processing
4385 Biomedical Instrumentation
4386 Computational Methods in Electrical Engineering
4388 Digital Communications
4389 High Resolution Radar
4395 Special Topics in Electrical Engineering

Required undergraduate electrical engineering courses may not be applied toward the MS in Electrical Engineering or Computer Engineering.

For Graduate Students Only

5095 Graduate Seminar (1-0)
Conferences and discussions of various topics in electrical and computer engineering by faculty, students, and speakers from industry and other institutions. Required of all graduate students during each semester of full-time enrollment.

5106 Research Methods II (1-0)
Study and development of research questions. Students will produce and defend written research proposal in field of interest in engineering. Prerequisite: EE 5205 with a grade of “B” or better.

5191 Individual Studies (0-0-1)
Individual variable-credit research, design or analysis on advanced phases of electrical engineering problems conducted under the direct supervision of a faculty member. A maximum of 3 credit hours may be applied towards the M.S. Degree. Prerequisite: Department approval.

5194 Graduate Research (0-0-1)
5294 Graduate Research (0-0-2)
5394 Graduate Research (0-0-3)
5494 Graduate Research (0-0-4)
5594 Graduate Research (0-0-5)
Individual variable-credit research in electrical or computer engineering. Cannot be used to satisfy minimum degree requirements. Grade of S or U. Prerequisites: Graduate standing and instructor approval.
5195  Graduate Seminar (1-0)
Conferences and discussions of various topics in electrical and computer engineering by faculty, graduate students, and speakers from industry and other institutions. Required of all graduate students during each semester of full-time enrollment.

5205  Research Methods I (2-0)
Introduction to the techniques, tools, and skills needed to conduct, evaluate, document, and disseminate research in engineering.

5300  Advanced Mathematics for Engineers I (3-0)
Random process fundamentals including spectral analysis; special classes of random processes; linear systems response to random processes; applications. Prerequisite: EE 3384 or STAT 3330 or equivalent.

5301  Advanced Mathematics for Engineers II (3-0)
A broad coverage of the field of numerical methods emphasizing computer techniques as they apply to Electrical Engineering. Topics generally include numerical integration and differentiation, boundary-value and eigenvalue-value problems, finite-difference and finite-elements methods, and solutions to partial, parabolic, and hyperbolic differential equations. Prerequisite: MATH 2326 or MATH 3326.

5302  Linear Systems Analysis (3-0)
Analysis of generalized linear systems through a state space approach. Relationships with frequency domain design. Modeling of physical systems. Controllability, observability, pole placement, and design of controllers and observers. Eigenstructures.

5306  Antenna Theory (3-0)
Fundamental theory of point sources; the antenna as an aperture; methods of analyzing and calculating characteristics of various types of antennas; self and mutual impedances of antennas; array of linear antennas; antenna measurement techniques. Prerequisite: EE 3321.

5310  Computer Graphics (3-0)
Advanced topics in two and three dimensional graphical techniques. Topics may vary, but course may not be repeated for credit.

5311  Semiconductor Devices (3-0)
Theory and application of advanced semiconductor devices including heterostructures, integrated circuits, semiconductor memories, charge transfer devices, thyristors, and microwave devices. Prerequisite: EE 4350 or equivalent.

5312  Advanced Optoelectronic Devices (3-0)
Theory and application of advanced photonic devices including injection lasers, photodiodes, infrared detectors, solar cells, and electroluminescent displays. Prerequisite: EE 4350 or equivalent.

5314  Ultrafast Electron Devices for Super Computers (3-0)
Theory and applications of electron devices used in fast computers including high electron mobility transistors, optical logic gates, quantum well lasers, Josephson junction logic gates, and heterojunction bipolar transistors. Prerequisite: EE 4350 or equivalent.

5323  Communication Theory (3-0)
Source coding, generation, transmission, and detection of digital baseband and bandpass signals, optimum receivers, block and convolutional channel coding, adaptive equalization, encryption and decryption, and introduction to spread spectrum. Prerequisite: EE 3384.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>5324</td>
<td><strong>Statistical Detection and Estimation Theory (3-0)</strong></td>
<td>Application of statistical decision theory and estimation theory to problems of communication systems and of radar and sonar. Narrowband signals, gaussian derived processes, hypothesis testing, detection of signals, and estimation of signal parameters. Prerequisite: EE 5300.</td>
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<tr>
<td>5330</td>
<td><strong>Data Communications (3-0)</strong></td>
<td>Study of modern telecommunication and data networks; packet and circuit switched networks; ATM; congestion control; mathematical modeling of networks; economics.</td>
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<tr>
<td>5332</td>
<td><strong>Coding and Error Correction (3-0)</strong></td>
<td>Topics to be discussed: Galois Fields, channel capacity and coding, linear channel codes and convolutional codes. Performance analysis of some well-known codes. A few decoding techniques and modulation and coding trade-offs. Instructor approval required.</td>
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<tr>
<td>5336</td>
<td><strong>Fiber Optic Communication Systems (3-0)</strong></td>
<td>In depth study of dispersion and attenuation in optical fibers, non-linear propagation effects, optical amplifiers, sources and detectors, wavelength division multiplexing, coherent systems, performance evaluation of fiber optic systems, and system design considerations.</td>
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<tr>
<td>5360</td>
<td><strong>Computer Vision (3-0)</strong></td>
<td>Fundamental concepts associated with the construction of meaningful descriptions of physical objects from images; including image segmentation, two-dimensional and three-dimensional representations, knowledge representation, matching, and inference. Prerequisite: Instructor approval.</td>
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<tr>
<td>5370</td>
<td><strong>Operating Systems (3-0)</strong></td>
<td>Fundamental concepts as they apply to multiprogrammed, multiuser operating systems within distributed computer systems. Topics include an overview of the kernel, file systems, process control and scheduling, interprocess communication, memory management, and I/O. The internal algorithms of a contemporary operating system are examined. Prerequisite: CS 4375 or EE 4374.</td>
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<tr>
<td>5371</td>
<td><strong>Digital Signal Processing (3-0)</strong></td>
<td>A course emphasizing the theory behind the following: the Discrete Fourier Transform (DFT) and its role in the representation, analysis, and processing of periodic and finite-duration signals; Fast Fourier Transform (FFT) algorithms for efficient computation of the DFT; sample rate change and other basic multirate signal processing systems; FIR and IIR digital filter design procedures. Prerequisite: EE 4383 or instructor approval.</td>
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<tr>
<td>5372</td>
<td><strong>Image Processing (3-0)</strong></td>
<td>A course covering the following topics: point, algebraic and geometric operations on digital images; two-dimensional digital filtering and Fourier transforms; image enhancement, segmentation, restoration and compression techniques. Prerequisite: EE 5371 or instructor approval.</td>
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<tr>
<td>5374</td>
<td><strong>Advanced Digital System Design I (3-0)</strong></td>
<td>Modern logic design methodologies of large digital systems with standard SSI, MSI and LSI, including PLD's and microprocessors. Emphasis is placed on the use of multilevel digital simulation and hardware language description. Prerequisite: EE 4342 or equivalent.</td>
<td></td>
</tr>
<tr>
<td>5375</td>
<td><strong>Advanced Digital System Design II (3-0)</strong></td>
<td>Emphasis on the principles and techniques of testability design and testing of digital logic circuits, including test pattern generation and fault simulation. Prerequisite: EE 5374.</td>
<td></td>
</tr>
</tbody>
</table>
5376 **Computer Architecture I (3-0)**  
Processing design, microprogramming, memory architecture, including memory hierarchy, cache and virtual memory, and pipelines. An introduction to multiprocessor configurations. **Prerequisites:** (1) EE 4342 and EE 3376 or (2) equivalent.

5377 **Computer Architecture II (2-3)**  
Advanced topics in computer architecture, including parallel and distributed processing. **Prerequisite:** EE 5376.

5378 **Advanced VLSI Design (3-0)**  
Important issues related to design of CAD tools for VLSI chip layout, testing, and simulation. Topics include area-time optimization, floor-plan and functional block placement, routing and functional testing for large systems. **Prerequisite:** EE 4375.

5379 **Network Protocols (3-0)**  
The theory and application of protocols such as TCP, IP, Sockets, and RPCs that are employed in computer network communications. Concentrates on network protocols that are employed from the network, transport, and process layers of the simplified 4-layer model for computer communications. **Prerequisite:** EE 5370 or instructor approval.

5389 **Radar Signal Processing (3-0)**  
Modern signal processing techniques for high range-resolution radar systems. One-and two-dimensional signals, high resolution radar, synthetic aperture radar, inverse synthetic aperture radar, radar tomography, ultrawideband radar. **Prerequisite:** EE 4389.

5390 **Special Topics (3-0)**  
Advanced topics of contemporary interest in electrical or computer engineering. May be repeated for credit when topic varies. **Prerequisite:** Instructor approval.

5391 **Individual Studies (0-0-3)**  
Individual variable-credit research, design, or analysis on advanced phases of Electrical Engineering problems conducted under the direct supervision of a faculty member. A maximum of three credit hours may be applied toward the MS degree. **Prerequisite:** Permission of Graduate Advisor.

5396 **Graduate Projects (0-0-3)**  
Individual research, design, or analysis on advanced phases of electrical or computer engineering problems conducted under the direct supervision of a faculty member. The courses, including a written report, are required of all students in the non-thesis option. **Prerequisite:** Instructor approval.

5397 **Graduate Projects (0-0-3)**  
Individual research, design, or analysis on advanced phases of electrical or computer engineering problems conducted under the direct supervision of a faculty member. The courses, including a written report, are required of all students in the non-thesis option. **Prerequisites:** EE 5396 and 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:** EE 5398.
The Industrial Engineering Department offers a Master of Science with majors Industrial Engineering, and Manufacturing Engineering, and an undesignated Master of Science with a major in Engineering. Courses of study in the Industrial Engineering major include quality engineering, computer simulation, industrial ergonomics, safety engineering, production and inventory control, and operations research. Areas of study in the Manufacturing Engineering major include design of manufacturing processes, analysis of discrete production systems, precision engineering, and automation.

The Industrial Engineering Department also offers a graduate certificate in International Manufacturing. Please contact the department for information on the program.

Requirements for Admission

Students should consult the Introduction to the College of Engineering section for information on general admission requirements.

General Requirements for Degree

Both thesis and non-thesis options are available under these degree programs. Students enrolled in a thesis option follow a 31-hour program that is composed of 24 hours of course work plus 6 hours of thesis (IE, or MFG 5398 and IE, or MFG 5399) and 1 hour of graduate seminar. Industrial and Manufacturing Engineering students pursuing the thesis option must have approval from the corresponding program’s Graduate Advisor.

Non-thesis students follow a 36-hour program. All students enrolled in the Industrial Engineering program must take at least 15 semester hours of course work within their major if they are following the thesis option or 18 if they are following the non-thesis option. Students enrolled in the Manufacturing Engineering program must take at least 15 semester hours of course work offered within the Mechanical and Industrial Engineering programs if they are following the thesis option or 18 for the non-thesis option.

No more than 6 semester hours of approved upper-level undergraduate course work may be used to satisfy the degree requirements in the Industrial, and Manufacturing Engineering programs. All course work must be approved by the student’s academic advisor and by the Graduate School. Specific requirements for each Master’s program are available from the Industrial Engineering Program.

International Manufacturing Certificate

An applied internship in a local manufacturing plant that promotes learning, hands-on experience and industrial practice by applying international manufacturing management and engineering fundamentals from IMS 4360 and 4361. The student will intern in a manufacturing facility and work on problems ranging from testing and inspection, design, quality, production and
inventory control, maintenance, purchasing, planning and scheduling, safety and ergonomics, tooling, to accounting, etc. Students will have an industry mentor, a faculty mentor, and a field engineer helping them in the manufacturing problems. The mid-term and final examinations will consist of a written report and presentation based on the research/design/analysis performed in a manufacturing department to the faculty mentor and industrial partner.

For Undergraduate and Graduate Students

**Industrial Engineering (IE)**

Courses that may be applied toward the Master of Science degree in Industrial Engineering.

4395  **Special Topics in Industrial Engineering**

For Graduate Students Only

**Industrial Engineering (IE)**

5195  **Graduate Seminar (1-0)**
Lectures and discussions of various topics in industrial engineering by faculty, graduate students, and speakers from industry and other institutions. Required for all non-thesis graduate students each semester they are in the graduate program. This seminar will be counted only once toward graduate degree requirements.

5316  **Advanced Work Design (3-0)**
This course will focus on the theoretical and practical issues concerning the design of work. It will provide a thorough coverage of the principles of industrial safety, plant layout and design, and methods engineering from a productivity and quality man-machine system perspective. The course will consist of lectures, class discussions, and student projects.

5330  **Industrial Statistics (3-0)**
Industrial statistics techniques such as generating functions, multivariate transformations, modes of convergence, limit theorems, parametrical statistical models, sufficiency, estimation, confidence intervals, hypothesis testing, optimal tests, and large sample theory. A strong emphasis is placed on the application of statistical techniques to industrial problems. *Prerequisite:* Department approval.

5332  **Advanced Concepts in Safety Engineering (3-0)**
Survey of industrial Safety Engineering topics to include hazard control principles, tools and machines, materials handling, noise and vibration, chemicals, ventilation, hazardous waste, personal protective equipment risk assessment, facility development process and safety, risk management and assessment, system safety, and accident investigation and analysis. This course will consist of lectures and class discussions. A semester project is an integral part of this course. *Prerequisite:* IE 3332 or IE 4332 or department approval.

5341  **Advanced Production and Inventory Control (3-0)**
This course emphasizes inventory control management for production planning and includes topics in inventory control, forecasting, lot
sizing, dispatching, scheduling, releasing, kitting, MRP and just-in-time models. Strong emphasis on the solution and research of existing production and inventory control problems. **Prerequisite:** Department approval.

5351 **Linear and Combinatorial Optimization Methods (3-0)**
Deterministic operations research techniques such as linear programming and its extensions, duality theory, sensitivity analysis, network related models, integer programming, and dynamic programming. Applications include production planning and project networks such as PERT/CPM. **Prerequisite:** Department approval.

5352 **Design and Analysis of Industrial Experiments (3-0)**
Investigation of statistical sampling methods, hypothesis testing procedures, and design of experiments. Both parametric and non-parametric procedures are included. **Prerequisite:** IE 4385 or department approval.

5354 **Advanced Engineering Economy (3-0)**
Capital budgeting, deterministic investment analysis, probabilistic engineering economy, manufacturing cost models, utility theory, and computer applications to engineering economy. **Prerequisite:** BE 2326 or department approval.

5357 **Computer Simulation Applications (3-0)**
An introduction to the concepts of simulation methodology as applied to the design and analysis of industrial systems. Specialized computer simulation language is applied to an industrial analysis or design term project. **Prerequisite:** Department approval.

5377 **Advanced Ergonomics and Process Design (3-0)**
This course emphasizes the tools, techniques, concepts, and theories of ergonomics and human performance criteria for work in the manufacturing environment. Emphasis is on the design and evaluation of workstations, man-machine systems, and processes. **Prerequisite:** Instructor approval.

5385 **Advanced Quality Control (3-0)**
This course covers current advances in quality control. The emphasis of the course is on continuous quality improvement. The course will concentrate on advanced quality control topics including, but not limited to, process, capability analysis, philosophies of quality management, advanced statistical process control, quality costs, and automated quality control. **Prerequisite:** Department approval.

5387 **Quality Engineering (3-0)**
Topics such as quality organization, quality assurance, quality policies and objectives, quality information systems, metrology, inspection and testing, quality planning, quality function deployment, and supplier quality assurance. Quality standards and legal issues with respect to quality such as torts, negligence, and contracts will also be addressed. A semester project is an integral part of this course. **Prerequisite:** Department approval.

5390 **Special Topics (3-0)**
Advanced topics of contemporary interest in industrial engineering. May be repeated for credit when topic varies. **Prerequisite:** Instructor approval.
5391 Individual Studies (0-0-3)
Individual variable-credit for non-thesis related research, design, or analysis on advanced phases of Industrial Engineering problems conducted under the direct supervision of a faculty member. A maximum of three credit hours may be applied towards the MS degree. Prerequisite: Department approval.

5394 Graduate Research (0-0-3)
Individual variable-credit research of contemporary topics in industrial engineering. Prerequisite: Department approval.

5397 Graduate Projects (0-0-3)
Individual research, design, or analysis on advanced phases of industrial engineering problems, conducted under the direct supervision of a faculty member. Prerequisites: IE 5396 and 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: IE 5398.

Manufacturing Engineering (MFG)

5195 Graduate Seminar (1-0)
Lectures and discussions of various topics in Manufacturing Engineering by faculty, graduate students, and speakers from industry and other institutions. Required for all non-thesis graduate students each semester they are in the graduate program. This seminar will be counted only once toward graduate degree requirements.

5291 Individual Studies (0-0-2)
5391 Individual Studies (0-0-3)
Individual variable-credit for non-thesis related research, design, or analysis on advanced phases of Manufacturing Engineering problems conducted under the direct supervision of a faculty member. A maximum of three credit hours may be applied towards the MS degree. Prerequisite: Department approval.

5311 Design for Manufacturability (3-0)
Theoretical and practical aspects of the implications that the manufacturing process has on the design activities will be studied. Issues such as rapid prototyping, tolerancing, geometric modeling, capabilities of manufacturing processes, design for quality and maintainability and others will be covered. The course will consist of lectures, class discussions, and student projects.

5312 Strategic Design of Manufacturing Processes (3-0)
Strategic and tactical aspects of the design of manufacturing processes will be covered in this course. Techniques such as concurrent engineering, quality function deployment, group technology, process planning, and others will be covered. The course will consist of lectures, class discussions, and student projects.

5314 Robotics and Flexible Automation (3-0)
Modern concepts of robotics and flexible automation including power and control mechanisms, flexible material handling systems, programmable controllers, interfacing and end-of-arm tooling. Prerequisite: Department approval.
5320 Tooling Engineering (3-0)
Design of tooling for various manufacturing processes such as plastic injection, metal casting, stamping, forming, etc. Materials properties, tolerances, cost, and tool interchangeability are covered.

5321 Modeling and Analysis of Manufacturing Processes (3-0)
This course is designed to be a capstone course for the graduate students of manufacturing engineering. The student will be expected to use the appropriate analytical tools to formulate, model, and solve real-life manufacturing problems. At the end of the course the student will give an open presentation of the results of the term project.

5322 Materials in Manufacturing Processes (3-0)
This course will focus on the selection of materials for manufacturing processes. In particular it will cover the properties of different materials as they apply to manufacturing such as: formability, machinability, hardening, weldability. It will also cover different types of materials such as: metal alloys, plastics, composites, ceramics, and adhesives. The course will consist of lectures, class discussions, and student projects. Prerequisites: CE 2334 and MME 2303.

5350 Reliability and Maintainability (3-0)
This course deals with the application of reliability theory in engineering design. In particular, the course covers reliability functions and gives broad guidelines for designing reliability into a given situation and for determining the appropriate level of reliability. Accelerated testing, reliability management, the relationship between reliability and quality and maintainability and its management will also be covered. Prerequisite: Department approval.

5359 Computer-Aided Manufacturing (3-0)
Modern concepts of using computers for manufacturing, including the theory of computer numerical control (CNC) and direct numerical control (DNC), CNC milling, CNC tuning and computer-aided process design. Prerequisite: Instructor approval.

5360 Computer Vision (3-0)
Fundamental concepts associated with the construction of meaningful descriptions of physical objects from images; including image segmentation, two-dimensional and three-dimensional representations, knowledge representations, and matching and inference.

5362 Graphical Elements of Computer-Aided Design and Manufacturing (3-0)
Modern concepts of using computer graphics for engineering design and manufacturing, including computer graphics standards such as CORE graphics and GKS, graphic input/output devices, and software design and programming techniques for computer-aided design and manufacturing (CAD/CAM). Prerequisite: IE 5359.

5362 Graphical Elements of Computer-Aided Design and Manufacturing (3-0)
Modern concepts of using computer graphics for engineering design and manufacturing, including computer graphics standards such as CORE graphics and GKS, graphic input/output devices, and software design and programming techniques for computer-aided design and manufacturing (CAD/CAM). Prerequisite: IE 5359.
5394 Graduate Research (0-0-3)
Individual variable-credit research of contemporary topics in Manufacturing Engineering. Prerequisite: Department approval.

5397 Graduate Projects (0-0-3)
Individual research, design, or analysis on advanced phases of engineering problems conducted under the direct supervision of a faculty member. Prerequisites: MFG 5396 and 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: MFG 5398.

Mechanical Engineering

101 Engineering Science Complex
(915) 747-5450
meandie@utep.edu

CHAIRPERSON: Jack Dowdy
GRADUATE FACULTY: Bronson, Chessa, Choudhuri, Cooke, Craver, Dowdy, Everett, Kim, Wicker

Mechanical Engineering offers a Master of Science in Mechanical Engineering and an undesignated Master of Science with a major in Engineering. Specific courses of study in the Mechanical Engineering major include fluid and thermal systems, and solid mechanics and machine design.

Requirements for Admission
Students should consult the Introduction to the College of Engineering section for information on general admission requirements.

General Requirements for Degree
Both thesis and non-thesis options are available under these two degree programs. Students enrolled in a thesis option follow a 31-hour program that is composed of 24 hours of course work plus 6 hours of thesis (MECH 5398, and MECH, 5399) and 1 hour of graduate seminar.

Non-thesis students follow a 36-hour program. For the Mechanical Engineering degree, the non-thesis option may include up to 6 credit hours for Graduate Projects (MECH 5396 and MECH 5397). All students enrolled in the Mechanical Engineering program must take at least 18 semester hours of course work within their major if they are following the thesis option or 24 if they are following the non-thesis option.

No more than 6 semester hours of approved upper-level undergraduate course work may be used to satisfy the degree requirements in the Mechanical Engineering programs. All course work must be approved by the student’s academic advisor and by the Graduate School. Specific requirements for each Master’s program are available from the Program.
For Undergraduate and Graduate Students

**Mechanical Engineering (MECH)**

Courses that may be applied toward the Master of Science degree in Mechanical Engineering.

- **4355 Gas Dynamics**
- **4395 Special Topics in Mechanical Engineering**

For Graduate Students Only

**Mechanical Engineering (MECH)**

- **5194 Graduate Research (0-0-1)**
- **5394 Graduate Research (0-0-3)**
- **5694 Graduate Research (0-0-6)**
  Individual variable-credit research of contemporary topics in mechanical engineering. *Prerequisite:* Department approval.

- **5195 Graduate Seminar (0-0-1)**
  Conferences and discussions of various topics in mechanical engineering by faculty, graduate students, and speakers from industry and other institutions. Required of all graduate students during each semester of full-time enrollment.

- **5302 Advanced Mechanics of Materials I (3-0)**
  An introduction to the theory of elasticity and the principles of stress and strain. Solution of some elasticity problems such as bending and shear of beams, torsion of bars. Energy method and stability. *Prerequisite:* CE 2334.

- **5303 Advanced Heat Transfer I—Conduction (3-0)**
  Conduction in various coordinate systems; steady and transient-state cases with various boundary conditions; analytical, numerical, and graphical solutions. *Prerequisite:* MATH 2326 or MATH 3326 or instructor approval.

- **5304 Advanced Heat Transfer II—Convection (3-0)**
  Thermal boundary-layer theory; forced convection in laminar and turbulent flows; free convection. *Prerequisite:* MECH 3354 or department approval.

- **5306 Advanced Fluid Mechanics I (3-0)**
  Survey of the principal concepts of fluid mechanics, statics, continuity, momentum and energy relations for continuum fluids, kinematics of fluid motion, governing equations for motion of non-viscous fluid, vorticity and circulation, and Kelvin’s theorem. Helmholtz theorem, Crocco’s theorem, steam function, potential flow, conformal transformation, theory or lift, and wave phenomena in fluids. *Prerequisite:* MECH 3354 or department approval.

- **5308 Advanced Mechanical Design (2-3)**
  Study of the method of optimum design for mechanical systems. Evolution of optimum design; approximation for explicit design; mathematical functions in design, evaluation of the effects of manufacturing errors on product performance, optimum choice for
method of analysis, statistical consideration for factor of safety; adequate design, optimum design, design equations, normal redundant and incompatible specifications; loose limits and loose specifications; problems with more than one primary design equation.

5309 Structural Dynamics (3-0)
Continuation of MECH 3365 with emphasis on multiple degree-of-freedom systems and their response to disturbances. Normal mode theory, and matrix representation of problem; Laplace transform, electrical analogue and mobility techniques of solution. Vibration measurements and analysis.

5310 Advanced Thermodynamics (3-0)
Applications of general thermodynamic relations; study and applications of time-dependent energy relationships; analysis of power, refrigeration, cryogenic and direct energy conversion systems. Prerequisite: MECH 3376 or instructor approval.

5312 Advanced Mechanics of Materials II (3-0)
Traditional approach to mechanics of materials with topics such as failure theories, fatigue, beams on an elastic foundation, stress concentrations, thick-walled and laminated cylinders, contact stresses, and inelastic behavior. Prerequisite: MECH 5302.

5318 Advanced Dynamics (3-0)
Velocity and acceleration analysis, motion of a point in space, rotating coordinate systems, balancing of masses; generalized coordinates, work and energy, and impulse and momentum. Prerequisite: MECH 2338 or equivalent.

5390 Special Topics (3-0)
Advanced topics of contemporary interest in mechanical engineering. May be repeated for credit when topic varies. Prerequisite: Department approval.

5391 Individual Studies (0-0-3)
Individual variable-credit for non-thesis related research, design, or analysis on advanced phases of Mechanical Engineering problems conducted under the direct supervision of a faculty member. A maximum of 3 credit hours may be applied towards the MS degree. Prerequisite: Department approval.

5396 Graduate Projects (0-0-3)
Individual research, design, or analysis on advanced phases of engineering problems conducted under the direct supervision of a faculty member. Prerequisite: Department approval.

5397 Graduate Projects (0-0-3)
Individual research, design, or analysis on advanced phases of engineering problems conducted under the direct supervision of a faculty member. Prerequisites: MECH 5396 and 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: MECH 5398.
Metallurgical and Materials Engineering

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CHAIRPERSON: Lawrence E. Murr
GRADUATE FACULTY: Arrowood, Fisher, Golding, McClure, Murr, Stafford, Trueba, 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.

Requirements for Admission

Students should consult the Introduction to the College of Engineering section for information on general admission requirements.

Applicants whose undergraduate degrees are not in metallurgical or materials engineering (i.e., related engineering or physical sciences field) may need to successfully complete specific undergraduate deficiency work as recommended by the department's Academic Advisory Committee.

Additionally, applicants must submit evidence of successful completion (or equivalent) of course work that includes:

- MME 3306 Rate Processes in Materials Systems
- MME 3308 Applied Chemical Thermodynamics
- MME 3309 Introduction to Electronic Materials Science
- MME 3406 Physical Metallurgy

Requirements for the Degree

Students may select one of the following programs:

**Thesis Program**
- 24 semester hours of course work plus
  - 6 semester hours of thesis (MME 5398 and 5399)
- 30 total semester hours minimum

**Project Program**
- 30 semester hours of course work plus
  - 6 semester hours of project (MME 5396 and 5397)
  - 36 total semester hours minimum

Students may apply a maximum of 9 semester hours of approved undergraduate courses toward the MS degree with the approval of the Graduate Advisor and the Graduate School.
Thesis work should clearly demonstrate the ability to execute independent, innovative research. The research should be original and make a contribution to the state of the art. Thesis work is the substance of the MS degree. It must be written, in whole or in part, as a technical paper and submitted for publication prior to the awarding of the degree. The student should be the senior (first) author. The required sequence of courses below are designed to apply the principles of thermodynamics, transport, reaction kinetics, crystal defects, and other materials fundamentals in contemporary materials engineering areas involving and reinforcing issues of structure, properties, processing, and performance. All students must successfully complete these courses with a 3.0 GPA:

- **MME 5302** Materials Extraction, Synthesis, and Processing
- **MME 5401** Microstructural and Microchemical Characterization of Materials
- **MME 5403** Advanced Concepts in Materials Science and Engineering
- **MME 5304** Phase Transformations and Microstructures

**Advisory Committees**

The Academic Advisory Committee, as well as the Graduate School, will normally approve all academic program proposals and monitor academic progress of all graduate students until a thesis or research program advisor is chosen and a Research Advisory Committee developed. This can be done at any time after the student matriculates into the MS program. The Research Advisory Committee normally consists of the research advisor (who serves as chair) and at least one additional member of the department faculty and one faculty member from another academic department. An additional member of the committee from another academic department is often desirable if a concentration is involved, bringing the committee size to four members. All members must be members of the Graduate Faculty. Students are required to meet with their Research Committee at least once per year, usually in the Spring semester.

**Undesignated Degrees**

A student holding a Bachelor of Science with a major in Metallurgical and Materials Engineering or a related materials area may work toward a 33 semester hour undesignated MS in Engineering degree without a thesis, leading to a concentration in an area outside of the major. The course work includes 18 hours in the major field and at least 12 hours in the particular area of concentration. The work in the major field includes credit for MME 5396 (Graduate Project). Possible areas of concentration are indicated below.

**Concentrations**

Possible concentrations for an undesignated degree or to complement a research area or to achieve a broader materials background may involve Business Management, Operations Research, Structural Mechanics, Electronic Device Design and Development, Experimental Design, Manufacturing Engineering emphasizing advanced manufacturing and Materials Processes, Waste Materials Management, and the like. Some examples of other engineering courses which might contribute to developing these areas include the following:

- **Civil Engineering**
  - **CE 5305** Advanced Structural Analysis
  - **CE 5312** Environmental Processes
  - **CE 5317** Similitude and Statistical Methods
Electrical Engineering and Computer Science
CS 5310 Computer Graphics
EE 5311 Semiconductor Devices
EE 5312 Advanced Optoelectronic Devices

Mechanical/Industrial/Manufacturing Engineering
IE/
MECH 5351 Linear and Combinatorial Optimization Methods
IE 5352 Design and Analysis of Industrial Experiments
IE 5359 Computer-Aided Manufacturing
IE 5362 Graphical Elements of Computer-Aided Design and Manufacturing
MECH/
IE/MFG 5390 Special Topics in Mechanical, Industrial, and Manufacturing Engineering

Students from other science or engineering disciplines may wish to develop a concentration in Metallurgical and Materials Engineering or Materials Engineering. In general, a concentration could be developed by considering the core program:
MME 5302 Materials Extraction, Synthesis, and Processing
MME 5304 Phase Transformations and Microstructures
MME 5401 Microstructural and Microchemical Characterization of Materials
MME 5403 Advanced Concepts in Materials Science and Engineering

Other concentrations could be developed by other groupings of courses or areas represented by course groupings. The first three core courses shown above from the MS program are also articulated with the Ph.D. program core in materials science and engineering. Students completing the MS degree in Metallurgical and Materials Engineering and pursuing the Ph.D. degree in Materials Science and Engineering may waive MASE 5302, 6400, and 6402, substituting work as recommended by the Graduate Advisor.

Ph.D. in Materials Science and Engineering
The Department of Metallurgical and Materials Engineering is a participant in a multidisciplinary program leading to the Ph.D. degree in Materials Science and Engineering. For information regarding admission and degree requirements, students should consult the Interdisciplinary Studies section.

Metallurgical and Materials Engineering (MME)

For Undergraduate and Graduate Students

3309 Introduction to Electronic Materials Science
3314 Composite Materials
3321 Engineering Alloys
3406 Physical Metallurgy
3407 Mechanical Behavior of Materials
4303 Metals Processing
4309 Corrosion
4316 Failure Analysis
4404 Materials Processing
4405 Materials Fabrication
4413 Structural Characterization
4419 Metallurgical and Materials Engineering Design
For Graduate Students Only

5191 Individual Studies (0-0-1)
5391 Individual Studies (0-0-3)
Individual variable-credit research, design, or analysis on advanced phases of metallurgical and materials engineering problems conducted under the direct supervision of a faculty member. A maximum of 3 credit hours may be applied towards the MS degree.

5194 Graduate Research (0-0-1)
5294 Graduate Research (0-0-2)
5394 Graduate Research (0-0-3)
5494 Graduate Research (0-0-4)
5594 Graduate Research (0-0-5)
5694 Graduate Research (0-0-6)
Individual variable-credit research of contemporary topics in metallurgical and materials engineering.

5195 Graduate Seminar (1-0)
Conferences and discussions of various, contemporary topics in metallurgical and materials engineering by faculty, graduate students, and speakers from industry, government, or other academic institutions or departments. The program is organized to encourage the development of communications skills at a professional level for graduate students. Required of all graduate students during each semester of full-time enrollment. Up to 3 credits can be applied to the degree.

5302 Materials Extraction, Synthesis, and Processing (3-0)
Thermodynamic, thermochemical, electrochemical, kinetic, and phase equilibrium fundamentals and fundamental structures and properties of materials applied to examples of ferrous and non-ferrous extraction and processing. Examples include copper extraction, refinement, processing, alloying and performance; iron and steel making and iron alloy processing, metal and ceramic powder processing, and contemporary materials synthesis and processing. Offered in alternate years.

Prerequisites: MME 3406, MME 3407, and MME 5401, or equivalent, or instructor approval.

5304 Phase Transformations and Microstructures (3-0)
The theory of the nucleation and growth kinetics of solid materials, solid-solid transformations, and mechanisms. Rate processes, decomposition and ordering reactions, and microstructures. Diffusionless transformations, eutectoid and martensitic transformations are covered along with associated microstructural morphologies and property/ performance control by microstructure control in materials. Prerequisites: MME 3406, MME 3407, and MME 5401, or equivalent, or instructor approval.

5308 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, and 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.

5313 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. Prerequisite: MME 5401, MME 5403, or equivalent, or instructor approval.

5390 Special Topics (3-0)
Advanced topics of contemporary interest in metallurgical and materials engineering. May be repeated for credit when topic varies.

5396 Graduate Projects (0-0-3)
Initial work on the project. Individual research, design, or analysis on advanced phases of engineering problems conducted under the direct supervision of a faculty member. The courses, including a written report, are required of all students in the non-thesis option.

5397 Graduate Projects (0-0-3)
Continuous enrollment required while work on the project continues. Individual research, design, or analysis on advanced phases of engineering problems conducted under the direct supervision of a faculty member. The courses, including a written report, are required of all students in the non-thesis option. Prerequisite: MME 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: MME 5398.

5401 Microstructural and Microchemical Characterization of Materials (3-3)
An interdisciplinary approach to the theory and applications of techniques for characterizing chemical (microchemical) and microstructural features of solid materials. Techniques that will be stressed include X-ray diffraction, optical metallography, scanning and transmission electron microscopy (emphasizing analytical transmission electron microscopy), electron probe microanalysis, and surface and near surface microanalysis (Auger electron spectroscopy, ESCA, SIMS, etc.). Sample preparation techniques will be covered and students will be encouraged to examine materials which may have some application to their research problems. Offered in alternate years. Prerequisite: MME 4413 or equivalent introductory background in topic areas, or instructor approval.

5403 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.
COLLEGE OF HEALTH SCIENCES

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Dr. Harry J. Meeuwsen, Interim Dean
Dr. Joe Tomaka, Associate Dean and Chair of Health Promotion
Dr. Darla R. Smith, Associate Dean for Academic Affairs and Student Success
Ms. Leticia Paez, Assistant Dean for Community Affairs
Ms. Connie Gamboa, Assistant Dean for Student Affairs

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Degree Programs
PhD  Interdisciplinary Health Sciences
MS  Health Promotion
    Kinesiology
    Speech-Language Pathology
MOT  Occupational Therapy
MPT  Physical Therapy

Certificate Programs
  Bilingual Speech Language Pathology
    (English/Spanish)

On-Line Program
MS  Kinesiology/UT Telecampus
The College of Health Sciences offers a Ph.D. in Interdisciplinary Health Sciences, masters programs in Health Promotion, Kinesiology, Occupational Therapy, Physical Therapy, and Speech-Language Pathology and a certification program in Speech-Language Pathology.

The Ph.D. in Interdisciplinary Health Sciences is designed to respond to the growing national shortage of doctorally-trained professionals in health-related fields and to address significant health research needs related to communities in the United States-Mexico border region.

The Master of Science in Health Promotion concentrates on preparing health educators for community and school health promotion positions. The curriculum offers courses in planning, administering and evaluating health promotion programs.

The Master of Science in Kinesiology is directed toward students who wish to: (a) increase their knowledge and competency as professional physical educators, (b) complete a master’s degree in preparation for continuing their education in a doctoral program, (c) enhance their knowledge in the various exercise science areas, or (d) prepare for higher level jobs in the many professions that deal with human movement and physical activity.

The Master of Science in Occupational Therapy is dedicated to preparing occupational therapists to serve as interdisciplinary health professionals in rural and urban settings in a variety of health care areas.

The Master of Physical Therapy will qualify students to take the Texas (and other State) licensure examination in Physical Therapy. Successful completion of the examination allows the graduate to practice Physical Therapy.

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 Certificate Program is provided in Bilingual Speech-Language Pathology (English/Spanish).

The College of Health Sciences also participates in a cooperative degree program with the University of Texas at Austin and the University of Texas Health Science Center, Houston. In cooperation with The University of Texas at Austin, College of Pharmacy, UTEP offers a doctoral program in Pharmacy.

Interdisciplinary Health Sciences

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PROGRAM DIRECTOR: Joe Tomaka

The Ph.D. in Interdisciplinary Health Sciences is designed to respond to the growing national shortage of doctorally-trained professionals in health-related fields and to address significant health research needs related to communities in the U.S.-Mexico border region. As the name implies, this degree will encompass classes taught by faculty from the various disciplines within the College of Health Sciences. Disciplines include Nursing, Physical Therapy, Health Promotion, Occupational Therapy, Speech-Language Pathology, Kinesiology, as well as Public Health. Courses included from programs outside the College of Health Sciences include those in Psychology and Biology.
Graduates from this program will have research skills, core knowledge in health sciences, and knowledge in their areas of specialization. The areas of core knowledge include background, concepts, and literature in the health disciplines, methods of scholarly inquiry in applied and clinical health topics; cultural and ethnic diversity and their effects on health care and research; ethical issues in health care and research; and skills to enhance success in academia and other leadership roles. Individuals will be prepared to educate future health professionals, conduct needed research, and fulfill leadership roles.

Requirements for Admission

Admission to the Ph.D. program in Health Sciences requires completion of a Master’s degree in a health-related profession. The program admissions committee will make recommendations to the Graduate School based on an assessment of each applicant’s academic achievement and potential. Applicants must apply through the Graduate School, submitting an application form and supporting materials:

- Transcripts according to the requirements of the Graduate School
- Official scores on the Graduate Record Exam
- Official scores on the TOEFL (if appropriate)
- Three letters of recommendation from individuals qualified to assess the applicant’s potential for doctoral work
- Personal statement describing career aspirations, potential research interests and faculty mentors, and research experiences
- Other evidence of relevant personal or professional experience

Requirements for the Degree

Degree requirements consist of 60 credit hours beyond the master’s degree.

Semester Hour Requirements

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Core Courses</td>
<td>21</td>
</tr>
<tr>
<td>Professional Preparation</td>
<td>6</td>
</tr>
<tr>
<td>Individualized Program</td>
<td>12</td>
</tr>
<tr>
<td>Research</td>
<td>21</td>
</tr>
</tbody>
</table>

Core courses (21 semester credit hours):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 5310</td>
<td>Statistics I: Applied Correlation and Regression Methods</td>
</tr>
<tr>
<td>PSYC 5311</td>
<td>Statistics II: Experimental Design</td>
</tr>
<tr>
<td>CHSC 6303</td>
<td>Proseminar in Interdisciplinary Health Sciences I</td>
</tr>
<tr>
<td>CHSC 6304</td>
<td>Proseminar in Interdisciplinary Health Sciences II</td>
</tr>
<tr>
<td>CHSC 6301</td>
<td>Multicultural Influences on Health Care and Research</td>
</tr>
<tr>
<td>CHSC 6302</td>
<td>Legal and Ethical Issues in Health Sciences</td>
</tr>
</tbody>
</table>

And a 3-hour measurement course selected from list below or other similar course as approved.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 5306</td>
<td>Attitudes and Attitude Measurement</td>
</tr>
<tr>
<td>PSYC 5323</td>
<td>Psychometrics</td>
</tr>
</tbody>
</table>

Professional Preparation courses (Select 6 semester credit hours):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CHSC 6343</td>
<td>Health Profession Education: Academic and Administrative Roles and Responsibilities</td>
</tr>
<tr>
<td>CHSC 6345</td>
<td>Designing Educational Programs in Health Professions</td>
</tr>
<tr>
<td>CHSC 6347</td>
<td>Innovative Teaching Strategies in the Health Professions</td>
</tr>
</tbody>
</table>
CHSC 6349 Evaluation in Health Professions Education
CHSC 6350 Seminar in Scientific and Grant Writing
CHSC 6355 Communications and Team Process
EDAD 6309 Seminar in Educational Leadership
HSCI 5352 Evaluation in Health Promotion/Education
PSYC 5312 Program Evaluation

Individualized Program courses (Select 12 semester credit hours)
CHSC 6360 Health Policy
CHSC 6380 Special Topics in the Health Professions
EDAD 6316 Qualitative Research Methodology II
MATH 5391 Time Series Analysis
PHEP 2498 Public Health Applications of GIS (UT Houston School of Public Health, El Paso)
PHEP 2998 Molecular Epidemiology (UT Houston School of Public Health, El Paso)
PSYC 5306 Attitudes and Attitude Measurement
PSYC 5331 Cross-Cultural Research Methods

All graduate courses in the College of Health Sciences or graduate courses at the UTHSC-Houston School of Public Health available through the El Paso Regional campus may be used to meet program requirements as approved by the student’s supervisory committee.

Research (Select 21 semester credit hours—courses may be repeated for credit)
CHSC 6385 Independent Study in the Health Sciences
CHSC 6388 Research Application
CHSC 6390 Directed Study
CHSC 6398 Dissertation
CHSC 6399 Dissertation

Non CHSC course descriptions can be found under the corresponding departments. Public Health El Paso (PHEP) courses can be found on-line. College of Health Sciences course descriptions are listed below.

College of Health Sciences (CHSC)

6301 Multicultural Influences on Health Care and Research (3-0)
Focus on the influence of various cultures (e.g. racial, ethnic, socio-economic, age related and geographic) on health care delivery and research. Cultural patterns, beliefs and expectations related to health care and health outcomes are explored and analyzed. Research methods, recruitment of subjects, data collection procedures and instrumentation are analyzed in relationship to various cultural groups. Priority needs for health care and research in various cultural groups are compared. Prerequisite: Department approval.

6302 Legal and Ethical Issues in Health Sciences (3-0)
A study of legal and ethical principles and theory with emphasis on how they apply to the provision of health services and pursuit of health research in culturally diverse settings. The course examines standard and emerging [e.g. Ethics of Care] theories and principles of ethics and the laws related to health services and offer in-depth look at how these theories and principles apply in ethnically diverse practice settings and research. Prerequisite: Department approval.

6303 Proseminar in Interdisciplinary Health Sciences I (0-0-3)
Survey of key concepts including health, wellness, illness, disease, and comparison and contrast of advantages and disadvantages of monodisciplinary education, research, and practice, compared with
multi- and inter-disciplinary models and approaches. Review, integration, and synthesis of the current key literature in the health promotion, nursing, and kinesiology fields. \textit{Prerequisite:} Department approval.

6304 \textbf{Proseminar in Interdisciplinary Health Sciences II (0-0-3)}
Survey of key concepts including health, wellness, illness, disease, and comparison and contrast of advantages and disadvantages of monodisciplinary education, research, and practice, compared with multi- and inter-disciplinary models and approaches. Review, integration, and synthesis of the current key literature in the rehabilitation sciences including physical therapy, occupational therapy, and speech-language pathology. \textit{Prerequisites:} Admission to the doctoral program and department approval.

6343 \textbf{Seminar in Health Professions Education: Academic and Administrative Roles and Responsibilities (3-0)}
Issues, roles and responsibilities of faculty and administrative appointments in academic and health science centers will be discussed. Other topics may include faculty appointment models, tenure process, faculty practice, clinical and affiliation agreements, finances, personnel, legal issues and public policy, internal/external governance, curricular and accreditation issues, and external relations. \textit{Prerequisites:} Admission to the doctoral program and department approval.

6345 \textbf{Designing Educational Programs in Health Professions (3-0)}
The steps of program and curriculum development will be examined as applicable to selected health profession education. The process of accreditation will be included. \textit{Prerequisites:} Admission to the doctoral program and department approval.

6347 \textbf{Innovative Teaching Strategies In the Health Professions (3-0)}
Creative and innovative approaches to teaching to facilitate learning in didactic and clinical settings for health professions education will be explored. Application of selected learning theories will be addressed. Meaningful applications for web-enhanced and online delivery will be examined within context of optimal learning. \textit{Prerequisites:} Admission to the doctoral program and department approval.

6349 \textbf{Evaluation in Health Professions Education (3-0)}
The systematic process of evaluation of learning in didactic and clinical settings related to health profession education will be addressed. Models and processes for curriculum and educational program evaluations will be explored. \textit{Prerequisites:} Admission to the doctoral program and department approval.

6350 \textbf{Seminar in Scientific and Grant Writing (3-0)}
This course will address two skills associated with success in academia: productive scientific writing and successfully obtaining research funding through grant writing. Students will learn the common components of scientific manuscripts and grant application. The course also will address how to overcome common barriers to writing productivity. \textit{Prerequisites:} Completion of leveling research project, if required by the doctoral program, and department approval.

6355 \textbf{Communication and Team Process (3-0)}
This course will address two important issues in relation to successful interdisciplinary teams: communication across health care disciplines
and the team process. Topics to be covered will include effective communication, team development, establishing working relationships, conflict management and resolution, as well as evaluation and assessment of team outcomes. Team-based learning will be utilized in order to facilitate the team process. Prerequisites: Admission to the program and department approval.

6360 Health Policy (3-0)
A study of major issues and problems in the formulation and establishment of health policy at the local, state, and federal levels. The course would explore foundational and emerging areas of health practice focusing on cultural and ethnic differences in access and practice, public health policy focusing on changes in demographics and reimbursement of services, local and federal health research agendas, and how each of these affects health care, research and education, with an emphasis on examples relevant to the border region. Prerequisite: Department approval.

6380 Special Topics in the Health Professions (3-0)
Course content may change. Possible topics include current topics integrating basic and clinical health science; organization and finance of health care systems; prevention and intervention research. May be repeated for credit when topics vary. Prerequisite: Department approval.

6385 Independent Study in the Health Sciences (0-0-variable 1-3)
Conduct intensive study on a health science topic with faculty supervision. Course content and requirements will be determined by the instructor but a comprehensive review paper suitable for publication is typical. May be repeated once for credit. Prerequisite: Department approval. Instructor permission required.

6388 Research Applications (0-0-variable 1-3)
Supervised research on topics in applied and clinical health sciences in designated laboratories. May be repeated twice for credit. Prerequisite: Department approval. Instructor permission required.

6390 Directed Study (0-0-3)
Conduct intensive study on a health science topic. May be repeated once for credit. Prerequisites: Admission to the doctoral program and department approval. Instructor permission required.

6398 Dissertation (0-0-3)
The student must register for CHSC 6398 when work on the dissertation is begun. Thereafter, the student must register for CHSC 6399 during each semester in which work on the dissertation is being conducted. Prerequisites: Approval of the dissertation proposal and the completion of CHSC 6390 under the supervision of a different faculty supervisor than the faculty supervisor proposed for this course.

6399 Dissertation (0-0-3)
The student must register for CHSC 6399 during each semester in which work on the dissertation is being conducted, for up to 3 semesters total. Prerequisites: CHSC 6398 and department approval.
Health Promotion

Prospective graduate students in Health Promotion may select either the MS in Health Promotion, the MA in Education with a Health Education emphasis, or the MEd (Instructional Specialist major) with a concentration in Health Education.

The MS in Health Promotion provides advanced training in the major areas of health promotion, including theory and application. It prepares students for careers in health promotion in a variety of settings including the work site, businesses, voluntary community agencies, and local and state health departments. The degree is primarily directed toward students who wish to pursue graduate studies beyond the Master’s Education emphasis and the MEd with a Health Education emphasis are designed for individuals teaching or employed in schools. Graduate students must maintain a CGPA of 3.0 in order to remain in good academic standing. No more than two “C” grades will be permitted in graduate courses.

Students who wish to specialize in health education/health promotion at the graduate level may select one of the following programs:

Master of Science in Health Promotion

Admission Requirements

- An undergraduate degree
- At least 12 semester hours of upper-division undergraduate level courses in Health Promotion, Health Sciences or a health-related discipline
- Submission of official Graduate Record Examination (GRE) scores
- Three letters of recommendation
- A 500-word statement of educational goals and objectives

Program

Thirty semester hours, including at least 15 hours of required core courses (HSCI 5352, HSCI 5353, HSCI 5355, HSCI 5356, and a graduate research methods and/or statistics course), six hours of elective courses, and nine hours of graduate thesis, graduate internship or a graduate project.

Students who choose the Graduate Thesis Option must take HSCI 5398, HSCI 5399, and three hours of graduate level statistics, as well as complete and orally defend a thesis that is satisfactory to the Graduate Faculty before the degree will be awarded. Students who elect the Graduate Internship Option must take HSCI 5662, three additional hours of graduate electives (chosen with
advisor approval), and satisfactorily complete a written project. Students who chose the Graduate Project Option must take HSCI 5397 with satisfactory completion of the written project and an oral report on the project, and six additional hours of directed graduate electives (chosen with advisor approval).

Master of Arts in Education (with a Health Education emphasis)

Students should refer to the appropriate section under the College of Education in the Graduate Catalog.

Master of Education – Instructional Specialist Major (with a Health Education emphasis)

Students should refer to the appropriate section under the College of Education in the Graduate Catalog.

Students seeking the MS in Health Promotion should be advised by the Graduate Advisor for the Department of Health Promotion in the College of Health Sciences. Students seeking the Master of Arts in Education or the Master of Education-Instructional Specialist degree should be advised by the Graduate Advisors in both the College of Education and the College of Health Sciences.

Health Science (HSCI)

5350 Curriculum Development for Health Promotion (3-0)
Various Curriculum models and the mechanics of construction and implementation; principles, issues, and problems of curriculum design in health promotion programs.

5351 Promotion/Education of Human Sexuality and Family Life (3-0)
Factors relating to the significance of sexuality as a function of being human; the philosophy, content, methods, resources, and evaluation related to the provision of sexuality and family life programs.

5352 Evaluation in Health Promotion/Education (3-0)
Issues, problems, and techniques involved in evaluation of health promotion and health education programs.

5353 Health Promotion Issues and Delivery Strategies (3-0)
Health promotion methodology in public schools, the work site, community health, health care facilities and the private sector; behavioral theories, educational strategies, and learning theories.

5354 School Health Program Promotion (3-0)
School health program with emphasis on instruction, services, healthful living, administrative and legal aspects, professional preparation, major issues, wellness programs (including school-based clinics), and controversial instructional content.

5355 Foundations of Health Promotion/Education (3-0)
Study of historical and philosophical perspectives of health promotion and health education, analysis of literature, which has influenced the development of health promotion and education programs and the concept of health, and investigation of ethical issues in health promotion.

5356 Planning and Administering Health Promotion Programs (3-0)
Study of methods and models of planning health promotion and health education programs for various settings, including theories and principles of administration and management of health promotion programs, with focus on coordination of services and supervision of staff.
5357  **Selected Topics in Health Promotion (3-0)**
Content of course may change. Possible topics include current issues and problems in health promotion, community health, health and safety. May be repeated, maximum of nine hours.

5358  **Independent Study in Health Promotion (0-0-3)**
Investigation and analyses of health/wellness and health promotion concerns. Field assignments may be required. May be repeated, maximum nine hours. **Prerequisite:** Department approval.

5359  **Grant Proposal Preparation in Health Professions (3-0)**
This course will address grant writing skills in finding and choosing appropriate funding sources, learning common components of grant applications, and overcoming common barriers to writing grant proposals, and successfully obtaining funding.

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:** Department approval.

5398  **Thesis (0-0-3)**
Initial work on the thesis. **Prerequisite:** Department approval.

5399  **Thesis (0-0-3)**
Continuous enrollment required while work on the thesis continues. **Prerequisites:** HSCI 5398 and department approval.

5662  **Internship in Health Promotion (0-0-6)**
Internship in community health agency or work site setting under supervision of preceptor and university graduate health science faculty. Requires a significant project or proposal approved by instructor and a narrative component which will follow a written format. **Prerequisite:** Department approval.

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**Kinesiology**

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rmdiaz@utep.edu

CHAIR: Harry Meeuwsen  
PROFESSOR: Meeuwsen  
ASSOCIATE PROFESSOR EMERITUS: Garland O'Quinn  
ASSOCIATE PROFESSOR: Smith  
ASSISTANT PROFESSORS: Dorgo, King, Kong, Pederson, Vella

The Master of Science degree with a major in Kinesiology is directed toward students who wish to: (a) increase their knowledge and competency as professional physical educators, (b) complete a master’s degree in preparation for continuing their education in a doctoral program, (c) enhance their knowledge in the various exercise science areas, or (d) prepare for higher level jobs in the many professions that deal with human movement and physical activity.
Admission Requirements

For admission into the master’s program in Kinesiology, students must present:
1. An undergraduate degree in Kinesiology or a related field from an accredited institution with an overall GPA of at least 3.0 on a 4.0 scale.
2. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework.
3. TOEFL score of at least 213/550 for those students for whom English is a foreign language. Score of at least 250/600 required for TA positions.
4. Other evidence of background and experience that may be available.

For conditional admission 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 2.8 on a 4.0 scale.
2. At least 12 hours of undergraduate Kinesiology core courses approved by the program graduate advisor.
3. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework.
4. TOEFL score of at least 213/550 for those students for whom English is a foreign language. Score of at least 250/600 required for TA positions.
5. Other evidence of background and experience that may be available.

Grade Requirements for the MS in Kinesiology

The following applies to fully admitted students. Any grade of “D” or “F” will result in a referral to the full Kinesiology Graduate Faculty for review. Barring extenuating circumstances, this will result in a recommendation to the Graduate School for dismissal from the Kinesiology Graduate Program. A grade of “C” is not considered acceptable graduate level work. One grade of “C” is permitted so long as the overall GPA does not fall below 3.0. A second “C” will result in a referral to the full Kinesiology Graduate Faculty for review. Barring extenuating circumstances, this will result in a recommendation to the Graduate School for dismissal from the Kinesiology Graduate Program.

Degree Requirements for the MS in Kinesiology
A total of 36 hours, distributed as follows:

Core Courses Required of All Students (15 hours)

<table>
<thead>
<tr>
<th>Kinesiology</th>
<th>5361</th>
<th>Biomechanical Basis of Sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIN 5372</td>
<td>5372</td>
<td>Advanced Exercise Physiology</td>
</tr>
<tr>
<td>KIN 5373</td>
<td>5373</td>
<td>Motor Learning and Control</td>
</tr>
</tbody>
</table>

Statistics-Choose one course from the following list:

<table>
<thead>
<tr>
<th>KINO 6370</th>
<th>6370</th>
<th>Introduction to Statistics (offered online)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 5310</td>
<td>5310</td>
<td>Statistics I: Applied Correlation and Regression</td>
</tr>
<tr>
<td>EDRS 5340</td>
<td>5340</td>
<td>Advanced Statistics</td>
</tr>
<tr>
<td>SOCI 5312</td>
<td>5312</td>
<td>Seminar in Advanced Measurement and Inference</td>
</tr>
</tbody>
</table>

Research Methods-Choose one course from the following list:

<table>
<thead>
<tr>
<th>KINO 6372</th>
<th>6372</th>
<th>Research Methods (offered online)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDRS 5305</td>
<td>5305</td>
<td>Educational Research and Statistics</td>
</tr>
<tr>
<td>EDRS 5306</td>
<td>5306</td>
<td>Qualitative Research</td>
</tr>
<tr>
<td>PSYC 5311</td>
<td>5311</td>
<td>Statistics II: Experimental Design</td>
</tr>
</tbody>
</table>
The graduate advisor may approve other statistics and/or research methods courses.

Students will choose to concentrate in either Exercise Science or Pedagogy of Physical Activities.

Exercise Science Concentration

The Exercise Science concentration will supplement students’ knowledge about laboratory practice and prepare them for careers in fitness, clinical and research settings. Although taking online courses can satisfy some of the requirements, a student must take the required traditional laboratory courses to complete this concentration. The 36-hour program will include the common core (15 hours) plus the following courses.

Exercise Science Courses:

- KIN 5371 Measurement Techniques in Exercise Physiology
- KIN 5374 Measurement Techniques in Biomechanics

Electives:

- 9 hours from Kinesiology or related area
- All elective hours are subject to approval by graduate advisor.

*Project Option:

- KIN 5397 Graduate Project
- 3 hours from Kinesiology or related area
- or

*Thesis Option:

- KIN 5398 Graduate Thesis I
- KIN 5399 Graduate Thesis II

* The project or thesis will relate to an exercise science topic

Pedagogy of Physical Activity Concentration

The Pedagogy of Physical Activity concentration will supplement students’ knowledge about teaching and/or coaching settings. A student can fulfill the requirements for this option completely online or by combining traditional and online courses. The 36-hour program will include the common core (15 hours) plus the following courses:

Pedagogy of Physical Activity Courses:

- KIN 5365 Programs of Physical Activity or
- KIN 5369 Physical Activities for Young Children (offered online)
- KIN 5367 Effective Instruction in Physical Education or
- KINO 6352 Analysis of Teaching and Coaching Behavior (offered online)

Electives:

- 9 hours from Kinesiology or related area
- All elective hours are subject to approval by graduate advisor.

*Project Option:

- KIN 5397 Graduate Project
- 3 hours from Kinesiology or related area
- or

*Thesis Option:

- KIN 5398 Graduate Thesis I
- KIN 5399 Graduate Thesis II

* The project or thesis will relate to a pedagogy topic
Online Master’s Degree

UTEP collaborates with five other UT System universities to offer the courses necessary to earn the Master’s Degree in Kinesiology with an emphasis in Pedagogy of Physical Activities completely online through the UT System TeleCampus. Although this degree was designed to meet the needs of students who are unable to attend traditional classes, the courses can also be used to supplement the course work taken by traditional students enrolled in the graduate program at UTEP.

The online program has the same admission and the degree requirements as the traditional program. Online courses offered by the other UT System universities can count toward the UTEP degree.

For more information regarding the Online Degree, students can visit the UT TeleCampus Kinesiology web page http://www.telecampus.utsystem.edu/index.cfm/4.623.82.56.html or contact Dr. Darla R. Smith, Graduate Coordinator (darsmith@utep.edu).

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.

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 4313 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 Kinesiology (3-0)
Course focuses on advanced topics and/or current issues in Kinesiology. 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.

5367 Effective Instruction in Physical Education (3-0)
This course focuses on effective teaching and learning strategies in physical education. Students gain experience in a range of teaching styles as well as skills in systematic observation techniques for analyzing and improving teaching. Prerequisite: Department approval.
5368 **Coronary Intervention (2-3-0)**
The primary focus of this course is in electrocardiographic interpretation and exercise stress testing of at risk populations. Additional discussion topics include the anatomy and physiology of the cardiovascular system, electrophysiology, pathology of cardiovascular disease, risk factor analysis, prevention programs, and cardiac rehabilitation programs. *Prerequisite:* Department approval. Laboratory fee required.

5369 **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 **Motor Learning and Control (3-0)**
Current theories and concepts involved in the processes of motor skill acquisition and performance from a behavioral perspective. Major topics include the methodology of studying motor performance, information processing, sensory and central contributions to motor control, coordination, individual differences, conditions of practice, feedback, retention and transfer and the learning process. Practical application of principles is emphasized. *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.

5375 **Advanced Scientific Principles in Strength Training and Conditioning (3-0)**
Advanced concepts and theory related to maximizing human performance. Analysis of the conceptual, theoretical, and technical considerations of assessing, designing, and implementing strength training and conditioning programs with particular focus on analyzing and applying contemporary periodization concepts. *Prerequisite:* Department 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.
5380  Qualitative Analysis of Human Movement (3-0)
An integrated approach to qualitative analysis of human movement: students will improve their ability to observe movement, detect errors, and diagnose individual situations to help students, athletes, clients, or patients move more effectively, efficiently, and safely. Prerequisite: Department approval.

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.

Kinesiology Online Courses (KINO)

6310  Exercise Physiology (UT Permian Basin/UT Tyler)
This course provides a comprehensive survey of exercise physiology, examining muscular, metabolic, and cardio respiratory adaptations to acute and chronic exercise. Emphasis is on the major concepts in terms of normal responses to exercise. This course is a prerequisite for KINO 5312, Training and Conditioning Methods.

6312  Training and Conditioning Methods (UT Arlington/UT Permian Basin/UT Tyler)
This course involves the study of training and conditioning methods used to improve and sustain athletic performance. Students will study methods and programs used with athletes to develop aerobic endurance, muscular strength, and anaerobic power, as well as the underlying physiological bases of the training effects. Prerequisite: KINO 6310, Exercise Physiology or the equivalent.

6316  Applied Biomechanics (UT El Paso – KIN 5361)
Students will investigate the application of biomechanical principles to human motor skill performance in sport and exercise settings. Emphasis will be placed on the teaching and learning of motor skills, characteristics of skilled performance, and safety-related considerations.

6320  Sport Psychology (UT Permian Basin/UT San Antonio/UT Tyler)
Students will investigate psychological and social-psychological theories and current research pertaining to the study of sport and physical activity. Topics covered will include personality, anxiety, arousal, causal attribution, motivation, attention, self-confidence and exercise psychology. This course is a prerequisite for KINO 6322, Applied Psychology.

6322  Applied Sport Psychology (UT Permian Basin/UT San Antonio)
Students will develop an array of mental training techniques that have been used successfully by athletes and coaches to improve sport performance. How to use each technique as an athlete and teach it as a coach will be the primary objectives. This course takes an educational approach toward performance enhancement, not a clinical one. The mental training techniques include imagery, arousal regulation,
somatic and cognitive stress management, concentration and attention control, positive self-talk, and goal setting. Prerequisite: KINO 6320 - Sport Psychology or equivalent.

6323 Exercise Psychology (UT Permian Basin)
Students will study the theoretical models and research related to the determinates of exercise adoption and adherence. Research related to the effects of exercise on mental health is also reviewed. Students are encouraged to apply their study of theory and research to the design of wellness, fitness, and health promotion programs in various settings of professional interest-education, corporate, and commercial.

6326 Motor Learning and Control (UT El Paso – KIN 5373)
Current theories and concepts involved in the processes of motor skill acquisition and performance from a behavioral perspective. Major topics include the methodology of studying motor performance, information processing, sensory and central contributions to motor control, coordination, individual differences, conditions of practice, feedback, retention and transfer and the learning process. Practical application of principles is emphasized.

6330 Sport and Society (UT Permian Basin)
This course, a critical examination of sport will be made. Students will examine opposing points of view related to the role of sport in various American institutions (political, economic, educational, religious) and by diverse sociocultural groups within these institutions. The impact of sport upon individuals and society will also be scrutinized (racism, sexism, elitism).

6340 History and Philosophy (UT Pan American)
Students will examine the historical development of kinesiology, physical education and sport from primitive to modern day times. Emphasis is placed on the role sport and physical education plays as part of the total educational system and how educational philosophy influences modern sport and physical education. Major philosophies will be investigated and applied to assist the student in developing her or his individual philosophy.

6342 Ethics in Health and Kinesiology (UT Tyler)
Students will examine ethical considerations encountered in professional areas related to health, exercise and sport. The students will learn to develop and evaluate ethical viewpoints based on theory and fundamental principles.

6346 Contemporary Issues in Health and Kinesiology (UT Tyler)
This course engages students in an analysis of selected contemporary controversial problems in the areas of health and human movement. Students will learn general principles and procedures related to rational development and evaluation of viewpoints, and will learn to apply these principles and procedures to specific controversies relevant to the professional interests and goals of the students in the class.

6348 US Health System (UT Tyler)
In this course students will better understand the extremely complex and rapidly changing U.S. health system. Though it is important for you as a student to appreciate the value of understanding our current healthcare system, healthcare systems are not holy and I believe they should be viewed with a degree of scholarly irreverence and skepticism. Students will be expected to cultivate a habit of demanding evidence as they peer into our diversified institutions and the minds of Americans who have created such perplexing systems for doing things.
**Curricular Innovations** (UT Arlington/UT Permian Basin)
Students will examine current trends and issues in physical education curriculum development. The course content includes examples of program innovations, as well as current international, national (e.g., NASPE national standards), and local (e.g., TEKS in Texas) curriculum initiatives. Individually or as members of a small group, students will design physical education curricula to be implemented in their own schools.

**Analysis of Teaching and Coaching Behavior** (UT Permian Basin)
Students will survey a variety of instructional models available to teachers and coaches. They will learn to match the variety of behavioral assessment tools to the instructional model and the task-at-hand. They will apply behavioral assessment tools in learning to observe, describe, code, and analyze the behaviors that they are observing in physical education students, teachers, student athletes, coaches, spectators, or officials of an activity.

**Early Childhood Physical Activity** (UT El Paso – KIN 5369)
A study of physical activity in early childhood and its influence on child development to include types of physical activity and its relationship to emotions, health, social and physical growth and development.

**Issues in Adapted Physical Activity** (UT Arlington/UT Pan American)
This course is specifically designed to expand the roles and responsibilities of the teacher/coach in the current and the future inclusion settings. Students will analyze and evaluate issues, trends and research findings pertinent to adapted physical activity for students with disabilities.

**Administration of Physical Education and Athletic Programs** (UT Permian Basin)
Students will investigate and apply administrative theories related to the administration of sport and physical education programs. Additionally, students will establish their program philosophy, perform budgeting and expenditure of funds, assignments, and examine legal issues associated with the administration of sport and physical education programs.

**Introduction to Statistics** (UT Permian Basin)
This course is designed for graduate students who require a basic understanding of statistics but have not previously had a statistics course. The course covers basic descriptive statistics, elementary probability, one- and two-population mean and variance comparisons, and an introduction to ANOVA, simple linear regression, and correlation. Graduate standing and an undergraduate course in mathematics at the level of college algebra or higher are assumed.

**Research Methods** (UT Pan American/UT Permian Basin/UT San Antonio)
The students will explore various types of research used in Kinesiology. The students will then develop a research question, formulate methodology and related statistical and measurement concepts, and write a research report. **Prerequisites**: None; a statistics course (KINO 6370) is highly recommended.

**Nutrition, Health, and Disease** (UT Tyler)
Study of basic nutrients, diets across the life cycle, and therapeutic diets for selected disease states.

**Sports Nutrition** (UT Tyler)
Study of nutrition as it relates to optimal training and performance of sports activities. **Prerequisite**: Graduate or upper-division undergraduate general nutrition course.
Rehabilitation Sciences

Occupational Therapy

1101 N. Campbell, Room 500
(915) 747-8207
ot@utep.edu

INTERIM DIRECTOR: Karen Funk
PROFESSOR EMERITA: Gretchen Schmalz
ASSISTANT PROFESSORS: Capshaw, Funk, Haltiwanger, Leech

Masters in Occupational Therapy

The MOT program at UTEP is dedicated to preparing occupational therapists to serve as interdisciplinary health professionals in rural and urban settings in a variety of health care areas. The program builds upon a strong undergraduate preparation and continues to teach students to think clearly, communicate and solve problems effectively, understand new technologies, and appreciate the connections that enhance quality of life.

Admission Requirements

For unconditional acceptance, generally, students must have:

1. A score of 550 (paper) or 213 (Computer based) or higher on the Test of English as a Foreign Language (TOEFL) from international applicants.

2. Evidence of satisfactory academic achievement and potential assessed by review of performance in upper division (junior and senior level) courses as well as any graduate-level courses completed and results of the Graduate Record Examination (GRE) or the Miller’s Analogy Test.

3. Other evidence of academic performance and the ability to make an important contribution to the program including personal statements and interviews.

4. A baccalaureate degree from an accredited institution (or, for international and special students, proof of equivalent training), including 20 undergraduate credit hours with a CGPA of 3.0 on a 4.0 scale, in the following subjects:

<table>
<thead>
<tr>
<th>Foundation Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Terminology</td>
<td>1*</td>
</tr>
<tr>
<td>Human Anatomy and Physiology with Lab**</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Psychology***</td>
<td>3</td>
</tr>
<tr>
<td>Other Social Sciences **</td>
<td>6</td>
</tr>
<tr>
<td>Statistics for non-math majors</td>
<td>3</td>
</tr>
<tr>
<td>Human development across the entire life span</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>20</td>
</tr>
</tbody>
</table>

* Successful completion of a medical terminology competency exam will substitute for this prerequisite.

** Courses must cover the nervous, muscular and skeletal systems.

*** Courses incorporating group dynamics and research in social sciences are strongly recommended.
For **conditional acceptance**, generally, students must have:

1. A score of 550 (paper) or 213 (Computer based) or higher on the Test of English as a Foreign Language (TOEFL) from international applicants.

2. Official results of the Graduate Record Examination (GRE) or the Miller's Analogy Test.

3. Satisfactory completion of the University of Texas Core Curriculum or equivalent approved by the program advisor. Conditional acceptance may be offered to a candidate without adequate preparation in the prerequisite course work until such time as the student has completed the courses of preparatory work designated by the graduate advisor.

4. Other evidence of academic performance and the ability to make an important contribution to the program including personal statements and interviews.

5. Applicants may be required, on the recommendation of the graduate advisor, to meet particular conditions during the first semester of study.

6. It is highly recommended that students without a baccalaureate degree who are considering applying for admission to the occupational therapy program follow an undergraduate major such as Biology or Health Promotion (for example, BIOL 1305/1107 and 2311/2111 are preferred to BIOL 1303/1103 and 1304/1104). By taking the undergraduate major course, students not only complete the occupational therapy program prerequisites and the University Core Curriculum, but they are in a good position to complete a bachelors degree in a related field should they not successfully complete the occupational therapy program.

7. Students admitted without a bachelor’s degree whose grades during the first year of the occupational therapy program do not appear to demonstrate the potential for successful completion will be advised to consider pursuing a bachelor’s degree in another field such as Biology, Health Promotion, or Kinesiology.

**Degree Requirements**

Applicants for the program should have completed the following undergraduate courses:

<table>
<thead>
<tr>
<th>a. Foundation Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Terminology</td>
<td>1*</td>
</tr>
<tr>
<td>Human Anatomy and Physiology with Lab**</td>
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</tr>
<tr>
<td>Introduction to Psychology***</td>
<td>3</td>
</tr>
<tr>
<td>Other Social Sciences ***</td>
<td>6</td>
</tr>
<tr>
<td>Statistics for non-math majors</td>
<td>3</td>
</tr>
<tr>
<td>Human development across the entire life span</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>20</td>
</tr>
</tbody>
</table>

* Successful completion of a medical terminology competency exam will substitute for this prerequisite.

** Courses must cover the nervous, muscular and skeletal systems.

*** Courses incorporating group dynamics and research in social sciences are strongly recommended.

**NOTE:** In order to engage in clinical rotations, which are a crucial element in the curriculum, Occupational Therapy students must pass a background check. Therefore, applicants accepted to the Occupational Therapy program will be required to undergo and pass a background check prior to matriculation. Applicants are responsible for the costs in obtaining a background check report.
b. **Major Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT 5136</td>
<td>Preceptorship Studies*</td>
</tr>
<tr>
<td>OT 5177</td>
<td>Graduate Seminar**</td>
</tr>
<tr>
<td>OT 5301</td>
<td>Therapeutic Media I</td>
</tr>
<tr>
<td>OT 5302</td>
<td>Therapeutic Media II</td>
</tr>
<tr>
<td>OT 5305</td>
<td>Upper Extremity Orthotics and Prosthetics</td>
</tr>
<tr>
<td>OT 5311</td>
<td>Human Adaptation to Pathophysiology</td>
</tr>
<tr>
<td>OT 5312</td>
<td>Psychosocial Aspects of Occupation</td>
</tr>
<tr>
<td>OT 5313</td>
<td>Studies in Human Neuroscience</td>
</tr>
<tr>
<td>OT 5315</td>
<td>Legal and Ethical Issues in Health Care</td>
</tr>
<tr>
<td>OT 5316</td>
<td>Occupational Therapy Management</td>
</tr>
<tr>
<td>OT 5320</td>
<td>Performance and Development of Older Adults</td>
</tr>
<tr>
<td>OT 5322</td>
<td>Biomechanical Approaches in Occupational Therapy</td>
</tr>
<tr>
<td>OT 5323</td>
<td>Assessment Principles</td>
</tr>
<tr>
<td>OT 5325</td>
<td>Developmental Approaches in Occupational Therapy</td>
</tr>
<tr>
<td>OT 5327</td>
<td>Work and Human Occupation</td>
</tr>
<tr>
<td>OT 5328</td>
<td>Rehabilitation Approaches in Occupational Therapy</td>
</tr>
<tr>
<td>OT 5329</td>
<td>Neurodevelopmental Approaches in Occupational Therapy</td>
</tr>
<tr>
<td>OT 5330</td>
<td>Research Methods I</td>
</tr>
<tr>
<td>OT 5410</td>
<td>Functional and Applied Anatomy</td>
</tr>
<tr>
<td>OT 5424</td>
<td>Psychosocial Interventions</td>
</tr>
<tr>
<td>OT 5611</td>
<td>Skills and Concepts in Occupational Therapy</td>
</tr>
</tbody>
</table>

**Total major required hours** .......................................................... **64**

* May be repeated with department approval
** Must be taken when student is concurrently enrolled in OT 5388 Project or OT 5399 Thesis during a summer semester.

---

**Graduate Project or Thesis Required Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT 5388</td>
<td>Graduate Project I or OT 5398 Thesis</td>
</tr>
<tr>
<td>OT 5389</td>
<td>Graduate Project II or OT 5399 Thesis</td>
</tr>
</tbody>
</table>

**Total graduate project or thesis hours** .......................................... **6**

---

**Fieldwork (formerly Field Studies)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT 5340</td>
<td>Fieldwork II First Rotation (weeks 1-6) and</td>
</tr>
<tr>
<td>OT 5341</td>
<td>Fieldwork II First Rotation (weeks 7-12)</td>
</tr>
<tr>
<td>OT 5342</td>
<td>Fieldwork II Second Rotation (weeks 1-6) and</td>
</tr>
<tr>
<td>OT 5343</td>
<td>Fieldwork II Second Rotation (weeks 7-12)</td>
</tr>
</tbody>
</table>

**Total Fieldwork hours** ................................................................... **12**

---

**Optional Elective Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT 5250</td>
<td>Selected Topics in Occupational Therapy</td>
</tr>
<tr>
<td>OT 5350</td>
<td>Selected Topics in Occupational Therapy</td>
</tr>
<tr>
<td>OT 5252</td>
<td>Independent Study in Occupational Therapy</td>
</tr>
<tr>
<td>OT 5352</td>
<td>Independent Study in Occupational Therapy</td>
</tr>
<tr>
<td>OT 5338</td>
<td>Fieldwork II Elective</td>
</tr>
</tbody>
</table>

**Total Semester credit hours required for the degree** ................. **82**
Occupational Therapy (OT)

For Graduate Students Only

5136 Preceptorship Studies (0-0-40)
Seminar and intensive practicum that integrates applications of theoretical knowledge in a variety of practice areas and client populations. Prerequisite: OT 5611 with a grade of “C” or better. May be repeated for credit with instructor approval.

5177 Graduate Seminar (0-0-1)
The capstone experience in which students discuss their ongoing projects/theses and for those who have completed their projects/theses present them in a colloquium setting. Prerequisite: Department approval.

5250 Special Topics in Occupational Therapy (2-0)
5350 Special Topics in Occupational Therapy (3-0)
Special topics of current interest. May be repeated for credit when topic varies. Prerequisite: Department approval.

5252 Independent Study in Occupational Therapy (0-0-2)
5352 Independent Study in Occupational Therapy (0-0-3)
Self-directed study planned to meet the learning objectives of the student in a special area of interest. Must be passed with a minimum grade of a “C” or better. Prerequisite: Department approval.

5301 Therapeutic Media I (2-3)
Introduction to human occupation and occupational performance from a developmental and evolutionary perspective. Exploration of survival, recreational work and social occupations in individuals and societies; skill development in performance and teaching of selected tasks; and basic task analysis. Prerequisite: Department approval.

5302 Therapeutic Media II (2-2)
Advanced principles of person-centered occupation and task analysis, integration of biomechanics and person/task/environmental demands applied to daily living skills. Prerequisites: OT 5301 and OT 5611 each with a grade of “C” or better.

5303 Performance and Development of Older Adults (3-0)
Introduction to performance of older adults from a developmental perspective. Includes assessment and interventions unique to healthy and at-risk older adults in their social and physical environments. Prerequisites: PSYC 2310 and department approval.

5305 Upper Extremity Orthotics and Prosthetics (2-2)
Integration of foundational and theoretical knowledge and technical competencies in the evaluation, fabrication, modification, and application of orthotics and prosthetics to promote client occupation. Prerequisites: OT 5322 and OT 5328 and all foundation knowledge courses offered in the first summer, fall, spring, and second summer semester, or instructor approval. OT 5328 may be taken concurrently with OT 5305.

5311 Human Adaptation to Pathophysiology (3-0)
The study of pathophysiological processes and their impact on the body systems, with special attention to disease or trauma-induced alterations of regulatory mechanisms in human organism. Links foundational knowledge of the normal human structures and functions to disruptions affecting occupational performance. Prerequisite: Department approval.
5312 **Psychosocial Aspects of Occupation (2-2)**
Foundations and knowledge related to psychosocial occupational function throughout the lifespan; intrapersonal, interpersonal, group, and cultural dynamics; general approaches for occupational therapy intervention. Includes practicum. Must be passed with a minimum grade of “C”. **Prerequisite**: Department approval.

5313 **Studies in Human Neuroscience (3-0)**
A study in human neuroscience with emphasis on the structures and the functions of the nervous system as applied to occupational performance components. Must be passed with a minimum grade of “C”. **Prerequisite**: OT 5410 with a grade of “C” or better.

5315 **Legal and Ethical Issues in Health Care (3-0)**
Principles and history of law and bioethics applied to the provision of health care services, the roles and responsibilities of the occupational therapy practitioner, and the rights of the consumer. Must be passed with a minimum grade of “C” or better. **Prerequisite**: Department approval.

5316 **Occupational Therapy Management (3-0)**
Trends and influences that affect the delivery, evaluation and outcome of occupational therapy and the management skills needed for practice. **Prerequisites**: OT 5136 and OT 5611 each with a grade of “C” or better or instructor approval.

5322 **Biomechanical Approached in Occupational Therapy (2-3)**
Theory and application of biomechanical principles in the evaluation and treatment of human occupational function related to strength, range of motion, endurance, and tissue integrity. **Prerequisite**: OT 5611 with a grade of “C” or better or instructor approval.

5323 **Assessment Principles (3-0)**
Introduction to the foundations, principles, and application of occupational therapy evaluation, assessment, and measurement of treatment outcomes. **Prerequisite**: OT 5611 with a grade of “C” or better.

5325 **Developmental Approaches in Occupational Therapy (2-3)**
Integration of foundational knowledge, theoretical constructs, development-based models and treatment approaches for occupation-based evaluation and intervention with the pediatric population. Includes practicum. **Prerequisites**: OT 5323 and OT 5611 each with a grade of “C” or better, or instructor approval.

5327 **Work and Human Occupation (2-3)**
Explores work and its role in human occupation. Emphasis is placed on theory, evaluation and intervention using outcome-based measurements for work readiness in a variety of populations. Includes practicum. **Prerequisites**: OT 5322, OT 5323 and OT 5611 each with a grade of “C” or better, or instructor approval.

5328 **Rehabilitation Approaches in Occupational Therapy (2-2)**
Integration of foundational knowledge, theoretical constructs, occupation-based evaluation and compensatory intervention principles for clients/families/caregivers to facilitate occupational role performance in the home, community, and natural environment. Includes practicum. **Prerequisites**: All foundation knowledge courses offered in the first summer, fall, spring, and second summer semester, or instructor approval.
5329 **Neurodevelopmental Approaches in Occupational Therapy (2-3)**
Integration of foundational knowledge and theoretical constructs in neurodevelopmental and sensorimotor evaluation and intervention with adults with neurological dysfunction. Includes practicum. 
Prerequisites: OT 5322, 5323, 5328, and OT 5611 each with a grade of “C” or better, or instructor approval.

5330 **Research Methods (3-0)**
Graduate research course focusing on basic principles and research design, including quantitative and qualitative designs. Prerequisites: PSYC 1303 with a grade of “C” or better and department approval.

5338 **Fieldwork II (0-0-20)**
Intensive clinical or community-based practicum under the supervision of a registered occupational therapist (OTR). Six weeks or equivalent part-time. To provide the student with additional learning experience in an area of the student’s choosing. This course is graded on a credit/no credit basis. Prerequisite: OT 5136 with a grade of “C” or better, and department approval.

5340 **Fieldwork II-Rotation I (weeks 1-6) (0-0-20)**
Intensive clinical or community-based practicum under the supervision of a registered occupational therapist (OTR). Course related fee required. Corequisite: OT 5341: Fieldwork II-Rotation I (weeks 7-12). Prerequisite: Department approval.

5341 **Fieldwork II-Rotation I (weeks 7-12) (0-0-20)**
Intensive clinical or community-based practicum under the supervision of a registered occupational therapist (OTR). Course related fee required. Corequisite: OT 5340: Fieldwork II-Rotation I (weeks 1-6). Prerequisite: Department approval.

5342 **Fieldwork II-Rotation II (weeks 1-6) (0-0-20)**
Intensive clinical or community-based practicum under the supervision of a registered occupational therapist (OTR). Course related fee required. Corequisite: OT 5343 Fieldwork II-Rotation II (weeks 7-12). Prerequisite: Department approval.

5343 **Fieldwork II-Rotation II (weeks 7-12) (0-0-20)**
Intensive clinical or community-based practicum under the supervision of a registered occupational therapist (OTR). Course related fee required. Corequisite: OT 5342: Fieldwork II-Rotation II (weeks 1-6). Prerequisite: Department approval.

5388 **Graduate Project I (0-0-3)**
Initial work on original development of a project/proposal under the direct supervision of a graduate faculty member. Requires satisfactory completion of the course, and a written report. May include practicum. Prerequisites: OT 5330 and OT 5388 each with a grade of “C” or better and department approval.

5389 **Graduate Project II (0-0-3)**
Continuous enrollment required while work on the graduate project continues. May include practicum. Prerequisites: OT 5330 and OT 5388 each with a grade of “C” or better and department approval.

5398 **Thesis (0-0-3)**
Initial work on original research of a thesis proposal under the direct supervision of a graduate faculty member. May include practicum. Prerequisites: OT 5330 with a grade of “C” or better and department approval.
5399  **Thesis (0-0-3)**  
Continuous enrollment required while work on the thesis continues. Includes practicum. **Prerequisites:** OT 5330 and OT 5398 each with a grade of “C” or better and department approval.

5410  **Functional and Applied Anatomy (2-6)**  
A study of the structure and function of the skeletal, muscular, and peripheral nervous systems of the human body as applied to human locomotion, exploration, and manipulation of the environment. **Prerequisite:** Department approval.

5424  **Psychosocial Interventions (3-2)**  
Theory, principles, and applications of client-centered occupational therapy evaluation and interventions with consumers experiencing psychosocial dysfunction. Includes practicum. **Prerequisite:** OT 5312 with a grade of “C” or better.

5611  **Occupational Therapy Skills and Concepts (5-3)**  
Introduction to the profession and practice of occupational therapy. Professional conduct, occupational therapy history and theory, systems theory applied to the individual, family, and community, and human occupational performance in a variety of environments. Includes practicum. **Prerequisite:** Department approval.

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**Physical Therapy**

1101 N. Campbell, Room 500  
(915) 747-8207  
pt@utep.edu

INTERIM DIRECTOR: J.A. Ryberg  
ASSOCIATE PROFESSOR: Carlson, Stanley  
CLINICAL ASSOCIATE PROFESSOR: Ryberg  
ASSISTANT PROFESSORS: Ko  
CLINICAL ASSISTANT PROFESSOR: Atkinson, Dillon  
LECTURER: Fisher, Sipla

Physical Therapy is a health profession whose primary purpose is the promotion of optimal physical function. Physical therapists apply scientific principles to prevent and treat acute and chronic movement disorders.

Physical therapy encompasses areas of specialization and includes the development of new approaches to more effectively meet existing and emerging health care needs.

The Physical Therapy Program offers a Masters Degree in Physical Therapy. While acceptance into the Masters Degree Program does not require completion of an undergraduate degree, the competitive nature of the admissions process makes it imperative that interested undergraduates follow a traditional undergraduate major (e.g., Biological Sciences, Health Promotion, Kinesiology, Chemistry) as they complete the program prerequisites and electives. In addition, undergraduates should be aware of the University Core Curriculum and its requirements as they plan a course of study that may lead to consideration for admission to the Masters Degree in Physical Therapy. Candidates with a Bachelor’s degree will be given preference.
Acceptance into the program requires the completion of ninety prerequisite and elective undergraduate credit hours (see below) and selection after a competitive admissions process (see below). Twenty-four students are selected each year and begin their studies in the Fall. Successful completion of the academic and clinical components of the Masters Degree makes the graduate eligible to take the Texas (and other State) licensure examination in Physical Therapy. Successful completion of that examination allows the graduate to practice Physical Therapy.

The program with its academic and clinical components is two and one-half calendar years in length (eight consecutive semesters). The semesters are sequential and require full-time attendance. Included in the program are a total of thirty (30) weeks of full-time clinical internships and a research project.

NOTE: In order to engage in clinical rotation, which are a crucial element in the curriculum, Physical Therapy students must pass a background check. Therefore, applicants accepted to the Physical Therapy program will be required to undergo and pass a background check prior to matriculation. Applicants are responsible for the costs in obtaining a background check report.

Admission Requirements

Before admission to the Physical Therapy program, students must meet all admission requirements as stated below.

Undergraduate Courses

At least 72 undergraduate hours must be completed prior to the formal application process and a minimum of 90 semester hours of undergraduate study must be completed prior to starting the program. When planning a course of study that may lead to consideration for the program, students must take courses that apply to the University Core Curriculum, meet requirements for a regular academic major, and satisfy specific program prerequisites. No more than 66 credit hours can be transferred from a community or junior college. All science (biology, chemistry, physics) and math courses must have been completed in the last 10 years.

Prerequisite Courses

Forty-nine semester hours are required prerequisite courses. These courses must meet specified conditions1 and include:

English (9 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1311 (ENGL 1301)*</td>
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</tr>
<tr>
<td>ENGL 1312 (ENGL 1302)*</td>
<td>3 hrs</td>
<td></td>
</tr>
<tr>
<td>ENGL 3359</td>
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<td>3 hrs</td>
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Chemistry (8 credit hours)

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<tr>
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<tbody>
<tr>
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<tr>
<td>CHEM 1306/1106 (CHEM 1312/1112)*</td>
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Biology (8 credit hours)

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<tbody>
<tr>
<td>BIOL 1305/1107 (BIOL 1306/1106)*</td>
<td>4 hrs</td>
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<td>And either:</td>
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<tr>
<td>BIOL 1306/1108*</td>
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<tr>
<td>BIOL 3414</td>
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<tr>
<td>or</td>
<td></td>
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<tr>
<td>ZOOL 2406</td>
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</tr>
</tbody>
</table>
Physiology (4 credit hours) 4 hrs
   Upper-division physiology with laboratory (human, animal, or vertebrate physiology)
   ZOOL  4380/4181 (preferred)
   or
   BIOL  4388/ZOOL 4181
   Note: BIOL 2313/2113 Human Anatomy and Physiology (BIOL 2302/2102) does not meet requirements as upper division.

Psychology (6 credit hours)
   PSYC  1301 (PSYC 2301)*  3 hrs
   PSYC  2310 (PSYC 2312)  3 hrs

Physics (8 credit hours)
   PHYS  1403 (PHYS 1401)*  4 hrs
   PHYS  1401 (PHYS 1402)*  4 hrs
   both courses must include labs

Communication (3 credit hours)
   COMM  1301*  3 hrs
   or
   COMM  1302 *  3 hrs

Statistics (3 credit hours)
   PSYC  1303 (PSYC 2317)  3 hrs
   should include analysis of variance (ANOVA)

1 All prerequisites must be completed prior to beginning the professional course of study in the Fall. All prerequisites must be completed with a grade of “C” or better.
* Course meets University Core Curriculum requirement.

Elective Courses
   Forty-one semester hours are elective. However, some of these hours must be used to complete the University Core Curriculum. Students are urged to choose courses that complete an academic major, fulfill University Core Curriculum requirements, and promote a well-rounded education.

University Core Curriculum
   Physical Therapy Program prerequisite courses do not meet all the University Core Curriculum requirements. Courses must be selected to complete University Core Curriculum requirements in U.S. History (HIST 1301 and HIST 1302), Political Science (POLS 2310 and POLS 2311), Visual and Performing Arts (three credits), Humanities (three credits), and the Institutionally Designated Option (three credits).

Additional Requirements for Admission
   1. Completion of the University Core Curriculum prior to beginning the Masters Degree Program in Physical Therapy
      a. Applicants without a baccalaureate degree must complete UTEP Core Curriculum requirements.
      b. Students with a baccalaureate degree are exempt from the University Core Curriculum requirement.
   2. A minimum overall GPA of 3.0 (on a four-point scale).
3. A minimum GPA of 3.0 (on a 4.0 scale) on physical therapy prerequisites.
4. 50 clock hours of documented volunteer or paid work experience in a physical therapy setting (must be completed prior to application).
5. Three letters of recommendation—one of which must be from a physical therapist who supervised the work or volunteer experience.
6. Submission of official Graduate Record Examination (GRE) scores.
7. International students (when English is not the official or first language) must have a minimum score of 213/550 on TOEFL.
8. Completed application for the Graduate School.
9. Transcripts according to the requirements of the Graduate School.
10. Graduate application processing fee ($15 US for permanent residents, $65 International applicants).
11. Completion of an official interview of all eligible candidates.

Selection Criteria
Completion of the above requirements makes a student eligible for selection but does NOT guarantee admission to the Physical Therapy Program. The final selection is competitive and based on academic course work and the other requirements.

Admissions Process
1. Obtain an Application for Graduate Admission from the Graduate School.
2. Complete at least 72 hours of required prerequisite work as an undergraduate student with a cumulative GPA of at least 3.0 and a minimum of 3.0 in Physical Therapy prerequisite course work.
3. Submit an Application for Graduate Admission with the required fee and a written plan for prerequisite course completion.
4. Complete and submit documentation of, a minimum of 50 clock hours of voluntary or paid experience in a physical therapy setting supervised by a licensed physical therapist.
5. Arrange to take the Graduate Record Examination (GRE) and have the official scores sent to the Graduate School. International applicants must arrange for the TOEFL score to be sent to the Graduate School.
6. Submit transcripts according to the requirements of the Graduate School and three confidential reference forms.
7. If prerequisites are not completed when application is submitted, subsequent transcripts must be submitted as soon as they are available.
8. Interviews for qualified applicants will occur on the UTEP campus when applications are complete.
9. Letters of admission will be sent from the Graduate School as students are selected and until the class is filled.

All applications, supporting documentation, transcripts, and test scores should be sent to:
Graduate School (Physical Therapy)
601 W. Schuster
223 Academic Services Building
The University of Texas at El Paso
El Paso, Texas 79968
(915) 747-5491
gradschool@utep.edu

Inquires may be made to:
Physical Therapy Program
UTEP College of Health Sciences
1101 N. Campbell
El Paso, TX 79902-0581
(915) 747-8207
pt@utep.edu

THE UNIVERSITY OF TEXAS AT EL PASO
Professional Course of Study

Year 1, Fall Semester (15 academic weeks)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PT 5406</td>
<td>Human Anatomy for Physical Therapists</td>
<td>4</td>
</tr>
<tr>
<td>PT 5312</td>
<td>Pathophysiology and Movement Science</td>
<td>3</td>
</tr>
<tr>
<td>PT 5408</td>
<td>Introduction to Patient Care and Therapeutic Procedures</td>
<td>4</td>
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<tr>
<td>PT 5310</td>
<td>Legal, Ethical and Professional Aspects of Practice</td>
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Total Credit Hours 14

Year 1, Spring Semester (15 academic weeks)

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<tbody>
<tr>
<td>PT 5418</td>
<td>Cardiorespiratory Disorders and Other Medical Conditions</td>
<td>4</td>
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<tr>
<td>PT 5407</td>
<td>Medical Kinesiology and Movement Science</td>
<td>4</td>
</tr>
<tr>
<td>PT 5409</td>
<td>Advanced Therapeutic Exercise and Muscle Testing</td>
<td>4</td>
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<tr>
<td>PT 5317</td>
<td>Neuroscience for Physical Therapists</td>
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Total Credit Hours 15

Year 1, Summer Semester (8 academic weeks)

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<tbody>
<tr>
<td>PT 5411</td>
<td>Neurorehabilitation I: Basic Adult Patient Management</td>
<td>4</td>
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<tr>
<td>PT 5319</td>
<td>Orthopedics I: Basic Orthopedic Physical Therapy</td>
<td>3</td>
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<tr>
<td>PT 5115</td>
<td>Clinical Education Seminar I</td>
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Total Credit Hours 8

Year 2, Fall Semester (8 clinical weeks, 9 academic weeks)

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<tr>
<td>PT 5413</td>
<td>Clinical Education in Physical Therapy I</td>
<td>4</td>
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<tr>
<td>PT 5216</td>
<td>Research Methods for Physical Therapists</td>
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<tr>
<td>PT 5311</td>
<td>Thermal Agents and Electrotherapeutics</td>
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<tr>
<td>PT 5421</td>
<td>Orthopedics II: Lower Quarter</td>
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Total Credit Hours 13

Year 2, Spring Semester (15 academic weeks)

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<td>PT 5123</td>
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<tr>
<td>PT 5226</td>
<td>Designing and Conducting Research in Physical Therapy</td>
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<tr>
<td>PT 5412</td>
<td>Neurorehabilitation II: Complex Adult Patient Management</td>
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<tr>
<td>PT 5320</td>
<td>Orthopedics III: Upper Quarter</td>
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<tr>
<td>PT 5150</td>
<td>Independent Study</td>
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Total Credit Hours 11

Year 2, Summer Semester (8 clinical weeks, 2 academic weeks)

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<td>PT 5425</td>
<td>Clinical Education in Physical Therapy II</td>
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<tr>
<td>PT 5346</td>
<td>Research Project I (repeat until complete)</td>
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Total Credit Hours 7
Year 3, Fall Semester (15 academic weeks)

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<tr>
<td>PT 5340</td>
<td>Management and Health Systems in Physical Therapy</td>
<td>3</td>
</tr>
<tr>
<td>PT 5414</td>
<td>Neurorehabilitation III: Pediatric Management</td>
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<tr>
<td>PT 5233</td>
<td>Behavioral Science Topics</td>
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<tr>
<td>PT 5346</td>
<td>Research Project I (if necessary)</td>
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Total Credit Hours 11-14

Year 3, Spring Semester (2 academic weeks, 14 clinical weeks)

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<tbody>
<tr>
<td>PT 5443</td>
<td>Clinical Education in Physical Therapy III</td>
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<tr>
<td>PT 5324</td>
<td>Clinical Education in Physical Therapy IV</td>
<td>3</td>
</tr>
<tr>
<td>PT 5256</td>
<td>Research Project II</td>
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Total Credit Hours 9

Total Credit Hours in Program = 88

The courses listed below are open to physical therapy students who have been accepted into the professional phase of the program. Students who are not in the MPT program may enroll in particular courses (e.g., kinesiology, neuroscience, anatomy, pathophysiology) only with the permission of the program coordinator.

Physical Therapy (PT)

5115  Clinical Education Seminar I (1-0)
Students will be given the opportunity to discuss various aspects of the upcoming, affiliation (internships) such as patient treatment, legal/ethical, management, administration, and professional issues. Case studies from clinical experiences related to past semesters’ course work will be presented. Use of the clinical education grading tool will be presented. Grading will be pass/fail. Restricted to MPT majors.

5123  Clinical Education Seminar II (1-0)
Students will be given the opportunity to discuss various aspects of the previous affiliation such as patient treatment, legal/ethical, administration, and professional issues. Grading will be pass/fail. Restricted to MPT majors.

5150  Independent Study (1-0)
An elective course that may include physical therapy evaluation and treatment techniques for special populations (e.g., geriatrics, pediatrics) or in specialized settings (e.g., aqua therapy, hippotherapy), advanced anatomical dissection, gerontology, or computer operations.

5216  Research Methods for Physical Therapists (2-0)
Students will be given the opportunity: (1) to understand principles of research design as related to case studies, survey, basic clinical and applied studies; (2) to study selected techniques of statistical analysis including parametric, non-parametric, and single case; (3) to conduct a literature search; and (4) to learn how to critique and apply research findings.

5225  Specific Populations (2-0)
Focuses on physical therapy issues and medical management of the older adults, women and adolescents. Emphasis on common medical problems prevalent in these populations, and the impact on patient/client management and outcomes.
5226 Designing and Conducting Research in Physical Therapy (2-0)
Students will be given the opportunity: (1) to create a research proposal and (2) to present the research proposal, both written and oral, to faculty advisors.

5233 Behavioral Science Topics (2-0)
Students will be given the opportunity to: (1) recognize and respond to personal, cultural, and societal differences in how people seek and accept health care; (2) understand the multiple factors that impact personal health, wellness, and health care delivery; (3) study communication issues within a patient population; and (4) understand the advocate’s role in physical therapy. Restricted to MPT majors.

5256 Research Project II (0-0-2)
Students will be given the opportunity to prepare and deliver an oral/poster presentation and final written paper on the topic of their research. Restricted to MPT majors.

5310 Legal, Ethical, and Professional Aspects of Practice (3-0)
Students will acquire knowledge of the ethical principles, legal factors and professional behaviors which impact patient management and the physical therapy profession.

5311 Thermal Agents and Electrotherapeutics (2-3)
Students will be given the opportunity: (1) to study the therapeutic effects of heat, cold, light, water, and electricity and the physiological effects on the nervous, vascular, and musculoskeletal systems; (2) to recognize the indications and contraindications for these modalities; and (3) to demonstrate the safe and effective application of these modalities. Laboratory fee required.

5312 Pathophysiology and Movement Science (3-0)
Focuses on the effects of disease and injury on human movement. Function at the cellular, tissue, and system levels will be discussed in both the normal and pathological states. Prerequisite: Department approval if student is not a PT major.

5317 Neuroscience for Physical Therapists (3-0)
Normal and abnormal structures and functions of the nervous system across the life span with correlation of lesions to neurodysfunction and patient presentation. Laboratory fee required.

5319 Orthopedics I: Basic Orthopedic Physical Therapy (2-3)
Focuses on basic examination, evaluation, and management of patients/clients with common orthopedic conditions of the extremities and spine. Laboratory fee required.

5320 Orthopedics III: Upper Quarter (2-3)
Focuses on the examination, evaluation and interventions for patients with common orthopedic conditions of the upper extremity and cervical and thoracic spine. Laboratory fee required.

5324 Clinical Education in Physical Therapy IV (0-0-16)
Students will be given the opportunity: (1) to apply advanced physical therapy knowledge and skills to patients in clinical settings or teaching and administrative skills in alternative settings, (2) to demonstrate entry level clinical behavior, and (3) to integrate knowledge from previous academic and clinical coursework to the physical therapy care of patients. Grading will be pass/fail. Restricted to MPT majors.
5340 Management and Health Systems in Physical Therapy (3-0)
Students will be given the opportunity to: (1) understand basic management theories, principles, and practices related to health care delivery; (2) discuss alternative means and sources of health care delivery as they relate to physical therapy; (3) understand reimbursement sources and procedures; (4) recognize the administrative factors that impact health care delivery; (5) determine the resources available within the community for health care practitioners and clients; (6) apply concepts and strategies of marketing to the management of a physical therapy practice.

5346 Research Project I (0-0-3)
Students will be given the opportunity to conduct a supervised investigation and to analyze results in preparation for their final presentation. Repeat as necessary until data collection is completed. Restricted to MPT majors.

5406 Human Anatomy for Physical Therapists (2-6)
Students will be given the opportunity to study, in detail, the anatomy of the extremities, the trunk, muscles of the face, scalp and neck, the heart, lungs, and the surface of the brain. Laboratory fee required.

5407 Medical Kinesiology and Movement Science (3-3)
Focuses on the application of biomechanical principles as they apply to the control of human movement. Structure and functions of joints, postural control and basics of gait assessment are emphasized. Laboratory fee required. Prerequisite: Department approval if student is not a PT major.

5408 Introduction to Patient Care and Therapeutic Procedures (2-6)
Students will be given the opportunity to acquire knowledge and skill in basic patient care procedures including the following areas: (1) body mechanics; (2) tests and measures: vital signs, surface palpation, goniometry and sensory testing; (3) interventions: bed mobility, positioning and draping, transfers, gait, assistive devices, wheelchair training, therapeutic exercise and massage; and (4) lines, tubes and aseptic techniques. Laboratory fee required.

5409 Advanced Therapeutic Exercise and Muscle Testing (2-6)
Students will be given the opportunity to: (1) evaluate and document normal and abnormal physiological responses to various types of therapeutic exercise; (2) perform and record both manual and instrumental tests of muscle strength, length and endurance; (3) formulate functional goals and develop appropriate exercise programs for patients with selected pathological conditions; and (4) recommend appropriate exercise parameters for healthy individuals to promote physical fitness and wellness. Laboratory fee required.

5411 Neurorehabilitation I: Basic Adult Patient Management (2-6)
Physical therapy and patient/client management of persons with common adult neurologic disorders. Laboratory fee required.

5412 Neurorehabilitation II: Complex Adult Patient Management (2-6)
Physical therapy and patient/client management of persons with less common adult neurologic disorders with an emphasis on the more complex patient. Laboratory fee required.

5413 Clinical Education in Physical Therapy I (0-0-21)
A synthesizing course for students to apply knowledge acquired from the first year of the curriculum including, but not limited to, human
anatomy, basic pathology and human physiology to the physical therapy care of patients/clients. Grading will be pass/fail. Restricted to MPT majors.

5414  **Neurorehabilitation III: Pediatric Management (3-3)**
The etiology and pathology of neurological and orthopedic dysfunction in the pediatric patient/client from birth through 18 years. Laboratory fee required.

5418  **Cardiorespiratory Disorders and Other Medical Conditions (3-3)**
Students will be given the opportunity (1) to develop knowledge of the etiology and pathology of selected medical conditions including cardiovascular disorders, diabetes, cancer, burns and other wounds, and renal and pulmonary disorders; and (2) to demonstrate knowledge and skill in the therapeutic management of patients with these conditions. Laboratory fee required.

5421  **Orthopedics II: Lower Quarter (2-6)**
Focuses on the examination, evaluation and interventions for patients with common orthopedic conditions of the spine, pelvis, and lower extremity. Laboratory fee required.

5425  **Clinical Education in Physical Therapy II (0-0-21)**
A synthesizing course to apply advanced physical therapy knowledge and skills to patients/clients in orthopedic settings and demonstrate competency in solving complex patient problems. Grading will be pass/fail. Restricted to MPT majors.

5443  **Clinical Education in Physical Therapy III (0-0-21)**
A synthesizing course to apply advanced physical therapy knowledge and skills to patients/clients in a primary neuro-rehab setting and demonstrate competency in solving complex patient problems. Grading will be pass/fail. Restricted to MPT majors.

### Speech-Language Pathology

1101 N. Campbell, Room 107  
(915) 747-7250  
spchlang@utep.edu

**PROGRAM DIRECTOR:** Anthony P. Salvatore  
**PROFESSOR:** Salvatore  
**ASSISTANT PROFESSORS:** Biswas, Davis, Fjordbak, Nelson  
**CLINIC COORDINATOR:** Valles

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 an international institution, or through the Five-Year degree plan.
2. Minimum of 21 semester hours of upper-division undergraduate courses related to communication disorders.
3. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework (a minimum GPA of 3.0 in upper-division preparatory SPLP undergraduate courses)

4. Other evidence of background and experience that may be available.

5. A 213/550 or higher on the Test of English as a Foreign Language (TOEFL) for international applicants

Admission is competitive. The number admitted each semester is dependent on available program resources.

NOTE: In order to engage in clinical practicums, which are a crucial element in the curriculum, students in Speech-Language Pathology must pass a background check. Therefore, applicants accepted to the Speech-Language Pathology will be required to undergo and pass a background check prior to matriculation. Applicants are responsible for the costs in obtaining a background check report.

MS Degree Requirements

Majors in Speech-Language Pathology must complete the following:

1. A minimum of 33 required academic courses, in addition to registering for five semesters of clinical practicum (15 credit hours) all of which may be completed in five years.

2. A minimum of 400 clock hours of supervised clinical practicum is required. In addition, a minimum of 25 clock hours of supervised clinical observation must be completed during the graduate studies.

Comprehensive written project 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 (33 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SPLP 5320</td>
<td>Research Design in Communication Disorders</td>
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<tr>
<td>SPLP 5359</td>
<td>Fluency Disorders</td>
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<tr>
<td>SPLP 5360</td>
<td>Aphasia and Related Disorders</td>
</tr>
<tr>
<td>SPLP 5362</td>
<td>Language Disorders in School-Aged Children</td>
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<tr>
<td>SPLP 5363</td>
<td>Phonatory Disorders of Voice</td>
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<tr>
<td>SPLP 5364</td>
<td>Motor Speech Disorders</td>
</tr>
<tr>
<td>SPLP 5365</td>
<td>Advanced Audiology</td>
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<tr>
<td>SPLP 5375</td>
<td>Articulation and Phonological Disorders</td>
</tr>
<tr>
<td>SPLP 5376</td>
<td>Multicultural Issues</td>
</tr>
<tr>
<td>SPLP 5377</td>
<td>Treatment Efficacy</td>
</tr>
<tr>
<td>SPLP 5380</td>
<td>Augmentive and Alternative Communication</td>
</tr>
</tbody>
</table>
Practicum (15 semester hours)

SPLP  5369  Graduate Practicum in Speech-Language Pathology, University Clinic (x3)
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  5330  Differential Diagnosis of Communication Disorders
SPLP  5367  Conservation of Hearing
SPLP  5370  Dysphagia
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

The graduate advisor must approve out-of-department graduate electives.

Recommended Sequence

First Year

Fall: SPLP 5320, 5362, 5369, 5376  12 semester hours
Spring: SPLP 5360, 5369, 5375, 5380  12 semester hours
Summer: SPLP 5369, 5377  6 semester hours

Second Year

Fall: SPLP 5364, 5365, 5379, or 5389  9 semester hours
Spring: SPLP 5359, 5363, 5379, or 5389  9 semester hours
Summer: SPLP 5379 or 5389 (if necessary)  3 semester hours
48 or 51Total

Speech-Language Pathology (SPLP)

For Undergraduate and Graduate Students

4312  Neural Bases of Speech and Language

For Graduate Students Only

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.

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.

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.

5380 Augmentative and Alternative Communication (3-0)
Integration of research results with clinical practice in augmentative and alternative communication (AAC) for individuals with complex communication needs. Implications for assessment, prescription of AAC systems, and intervention planning in AAC will be addressed. Development of light and high tech AAC systems will be completed.

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.
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 the community with 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 is designed to facilitate access to the College of Pharmacy at Austin by providing opportunities to fulfill pre-pharmacy requirements 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 into the program each year. These undergraduates will select the pre-pharmacy major 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 (e.g., organic chemistry, calculus, and physics) and, after obtaining 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 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 by calling (915) 747-8519. The program office is located at 1100 N. Stanton, Suite 301, El Paso, TX 79902. Web Site: http://chs.utep.edu/pharmacy/home.html.
SCHOOL OF NURSING

School of Nursing

Dr. Robert L. Anders, Dean
Dr. Leticia Lantican, Interim Associate Dean for Academic Affairs
Dr. Karen C. Lyon, Assistant Dean for Graduate Education

1101 N. Campbell
(915) 747-8217 (ph)
(915) 747-8266 (fax)
son@utep.edu

Degree Programs
MSN  Family Nurse Practitioner
     Nursing Systems Management
     Nurse Clinician: Educator
     Women’s Health Care/Nurse Practitioner

Certificate Programs
     Family Nurse Practitioner Program-Post-Masters Program
     Nurse Education Series: Graduate Certificate

Cooperative Programs
MPH  Public Health/University of Texas Health Science Center, Houston
PharmD Pharmacy/University of Texas at Austin
DSN  Nursing/University of Texas Health Science Center, Houston
The School of Nursing offers a masters program in Nursing and a certification program in Nursing.

Students enrolling in the Master of Science in Nursing degree program may elect options in Family Nurse Practitioner, Nursing Systems Management, Women's Health Care/Nurse Practitioner or Nurse Clinician: Educator. 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. A Health Care concentration is available with the Master's of Business Administration (MBA) degree offered by the College of Business Administration. Certificate Programs include Family Nurse Practitioner Program-Post-Masters and Nurse Education Series: Graduate Certificate.

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, Houston. And finally, in cooperation with the University of Texas Health Science Center, Houston, School of Nursing, a Doctor of Science in Nursing is available. For more information on these cooperative programs, students should consult the Graduate School section, under the Cooperative Programs heading.

The Graduate Program in Nursing is designed to permit students to earn the degree of Master of Science in Nursing. The mission of the School of Nursing is to prepare caring professional nurses to address multiple complex human needs in a binational and multicultural community. The curriculum of the Graduate Program in Nursing prepares professional nurses for advanced leadership through enhanced practice, research, and role expansion. Enhancement of practice occurs through expansion, refinement, and application of knowledge and theory. Research skills are enhanced through opportunities to carry out supervised research projects. Role expansion occurs through advanced practice, education, and management functions relating to health care delivery and increasing professional responsibilities to society.

Graduates have increased autonomy and independence in their practice. They are eligible to apply for certification as advanced practice nurses in a variety of roles and settings.
The degree of Master of Science in Nursing provides the graduate the opportunity to:

1. synthesize theory and concepts from nursing and other disciplines for applications in the care of clients;
2. provide advanced nursing care based upon in-depth client assessment in an area of specialization;
3. evaluate ethical, moral, and legal precepts in client care;
4. design culturally competent interventions based on current, valid evidence;
5. apply research methods to investigate problems that influence advanced nursing care;
6. analyze public policy and issues that affect advanced nursing practice and health care delivery systems;
7. collaborate with other disciplines to provide care in a variety of settings;
8. integrate peer review and/or peer guidance in advanced practice;
9. participate in leadership and development of the profession; and
10. enhance the basis for life-long learning and/or doctoral study.

Master of Science in Nursing

The Graduate Program in Nursing offered by the College of Health Sciences at The University of Texas at El Paso is fully accredited both nationally and by the State of Texas. The Master of Science degree in Nursing prepares graduates for post-graduate roles in a variety of advanced practice and specialty areas. The options available are family nurse practitioner, nursing systems management, women’s health care nurse practitioner, and nurse clinician-educator. Total hours required vary from 33 to 50 semester hours. Students should contact the academic advisor for each of these specialties for further course information and program requirements.

Applications and official transcripts are sent to the Graduate School. Final decisions regarding admission are made by the Dean of the Graduate School upon the recommendation of the Graduate Nursing Committee. Student profiles are evaluated on an individual basis.

Requirements for Admission

1. a. Bachelor’s degree from an accredited baccalaureate nursing program in the United States or equivalent education at a foreign institution -OR-
   b. RN-MSN:ADN from accredited Associate Degree program, completion of University bachelor’s core courses, completion of NURS 3314 and 4 RN only courses with a grade of “B” or better, GRE scores,**(see note in #6 about GRE), evaluation of professional portfolio and acceptance into a graduate major (Bachelor’s degree not awarded)-OR-
   c. ADN with degree in another field: ADN from an accredited Associate Degree program, official transcripts showing bachelor’s degree, evaluation of professional portfolio and acceptance into graduate major, completion of NURS 3314 and 4 RN only courses with a grade of “B” or better, and official GRE scores. ** (See note in #6 about GRE)

2. Documentation of competency in undergraduate statistics

3. Current Texas licensure, or in a compact state, as a registered nurse; international applicants must be authorized to practice in their own country and have the GSFSN certification.
4. Evidence of current Provider CPR, liability insurance, and health clearance

5. Satisfactory score on TOEFL score of 213/550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S.

6. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE), and upper level undergraduate and/or graduate coursework. **Pilot for 2 years, May 2003 through August 2005, omits GRE as an admission requirement. The GRE waiver is currently being evaluated for continuance.

7. Other evidence of background and experience that may be available. Some majors may have additional requirements. Students should contact the advisor of the Graduate Program in Nursing for further information (gradnursing@utep.edu). Applications are considered on an individual basis and are reviewed by the Graduate Nursing Committee of the School of Nursing.

Clinical Clearance Requirements for MSN Program

** Note: Failure to comply with these requirements will result in students having holds placed on registration or being dropped from courses.

Implementation for all NURSING courses: January 2004.

Documentation of Administrative and Clinical Clearance should be given directly to the Compliance Officer. Health clearances are given to the Student Health Center. Copies will be made for the student record file.

Health Clearance Students who do not have a health clearance will have a hold placed on registration until such time as the clearance is completed. Students who are newly admitted and are to register for the first time should take documentation of the health items directly to the Student Health Center. The Student Health Center will create a file for them so that they may have permission to register and pay fees. No other services may be provided until the student has paid appropriate Student Health Center fees at time of registration.

A. Administrative Clearance:
   1. Current Texas RN License
      Please submit a copy. Students whose license expires during a clinical semester must present documentation of renewal as soon as received from the BNE. **Students will not be allowed to continue in any graduate courses if the license has expired.**

   2. Current Health Care Provider CPR
      CPR must be current (i.e., certified in accordance with the recommendations of the certifying body)—at least once every two years. **Please submit a copy of both sides of your CPR card.** If the CPR expires during a semester, students must renew immediately or be dropped from courses.

B. Clinical Clearance: You must also provide documentation of:
   1. Liability Insurance
      Liability Insurance must be current (i.e., If the first course is in the fall semester, the cost of $71.00 per year covers the student for the academic year. A prorated payment in January covers the student for the Spring and Summer semesters). **Note:** All graduate nursing students must carry the $71 liability insurance. **Submit a copy of your paid receipt prior to the first day of classes for the given semester. If this receipt is not on record, you will be dropped from the clinical course.**
2. City Wide Orientation

City Wide Orientation is a presentation of OSHA and JCAHO required information. All students are required to complete the on-line City-Wide Orientation at http://www.epcc.edu/nursing/cwo/O/php each year. This presentation takes place immediately prior to the start of each semester. Submit a copy of signed verification card or an original copy of the on-line City Wide Orientation certificate to the Compliance Officer. (Note: Exceptions to attending City Wide Orientation ONLY for those doing their clinicals out of the El Paso area. However, you MUST meet OSHA/JCAHO requirements for the agency in which the clinical experience is taking place.) If previous orientation does not cover the current semester, the student will be dropped from the clinical course.

3. Background Check

In order to engage in clinical rotations, which are a crucial element in the curriculum, and to be licensed by the Texas Board of Nursing Examiners, nursing students must pass a background check. Therefore, applicants accepted to the School of Nursing will be required to undergo and pass a background check prior to matriculation. Applicants are responsible for the costs in obtaining a background check report.

C. Health Clearance: Up to date health clearance must be documented prior to enrolling in any Nursing classes.

1. Physical Exam and Vaccines:

Health clearance is done by the Student Health Center. For ongoing students the physical exam, immunizations, and lab work may be done at the Student Health Center at reduced rates. Check with the Student Health Center for the fee schedule (747-5624). Students who have had their physical exam, lab work and/or immunizations done by a private physician or through their employers may submit copies to the Student Health Center for review and clearance.

The list of required vaccines and titers is as follows:

A. Vaccines and Titers:
   1. Td (within 10 years)
   2. Varicella Vaccine (not required if titer is > 1.10)
   3. MMR Vaccine (must have vaccine as an adult)
   4. Hepatitis B (either the series or a negative titer)
   5. Varicella Titer
   6. Rubella Titer
   7. Rubeolla
   8. Flu Vaccine strongly recommended but not required

B. Lab Results:
   1. CBC
   2. Urinalysis

C. Tuberculosis Screening
   1. PPD (yearly) with appropriate followup of positive PPD or CXR (every five years)

The physical examination should be comprehensive and include appropriate age and gender specific screening tests. The name and address of the Health Care Professional who completed the exam should be printed clearly or typed on whatever form is presented.
Degree Requirements for the Master of Science in Nursing

The School of Nursing attempts to accommodate flexibility in course offerings with respect to weekend, evening, and summer classes. Courses with enrollment of less than five individuals are subject to cancellation.

Graduate students must maintain a GPA of 3.0 ("B" average) in order to remain in good academic standing. Additionally, any graduate nursing student achieving less than a B in any of the Graduate Core or Advanced Practice Core courses must repeat the course and earn a grade of B or better. **Students earning two "C" grades in any graduate nursing course will be dismissed from the Graduate Nursing Program. Students earning a grade of "D" or "F" in any graduate nursing course will be dismissed from the Graduate Nursing Program.** Both thesis and non-thesis options are available in some majors, see degree plan for selected majors.

Those students who elect the thesis option must complete an oral defense. The research proposal and pilot study completed in previous courses may be used as the basis for the thesis project. Students electing the non-thesis option must successfully complete an oral comprehensive examination at the end of their coursework.

All degree requirements for the MSN must be completed within six years.

**Graduate Core Hours** (9 Semester Credit Hours)

- NURS 5310 Nursing Theories and Processes
- NURS 5370 Research Methods I
- NURS 5338 Health Law, Policy, and Ethics

**Advanced Practice Core Courses** (Clinical Majors - 9 Semester Credit Hours)

- *NURS 5303 Advanced Health Assessment
- NURS 5319 Advanced Pathophysiology
- NURS 5362 Pharmacotherapeutics

**Role Courses** (Clinical Majors - 5 Semester Credit Hours)

- NURS 5254 Advanced Practice Nursing Role
- *NURS 5356 Nursing Preceptorships

**Thesis** (9 Semester Credit Hours)

- NURS 5371 Research Methods II
- NURS 5398 Thesis
- NURS 5399 Thesis

**Non-Thesis**

See degree plan for selected major.

**Note:** Some degree plans do not include electives. Thesis students in those degree plans will take more than the minimum hours specified in their major.

**Majors**

**Family Nurse Practitioner** (50 Semester Credit Hours)

Graduate Core Courses (9 Semester Credit Hours)

Advanced Practice Core Courses (9 Semester Credit Hours)

Major Courses (28 Semester Credit Hours)

- *NURS 5206 Primary Care Practicum I
- *NURS 5207 Primary Care Practicum II
*NURS 5208 Primary Care Practicum III
NURS 5307 Primary Care I
NURS 5308 Primary Care II
NURS 5309 Primary Care III
NURS 5357 Perspectives on Border Health
NURS 5572 Advanced Practice Clinical
*NURS 5573 Advanced Practice Clinical

Role Courses (2 Semester Credit Hours)
NURS 5254 Advanced Practice Nursing Role

**Nursing Systems Management** (33 Semester Credit Hours)

Graduate Core Courses (9 Semester Credit Hours)
NURS 5310 Nursing Theory
NURS 5338 Health Law, Policy and Ethics
NURS 5370 Research Methods

Major Courses (18 Semester Credit Hours)
NURS 5300 Organization Theory and Culture
NURS 5335 Management Roles and Operations
NURS 5337 Health Care Financial Management
NURS 5365 Managing Health Care Outcomes
NURS 5366 Managing Diverse Work Teams
*NURS 5339 Nursing Management Residency

Electives (6 hours Interdisciplinary Electives)
Thesis Option (9 Additional Semester Credit Hours)
NURS 5371 Research Methods II
NURS 5398 Thesis
NURS 5399 Thesis

Non-Thesis Option (Oral Comprehensive Exam Format D to be developed)

**Women’s Health Care/Nurse Practitioner** (48 Semester Credit Hours)

Graduate Core Courses (6 Semester Credit Hours)
Advanced Practice Core (9 Semester Credit Hours)

Major Courses (24 Semester Credit Hours)
NURS 5254 Advanced Practice Nursing Role
NURS 5351 Women’s Health Care I
NURS 5356 Nursing Preceptorship
NURS 5552 Women’s Health Care II
NURS 5553 Women’s Health Care III
NURS 5656 Nursing Preceptorship

Thesis or Non-Thesis courses (9 Semester Credit Hours)

**Nurse Clinician** (36 Semester Credit Hours)

Graduate Core Hours (9 Semester Credit Hours)
NURS 5310 Nursing Theories and Processes
NURS 5370 Research Methods I
NURS 5338 Health Law, Policy and Ethics

Advanced Practice Core Courses (9 Semester Credit Hours)
*NURS 5303 Advanced Health Assessment
NURS 5319 Advanced Pathophysiology
NURS 5362 Pharmacotherapeutics
Nurse Clinician sequence (18 semester credit hours)

- NURS 5322 Roles of the Nurse Clinician
- NURS 5337 Health Care Financial Management
- *NURS 5365 Managing Health Care Outcomes
- *NURS 5423 Utilization of Clinical Research
- *NURS 5524 Clinical Concepts: Interventions and Outcomes

Thesis option (9 semester credit hours above courses listed)
Non-thesis option-Oral Comprehensive Exam

**Nurse Clinician: Educator** (36 Semester Credit Hours)

Graduate Core Hours (9 Semester Credit Hours)

- NURS 5310 Nursing Theories and Processes
- NURS 5370 Research Methods I
- NURS 5338 Health Law, Policy and Ethics

Advanced Practice Core Courses (Clinical Majors-9 Semester Credit Hours)

- *NURS 5303 Advanced Health Assessment
- NURS 5319 Advanced Pathophysiology
- NURS 5362 Pharmacotherapeutics

Nurse Clinician sequence (18 semester credit hours-205 contact hours practicum)

- NURS 5345 Curriculum Development
- *NURS 5347 Effective Teaching Strategies
- NURS 5348 Evaluation of Learning
- *NURS 5423 Utilization of Clinical Research
- *NURS 5524 Clinical Concepts: Interventions and Outcomes

Thesis option (9 semester credit hours above courses listed)

Master’s completion degree plans are available in Women’s Health Care NP. Post-masters non-degree course work in Family Nurse Practitioner is available. Students should contact the Graduate Nursing Program for additional information.

*Includes a practicum

**Post-Masters Nursing Certification**

For information related to the Post-Masters Nursing Certificate, students should consult the Graduate School section, under Certificates and Non-Degree Programs.

Post-Masters Nursing Certification is available for persons with a Master's degree in nursing who wish to be eligible to take the certification examinations in an advanced practice area for which they were not prepared in their original program. The plan of studies will be individualized after review of official transcripts. No degree is awarded, however, awarding of the certificate will be noted on the official transcripts from UTEP. Contact the Assistant Dean of Graduate Education for more information.

**Graduate Certificate: Nurse Educator**

**Required Courses:**

This certificate program would consist of 3 on-line graduate nursing courses

- NURS 5347 Effective Teaching Strategies
- NURS 5345 Curriculum Development
- NURS 5348 Evaluation of Learning
Admission Requirements: Applicants for the Nurse Educator Graduate Certificate would be:

UTEP degree seeking students: Approval of Academic Advisor for the major in which the student is enrolled.

Non-degree (certificate only) student applicants:

- Application to the Graduate School (classified as NDNU) non-degree graduate nursing
- Documentation of graduation from an accredited BSN program
- Cumulative GPA of 3.0 in BSN program
- Interview: in person, on telephone or by email with faculty teaching courses
- Approval of Graduate Certificate Student status submitted to the Graduate School by the Advisor of Graduate Education

Grade Requirement:

Students must earn a “B” or better in each of the 3 courses in order to earn the Graduate Certificate. Single courses may be taken for elective credit, however, the certificate would be granted only on completion of the 9 hour sequence.

Student Employment

Student employment is a personal decision; however, it is up to the student to arrange the work schedule so as not to interfere with classes and clinical practicum requirements. Classes are offered in a variety of time periods throughout the year to assist the students in minimizing conflicts.

Nursing (NURS)

For Graduate Students Only

* Note: Numbers in parentheses following course titles are to be interpreted as follows:

First digit = number of didactic contact hours average per week
Second digit = number of in-school laboratory contact hours average per week
Third digit = number of off-campus practicum contact hours average per week

All numbers are based on a 15-week semester. Courses taught in summer school, compressed or alternate schedule, must meet the same number of total hours as if offered on the standard schedule. Actual time per week may vary accordingly.

5194 Independent Study (0-0-1)
5294 Independent Study (0-0-2)
5394 Independent Study (0-0-3)

A course designed by the student to meet an individual learning need. Prerequisites: Instructor approval and consent of Assistant Dean of Graduate Education.

5197 Graduate Research (0-0-1)
5297 Graduate Research (0-0-2)

Variable credit for approved research activity. Up to three semester hours may be applied toward degree requirements.

5206 Primary Care Practicum I (0-0-6)

Practice/laboratory component for Family Nurse Practitioner students. Includes practicum. Prerequisites: NURS 5307 with a grade of “B” or better.
5207 Primary Care Practicum II (0-0-6)
Practice/Laboratory component that is associated with NURS 5507. Includes practicum. Corequisite: NURS 5308. Prerequisites: NURS 5106 and NURS 5307.

5208 Primary Care Practicum III (0-0-6)
Practice/Laboratory component that is associated with NURS 5508. Includes practicum. Corequisite: NURS 5309. Prerequisite: NURS 5308.

5254 Advanced Practice Nursing Role (2-0-0)
This course focuses on multifaceted roles of the professional nurse in advanced practice in a variety of clinical settings. The distinct and emerging roles of the clinical nurse specialist and the nurse practitioner are examined along with the legal and ethical implications of advanced practice. Prerequisite: NURS 5553 or NURS 5353, with a grade of “B” or better.

5300 Organizational Theory and Culture (3-0-0)
Examination of organizational and management theories and research that guide effective management practice in integrated care delivery systems and managed care settings. Management/organizational theories include adaptation-innovation theory, interpersonal relationship theories, situational leadership, power, change, and conflict. The management process is detailed. Research and theory on diversity, particularly cultural diversity, is integrated into management theory and practice. Organizational culture is viewed as a primary influencer of organizational behavior, dynamics, and management behavior.

5303 Advanced Health Assessment (2.5-0-1.5)
Didactic and clinical experiences that provide students with the knowledge and skills for performing a comprehensive assessment. Obtained data will be used to make a diagnosis of health status leading to the formulation of a clinical management plan. Includes practicum. Prerequisite: Department approval. Nursing equipment fee required.

5307 Primary Care I: Family and Women’s Health (3-0-0)
This course focuses on family theory and the management of health and illness care for women and their families in the primary care setting. Strategies are presented for providing health care to vulnerable individuals, families, and communities living on the U.S./Mexico border communities. The impact of culture on childbearing and women’s health care practices as well as strategies for health promotion and disease prevention are covered. Corequisite: NURS 5106. Prerequisite: Department approval.

5308 Primary Care II: Family and Pediatric Health (3-0-0)
This course focuses on family theory and the management of health and illness care for infants, children, and adolescents and their families in the primary care setting. Emphasis is placed on assessment and management of the child as both an individual and a family member. Strategies are presented for providing health care to vulnerable individuals, families, and communities living on U.S./Mexico border communities. The impact of culture on child development, parenting styles, and health care practices as well as strategies for health promotion and disease prevention are covered. Corequisite: NURS 5207. Prerequisites: NURS 5307 and department approval.

5309 Primary Care III: Family and Adult Health (3-0-0)
This course focuses on the application of family theory to the management of both healthy adults and those with acute and chronic illnesses in primary care settings. The course emphasizes screening for early detection of disease and family support roles in chronic illness.
Emphasis is placed on the management of common primary health problems of young, middle-aged, and elderly adults. The delivery of culturally competent primary healthcare interventions for individuals living on the U.S./Mexico border is addressed. Corequisite: NURS 5208. Prerequisites: NURS 5308 and department approval.

5310 Nursing Theories and Processes (3-0-0)  
Focuses on critical analysis of current nursing theories and related nursing process conceptualization with application to selected clients/patients and families. Required for all Graduate nursing students. Prerequisite: Departmental approval.

5319 Advanced Pathophysiology (3-0-0)  
Examines the processes involved in and manifestations of altered physiological functioning across the lifespan. Builds on knowledge of basic physiologic and pathophysiologic processes and is foundational to advanced practice nursing roles. Prerequisites: NURS 3313 with a grade of “C” or better or equivalent, and department approval.

5322 Roles of the Nurse Clinician (3-0)  
Roles of the nurse clinician in clinical case management, collaboration, consultation, education (patient/staff) and quality improvement in clinical settings. For Nurse Clinician Majors only.

5335 Management Roles and Operations (3-0-0)  
Explication of nurse management roles and functions in a variety of health care settings including community settings. Specific operations are discussed including supervision and administration, strategic planning, marketing, policy development, systems analysis, decision support and collective bargaining. Culturally diverse perspectives on management roles and behaviors are applied to work requirements in health care organizations.

5337 Health Care Financial Management (2-0-3)  
Basic economic policies related to funding of healthcare of individuals and populations of diverse backgrounds will be discussed as will financial and accounting concepts. Planning, budgeting and controlling process will be analyzed from the perspective of impact on patient populations, programs, units, and organizations. Students will complete a 45 hour practicum project focusing on cost analyses and business plans for a specific patient population, unit or organization.

5338 Health Law, Policy, and Ethics (3-0-0)  
Focus on the concepts of law that affect nursing and health care delivery in various settings to lead practice, to prevent liability, and to assist in public policy development related to organized nursing services. Organizational challenges and constraints are evaluated in relation to state and federal level policies. Ethical considerations, legal decisions, and public policy are highlighted as they affect nursing practice and the administrative role. Required for all graduate nursing students. Prerequisite: Departmental approval.

5339 Nursing Management Residency (1-0-6)  
Students develop competencies as a nurse manager under the guidance of a preceptor. Focus is on analysis and evaluation of management policies, issues, and challenges to include providing culturally competent care though managing a culturally diverse work force. Synthesizing knowledge from previous courses, students complete a comprehensive assessment of an aspect of the health care organization, design and, where possible, implement change strategies. Prerequisites: NURS 5300, NURS 5335, NURS 5337, NURS 5365, and NURS 5366 each with a grade of “B” or better.
Curriculum Development (3-0-0)
Focus on the process and issues of curriculum development, revision, and evaluation related to a variety of nursing educational settings. Addresses the major steps involved in curricular change within the context of societal and health care delivery factors. Provides the foundation for effective educational program implementation. Web-based online course.

Effective Teaching Strategies (3-0-0)
Focuses on curricular implementation in classroom/didactic and clinical settings. Strategies for effective content planning, organization, delivery, and evaluation of the teaching-learning process in nursing education settings. Strategies for developing the educator role included. Web-based online course.

Evaluation of Learning (3-0-0)
This course addresses the context within which the evaluation of learning occurs. The concepts relevant to the structure of evaluation, such as conceptual frameworks, benchmarks and outcomes are presented. Course content addresses the construction and evaluation of teacher-made tests and the assessment of critical thinking in both classroom and clinical settings.

Women’s Health Care I (2-0-3)
Primary prevention, health promotion and disease prevention concepts applied in the care of women across the life span. Emphasis on acquisition of skills and transition to the nurse practitioner role. Includes 45 hours of clinical practicum. Prerequisites: NURS 5303, NURS 5310, NURS 5319, NURS 5362, and NURS 5370, each with a grade of “B” or better.

Nursing Preceptorship (0-0-9)
Nursing Preceptorship (0-0-18)
Nursing Preceptorship (0-0-27)
Provides the basis for the refinement of advanced practice clinical decision-making skills and role integration. Practicum only. Prerequisite: NURS 5332 or NURS 5553 with a grade of “B” or better.

Perspectives on Border Health (3-0-0)
Examines issues and challenges in border health care with special reference to the U.S.-Mexico border. Social, cultural, political and economic factors are explored and analyzed in relation to the role of nursing, health care delivery and policy formulation along the border. Community-based and other innovative and indigenous health care strategies and programs are critically evaluated using appropriate research approaches.

Pharmacotherapeutics (3-0-0)
Analysis of pharmacologic fundamentals relating to selection, screening, and use of prescriptive and non-prescriptive drugs throughout the life cycle. Prerequisites: NURS 5319 with a grade of “B” or better or equivalent, and department approval.

Managing Health Care Outcomes (2-0-3)
Performance and outcome standards used by industry, regulatory and accreditation bodies are applied to improvement of clinical and administrative outcomes in health care programs and organizations. Measurement and management of individuals and populations of culturally diverse backgrounds are stressed. Evidence-based practice and the relationship of quality/performance to cost are core themes.
Students focus on measurement and management of outcomes through development of performance improvement project in a clinical setting. 45 hours of practicum during semester. **Prerequisite**: NURS 5370 with a grade of “B” or better.

5366 **Managing Diverse Work Teams (3-0-0)**
Human resources management in health care systems. Emphasis is on managing diversity in recruiting, interviewing, evaluating, and promoting staff. Laws and regulations related to equal employment opportunity are integrated. Students analyze models and research that foster work team transformations that result in enhanced individual, team and organizational productivity.

5370 **Research Methods I (3-0-0)**
Focus on the role and process of scientific inquiry with thematic emphasis on theories, techniques, and issues. **Prerequisite**: Department approval.

5373 **Advanced Practice Clinical (0-0-9)**
Integrates didactic and clinical content into intensive clinical practicum for family nurse practitioner students. **Prerequisites**: NURS 5309 and department approval.

5380 **Special Topics in Nursing (3-0-0)**
May be repeated as topic varies.

5398 **Thesis (0-0-9)**
Initial work on the thesis.

5399 **Thesis (0-0-9)**
Continuous enrollment required while work on the thesis continues. **Prerequisite**: NURS 5398.

5423 **Evidence Based Practice I (3-0-3)**
Uses principles of evidence-based practice, students analyze current clinical practice, identify actual or potential problem areas and summarize evidence for best practice. Application to clinical practice included. Includes 45 hours practicum. **Prerequisites**: NURS 5310 and NURS 5370 each with a grade of “B” or better. NURS 5310 and NURS 5370 may be taken concurrently with NURS 5423.

5524 **Evidence Based Practice II (3-0-6)**
Using the process of evidence-based practice, students implement a solution for a specific problem and document outcomes based on best evidence. Taken within the last two semesters of degree completion. Students complete a synthesis project and application in a clinical or practice setting. **Prerequisite**: NURS 5423. Includes 90 hours practicum.

5552 **Women’s Health Care II (3-0-6)**
Secondary and tertiary prevention in women with acute and chronic reproductive health problems. Emphasis on collaborative management approaches to attain, regain, and maintain health. Includes 90 hours of clinical practicum. **Prerequisite**: NURS 5351 with a grade of “B” or better.

5553 **Women’s Health Care III (3-0-6)**
Completes the framework for advanced practice nursing in women’s health through development of skills in primary care, transcending reproductive care. Focus is on the integration of theories and concepts, policy analysis and evaluation of management protocols for holistic primary care. Emphasis on advanced clinical management and interdisciplinary collaboration. Includes 90 hours of clinical practicum. **Prerequisite**: NURS 5552 with a grade of “B” or better.
COOPERATIVE MASTER OF PUBLIC HEALTH

1101 N. Stanton, Suite 110
(915) 747-8500
sph@utep.edu

The Master of Public Health Program (MPH) at El Paso is a program offered by The University of Texas Health Science Center at Houston on the UTEP campus. The El Paso program was started in 1992 in response to the high demand for public health professionals along the U.S.-Mexico border. Courses are provided by the University of Texas-Houston School of Public Health faculty in residency at the El Paso campus, as well as through interactive television courses taught by the Houston, San Antonio, Dallas, and UT Austin campuses. In addition, some upper-division and graduate courses offered by UTEP academic departments may be taken concurrently and be considered in fulfillment of degree requirements. Students may also be enrolled in the MPH program and as post-baccalaureate students at UTEP concurrently.

Admission, registration, grading, and other policies are the same as at the Houston campus. Students are expected to gain a competency in the five basic disciplines of Public Health (administration, behavioral sciences, biometry, environmental health, and epidemiology). Degree requirements include the completion of a minimum of 36 semester credit hours through which each student must demonstrate competency in the five basic sciences of public health, complete a practicum, and complete a thesis. No more than 6 of the 36 credit hours may be in thesis research. Additional courses may be required depending on the student's previous background, area of interest, and academic preparation. The thesis provides an opportunity for the student to synthesize the knowledge and skills gained through coursework by focusing on a specific public health problem. The MPH Program is fully accredited by the Council on Education for Public Health.

Internships and opportunities for students to gain some hands-on experience in public health issues affecting the border area are available. Additionally, MPH students may be eligible for Teaching or Research Assistantships at the School of Public Health and UTEP. Most of the research that is being done at the El Paso campus focuses on assessing local health issues, evaluating the effectiveness of local health programs, or developing new approaches to solve local problems. Faculty is directly involved in assisting local public health agencies and brings these experiences into the classroom. Many of the projects are multidisciplinary in nature and include collaborators from international,
national, and local agencies and universities such as the Centers for Disease Control and Prevention (CDC), Pan American Health Organization (PAHO), UTEP, and Ciudad Juárez.

List of Courses

- Introduction to Epidemiology (4 semester credit hours)
- Infectious Disease Epidemiology (3 semester credit hours)
- Special Topic: Chronic Disease and Injury Epidemiology (3 semester credit hours)
- Natural History of Disease (3 semester credit hours)
- Molecular Epidemiology (2 semester credit hours)
- Introduction to Biometry (4 semester credit hours)
- Statistical Applications of Public Health Research (3 semester credit hours)
- Overview of Environmental Health (4 semester credit hours)
- Environmental Health Assessment (3 semester credit hours)
- Applications of GIS (2 semester credit hours)
- Administration and Public Health (4 semester credit hours)
- Health Planning I (3 semester credit hours)
- Financial Management and Accounting (2 semester credit hours)
- Patients’ Rights in Health Care (3 semester credit hours)
- Texas Health Policy (3 semester credit hours)
- Health Promotion, Theory, and Methods I (3 semester credit hours)
- Health Promotion, Theory, and Methods II (3 semester credit hours)
- Addictive Behavior (3 semester credit hours)
- Risk Communication (2 semester credit hours)
- Social and Behavioral Aspects of Community Health (3 semester credit hours)
- Public Health and Nutrition (3 semester credit hours)
- Precede Health Promotion and Planning (3 semester credit hours)
- Health and Development in the Third World (3 semester credit hours)
- Informatics in Public Health (3 semester credit hours)
- Classic Readings in Public Health (2 semester credit hours)
- Thesis Workshop (1 semester credit hour)
- Research Methods (3 semester credit hours)
- Analyzing Health Systems (2 semester credit hours)
- Border Health Issues (2 semester credit hours)
- International Health (3 semester credit hours)

Faculty Members

- Theresa Byrd, Ph.D., Behavioral Scientist
- Victor Cardenas, M.D., Ph.D., Epidemiologist
- Joao Ferreira-Pinto, Ph.D., Behavioral Scientist
- Nuria Homedes, M.D., Dr. P.H., Health Policy and Management
- Kristina Mena, Ph.D., MSPH, Environmental Scientist
- Zuber Mulla, Ph.D., Epidemiologist
- Melchor Ortiz, Ph.D., Biostatistician
- Patrick Tarwater, Ph.D., Biostatistician

For more information concerning the Master’s of Public Health degree, students should call (915) 747-8500 or write The University of Texas Health Science Center, 1100 N. Stanton, Suite 110, El Paso, TX, 79902.
The Doctor of Science in Nursing is a cooperative program between the University of Texas at Houston Health Science Center School of Nursing and the School of Nursing at UTEP. The program is 65 credit hours in length. Distance learning and Web technology are used to allow students to take classes in El Paso with only a few trips to Houston per year. Students may also take selected classes at the UT Houston School of Public Health in El Paso and at UTEP. Students should contact the Graduate Nursing Program Office for more information at (915) 747-7230.
COLLEGE OF LIBERAL ARTS

Art 288  Music 335
Communication 293 Philosophy 341
Creative Writing 296 Political Science 342
English 299 Psychology 345
History 310 Sociology and Anthropology 353
Languages and Linguistics 321 Theatre, Dance, and Film 356
    Liberal Arts Interdisciplinary Studies 328 Women’s Studies 359

Dr. Howard C. Daudistel, Dean
Dr. Irasema Coronado, Associate Dean
Dr. Harmon M. Hosch, Associate Dean
Dr. Michael Topp, Associate Dean

Liberal Arts Bldg., Room 343
(915) 747-5666 (ph)
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libarts@utep.edu

Degree Programs

Ph.D.  Border Studies+
       History
       Psychology
       Rhetoric and Composition

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

MAIS  Interdisciplinary Studies, Liberal Arts*

MAT  Teaching/English

MFA  Creative Writing*

MM  Music Education Performance

* Interdisciplinary Program
+ Cooperative program with 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 with options in Art Education and Studio Art, Communication, English, History, Linguistics, Political Science, Psychology, Sociology, Spanish, Teaching, and Theatre Arts. The Department of Music offers the Master of Music (MM) degree with options in Performance and Music Education. The Master of Fine Arts (MFA) is the degree offered by the Department of Creative Writing. In September 1993, the first students began course work in the Ph.D. program in Psychology— the first doctoral degree program in Liberal Arts. In September 1999, the first students entered the Ph.D. in History, and in August 2004 the first students will begin their coursework toward a Ph.D. in English with an emphasis in Rhetoric and Composition began.

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. For more information on this program, students should consult the Graduate School section, under Cooperative Programs.

Art

350 Fox Fine Arts
(915) 747-5181
Fax: (915) 747-6749
artdept@utep.edu

CHAIRPERSON: Gregory M. Elliott
PROFESSOR EMERITUS: Clark H. Garncy
GRADUATE FACULTY: Bauer, Bonansinga, Burke, Castro, Elliott, Fensch, Gianguillo, Goldman, Parish, Quinnan, Thiewes, Wong

MA in Studio Art and Art Education

The Art Department offers two Master’s degrees: 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 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 non-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.
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 213/550 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 artwork, presented in a clear plastic slide sheet, with each slide labeled and identified on a separate slide list. Digital images may be submitted in TIF or PIC format as an alternative to the slides.
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. Official scores on the Graduate Record Examination (GRE) or TOEFL (for international students)
3. 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 stating how this degree program fits into the applicant’s long term goals
3. Transcripts according to the requirements of the Graduate School.
4. Two letters of recommendation
5. 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). Digital images may be submitted in TIF or PIC format as an alternative to the slides.
6. A written philosophic and theoretical statement regarding the applicant’s views of art and art education
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 an 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.

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.

For Undergraduate and Graduate Students

Art History (ARTH)
4309 Research Problems in Art History
4319 Special Problems in Art History

Ceramics (CERM)
4304 Ceramics VI
4314 Ceramics VII
4324 Special Problems in Ceramics

Drawing (DRAW)
4310 Advanced Drawing I
4320 Advanced Drawing II
4330 Special Problems in Life Drawing

THE UNIVERSITY OF TEXAS AT EL PASO
Metals (MTLS)
4303 Metals VI
4313 Metals VII
4323 Special Problems in Metals

Painting (PNTG)
4301 Painting VI
4331 Painting VII
4341 Special Problems in Painting

Printmaking (PRNT)
4305 Printmaking VI
4325 Printmaking VII
4335 Special Problems in Printmaking

Sculpture (SCUL)
4302 Sculpture VI
4332 Sculpture VII
4342 Special Problems in Sculpture

For Graduate Students Only

General Art 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 Art course 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.

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.

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. Art course fee required.

5399 Thesis (0-0-3)  
Continuous enrollment required while work on the thesis continues.  
**Prerequisite:** ARTE 5398. Art course fee required.

**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.

**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.

**Whole Arts (ARTS)**

5320 Whole Arts (2-2)  
An interarts experience that addresses Texas State requirements in the arts for classroom teachers EC-4. The course explores major themes from the visual and performing arts tools, methods and resources for learning. The themes are presented in lectures, activities and interviews. Arts-for-learning research projects and papers are required. **Prerequisites:** Core curriculum and Performing Arts requirement.

**Ceramics (CERM)**

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

**Drawing (DRAW)**

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

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

**Metals (MTLS)**

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

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

Printmaking (PRNT)

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

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.

Communication

202 Cotton Memorial
(915) 747-5129
communications@utep.edu

CHAIRPERSON: Patricia D. Witherspoon
PROFESSOR EMERITUS: Ray Small
GRADUATE FACULTY: Barrera, Byrd, Erbert, Pineda, Perez, Riccillo, Ruggiero, Sowards, Trejo, Witherspoon, Yang

The department offers a Master of Arts degree in Communication.

Requirements for Admission

1. Bachelors degree in communication from an accredited institution or proof of equivalent education in a foreign institution.

2. Twelve semester hours of advanced course work in communication or related discipline as determined by the graduate advisor, along with the names, e-mail addresses and phone numbers of two academic references who can comment about the student’s ability to do graduate course work.

3. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework. Applicants are generally expected to have achieved a GPA of 3.0 or higher in upper level course work.

4. A letter of application to the graduate advisor addressing the rationale for advanced study in communication, along with letters of recommendation sent to the graduate advisor from two academic references who can comment about the student’s ability to do graduate course work.
5. TOEFL score of at least 550 (paper) or 213 (Computer based) for international students whose first language is not English or who have not completed a university degree in the U.S.

Department Academic Standards

In addition to the graduate school requirements of maintaining a 3.0 GPA in all courses counting towards a degree, the department requires students to earn a grade of “B” or better in all core research methods courses (5100, 5310, 5311). Students receiving a “C” or lower will be required to retake the course a second time. If, after repeating a core research methods course a second time and a grade of “B” is not achieved, the student will be dismissed from the program.

MA Degree Requirements

Course Work

Thesis Option: A minimum of 30 semester hours in communication are required. 24 hours of course work numbered 5100-5399 and 6 hours of theses (5398, 5399) credit, and the submission of a bound thesis approved by the graduate faculty.

Non-thesis Option: A minimum of 36 semester hours in communication are required. 36 hours of course work numbered 5100-5390. In addition, a graduate school approved electronic copy of a project report approved by the graduate faculty is required.

Research Core Courses

The core research courses are required for both the thesis and non-thesis options: 5100, 5310 and 5311.

Oral Examination

An oral examination by the graduate faculty will be required for both the thesis and non-thesis options.

Undergraduate Courses for Graduate Credit

With approval of the graduate advisor, up to 6 hours of credit may be selected from other departments which have designated undergraduate course work for graduate credit to enrich the graduate offering.

For Graduate Students Only

Communication (COMM)

5100  Introduction to Graduate Studies (1-0)
An introduction to theories, methods and styles of research in the communication discipline. Required of all graduate students pursuing advanced degree.

5310  Quantitative Research Methods (3-0)
Introduction to methods used in conceptualizing, planning and designing measurement of communication research problems.

5311  Qualitative Research Methods (3-0)
Introduction to methods used in conceptualizing, planning, and designing critical or interpretive methods for communication research problems.
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.

5333 Seminar in Interpersonal Communication (3-0)
Explores and reviews theory and research related to the process of communication involved with message exchange between people in relationship formation and maintenance. May be repeated for credit when topic varies.

5334 Seminar in Media and Society (3-0)
Explores and reviews theory and research regarding media issues and effects in various societal context. Various print and electronic media are explored. May be repeated for credit when topic varies.

5335 Seminar in Intercultural/International Communication (3-0)
Explores and reviews theory and research regarding intercultural and international issues when individual members, groups or institutions interact, individually or collectively, from different cultures or national perspectives. May be repeated for credit when topic varies.

5336 Seminar in New Communication Technologies (3-0)
Explores and reviews theory and research regarding the introduction and use of new communication technologies in various areas of society. May be repeated for credit when topic varies.

5337 Seminar in Organizational Communication (3-0)
Explores and reviews theory and research regarding communication processes used in organizing in various contexts of complex human organizations. May be repeated for credit when topic varies.

5338 Seminar in Communication Education (3-0)
Explores and reviews theory and research regarding the development and implementation of pedagogical issues in communication instruction. May be repeated for credit when topic varies.

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 topic 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.
Creative Writing

The Department of Creative Writing is designed to provide the highest professional preparation and training to individuals who wish to pursue careers in writing or the teaching of writing. Students may choose to take creative writing and literature courses in English, Spanish, or a combination of the two languages. Each year a variety of fully bilingual courses is offered. The MFA curriculum culminates in the writing of a book length manuscript of original creative work (thesis).

Minimum Admission Requirements

1. A Bachelor’s degree or its equivalent
2. Transcripts according to the requirements of the Graduate School
3. Three letters of recommendation
4. A writing sample in the genre of emphasis:
   - 8-10 poems
   - 20 pages of prose, playwriting, essay or screenplay

Degree Plan Options for MFA in Creative Writing

Required Form and Theory Courses (9 hours)
- CRW 5321 Narrative Theory and Poetics
- CRW 5364 Forms and Techniques of Fiction
- CRW 5365 Forms and Techniques of Poetry

These three courses should be taken by all students in their first year of residence.

Workshop and/or Variable Topics courses (15 hours)
- CRW 5366 Advanced Fiction Writing
- CRW 5367 Advanced Poetry Writing
- CRW 5369 Advanced Playwriting
- CRW 5372 Advanced Screenwriting
- CRW 5373 Advanced Creative Non-fiction

(Only three permitted in a single genre)

All of the above may be taken up to three times for credit.

Literature Courses (12 hours)

These courses may be taken from ENGL or SPAN.

Optional: CRW 5368 Variable Topics in Creative Writing may be taken twice for credit when topic varies. This course may count once each either as a literature course or as a workshop course.
Electives (6 hours)

These courses may be taken from any department with an advisor’s approval.

Thesis (6 hours)

CRW 5398 Thesis
CRW 5399 Thesis

In addition, ENGL 5345 English Teaching Methods must be taken by students whose teaching assistantship falls within the English Department.

The thesis will consist of a book length manuscript of original fiction or poetry, play, group of essays, or screenplay, accompanied by a preface. Each candidate is required during the first semester of thesis hours to submit a thesis proposal and a sample of the thesis-in-progress to the thesis committee. The thesis will be prepared under the direction of a three-member supervising committee and will be defended orally.

For Graduate Writing (CRW)

5321 Narrative Theory and Poetics (3-0)
Intensive readings in literary theory and criticism as they relate to aesthetics, form, and the creative process. The course will cover a spectrum of critical reflection by philosophers, theorists, fiction writers and poets regarding poeisis and the making of fiction. Students will undertake a research paper or project. **Prerequisite:** Department approval.

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 works of fiction. **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 works of poetry. **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 and individual student manuscripts. **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. **Prerequisite:** Department approval.

5368 Variable Topics in Creative Writing (3-0)
Genres and forms not normally covered in the MFA curriculum, e.g., the short novel, libretti, the dramatic monologue. Writing consists of both criticism particular to the course focus, and writing representative of the form or genre itself. May be taken up to three times.

5369 Advanced Playwriting (3-0)
Intensive study and practice in the various forms and approaches of playwriting, including workshop discussion of individual student playwriting.
Advanced Screenwriting (3-0)
Intensive study and practice in various forms and approaches of screenwriting, including workshop discussion of individual student screenwriting.

Advanced Creative Non-Fiction (3-0)
Intensive study and practice in the various forms and approaches of creative non-fiction including workshop discussion of individual student creative non-fiction.

Literary Translation (3-0)
Theoretical consideration, reading and practice in various forms and approaches to literary translation, including individual projects. *Prerequisite*: Department approval.

Studies in Form (3-0)
Advanced literary and critical focus on a single author, movement, or period within a single major form, e.g. novel, drama, poetry, essay, screenplay. *Prerequisite*: Department approval.

Independent Study (0-0-3)
Individual projects in reading and writing. Cannot duplicate the content of any course regularly offered. *Prerequisite*: Department approval.

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

Thesis (0-0-3)
Continuous enrollment required while work on the thesis continues.
English

113 Hudspeth Hall
(915) 747-5731
english@utep.edu

CHAIRPERSON: Evelyn Posey
GRADUATE FACULTY: Abarca, Armitage, Baca, Bledsoe, Brunk-Chavez, Cappell, Clark, Dick, Foster, Fredericksen, Gladstein, Gmuca, Gunn, Johnson, Lawson, Mangelsdorf, Mansfield-Kelley, Marchino, Meyers, Minnick, Perrillo, Polette, Posey, Ruiter, Scenters-Zapico, Schmid, Smith, Stafford, Youthers

MA, MAT and PhD Degrees

The English Department offers a Master of Arts in English degree with two concentrations available: 1) English and American Literature and 2) Rhetoric and Writing Studies; and a Master of Arts in Teaching in English. The department also offers a Doctor of Philosophy degree in Rhetoric and Composition.

MA Degree - English and American Literature Concentration

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 PhD 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. Submission of official Graduate Record Examination (GRE) scores
3. 18 hours of advanced level English courses
4. A writing sample
5. A Statement of Purpose
6. Three letters of recommendation
7. Optional: a resume or other supporting materials to give a full picture of the applicant’s potential.

Requirements for Degree

1. 36 semester hours to include 30 semester hours of course work, ENGL 5398-5399, and an oral examination; or
2. 37 semester hours, to include 36 semester hours of course work, ENGL 5197, and an oral examination.
   a. Core Curriculum (15 hours): ENGL 5300; 1 course from ENGL 5301-5304; 1 course from ENGL 5305-5306; 1 additional course from ENGL 5301-5306; 1 course from ENGL 5320 or any ENGL course listed in the class schedule as “meets theory requirement.”
b. **English Electives** (9-15 hours): any other graduate ENGL courses except ENGL 5130, 5230, and 5330.

c. **Free Electives** (6 hours): any other graduate ENGL courses except ENGL 5130, 5230, and 5330; or graduate CRW courses; or graduate courses in other departments as approved by the Dean of Graduate School.

d. **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.

e. **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.

**MA Degree - Rhetoric and Writing Studies Concentration**

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

**Requirements for Admission**

1. A Bachelor’s degree from an accredited U.S. institution or proof of equivalent education at a foreign institution
2. Submission of official Graduate Record Examination (GRE) scores
3. Evidence of adequate preparation for graduate course work in Rhetoric and Writing Studies
4. A writing sample
5. A Statement of Purpose
6. Three letters of recommendation
7. Optional: a resume or other supporting materials to give a full picture of the applicant’s potential

**Requirements for the Degree**

Thirty-six (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; or
3. 30 hours of course work, plus a 6-hour thesis (ENLG 5398 and ENGL 5399), and an oral examination.

a. **Core Curriculum** (24 hours)
   Research Methods (3 hours): ENGL 5309
   Rhetoric (6 hours): ENGL 5310 and ENGL 5311
   Internship (3 hours): ENGL 5317 or 5318
Writing Studies (12 hours): from ENGL 5312*, ENGL 5313, ENGL 5314*, ENGL 5315*, and ENGL 5328*
* Topics vary: may be retaken for credit.

b. Electives (6-9): Electives may include any graduate English courses not being counted as part of the core curriculum (with the exception of ENGL 5316, 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 Rhetoric and Writing Studies, and the Graduate Advisor.

c. Practicum (3-6 hours) or Thesis (6 hours)
   (1) The practicum option requires the completion of a supervised experience 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 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 the practicum paper.
   (2) The thesis option requires the completion of a substantial work of writing rhetoric and writing studies scholarship. The student submits a thesis 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 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.

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. Submission of official Graduate Record Examination (GRE) scores
3. A Bachelor’s degree in English OR 12 hours of advanced-level English courses plus English 4355 or the equivalent
4. A writing sample
5. A Statement of Purpose
6. Three letters of recommendation
7. Optional: a resume or other supporting materials to give a full picture of the applicant’s potential

Requirements for the Degree
Thirty-six (36) semester hours consisting of
1. Thirty 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): ENGL 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 5306-56 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 approaches 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.

**PhD in Rhetoric and Composition**

**Overview of Program**

The PhD program in Rhetoric and Composition prepares graduates for careers as writing specialists in higher education, business, industry, and government. In higher education they conduct research into theories of writing development, use, and pedagogy. In business, industry, and government they apply higher-level research, thinking, and writing skills to enhance communication. The focus of the program is on intercultural rhetoric, computer-mediated writing, and community application.

Students can enter the program with a Bachelor’s degree in English, a Master’s degree in Rhetoric and Composition, or a related field. They will complete a minimum of 45-51 credit hours beyond the MA, including core courses that will cover rhetorical history, writing pedagogy, writing in cultural contexts, and computer-mediated writing; concentration courses in topics such as workplace writing, the teaching of writing, or literary studies; and an internship course in a community setting. A dissertation involving extended research is required. Students have opportunities to extend their knowledge of Rhetoric and Composition by taking courses in other disciplines such as Communications, Languages and Linguistics, and Teacher Education.

**Requirements for Admission**

Students will be considered for admission after completion of a BA in English or an MA in English with a focus in Rhetoric and Composition; Rhetoric and Writing Studies; or Professional Writing and Rhetoric. Students with an MA, in Literature, an MAT in English, an MFA in Creative Writing, or an MA in a related field (such as Communication or Linguistics) also will be considered.

Students entering the program with a BA will enroll in the Master’s program in Rhetoric and Writing Studies offered by the English Department. They will be required to complete the 6-hour thesis requirement for the MA degree. Upon finishing this degree, they will complete the additional work required in the PhD program.
To be considered for admission, all applicants to the PhD program must meet the minimum requirements for admission described in the University of Texas at El Paso Graduate Studies Catalog. Students (including UTEP graduates) will be required to submit:

1. Official transcripts of all prior academic work,
2. Scores from the Graduate Record Examination (GRE)
3. Letters of recommendation from at least three faculty members and/or members of the professional community with whom they have worked,
4. A description of their educational objectives,
5. A description of their theoretical and pedagogical approaches to teaching writing, and
6. Two writing samples: a research paper, and another of their choice, such as a digital project.

Applicants will be evaluated according to their previous academic record, scores on the analytical and verbal sections of the Graduate Record Examination, the strength of their letters of recommendation, and the quality and appropriateness of their writing samples. Another key criterion will be the compatibility between students’ interests and expectations and the objectives of the PhD program.

Requirements for the Degree

A minimum of 45-51 credit hours beyond the MA
1. 15 hours of core courses,
2. 9 hours in a concentration,
3. 3 hours of graduate seminars,
4. 3 hours of an internship course,
5. 3 hours of an elective course, and
6. 12 hours of research courses, including the dissertation.

A. Foundation (Prerequisite) Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 5309</td>
<td>Introduction to Rhetoric and Writing Studies</td>
</tr>
<tr>
<td>ENGL 5345</td>
<td>English Teaching Methods Topic: Teaching College Composition</td>
</tr>
</tbody>
</table>

B. Required Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 6310</td>
<td>Rhetorical History I</td>
</tr>
<tr>
<td>ENGL 6311</td>
<td>Rhetorical History II</td>
</tr>
<tr>
<td>ENGL 6319</td>
<td>Composition Studies</td>
</tr>
<tr>
<td>ENGL 6320</td>
<td>Advanced Critical Theory</td>
</tr>
<tr>
<td>ENGL 6321</td>
<td>Rhetoric and Technology</td>
</tr>
</tbody>
</table>

C. Concentration

Students may select a concentration in Composition, Professional Writing, or Rhetoric. They also have the option of creating their own concentration subject to the approval of the Director of Rhetoric and Writing Studies.

1. Composition

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 5328</td>
<td>Special Topics in Rhetoric and Composition (may be repeated for credit when topic varies)</td>
</tr>
<tr>
<td>ENGL 5344</td>
<td>Integrated Teaching Methods</td>
</tr>
<tr>
<td>ENGL 5345</td>
<td>English Teaching Methods (may be repeated for credit when topic varies)</td>
</tr>
</tbody>
</table>
2. Professional Writing
   ENGL 5311  Persuasion and Argument
   ENGL 5312  Technical Writing Proseminar
   ENGL 5314  Computers and Writing Seminar (may be repeated for credit)
   ENGL 5315  Professional Writing Seminar (may be repeated for credit)
3. Literary Studies
   ENGL 5325  Genre: Theory and Practice
   ENGL 5327  Variable Topics in Contemporary Literature
   ENGL 5350  Seminar: Special Topics (may be repeated for credit)
   ENGL 5351-56  Literature Seminars
D. Graduate Seminar
   ENGL 6130  Graduate Seminar in Rhetoric (must be taken 3 times)
E. Internship
   ENGL 5317  Professional Writing Internship
   Or
   ENGL 5318  Community Literacy Internship
F. Electives
   Any graduate-level English course, a recommended course* from a related
discipline outside of the English Department, or another course subject to
the approval of the Director of Rhetoric and Writing Studies.
   *COMM 5332  Seminar in Contemporary Rhetoric
   *COMM 5343  Seminar in Communication Theory
   *COMM 5350  Directed Study
   *ENGL 5375  Creative Writing Workshop
   *LING 5331  Teaching Second Language Composition
   *RED 5344  Seminar in Reading
   *RED 5348  Issues and Problems in Adult Literacy
   *SPAN 5304  The Hispanic Essay
G. Research Courses
   ENGL 6395  Dissertation Preparation
   ENGL 6398 and
   6399  Dissertation
H. Maximum Time to Completion
   Students accepted into the PhD program in Rhetoric and Composition
must complete all requirements for the degree within eight years.
I. Language Requirement
   All students must demonstrate a reading knowledge of a language other
than English sufficient to conduct research using primary and secondary
sources. The PhD program’s emphasis on intercultural writing on the U.S./
Mexican border will lead many students to elect Spanish to satisfy this
requirement.
J. Qualifying Exams
   Students will take qualifying exams after successful completion of the
language requirement and all courses with the exception of ENGL 6395
and the dissertation.
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 (students should 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 Graduate School 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.

**English (ENGL)**

For Undergraduate and Graduate Students

4390 **Directed Study (0-0-3)**
(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

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 department approval.

5146 **Composition Theory and Pedagogy (1-0)**
5246 **Composition Theory and Pedagogy (2-0)**
5346 **Composition Theory and Pedagogy (3-0)**
An advanced course in English Composition theory and pedagogy of developmental English and first-year composition.

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. **Prerequisite:** Department approval.

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)**
Study of two or more major schools, literary trends, or genres from the beginnings of literature in Old English through the Middle English period.

5302 **British Literature 1485-1660 (3-0)**
Study of two or more major schools, literary trends, or genres from the Tudor period through the Commonwealth.

5303 **British Literature 1660-1832 (3-0)**
Study of two or more major schools, literary trends, or genres from the Restoration through the Romantic period.

5304 **British Literature 1832-Present (3-0)**
Study of two or more major schools, literary trends, or genres from the Victorian period to the present.

5305 **American Literature to 1860 (3-0)**
Study of two or more major schools, literary trends, or genres from the colonial period through 1860.

5306 **American Literature since 1860 (3-0)**
Study of two or more major schools, literary trends, or genres from the Civil War to the present.

5309 **Introduction to Rhetoric and Writing Studies (3-0)**
A comprehensive introduction to the discipline and sub-fields of Rhetoric and Writing Studies, and to relevant empirical, historical, and theoretical methodologies. Course work will include a substantial research project carried out under close faculty supervision.

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. May be repeated when topic varies.
5313 Grant Writing (3-0)
Principles and practical applications of writing grant proposals: analyzing requests for proposals, anticipating the needs of reviewers as audience, conforming to application guidelines, preparing executive summaries, project descriptions, outcomes measures, and budgets. Course work will include preparation, under close faculty supervision, of a substantial grant proposal.

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.

5316 Graduate Writing Workshop (3-0)
Practice, in a workshop setting, of planning, drafting, revising, and editing responses to graduate-level academic assignments typical of a variety of disciplines, including seminar papers, research proposals, research reports, theses, and dissertations. Credit to be determined by the student's major program. May not be used to fulfill requirements for any graduate degree in the English Department.

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

5318 Community Literacy Internship (0-0-3)
Supervised internship in a community literacy setting. Consent of the instructor required. May be repeated for credit.

5320 Critical Theory and Practice (3-0)
Intensive study of contemporary critical theory, with practice in translating theory into practical readings and valuation of selected literary texts. 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. May be repeated once for credit 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 once for credit when the topic varies.

5328 Special Topics in Rhetoric and Composition (3-0)
Seminar on topics in rhetoric and composition, such as borderlands rhetoric, transformational pedagogy, or material rhetoric. May be repeated when topic varies.

5343 Principles in Teaching Secondary English (3-0)
The development of a theoretical philosophy and pragmatic orientation toward the teaching of English that will enable practicing teachers to
collaboratively design lessons, implement lessons on-site, and reflectively assess the quality of their own and others’ instruction. 

Prerequisite: Concurrent enrollment in Alternative Certification Program, or department approval.

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. May be repeated once for credit when the topic varies.

5351 Seminar: Studies in British Literature to 1485 (3-0)
Detailed study of one or more authors; or advanced study of a school, literary trend, or genre from the beginnings of literature in Old English through the Middle English period. May be repeated once for credit when the topic varies.

5352 Seminar: Studies in British Literature 1485-1660 (3-0)
Detailed study of one or more authors, or advanced study of a school, literary trend, or genre from the Tudor period through the Commonwealth. May be repeated once for credit when the topic varies.

5353 Seminar: Studies in British Literature 1660-1832 (3-0)
Detailed study of one or more authors; or advanced study of a school, literary trend, or genre from the Restoration through the Romantic period. May be repeated once for credit when the topic varies.

5354 Seminar: Studies in British Literature 1832-Present (3-0)
Detailed study of one or more authors; or advanced study of a school, literary trend, or genre from the Victorian period to the present. May be repeated once for credit when the topic varies.

5355 Seminar: Studies in American Literature To 1860 (3-0)
Detailed study of one or more authors; or advanced study of a school, literary trend or genre from the Colonial period to 1860. May be repeated once for credit when the topic varies.

5356 Seminar: Studies in American Literature Since 1860 (3-0)
Detailed study of one or more authors; or advanced study of a school, literary trend, or genre from the Civil War to the present. May be repeated once for credit when the topic varies.

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

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

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

5398 **Thesis (0-0-3)**
Initial work on the thesis. *Prerequisite:* Department approval.

5399 **Thesis (0-0-3)**
Continuous enrollment required while work on the thesis continues. *Prerequisites:* ENGL 5398 and department approval.

For Doctoral Students Only

6130 **Graduate Seminar in Rhetoric (1-0)**
Presentation and discussion of topics in rhetoric and composition by graduate students, faculty, and visitors.

6310 **Rhetorical History I (3-0)**
A detailed examination of the development of Western and non-Western rhetoric up to 1700 C.E.

6311 **Rhetorical History II (3-0)**
An intensive examination of Western and non-Western rhetorical traditions from 1700 to the present.

6319 **Composition Studies (3-0)**
An investigation of research and theories in composition studies from the 1960’s to the present, with emphasis on critical literacy and writing in cultural contexts.

6320 **Advanced Critical Theory (3-0)**
An intensive study of major authors and debates in contemporary critical theory, with emphasis on intercultural discourse.

6321 **Rhetoric and Technology (3-0)**
An investigation of computer-mediated communication in education, industry, government, and business.

6395 **Dissertation Preparation (0-0-3)**
Preparation and defense of a satisfactory dissertation proposal. 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)**
Initial work on the dissertation.

6399 **Dissertation (0-0-3)**
Continuous enrollment required while work on the dissertation continues. *Prerequisite:* ENGL 6398.
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. Submission of official Graduate Record Examination (GRE) scores
4. TOEFL score of 213/550 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 and 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. With the permission of the Graduate Advisor, a Minor field in a related discipline may be taken. At least three of the six hours in the Minor must be at the graduate level.

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, 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 complete a minor in Public History. For the minor, a student must successfully complete HIST 5302, Introduction to 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 and 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 two other courses directly related to the U.S.-Mexico borderlands which must be approved by the Graduate Program 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 Graduate Program Committee.

**Other Courses:** Six hours of courses related to the U.S.-Mexico Borderlands selected in any combination from seminars, studies courses, upper division undergraduate courses taken for graduate credit, or (with the approval of the graduate advisor) a Minor field in a related discipline. If a minor field is selected, at least one of the courses 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 and which must be approved by the Graduate Program 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 Graduate Program Committee.

**Other Border Courses:** Six hours of graduate history courses or undergraduate history courses taken for graduate credit that relate to the U.S.-Mexico Borderlands.

**Other Courses:** Nine hours from among graduate history courses and upper division undergraduate history courses taken for graduate credit. With the approval of the graduate advisor, a Minor field of six hours in a related discipline may also be selected. (Of the six hours for the Minor, at least three must be at the graduate level.)

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

**Limitations on undergraduate courses taken for graduate credit:** No more than six hours of undergraduate history courses may be taken for graduate credit. No more than three hours of undergraduate courses may be taken for graduate credit in a Minor field.
Ph.D. Program

The Ph.D. program in History focuses on the history of the Borderlands. The program is rooted in the premise that the Border unites as much as it divides and that the people of the Southwestern United States and Northern Mexico share many common historical experiences. Students at UTEP experience first-hand the complex political and social realities of a border community and take advantage of the rich opportunities for research in both El Paso and Ciudad Juárez. 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.

All students in the program complete a field of concentration in U.S.- Mexico Borderlands history and two additional fields chosen from United States history, Mexican and Latin American history, and World history. With the approval of the Graduate Program Committee, students may design an alternative supporting field in history or related fields. Students must demonstrate a reading knowledge of Spanish, except in unusual circumstances where another language may be more appropriate.

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). Applicants with less than the required preparation may be required to do predoctoral work.

2. Submission of official Graduate Record Examination (GRE) scores

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 213/550 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 1.

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

1. Official Graduate School application form

2. Transcripts according to the requirements of the Graduate School

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:

- **HIST 5351** Literature and Methodology of Borderlands History (required)
- **HIST 6300** Advanced Topics in Historiography (required)
- **HIST 6320** History Teaching and Learning (required)
- **HIST 5352** Literature and Methodology of Latin American History
- **HIST 5353** Literature and Methodology of United States History
- **HIST 5354** Literature and Methodology of World History

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
- Research seminar courses: HIST 5370-5382
- Studies courses: HIST 5304-5321
- Public History courses: HIST 5302 Introduction to Public History; HIST 5390 Public History Internship

Courses from a graduate program outside history (5300 level) if appropriate to the field of study, with approval of the Graduate Advisor

The required doctoral dissertation courses (9 hours) are as follows:

- **HIST 6301** Dissertation Planning Course
- **HIST 6398/6399** Dissertation courses may be repeated, but count for only 6 credit hours in the total of 63 semester credit hours.

Two C’s

Ph.D. students who receive two or more grades of “C” will be formally reviewed, and the Graduate Program Committee will make a recommendation as to whether the student should be allowed to continue in the program.

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) the semester before 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.

Failing Qualifying Examination Twice

Ph.D. students who fail the same qualifying exam more than once will be formally reviewed, and the Graduate Program Committee will make a recommendation as to whether the student should be allowed to continue in the program.

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*.

**Prerequisite**

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.

**M.A. for students enrolled in the Ph.D. Program**

Students who enter the Ph.D. program directly upon completion of the bachelor’s degree will be reviewed formally at an early stage of their graduate careers (normally at the completing of 18 semester credit hours of graduate work) to determine whether they should be encouraged to continue their work for the degree. Those who are cleared for continuation toward the doctorate will be awarded an M.A. after completing thirty-six hours of approved coursework, including twelve hours of research seminars; these students will not be required to complete an M.A. thesis or to submit a revised seminar paper in lieu of a thesis.

**Border History M.A. for students enrolled in the Ph.D. Program**

Those Ph.D. students who are cleared for continuation toward the doctorate may receive an M.A. with a Border History concentration by completing 36 hours of approved coursework, which must include 12 hours of graduate research seminars (nine of which must relate to the U.S.-Mexico Border), nine hours of graduate studies courses (of which six must relate to the U.S.-Mexico Border), six hours of undergraduate courses taken for graduate credit (selected from History 3309, 3312, 3316, 3322, 3328, 3342, and 3390 [when the topic is related to the U.S.-Mexico Border]), and nine additional hours of graduate courses. With the approval of the Graduate Advisor, graduate seminars or studies course that relate to the U.S.-Mexico Border may be substituted for the required undergraduate courses. Students will not be required to complete an M.A. thesis or to submit a revised seminar paper in lieu of a thesis.

**Students who voluntarily withdraw from the Ph.D. program or who are denied permission to continue in the Ph.D. Program**

Students who have been reviewed and who are denied permission to continued work toward the doctorate, or those who voluntarily withdraw from the doctoral program, will be permitted to complete the M.A. degree (Plans 1, 2, 3 or 4) according to existing departmental requirements.

**History (HIST)**

**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.

- 3301 Colonial America to 1763
- 3302 The American Revolution and the New Nation, 1763-1815
- 3303 The U.S. Mexican War
- 3304 The Age of Jackson, Clay, and Webster, 1815-1860
- 3305 The Civil War and Reconstruction Era, 1860-1877
- 3306 From Plutocracy to Progressivism, 1877-1917
- 3307 The Interocracy Years, 1918-1941
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>3308</td>
<td>United States since 1941</td>
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<tr>
<td>3309</td>
<td>Mexican-American History</td>
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<tr>
<td>3310</td>
<td>American Legal History</td>
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<td>3311</td>
<td>History of American Foreign Relations to 1914</td>
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<td>3312</td>
<td>History of American Foreign Relations since 1914</td>
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<td>3313</td>
<td>American Military History</td>
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<td>3314</td>
<td>Main Currents in American Thought to 1865</td>
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<td>3315</td>
<td>Main Currents in American Thought since 1865</td>
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<td>3316</td>
<td>Southwest Frontier</td>
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<td>3317</td>
<td>History of Texas since 1821</td>
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<td>3321</td>
<td>19th Century American West</td>
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<td>3322</td>
<td>20th Century American West</td>
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<td>3323</td>
<td>American Indian History</td>
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<td>3324</td>
<td>The United States in Vietnam and Southeast Asia</td>
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<td>3325</td>
<td>History of Immigration and Ethnicity in the U.S.</td>
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<td>3326</td>
<td>Life and Labor in the U.S. in the 19th and 20th Centuries</td>
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<td>3327</td>
<td>Racial Thought in U.S. History</td>
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<td>3328</td>
<td>History of Hispanic Peoples in the United States</td>
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<td>3329</td>
<td>African American History</td>
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<td>3330</td>
<td>East Asia</td>
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<td>3331</td>
<td>History of Religion in the East</td>
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<td>3332</td>
<td>Russia</td>
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<td>3333</td>
<td>The Soviet Union</td>
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<td>3337</td>
<td>Modern Africa</td>
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<td>3339</td>
<td>Pyramids and Prophets: Ancient Egypt, Mesopotamia and Palestine</td>
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<td>3340</td>
<td>The Middle East and Islam</td>
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<td>3342</td>
<td>The Spanish Borderlands</td>
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<td>3346</td>
<td>Central America and the Caribbean</td>
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<td>3347</td>
<td>Argentina, Brazil, and Chile since 1810</td>
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<td>3348</td>
<td>Environmental History of Latin America</td>
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<td>3349</td>
<td>History of Mexico to 1900</td>
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<td>3350</td>
<td>The Mexican Revolution</td>
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<td>3354</td>
<td>England to 1603</td>
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<td>3355</td>
<td>England since 1603</td>
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<td>History of Religion in the West</td>
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<td>Ancient Greece</td>
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<td>3361</td>
<td>Hellenism and the Coming of Rome</td>
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<td>3362</td>
<td>The Medieval World</td>
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<td>The Roman Empire</td>
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<td>The Age of Renaissance</td>
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<td>The Age of the Reformation</td>
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<td>3366</td>
<td>The Age of Absolutism and Enlightenment</td>
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<td>3367</td>
<td>The French Revolution and Napoleonic Eras</td>
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<td>3368</td>
<td>Nineteenth Century Europe</td>
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<td>3369</td>
<td>Twentieth Century Europe, 1900 to the Present</td>
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<td>3370</td>
<td>The Holocaust in Europe</td>
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<td>3374</td>
<td>Modern Germany since 1866</td>
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<td>3381</td>
<td>The History of Spain and Portugal</td>
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<td>3382</td>
<td>Spain in the Age of Expansion, Eighth-Sixteenth Centuries</td>
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<td>3390</td>
<td>History, Special Topics</td>
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<td>3391</td>
<td>History of Women</td>
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<td>3399</td>
<td>History and Historians</td>
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For Graduate Students Only

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.

5304 Studies in Public History (3-0)
Survey of a major theme in Public History with special emphasis on reading and discussion of significant topics. Possible topics might include history and memory; historic preservation; cultural conservation; oral history; race, gender and class in public history; media and public history; historical interpretation in urban settings. May be repeated for credit when topic varies.

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.

5306 Studies in World History (3-0)
Survey of a major topic, period, or region in World History, with special emphasis on reading and discussion of significant historiographical interpretations. Topics might include comparative colonialism, migration, trade and development, racism, comparative social structures, cultural exchange, and movements and methods of resistance. 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.

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.

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.

6395 Problems in Historical Research (0-0-3)
Emphasizes research, with writing and discussion. To be taken in conjunction with History 3598 or 3599, or History 3620 or 3621. 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 M.A. or Ph.D. degree. Consent of the Graduate Advisor required. Prerequisite: Department approval.

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.

5376 Seminar in World History
Focuses in depth on a theme, movement, or period of significance in World History. Possible topics might include migration, borders, trade, globalization, war, science, industrialization, empire, leadership, race, and gender. 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.

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)**
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.

**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. Thereafter, the student must register for 6399 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. Thereafter, the student must register for 6399 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.

**6695 Problems in Historical Research (0-0-6)**
Emphasizes research, with writing and discussion. To be taken in conjunction with History 5398 or 5399, or History 6320 or 6321. 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 M.A. or Ph.D. degree. Consent of the Graduate Advisor required. **Prerequisite:** Department approval.
Languages and Linguistics

CHAIR: Kirsten F. Nigro
PROFESSORS EMERITI: Richard Ford, Arturo Perez
ASSOCIATE PROFESSORS EMERITI: Sandra Beyer, Eleanor Cotton, Frederick Kluck
GRADUATE FACULTY: Amastae, Armengol, Bagby, Blansitt, Courtney, Elerick, Garabano, Garcia, Louden, Nigro, Sobin, Teschner

The department offers two graduate degrees: (1) the MA in Linguistics with available additional concentrations in Applied Linguistics and in Hispanic Linguistics, (2) the MA in Spanish.

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) (Where there is a question of sufficient background, a program of leveling courses not to exceed 12 hours will be arrived at in consultation with the graduate advisor.)
3. (For Hispanic linguistics only) Competency in both Spanish and English
4. Submission of official Graduate Record Examination (GRE) scores
5. TOEFL score of 213/550 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 (36 hours)

Thesis and Non-thesis options and hours

There are one thesis and two non-thesis options. Each student must choose one of these options. The thesis option requires LING 5398 and LING 5399, in addition to the requirements of 9 core hours and 21 elective hours. The thesis will be presented in an open defense. One non-thesis option involves an extended research paper, which will be presented in an open defense. This option requires LING 5397, in addition to the requirements of 9 core hours and 24 elective hours. The second non-thesis option involves extended course work, requiring 9 core hours and 27 elective hours. With this option, there will be a final open oral and/or written examination in the candidate’s chosen primary area of study. In more detail, the requirements for each degree option, including the concentration possibilities mentioned above, are as follows:

MA degree in Linguistics (no concentration)

A. Core Requirements

LING 5301 Principles of Linguistic Analysis
LING 5309 Generative Syntax or
LING 5312 Functionalist Syntax
LING 5320 Phonology
B. AND EITHER
   - a thesis (LING 5398 and LING 5399), and
   - 21 additional hours of graduate linguistics courses
OR
   - an extended paper (LING 5397), and
   - 24 additional hours of graduate linguistics courses
OR
   - examination/open presentation of an area of interest beyond individual course work, and
   - 27 additional hours of graduate linguistic courses

Concentration in Applied Linguistics (AL) with a theses OR extended paper:

A. Core Requirements
   LING 5301 Principles of Linguistic Analysis
   LING 5309 Generative Syntax or
   LING 5312 Functionalist Syntax
   LING 5320 Phonology

B. LING 5348 Second Language Acquisition

C. An Advanced course in or relevant to AL (as agreed by student and graduate advisor)

D. AND EITHER
   - a thesis in AL (LING 5398 and LING 5399), and
   - 15 additional hours of graduate linguistics courses
OR
   - an extended paper in AL (LING 5397), and
   - 18 additional hours of graduate linguistics courses

Concentration in Hispanic Linguistics (HispLX) with a thesis OR extended paper:

A. Core Requirements
   LING 5301 Principles of Linguistic Analysis
   LING 5309 Generative Syntax or
   LING 5312 Functionalist Syntax
   LING 5320 Phonology

B. LING 5348 Second Language Acquisition

C. An Advanced course in or relevant to HispLX (as agreed by student and graduate advisor)

D. AND EITHER
   - a thesis in HispLX (LING 5398 and LING 5399), and
   - 15 additional hours of graduate linguistics courses
OR
   - an extended paper in AL (LING 5397), and
   - 18 additional hours of graduate linguistics courses
Spanish

Admission to the Program
1. Fulfillment of all general requirements for admission to the Graduate School
2. Completion of four upper-division undergraduate survey courses in Spanish and Spanish American literature with a grade of “C” or better (SPAN 3301, 3302, 3303, 3304 at UTEP or their equivalent at other institutions). Applicants who have not taken all such courses or who have not completed one or more of them with a grade of “C” or better may be granted conditional admission but will be required to make up any deficiency by enrolling in the appropriate course(s) during their first semester. 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): Complete SPAN 5397 Seminar in Hispanic Literary Research, which counts for 3 of the required 36 hours of work.
  Plan II (Thesis Option): Complete SPAN 5398-SPAN 5399, Thesis, which counts for 6 of the required 36 hours of work. The Committee on Graduate Studies must approve a prospectus outlining the proposed thesis. 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 4372, SPAN/LING 5385, or SPAN/LING 5388.
   d. One course selected from the following:
      (1) SPAN 5304
      (2) SPAN 5335
      (3) A second course in Hispanic linguistics
For Undergraduate and Graduate Students

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

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

Portuguese (PORT)
4390 Topics in Portuguese

Spanish (SPAN)
4301 Methods of Foreign Language Instruction
4324 The Literature of Mexico
4238 Golden Age Drama
4335 Nineteenth Century Spanish Novel
4339 The Short Story
4341 Modern Drama
4358 Twentieth Century Spanish Literature
4360 Twentieth Century Spanish American Novel
4361 Cervantes
4363 Spanish American Poetry
4372 Contrastive Linguistics: English/Spanish
4390 Topics in Spanish

Translation (TRAN)
4381 Commercial and Legal Translation
4382 Translation from the Information Media
4383 Literary Translation
4384 Introduction to Interpreting
4389 Topics in Translation
4390 Senior Project in Translation

For Graduate Students Only

French (FREN)
5390 Topics in French (3-0)

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, 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 computers 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.
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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.

5397 Extended Research Project (3-0)
Advanced work on a topic of research in linguistics culminating in a paper and an oral presentation/defense. For non-thesis option students only. Prerequisite: 24 graduate hours in linguistics.

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.

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.

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.

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.

5397 **Seminar in Hispanic Literary Research (3-0)**
Advanced work on a topic of research in Hispanic literature culminating in a paper and a final open oral and/or written examination. 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:* SPAN 5398.

### 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 Rubén Darío and his school.

5317 **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 María, El Libro de Buen Amor El Conde Lucanor, El Romancero, and La Celestina.
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 Calderón de la Barca.

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

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.

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.

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

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

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.

Liberal Arts Interdisciplinary Studies

The College of Liberal Arts offers three interdisciplinary studies programs leading toward the master's degree. These programs are the Master of Arts in Interdisciplinary Studies (MAIS), Master of Arts in Latin American and Border Studies and the Master of Fine Arts in Creative Writing (MFA).
Master of Arts in Interdisciplinary Studies

307 Hudspeth Hall
(915) 747-5647
mais@utep.edu

PROGRAM DIRECTOR: Robert Bledsoe

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.

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. Submission of official Graduate Record Examination (GRE) scores
4. Submission to the MAIS Advisory Committee of an acceptable Admission Essay and Plan of Study
5. Acceptance by the MAIS Advisory Committee and by the Graduate School

Specific Requirements for the MAIS Degree

1. Thirty-six 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 27 semester hours of graduate-level courses; the remaining nine hours may be selected from among graduate-level courses and/or upper-division undergraduate courses. (Any undergraduate course taken for MAIS credit must be specifically designated in the catalog as “For Undergraduate and Graduate Students.”)
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, a copy of the Final Project will be bound and submitted (two to the Graduate School and one to the MAIS Program archives).
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 normally 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. **Prerequisite**: Department approval.
Master of Arts in Latin American and Border Studies

Center for InterAmerican and Border Studies
1514 Hawthorne Street
(915) 747-5196
www.utep.edu/cibs/

PROGRAM DIRECTOR: Jon Amastae

The College of Liberal Arts offers an interdisciplinary Master of Arts degree with a major in Latin American and Border Studies.

Requirements for Admission

Admission to the MA program in Latin American and Border Studies will follow the general admissions requirements of the UTEP Graduate School. In addition, it will require a 3.0 minimum upper division undergraduate GPA. Because the program is interdisciplinary, no specific undergraduate major is required. However, admission requires the completion of an essay that addresses the student’s specific interest in participating in the program. Students without any undergraduate credits in any area related to Latin America or Border studies may be required to complete up to 9 hours of undergraduate work in the area of Latin American and Border Studies.

Requirements for the Degree

<table>
<thead>
<tr>
<th>Thesis</th>
<th>Non-Thesis</th>
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<tbody>
<tr>
<td>Core Courses</td>
<td>9</td>
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<tr>
<td>Prescribed Electives</td>
<td>9</td>
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<td>Free Electives</td>
<td>6</td>
</tr>
<tr>
<td>Thesis</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours:</td>
<td>30</td>
</tr>
</tbody>
</table>

a. Foundation Courses

1. for undergraduate programs, general education/core curriculum;
2. for graduate programs, prerequisite/leveling courses;

b. Courses required of all students in the proposed program;

All students must complete the following core courses:

LABS 5301 Issues in Border Studies
LABS 5302 Issues in Latin American Studies
LABS 5390 Research Seminar in Latin American and Border Studies

LABS 5301 and 5302 should be taken early in the student’s program of study. They will introduce students to the main questions and the critical literature in the respective field. As a requirement for each course, students will be expected to write a paper reviewing the literature that focuses on their intended area of concentration.

In LABS 5390, students will formulate and discuss their research ideas, cross-fertilizing the study of the border and of Latin America. It will help launch the thesis and serve as a forum for non-thesis students. A capstone course, it should be taken near the end of the student’s program of study.
c. Elective courses prescribed for those students;

Each student will take 9-12 hours of courses in a single area to provide disciplinary depth and expertise to complement the breadth of knowledge in the core course concerning the border area and Latin America. These courses will be chosen in consultation with the academic advisor. Field experience under a supervising professor is required when appropriate to the student’s needs.

d. Courses freely elected by students

Each student will choose, in consultation with the academic advisor, 6-9 hours of courses to complete the program.

e. Other, specify.

Language Requirement

All students must demonstrate oral, reading, and writing proficiency in Spanish. Substitutions may be made. If proficiency is not adequately demonstrated by sufficient coursework at the undergraduate level, including undergraduate education conducted in Spanish, a proficiency examination in Spanish is required the first semester of enrollment. Students who do not satisfy the proficiency requirements through this test must register for Spanish instruction until they pass the test.

Students may select up to 6 credit hours from upper-division undergraduate courses, as approved by the graduate committee. The instructor is expected to assign the student appropriate work for graduate level credit.

Students may elect either the thesis or non-thesis option. In the capstone course, LABS 5390, students will be encouraged to incorporate field experience. Students will also be encouraged to undertake other field experiences that may be part of the program in consultation with the program advisor.

Transfer students will be admitted based on the graduate school guidelines. No more than 9 hours of transfer credit will be accepted.

For Graduate Students Only

The following are the core (LABS) and departmental courses approved for the programs. Additional courses may be approved by the Graduate Advisor.

Latin American and Border Studies (LABS)

5301 Issues in Border Studies (3-0)
An analysis of selected aspects of the culture, society, politics, government, environment, and economy of the U.S.-Mexico border region. An interdisciplinary academic experience will be conducted through reading and an exploration of data sets available on the region. Students will become familiarized with interaction patterns between Northern Mexico and the U.S. Southwest.

5302 Issues in Latin American Studies (3-0)
The course will acquaint students with key dynamics and problems in contemporary Latin America. It examines the historic roots and possible outcomes of these trends, including social structures and institutions, such as government, religion, family, education, stratification, urban and rural development, economics, and migration.

5390 Research in Latin American and Border Issues (3-0)
A seminar designed to teach research methodology, emphasizing the integration of techniques of different disciplines, based on the study
of a specific theme germane to the study of Latin American and/or the U.S.-Mexico border region. Research and writing of a substantial paper on a special topic is required.

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: LABS 5398.

Art History (ARTH)  
For Undergraduate and Graduate Students

The following undergraduate courses have been approved for graduate credit.

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

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 art as both religious and political expression will be examined.

5310 The Border and Visual Culture (3-0)  
The class explores the history of art and its role in the civilization 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.

Economics (ECON)  

5366 Latin American Economics (3-0)  
A study of the existing economic institutions in Latin America. Application of economic principles to Latin America economic problems and policy. The emphasis is institutional rather than analytical. Prerequisite: ECON 3302 or ECON 3512 or department approval.

History (HIST)  

5309 Studies in Latin American History (3-0)  
The 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.

5377 Seminar in Latin American and Border History (3-0)  
Focuses in depth on 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, Central American history, and major aspects of the U.S.-Mexican border experience. May be repeated for credit when topic varies.

**Spanish (SPAN)**

**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. Includes selected works of Hispanic discoverers, conquistadors, and literati from 1492 through the eighteenth century.

5314 **Nineteenth Century Spanish-American Literature (3-0)**
A 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 emphasis placed upon Ruben Dario and his school.

5317 **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.

**Political Science (POLS)**

5334 **Seminar in the Politics of Developing Countries (3-0)**
Focuses on the politics and economics of developing nations in a global context. May be repeated for credit when topic varies.

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.

6303 **Seminar in Cultural, Linguistic, and Political Borders (3-0)**
This seminar provides an interdisciplinary immersion into cultural, linguistic, and political issues in the U.S.-Mexico border region, their policy implications, and the challenges posed to policy solutions amid political-administrative divisions. Course participants will be expected to work as teams in problem-solving experiences designed to go beyond the readings and classroom to utilize the border context. **Prerequisites:** EDAD 6301, EDAD 6302, EDAD 6303, EDAD 6304 each with a grade of “C” or better and department approval.

**Sociology (SOCI)**

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.

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

Geological Sciences (GEOL)

5397 Geology and Mineral Resources of Mexico (3-0)
Stratigraphic and structural framework of the Republic of Mexico with particular reference to the distribution of mineral resources. Field excursion required. Prerequisite: Graduate standing.

Music

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

CHAIRPERSON: Lowell Graham
PROFESSOR EMERITUS: Arryl Paul, Charles Stanley
GRADUATE FACULTY: Cardon, Colgin, Fountain, Gibson, Graham, Hufstader, Jones, Leinberger, Macchioni, McMillan, Ross, Schweigart, Tredway, Trimble, White, Wilkinson, E. Wilson, S. Wilson

Master of Music

The Master of Music degree is offered in two majors: Performance (instrumental, vocal, conducting, theory 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
   a. audition with a three-person panel of area faculty
   b. vocal majors must demonstrate knowledge of Italian, French, German, Latin, and English diction
   c. submission of undergraduate official transcript
   d. two letters of recommendation
   e. written statement of intent
3. Completion of the following required courses with a “B” or above:
   Instrumental
   9 hours MUSA 5391 Applied Lessons
   3 hours MUSL 5371 Bibliography and Research
   3 hours MUSE 5397 Pedagogy of Instrumental Music
   2 hours MUSL 5211 Selected Topics in Music History
   2 hours MUST 5217 Selected Topics in Music Theory
   3 hours MUST 5321 or Analysis of Tonal Music
   3 hours MUST 5322 or Analysis of Modern Music
   2 hours Ensemble or Chamber Music Participation
   3 hours MUSG 5398 Thesis
   3 hours MUSG 5399 Thesis
   5 hours Electives (Approved upper-division undergraduate or graduate courses)

32-33 hours Total
Vocal:
9 hours MUSA 5391 Applied Lessons
3 hours MUSL 5371 Bibliography and Research
3 hours MUSE 5396 Pedagogy of Vocal Music
2 hours MUSL 5211 Selected Topics in Music History
2 hours MUST 5217 Selected Topics in Music Theory
3 hours MUST 5321 or Analysis of Tonal Music
3 hours MUST 5322 or Analysis of Modern Music
2 hours Ensemble or Chamber Music Participation
3 hours MUSG 5398 Thesis
3 hours MUSG 5399 Thesis
5 hours Electives (Approved upper-division undergraduate or graduate courses)
32-33 hours Total

Conducting:
9 hours MUSA 5391 Applied Lessons
3 hours MUSL 5371 Bibliography and Research
2 hours MUSA 5233 Graduate Score Study
2 hours MUSA 5234 Graduate Rehearsal Techniques
2 hours MUSL 5211 Selected Topics in Music History
2 hours MUST 5217 Selected Topics in Music Theory
3 hours MUST 5321 or Analysis of Tonal Music
3 hours MUST 5322 or Analysis of Modern Music
2 hours Ensemble or Chamber Music Participation
3 hours MUSG 5398 Thesis
3 hours MUSG 5399 Thesis
4 hours Electives (Approved upper-division undergraduate or graduate courses)
32-33 hours Total

Theory:
9 hours MUSA 5281 Applied Lessons
3 hours MUSL 5371 Bibliography and Research
3 hours MUSL 5319 Pedagogy of Theory
3 hours MUST 5321 Analysis of Tonal Music
3 hours MUST 5322 Analysis of Modern Music
2 hours MUST 5217 Selected Topics in Music Theory
2 hours Ensemble or Chamber Music Participation
3 hours MUSG 5398 Thesis
3 hours MUSG 5399 Thesis
4 hours Electives (Approved upper-division undergraduate or graduate courses)
32 hours Total

Composition:
9 hours MUST 5325 Graduate Composition
3 hours MUSL 5371 Bibliography and Research
3 hours MUSA 5319 Pedagogy of Theory
3 hours MUST 5321 Analysis of Tonal Music
3 hours MUST 5322 Analysis of Modern Music
2 hours MUSL 5211 Selected Topics in Music History
2 hours MUST 5217 Selected Topics in Music Theory
2 hours Ensemble or Chamber Music Participation
3 hours MUSG 5398 Thesis
3 hours MUSG 5399 Thesis
2 hours Electives (Approved upper-division undergraduate or graduate courses)
32-33 hours Total
The thesis sequence includes either 1) a Master’s recital and a written thesis documenting that recital or 2) two performance recitals. A final oral examination on the thesis is also required.

Specific Requirements for the Master of Music in Music Education: Thesis Track

1. A Bachelor’s degree in Music or its equivalent with certification to teach music in the public schools or significant and equivalent professional teaching experience.

2. Acceptance into the music education program via
   a. the approval of a three-person panel of area faculty after appropriate interviews and/or teaching demonstration
   b. submission of undergraduate official transcript
   c. two letters of recommendation
   d. written philosophy of teaching

3. Completion of the following required courses with a “B” or above:
   - 3 hours MUSE 5331 Foundations of Music Education
   - 3 hours MUSL 5371 Bibliography and Research
   - 4 hours MUSA 5281 Applied Lessons (on principal or secondary instrument)
     MUSA 5261 or Applied Lessons
     MUSA 5381 or Applied Lessons
   - 3 hours MUSE 5396 Pedagogy of Vocal Music
     MUSE 5397 or Pedagogy of Instrumental Music
   - 2 hours MUST 5217 Selected Topics in Music Theory
   - 3 hours MUST 5321 or Analysis of Tonal Music
   - 3 hours MUST 5322 or Analysis of Modern Music
   - 2 hours MUSL 5211 Music History
   - 6 hours MUSG 5335 Seminar in Music Education
   - 3 hours EDAD 5310 Education Research and Statistics
     EDPC 5340 or Learning Theories Across the Lifespan
     TED 5301 or Curriculum Theory and Design
   - 3 hours MUSG 5398 Thesis
   - 3 hours MUSG 5399 Thesis

32-33 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.

Non-Thesis Track

1. A Bachelor’s degree in Music or its equivalent with certification to teach music in the public schools or significant and equivalent professional teaching experience.

2. Acceptance into the music education program via
   a. the approval of a three-person panel of area faculty after appropriate interviews and/or teaching demonstration
   b. submission of undergraduate official transcript
   c. two letters of recommendation
   d. written philosophy of teaching

3. Completion of the following required courses with a “B” or above:
   - 3 hours MUSE 5331 Foundations of Music Education
   - 3 hours MUSL 5371 Bibliography and Research
   - 4 hours MUSA 5281 Applied Lessons (on principal or secondary instrument)
No thesis is required in this particular Music Education track. This sequence of classes may be completed in two regular semesters plus two summer semesters of study (2+2).

For Undergraduate and Graduate Students

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

**Languages and Linguistics**

Any upper level undergraduate foreign language course

**Dance (DANC)**

3343 Character and Jazz Dance
3341 Ballet Techniques

**Music Education (MUSE)**

3336 Teaching of Music in the Elementary Schools
4333 Teaching of Music in the Junior and Senior High Schools
4335 Selected Problems in Music Education
4395 Piano Pedagogy

**Music Theory (MUST)**

3215 Analytical Process in Music
3216 Theory Seminar
3218 Composing and Arranging for Instruments and Voice
3315 Advanced Electronic Music
3316 Commercial Music Composition
3317 Applied Audio Production
3319 Advanced Composition
3341 Introduction to Recording

**Theatre (THEA)**

3355 The Musical Theatre

For Graduate Students Only

**Applied Music (MUSA)**

5233 Graduate Score Study (3-0)
A study of how to analyze scores from a conductor's viewpoint.  
*Prerequisite:* Department approval.
5234 Graduate Rehearsal Techniques (3-0)
A study of how to prepare and conduct rehearsal at various stages of preparation for performance. Prerequisite: Department approval.

5261 Applied Lessons (0-0-2)
Used by non-performance majors to develop playing skills on a new secondary instrument.

5281 Applied Lessons (0-0-2)
5381 Applied Lessons (0-0-3)
These “81” courses can be used as: 1) secondary applied area; 2) the principal applied area for a non-performance major; or 3) an elective by graduate students in fields other than music. For Music Education candidates, Applied Lessons in conducting may be considered for credit toward completion of the Music Education Block. Prerequisite: Admission requires successfully completed audition for appropriate applied faculty professor. Music course fee required.

5361 Applied Lessons (0-0-3)
Used by Music Education majors to develop playing skills on a new secondary instrument.

5391 Applied Lessons (0-0-3)
For performance majors. Requires acceptance into degree program by a two or more person committee. Music course fee required.

Music 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.

Music, General (MUSG)

5335 Special Topics in Music (0-0-3)
Rotating special topics seminar including such topics as Evaluation in Music Education, Music Administration, Behavior Modification in Music, Applications of Music Technology. Topics can include all areas of music. 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 or recital. This class is the first section of the two semester required sequence and is given a grade of “I” (In Progress) until the subsequent course, submitted document and recital(s) are completed.
5399 Thesis (0-0-3)
Continuous enrollment required while work on the thesis/recital(s) is completed. \textit{Prerequisite:} MUSG 5398.

Music Literature and History (MUSL)

5211 Selected Topics in Music History (0-0-2)
Study of specialized topics in Music History. Courses in the sequence must be approved by the Music History Coordinator.

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.

Music Theory (MUST)

5217 Selected Topics in Music Theory (2-0)
Study of specialized topics in Music Theory. Courses in the sequence must be approved by the Music Theory Coordinator.

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.

5319 Pedagogy of Music Theory (3-0)
A study of pedagogical materials and methods for use in teaching music theory at various instructional levels. \textit{Prerequisite:} Department approval.

5321 Analysis of Tonal Music (3-0)
A three hour course for advanced theory and composition students, focusing on analysis of common practice forms with emphasis on chromatic harmony and modulation. \textit{Prerequisite:} Department approval.

5322 Analysis of Modern Music (3-0)
A three hour course for advanced theory and composition students, focusing on analysis of works which represent styles unique to the twentieth and twenty-first centuries, including atonality, neoclassicism, impressionism, minimalism, film music and more. \textit{Prerequisite:} Department approval.

5325 Graduate Composition (0-0-3)
Applied composition lessons for advanced theory and composition students for weekly independent study. Requires acceptance into a degree program by a two or more person committee of an area or other music faculty. \textit{Prerequisite:} Department approval.
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.

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.

5354 Topics in Philosophy of History (3-0)
Topics will include matters such as the debate between idealist and materialist interpretations of history, the question of historical “laws” and determinism, the debate over “progress” in history, and the relation between the social and natural sciences.

5355 Topics in Philosophy of Education (3-0)
Analyzes classical and contemporary theories and practices of education in a global perspective, using mainstream, alternative, and critical approaches. Key readings could include selections from Plato, Rousseau, Dewey, and Goodlad. Prerequisite: One upper-level undergraduate Philosophy course or permission of instructor.

5356 Topics in Philosophy of Science (3-0)
An examination of selected issues and themes in the philosophy of the natural sciences. While topics will vary according to the interests of the instructor, they will be drawn from ongoing debates in contemporary philosophy of science including, but not limited to, causality, confirmation, the relation between theory and observation, the demarcation between science and anti-science, feminist and post modernist critiques of scientific rationality, the realist/anti-realist debate, progress, and the ethical implications of science and technology. This course may be repeated for credit with different instructors. Prerequisite: 1 Undergraduate Philosophy Course or permission of instructor.
This course will provide students with an understanding of the basic tenets of the major traditions in psychology and will engage in critical evaluation of their fundamental assumptions and methods. While the emphasis of the course will vary depending on the instructor, major attention will be given to the establishment of the information processing tradition in cognitive psychology, especially the role of representation, belief, desire and the like as explanatory posits and their relation to underlying neural activity. **Prerequisites:** 1 Undergraduate Philosophy Course, Philosophy of Science, Modern Philosophy, or 1 or more courses in Psychology and department approval.

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**Political Science**

111 Benedict Hall  
(915) 747-5227 (ph)  
(915) 747-6616 (fax)  
politicalscience@utep.edu  
http://academics.utep.edu/politicalscience

**CHAIRPERSON:** Gregory G. Rocha  
**PROFESSORS EMERITI:** Charles R. Bath, Kenneth E. Beasley, Howard D. Neighbor, Thomas J. Price, Roberto E. Villarreal  
**GRADUATE FACULTY:** Boehmer, Coronado, Genna, Graves, Hiroi, Kruszewski, Mack, Pallitto, Payan, Rocha, Staudt, Weaver, Webking

**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. Letters of recommendation and statement of purpose  
3. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework  
4. Other evidence of background and experience that may be available

**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. Independent studies are limited to three hours, with the permission of the instructor and graduate advisor, and must be justified with a proposal from the student outlining the objectives of the project.

**The MA Degree Plan shall include:**

1. **Research Preparation (6 hours)**  
   - POLS 5300 Research Methods in Political Science (To be taken the first semester after admission.)  
   - POLS 5301 Seminar in Qualitative Methods or  
   - POLS 5302 Seminar in Quantitative Research Methods II

2. **Graduate courses in political science from the 3 subfields or general section, with a minimum of at least 1 course in each subfield: (18 hours)**  
   - American Institutions and Processes
Comparative Politics
International Politics

3. One three hour elective graduate course may be taken from a related field outside the department with the advice of the Graduate Advisor.

4. Two Thesis courses: (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>POLS 5398</td>
<td>Thesis</td>
</tr>
<tr>
<td>POLS 5399</td>
<td>Thesis</td>
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</tbody>
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Total Hours: 30

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. This applies not only to the initial registration, but also 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.

Political Science (POLS)
For Graduate Students Only

American Institutions and Processes

5310 Seminar in Political Behavior (3-0)
The study of the theories and research about how and why people act politically. Areas of study include: political participation, gender, public opinion, political communication, and race and ethnicity. Course content will vary based on which area of study is highlighted.

5315 Seminar in American Institutions and Processes (3-2)
This course is designed to study the various theories and research about the executive, legislative and judicial branches of government in the United States. Course content will vary based on which branch of government is highlighted.

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 function of law.

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.

Comparative Politics

5334 Seminar in Comparative Political Development (3-0)
The comparative analysis of socioeconomic development, regime transitions, and political culture. Topics may include democratization, political economy, social movements, ethnic conflict, gender politics, civil society, and corruption.

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.
5339 **Seminar in Comparative Political Institutions (3-0)**
The comparative analysis of political institutions, such as electoral systems, party systems, legislatures, judiciaries, parliamentary vs. presidential systems, cross-border institutions, system of interest representation, and intergovernmental relations.

5343 **Seminar in Border Politics (3-0)**
Comparative study of selected international borders in their multifaceted transnational, local, regional, and national complexities.

5344 **Seminar in Border Theory (3-0)**
Course examines theoretical explanations for the political behavior and events on international borders from a comparative perspective. Special attention is paid to explaining border politics and various issues including bilateral cooperation, geopolitics, territoriality, culture, demographic migrations, and economic flows across borders.

6303 **Seminar in Cultural, Linguistic, and Political Borders (3-0)**
This seminar provides an interdisciplinary immersion into cultural, linguistic, and political issues in the U.S.-Mexico border region, their policy implications, and the challenges posed to policy solutions amid political-administrative divisions. Course participants will be expected to work as teams in problem-solving experiences designed to go beyond the readings and classroom to make use of the border context. 

**Prerequisites:** EDAD 6310, EDAD 6302, EDAD 6303, EDAD 6304, and/or department approval.

**International Politics**

5330 **Seminar in International Politics (3-0)**
Examines the structures and the interactions that characterize the politics of the international system. Attention is paid to various theoretical perspectives of international relations scholarship and other topics of world politics.

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. May be repeated for credit when the topic varies.

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.

5338 **Seminar in International Political Economy (3-0)**
Examines the political and economic effects of the interaction of national policies in the global economy, with special attention paid to theory, evidence, and national policies. Topics include: trade policies, monetary policies, financial crises, multinational corporations, intergovernmental economic organizations and treaties, free trade areas, and other issues of economic development.

**General**

5300 **Seminar in Quantitative Research Methods (3-0)**
Basic introduction to principles of scientific inquiry, research design, and quantitative methodological techniques used in political analysis. Required of all graduate Political Science majors. The seminar must be taken during the first semester of graduate study.

5301 **Seminar in Qualitative Research Methods (3-0)**
The study of qualitative research methods, including case studies and the comparable cases strategy. Issues and themes used to illustrate
these methods will vary according to the instructor’s interests. Prerequisite: POLS 5300 or equivalent course, with a minimum of “B” or better.

5302 Seminar Quantitative Research Methods II (3-0)
This course further explores methods of quantitative analysis and hypothesis testing, including data management, various regression estimation methods, diagnostic techniques, and other topics. Prerequisite: POLS 5300 or equivalent course, with a minimum of “B” or better.

5349 Seminar in Political Thought (3-0)
This course investigates topics of political thought ranging from ancient to modern/contemporary time periods. The subject matter will vary according to the instructor’s choice but will familiarize students with relevant literature and contemporary scholarly discussions of political thought.

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

112 Psychology Building
(915) 747-5551
psychology@utep.edu

INTERIM CHAIRPERSON: Harmon Hosch
PROFESSORS EMERITI: Edmund Coleman, James V. Devine, Judith P. Goggin, Philip Himelstine, Randolph H. Whitworth
ASSOCIATE PROFESSOR EMERITUS: Guido A. Barrientos
GRADUATE FACULTY: Cohn, Cooper, Crites, de Castro, Francis, Hosch, Lucke, Malpass, Meissner, Morera, Moss, O’Dell, Schwartz, Wiebe, Wood, Zárate

The University of Texas at El Paso’s location on the U.S./Mexico border provides a unique opportunity to investigate how an intersection of nationalities, cultures, and languages affects cognitive processes and behaviors. These issues permeate nearly all of our academic and scholarly activities including classroom instruction, research, and community placements. The psychology department offers a variety of graduate programs and concentrations so students can tailor their graduate studies in preparation for their future career.
goals. We offer a Ph.D. in general psychology and provide three areas of concentration for students: Health; Legal; and Social, Cognitive and Neurosciences. The objective of the Ph.D. program is to prepare students for research careers in either academic or applied settings. We also offer two M.A. programs: one in Clinical Psychology that prepares students to either work in applied settings as a psychological associate or continue on to a Clinical Ph.D. program and one in General Experimental Psychology that prepares students to continue on to a Ph.D. program.

General Requirements for Graduate Programs in Psychology

Admissions Requirements

Because all of our graduate programs focus on research and require extensive one-on-one contact between faculty and students, we can accept only a limited number of students each year. Admission is competitive, and admission recommendations are made by a committee that carefully reviews each applicant’s academic history, performance, and interests. To be admitted, one must have a bachelor’s degree (or the equivalent for non-U.S. students) from an accredited university. Students who are still working on their bachelor’s degree and who will complete it before starting graduate work are given full consideration. Individuals who do not have a degree in psychology are also given full consideration, but admission may be conditional on satisfactorily completing a few undergraduate psychology courses.

We accept students once a year. New students are admitted to begin during the fall semester only. Applications for admission are due January 15th. If you are interested in applying, please send the materials indicated below to the graduate school (UTEP Graduate School; Administration Building Room 223, 601 W. Schuster; El Paso, TX 79968.

- A UTEP graduate school application (an on-line application can be found at the graduate school’s page)
- Transcripts according to the requirements of the Graduate School.
- Official GRE General Test scores from ETS (GRE scores taken within the last five years are required of all applicants, regardless of whether or not they have a graduate degree in another discipline)
- A two- to three-page personal statement outlining experiences, skill, and training. In addition, please state your career goals and how this specific program will benefit your professional development
- Three letters of recommendation
- Official TOEFL scores for international students who do not have a degree at an accredited U.S., institution

Before being admitted into any graduate program, either M.A. 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.

Ph.D. Program

The Ph.D. Program is designed to train all students in the fundamental areas of psychology. The department extends this training with three concentrations in (1) Health, (2) Legal, and (3) Social, Cognitive and Neurosciences. Students with a health concentration have an opportunity to conduct research in areas such as adaptation to chronic illness; food and fluid intake; judgment and decision making; risk taking; smoking prevention and cessation; and underage drinking and driving. Students with a legal
concentration have an opportunity to conduct research in areas such as detection of deception; facial recognition and eyewitness identification/memory; interviewing and interrogation; jury decision making; and suggestibility in legal cases. Students with a social, cognitive, and neuroscience concentration have an opportunity to conduct research in areas such as addiction and drugs of abuse; behavioral regulation; bilingual memory; multilingual language processing; social neuroscience; and social perception, prejudice and stereotyping. Ph.D. candidates are required to complete 78 semester hours.

Course Requirements

1) Statistics and research methods courses (12 semester hours)
   PSYC 5310 Applied Correlation and Regression Methods
   PSYC 5311 Experimental Design and Analysis of Variance
   PSYC 5334 Foundations of Research
   Plus one additional research method course approved by graduate program director.

2) Breadth courses include three of the following (9 semester hours)
   PSYC 5371 Animal Learning and Behavior
   PSYC 5372 Behavioral Neuroscience
   PSYC 5374 Cognitive Psychology
   PSYC 5376 Developmental Psychology
   PSYC 5330 Social Behavior

3) Research (24 semester hours)
   a. First Year Research (6 semester hours)
      PSYC 6310 First Year Research
      PSYC 6311 First Year Research
   b. Research Applications (6 semester hours)
      PSYC 5301 Research Applications
   c. Thesis Research (6 semester hours)
      PSYC 5398 Thesis
      PSYC 5399 Thesis
   d. Dissertation Research (6 semester hours)
      PSYC 6320 Dissertation
      PSYC 6321 Dissertation
   Research must be taken with at least 2 different faculty members.

4) Concentration Courses and Electives
   a. Health
      PSYC 5323 Psychometrics
      PSYC 5351 Behavioral Medicine
      PSYC 5352 Public Health and Community Interventions
      Plus 24 additional semester hours of approved Health elective coursework (A list of approved elective coursework can be obtained from the graduate program director.)
   b. Legal
      PSYC 5344 Survey of Legal Psychology
      PSYC 5342 Special Topics in Psychology and Law
      PSYC 6305 Field Placement
      PSYC 6305 Field Placement
      Plus 9 additional semester hours of approved Legal elective coursework (A list of approved elective coursework can be obtained from the graduate program director.)
   c. Social, Cognitive, and Neurosciences
      BIOL 5131 Ethical, Social, and Political Dimensions of Science
      Plus 12 additional semester hours of approved Social, Cognitive, and Neurosciences elective coursework (A list of approved elective coursework can be obtained from the graduate program director.)
Yearly Evaluations and Satisfactory Progress

Students are expected to make satisfactory progress toward their degree. Faculty will provide all students with annual, written evaluations and feedback. Failure to make satisfactory progress toward one's degree may result in dismissal from the program.

Advancement to Candidacy

Students must apply for advancement to candidacy. This can be done once students complete (1) statistics and research method courses, (2) breadth courses, (3) first year research, and (4) thesis research requirements.

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.

Ph.D. Oral Examinations

A dissertation proposal must be defended orally before the student's committee prior to collecting data. In addition, students must make a public presentation of their dissertation and 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.

MA Programs

The department offers two concentrations leading to the MA degree: Clinical Psychology and General Experimental Psychology. Both MA degrees are research-focused and require theses. The Clinical M.A. program is designed to prepare students to either work in applied settings as a psychological associate or continue on to a Clinical Ph.D. Program. The General Experimental M.A. program is designed to prepare students to continue on to a Ph.D. program.

In both the Clinical and General Experimental M.A. programs,
1) students must orally defend their thesis before a thesis committee
2) all requirements must be completed within six years of entering the program
3) no more than 6 credit hours of approved upper-division undergraduate courses may count for graduate credit.

The M.A. in Clinical Psychology requires the completion of 45 credit hours; including 21 hours of required course work, 15 hours of elective coursework, 3 hours of internship, and 6 hours of theses. The required courses for a Clinical M.A. degree are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 5310</td>
<td>Applied Correlation and Regression</td>
</tr>
<tr>
<td>PSYC 5311</td>
<td>Experimental Design and Analysis of Variance</td>
</tr>
<tr>
<td>PSYC 5309</td>
<td>Seminar in Psychopathology</td>
</tr>
<tr>
<td>PSYC 5321</td>
<td>Seminar in Personality Assessment</td>
</tr>
<tr>
<td>PSYC 5322</td>
<td>Theories and Methods of Psychotherapy</td>
</tr>
<tr>
<td>PSYC 5323</td>
<td>Psychometrics</td>
</tr>
<tr>
<td>PSYC 5333</td>
<td>Seminar in Intellectual and Neuropsychological Assessment</td>
</tr>
<tr>
<td>PSYC 5360</td>
<td>Clinical Internship</td>
</tr>
</tbody>
</table>

Two of the following five courses, taken within the first 3 semesters after being admitted to the Clinical M.A. program (6 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 5371</td>
<td>Animal Learning and Behavior</td>
</tr>
<tr>
<td>PSYC 5372</td>
<td>Behavioral Neuroscience</td>
</tr>
<tr>
<td>PSYC 5374</td>
<td>Cognitive Psychology</td>
</tr>
</tbody>
</table>
PSYC 5376 Developmental Psychology
PSYC 5330 Social Behavior
PSYC 5398 Thesis
PSYC 5399 Thesis

The MA in General Experimental Psychology requires the completion of 30 credit hours, including 12 hours of required course work, 12 hours of elective coursework, and 6 hours of thesis. The required courses for a General Experimental M.A. degree are:

PSYC 5310 Applied Correlation and Regression
PSYC 5311 Experimental Design and Analysis of Variance
Two of the following five courses (6 semester hours)
PSYC 5371 Animal Learning and Behavior
PSYC 5372 Behavioral Neuroscience
PSYC 5374 Cognitive Psychology
PSYC 5376 Developmental Psychology
PSYC 5330 Social Behavior
PSYC 5398 Thesis
PSYC 5399 Thesis

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 students who attempt a course or courses and receive two grades of “C” or lower in Psychology courses be dismissed from the program. Students who earn a grade of “C” or lower in a course must retake the course the next time it is offered and earn a grade of “B” or better.

Language

The University of Texas at El Paso’s location on the U.S./Mexico border provides a nearly unique opportunity to investigate how language use, specifically proficiency in English and/or Spanish, affects cognitive processes. To investigate the importance of English/Spanish proficiency, it is essential that people comprehend and speak both languages. The psychology faculty, therefore, view language as an important and often necessary, methodological tool for conducting research and strongly encourages and promotes proficiency in both languages.

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 Director. It is the student’s responsibility to provide all evidence and material necessary for the Graduate Program Director to review the request. Advanced Standing Credits are subject to final approval from the Graduate School. Transfer students can only be considered for advancement to candidacy after they complete 2 academic semesters and all relevant requirements.
Psychology (PSYC)

For Graduate Students Only

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, culture, 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  Applied Correlation and Regression Methods (3-0)
Reviews correlation techniques, simple and multiple regression,
mediated and moderated regression, and several multivariate
techniques. Applications of these techniques in psychological
research in field settings are discussed. Prerequisite: PSYC 4317 or
equivalent.

5311  Experimental Design and Analysis of Variance (3-0)
Consideration of problems of analysis and design commonly
encountered in psychological research. Prerequisite: PSYC 4317, 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 psychopharma-
cological 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.

5330  Social Behavior (3-0)
Theoretical and applied approaches to individual and group behavior.
Topics include social cognition, attitudes and persuasion, group
processes, group decision making, intra-and intergroup relations,
person and group perception, and cross-cultural issues related to
these social processes. Prerequisite: Department approval.
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 Foundations of Research (3-0)
Design and implementation of 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.

5342 Special Topics in Psychology and Law (3-0)
Focuses on selected issues and problems where psychology and culture contribute 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.

5344 Survey of Legal Psychology (3-0)
Provides an introduction to the field of Legal Psychology, with an overview of important theoretical and applied issues. Topics may include: Eyewitness identification; juror decision making; memory and suggestibility of witnesses and victims; causes and predictors of violence, domestic violence and child abuse; decision processes in the legal system; expert testimony, and cultural issues.

5351 Behavioral Medicine (3-0)
Behavioral medicine and clinical health psychology are multi- and inter-disciplinary fields in which multiple related professions integrate to promote emotional and physical health and well being. This course will introduce students to key elements of the field, including its research and practice. Foci will include: theoretical models, assessment, differential medical and psychological diagnosis, intervention, and ethics among others. Assignments and class exercises are designed to provide students knowledge and specific tools to collaborate with other professionals, both clinically and for the purposes of research. **Prerequisite:** Department approval.

5352 Public Health and Community Interventions (3-0)
Reviews empirical evidence concerning the efficacy of a range of programs and interventions that are designed to increase health promoting behaviors in various cultures and reduce health threatening and high risk behaviors such as teen pregnancy, drinking and driving, smoking, and alcohol and drug use. The efficacy of fear appeals, media campaigns, and related interventions will also be addressed. **Prerequisite:** Department approval.
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.

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.
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 will count towards the MA degree in
Clinical Psychology. Grades in this course will not be used in
computing grade point average. Psychology majors only. Pass/Fail
grading option. Prerequisite: Department approval.

5371  Animal Learning and Behavior (3-0)
Examination of current theories and recent developments in our
understanding of the role of learning in modulating animal behavior. A
broad range of animal models used to study various Psychological
phenomena will be covered with an emphasis on the role of learning
and memory processes in these models. Prerequisite: Department
approval.

5372  Behavioral Neuroscience
Advanced study of the most current information related to
neurochemical and neurophysiological mechanisms by which the
nervous system controls behavior. Topics will vary but may include
examination of normal behaviors such as eating, water balance,
sleep, learning, and memory or abnormal behaviors such as mental
disorders and drug addiction. Emphasis will be placed on the study
and evaluation of current theories of neurochemical mechanisms and
neuroanatomical substrates for the behaviors. Prerequisite:
Department approval.

5374  Cognitive Psychology (3-0)
Examines classic and current findings and methodological approaches
to the study of human cognition. Topics may include perception,
attention, memory, language, thinking, problem solving, reasoning,
and cross-cultural issues. Prerequisite: Department approval.

5376  Developmental Psychology (3-0)
In this course students will explore, in depth, life-span development
with a focus on cognition and mental processes. Topics will include,
but are not limited to, the development of reasoning, language, and
the neural bases of cognitive development. Students will critically
analyze seminal studies and papers from a variety of disciplines,
including experimental psychology, cognitive neuroscience and animal
learning and behavior.

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.
For Doctoral Students Only

6305  **Field Placement (0-0-3)**
Professional experience in an applied setting. Each 150-clock hours is equivalent to three credit hours. The graduate program committee must approve the location and extent of the activity involved.

6310  **First Year Research (0-0-3)**
Initial work on first year research project. *Prerequisite*: Department approval. Psychology Research course fee required.

6311  **First Year Research (0-0-3)**
Continuous enrollment required while work on first year research project continues. *Prerequisites*: PSYC 6310 with a grade of “C” or better and department approval. Psychology Research course fee required.

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.

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**Sociology and Anthropology**

109 Old Main  
(915) 747-5740  
soci@utep.edu

CHAIRPERSON: Josiah Heyman  
PROFESSORS EMERITI: Julius Rivera, Ellwyn Stoddard  
GRADUATE FACULTY: Campbell, Carmichael, Curry, Daudistel, Fernandez, Heyman, Howard, Lee, Rodriguez, Smithey

The Department offers a Master of Arts degree in Sociology.

**Requirements for Admission**

1. Admission is based on the entire record of the applicant and availability of departmental resources.

2. Students must submit a completed admissions form to the UTEP graduate school, including references and statement of purpose, as well as transcripts and GRE scores.

3. A bachelor’s degree from an accredited U.S. university or proof of equivalent education at a foreign institution. Generally, students should have a 3.0 (B) grade point average, or equivalent, particularly in sociology courses and over the last sixty hours of undergraduate work.

4. Students must submit scores from the graduate record examination (GRE). However, pursuant to Texas HB 1641 Admission and Scholarship Policies for Graduate and Professional Programs, an applicant’s performance on a standardized test may not be used in the admission or competitive scholarship process for a graduate or professional program as the sole criterion for consideration of an applicant or as the primary criterion to end consideration.
5. The department also grants a limited number of teaching and research assistantships to selected graduate students. Other forms of financial assistance are also available. For further information please contact the graduate advisor.

Official Graduate Record Examination (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. Each candidate must take SOCI 5312 (Advanced Measurement and Inference), SOCI 5320 (Quantitative Methods), SOCI 5322 (Qualitative Methods), and SOCI 5328 (Social Theory) plus twelve semester hours of sociology or anthropology approved for graduate credit.

2. Each candidate must enroll in 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. Each thesis course can only count once toward the total number of hours needed for the degree. Thesis committees consist of at least two departmental representatives and one member from outside the department.

3. Candidates may pursue a minor in anthropology. Candidates taking this option must obtain the consent of the graduate advisor and his/her thesis director, and may take up to 9 hours of anthropology courses from the list of advanced undergraduate courses approved for graduate credit. The plan of anthropology courses must be approved by the graduate advisor and thesis advisor, once assigned. Additional requirements are listed in item 4 below.

4. Undergraduate courses and independent studies approved for graduate credit will count toward the degree only by permission of the graduate advisor and thesis advisor, once assigned. To use an undergraduate course for graduate credit, the following additional work is required: additional reading of original scholarly books and articles above and beyond textbooks; additional written work such as research on specific topics or hypotheses, literature reviews, or identifying research problems in specific areas; and at least five additional meetings with the professor to discuss the added requirements and their completion.

5. Each candidate will submit a suitably bound thesis which must be approved by the candidate’s committee and placed on file in the Department and two additional bound copies in Graduate Student Services.

6. Candidates will be allowed only one grade lower than a “B” in coursework taken for graduate credit. No grade lower than a “B” will be accepted in a required course. Candidates must maintain a minimum 3.0 GPA.

For Undergraduate and Graduate Students

Anthropology (ANTH)

3303  Ecological Anthropology
3304  Biological Anthropology
3309  Mesoamerican Cultures
3313  Historical Archaeology of the El Paso-Cuidad Juarez Area
3314  Economic Anthropology
3315  Urban Anthropology
3319  Indigenous Cultures of Latin America
3320  Indigenous Cultures of North America
3321  Indians of the Southwest
3347  Archaeological Field Methods
3357  Sociolinguistics  
3358  Ethnographic Methods  
3360  Lab Methods in Archaeology  
4304  Environmental Justice and Minority Communities in the U.S.  
4306  Colonias on the U.S.-Mexico Border  
4346  Health and Illness in Cross-Cultural Perspective  
4365  Museum Fundamentals  

Sociology (SOCl)  

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

For Graduate Students Only  

Sociology (SOCl)  

5190  Individual Studies (0-0-1)  
5290  Individual Studies (0-0-2)  
Supervised individual study. Prerequisite: Department approval.  

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 Quantitative Methodology (3-0)  
Focus on understanding, interpreting, and critically evaluating information obtained from quantitative methods and the sampling procedures these methods employ, including a general overview of relevant social science research methods.  

5322  Seminar in Qualitative Methods (3-0)  
The field research process from initial proposal to final report, emphasizing participant-observation and in-depth interview methods and the analysis of qualitative materials.  

5328  Social Theory (3-0)  
An examination of major social theories from the early modern era to the present. The course has four objectives (1) identifying connections between philosophical traditions and social theory; (2) establishing the basic assumptions and arguments of major social theories; (3) examining the linkages between social theories and research approaches; (4) examining the linkages between social theories social policies, and social practices.  

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

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.

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.

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, Dance, and Film

371 Fox Fine Arts
(915) 747-5146
theatrearts@utep.edu

CHAIR: Joel Murray
PROFESSORS EMERITI: R. Milton Leech
GRADUATE FACULTY: Baker, Gorden, Gladstein, Haines, Murray, Nadel, Redman, Stoughton

The Theatre, Dance, and Film Department offers a Master of Arts in Theatre Arts.

Requirements for Admission
1. Bachelor’s degree from an accredited college or university
2. A minimum of 18 approved undergraduate credit hours in Theatre Arts, 12 of which must be approved advanced semester hours (3300, 4300).
3. Submission of official Graduate Record Examination (GRE) scores
4. The following must be submitted to the department: three letters of recommendation, resume, scholarly writing sample, and a letter of application.
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 24 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 thesis or a research/production thesis (available on a limited basis), for which they will receive 6 hours of credit (THEA 5398-THEA 5399: Thesis) toward these minimum requirements.

Theatre Arts (THEA)

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.

3325 Directing I
3335 Chicano Theatre and Drama
3336 Theatre in Spanish
3340 A History of Costume Design
3351 History of the Theatre I
3352 History of the Theatre II
3355 The Musical Theatre
3356 Women in Drama
3313 Acting III or
4313 Acting IV
4318 Playwriting
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, critical theory, dramatic literature, design, management, and drama education. A course in this group may be taken a second time when the topic varies.

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 Critical Theory.

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 contemporary playwrights. 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.
Women’s Studies

233 Liberal Arts
(915) 747-5200
womenstudies@utep.edu
www.utep.edu/womens/

DIRECTOR: Martha Smithey
PROFESSORS: Amaya, Armitage, Dailey, Dick, Fitzgerald, Gates, Gladstein, Martin, McGee Deutsch, Mansfield, Nigro, Staudt
ASSOCIATE PROFESSORS: Baker, Byrd, Clark, Coronado, Farah, Hatchett, Howard, Marchino, Rippberger, Smithey, Topp
ASSISTANT PROFESSORS: Abarca, Binggeli, Cohoon, Fernández, Garabano, Haines, Henderson, Leyva, Ramos, Romero, Smith, Sowards, Simon, Tafoya, Weaver, Wiebe
LECTURERS: Baker, Hibbert, Risch

Women and men are invited to participate in this interdisciplinary program that studies women, gender relations, and sexuality. Since its inception in the 1970’s, women’s studies scholarship has significantly revised every major discipline in the liberal arts curriculum, from history and literature, to art and political science. Feminist scholarship has also been the catalyst for new directions in research within other established academic fields such as science and business.

Women’s and gender studies courses offer students a rigorous education in feminist theory, diverse gender roles and sexual identities, the history of gender relations, economic and social policies affecting women, and in the creative work of women. Courses offered in the Certificate Program focus on issues of equality between women and men either nationally or globally, with particular emphasis on the U.S./Mexico border. The Women’s Studies Program understands that knowledge is created both in and outside of the university; therefore, many courses integrate the insights and experiences of community activists, community organizations, and people in the El Paso/ Juárez and greater border region.

While the Women’s Studies Program was created in 1981, UTEP has offered undergraduate courses in women’s studies since the early 1970’s. The Graduate Certificate in Women’s and Gender Studies, created in 2002, is available both to degree-seeking UTEP graduate students and to non-degree seeking professionals in the surrounding border area. To date, the program offers one interdisciplinary graduate course in women’s studies; other courses applicable for the Certificate are cross-listed with other departments and deal with the impact of gender within specific disciplines, such as History, Public Administration, and Sociology, to name a few. Because of its interdisciplinary nature, the Certificate complements any field of study or profession, and it fosters the development of gender equality in scholarship and in the workplace.

Graduate Certificate in Women’s and Gender Studies

Admission Requirements
The admission requirements for the graduate certificate are as follows:

1. Bachelor’s degree with a minimum 3.0 GPA*
2. Acceptance by the Graduate School
3. Completed application form for the Certificate Program from the Women’s Studies Program
4. An appointment with the advisor of the Certificate Program

Note: The advisor may extend conditional admission to students with less than a 3.0 GPA.
To complete a certificate in Women’s or Gender Studies, students must complete at least 12 hours of courses from at least two different disciplines. One core course must be taken as part of the total 12 hours: WS 5300 Interdisciplinary Feminist Theory and Methodology.

The following list of courses has been approved for Women’s and Gender Studies credit. The Women’s Studies Director may approve courses for the Certificate that are not listed but contain a substantial women’s and gender studies component.

### English
- ENGL 5320 Literary Criticism: Feminist and Queer Theory
- ENGL 5325 Genre, Theory and Practice: Genre and Gender
- ENGL 5327 Variable Topics in Contemporary Literature: Contemporary British Women Writers
- ENGL 5327 Variable Topics in Contemporary Literature: Literature of Women of Color
- ENGL 5350 Seminar, Special Topics: Women and Nature Writing
- ENGL 5356 Seminar, Studies in American Literature Since 1860: American Women Writers

### History
- HIST 5305 Studies in U.S. History: Gender and Labor Movements
- HIST 5309 Studies in Latin American History: Gender in Colonial Mexico
- HIST 5374 Seminar in Borderlands History: Gender and Sexuality in the Borderlands
- HIST 5377 Seminar in Latin American History: Women in Argentina

Liberal Arts Interdisciplinary Studies
(These courses may be tailored by women’s studies faculty to fulfill the certificate)

- MAIS 5350 History of an Idea
- MAIS 5360 Contemporary Issues

### Sociology
- SOCI 5330 Social Inequality

### Women’s Studies (WS)

#### 5300 Interdisciplinary Feminist Theory and Methodology (3-0)
This course offers an introduction to feminist critical theories in the humanities and social sciences. It examines models of inclusion of diverse women in research and theory and investigates what constitutes “feminist” research. It places special emphasis on the application of feminist theories to current research, public policy, or activism in women’s and gender studies.

#### 5320 Directed Study (3-0)
Directed program of independent readings and/or a research project on a topic in women’s or gender studies. Requires consent of the course instructor and the program director. Prerequisite: Department approval.

#### 5390 Special Topics (3-0)
Studies in special topics and current issues in women’s and gender studies.
COLLEGE OF SCIENCE

Biological Sciences 370
Chemistry 377
Geological Sciences 380
Mathematical Sciences 389
Physics 395

Dr. Michael P. Eastman, Dean
Dr. Nancy Marcus, Associate Dean
Dr. Kate Miller, Associate Dean

Bell Hall, Room 100
(915) 747-5536 (ph)
(915) 747-6807 (fax)
science@utep.edu

Degree Programs

PhD
Biological Sciences
Environmental Science and Engineering*
Geological Sciences
Materials Science and Engineering*

MS
Bioinformatics
Biological Sciences
Chemistry
Environmental Science
Geological Sciences
Geophysics
Mathematics
Physics
Statistics

MAT
Master of Arts in Teaching/Mathematics

MSIS
Interdisciplinary Studies/Science*

* Interdisciplinary Program
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 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, students should refer to the Interdisciplinary 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 and Technology Institute (MRTI) 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, students should refer to the Interdisciplinary Programs section.

**Master’s Degrees**

The College of Science offers eleven graduate degrees at the master’s level. These include Master of Science (MS) degrees in Bioinformatics, Biological Sciences, Chemistry, Environmental Science, 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, students should refer to 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 Bioinformatics

PROGRAM DIRECTOR: Ming-Ying Leung

The Master of Science degree in Bioinformatics is an interdisciplinary professional degree administered through the College of Science through coursework in the Departments of Biological Sciences, Chemistry, Computer Science, and Mathematical Sciences. Bioinformatics is an emerging technical field that draws upon advanced knowledge and methodologies in biology, chemistry, computer science, mathematics and statistics especially in the areas of molecular modeling, DNA data base analysis/management, and protein structure. As an academic field, bioinformatics thus combines elements of several different areas into a specialized interdisciplinary program of study. Although the greatest current demand for trained professionals in bioinformatics is from pharmaceutical companies, there is growing interest from the fields of agriculture, infectious disease, pest-specific environmental science, criminal forensics, environmental science, biodiversity, and evolutionary biology.

Requirements for Admission

In addition to the general requirements for admission into a graduate program as specified by the Graduate School, applicants must separately submit to the Bioinformatics Admissions Committee via the Program Director: 1) a completed Bioinformatics Program Application, 2) unofficial copies of transcripts, GRE/TOEFL scores, 3) a brief statement summarizing professional goals, and 4) at least two letters of recommendation or other personal references.

Prior to making a recommendation on acceptance to the Graduate School, the Bioinformatics Admissions Committee will review the academic preparation of applicants. Unconditional admission requires a completed bachelor’s degree that includes satisfactory undergraduate coursework experiences in biology, chemistry, computer science, mathematics and statistics. This foundation is represented by the following UTEP courses and their several underlying prerequisites (or by the equivalent experience at other institutions):

- **BIOL 3414** Molecular Cell Biology
- **CHEM 4330** Biochemistry
- **CS 2402** Data Structures
- **MATH 2300** Discrete Mathematics
- **STAT 2380-2182** Statistical Methods and its laboratory

Course descriptions and prerequisites of these courses are provided in the UTEP Undergraduate Catalog. Because this suite of foundation courses is seldom met by traditional undergraduate curricula, potential applicants should make early inquiry of the Program Director for consultation on its expeditious completion.
Degree Requirements

The Master of Science degree in Bioinformatics consists of 40-41 graduate hours comprised of required courses and electives drawn from a restricted menu. The program of study is intended to be a course-intensive experience requiring two years of full-time academic work, including a summer internship in the public or private sector between the first and second years. The internship is required of all students in the program and it may be counted as a 3 credit hour elective course. Thesis is an option but not a requirement for this degree.

I. Internship

The student is responsible for securing an internship offer from an academic, industry, or government institution which is a current or potential employer of bioinformatics professionals. For the internship to count towards the Master of Science degree in Bioinformatics, the student must obtain pre-approval from the Bioinformatics Program Committee before the start of the internship. An evaluation form will be sent to the employer at the end of the internship and the student must receive a grade of “Satisfactory” or better in order to fulfill the internship requirement of this degree.

II. Courses

1. Required courses and seminars (28 semester hours):

   CHEM 5341 Analysis and Modeling of Biological Structures
   BINF 5351 Introduction to Bioinformatics I: Basic Sequence Comparisons
   BINF 5352 Introduction to Bioinformatics II: Gene Finding and Genomic Comparison
   BINF 5354 Post-Genomic Analysis
   BIOL 5340 Structure and Function of Macromolecules
   STAT 5328 Introduction to Statistical Analysis
   MIT 5310 Fundamentals of Computers
   MIT 5314 Data Base Applications

   Plus 4 credit hours of seminars chosen from:
   BINF 5110 Biology Seminar for Bioinformatics
   BINF 5111 Chemistry Seminar for Bioinformatics
   BINF 5112 Computer Science Seminar for Bioinformatics
   BINF 5113 Mathematics Seminar for Bioinformatics

2. In addition, students will take a total of 12 or 13 semester hours chosen from the list of courses below, and they should take courses from lists b) and c) only after they have completed 18 semester hours in the program. No more than 6 hours from list b) can be counted towards the M.S. in Bioinformatics degree.

   a) Regular courses
   BIOL 5316 Biosystematics
   BIOL 5326 Advances in Immunological Concepts
   BIOL 5329 Physiology of the Bacterial Cell
   BIOL 5342 Synthesis and Degradation of Macromolecules
   BIOL 5343 Mechanisms of Cellular Toxicity
   BIOL 5344 Molecular Pathogenesis
   CHEM 5329 Contemporary Topics in Organic Chemistry
   CHEM 5339 Contemporary Topics in Biochemistry
   CHEM 5342 Physical Biochemistry
   CS 5334 Parallel and Concurrent Programming or MIT 5328 Applied Multiprocessing Computing
   (Only one of CS 5334 or MIT 5328 can count as an elective for the M.S. degree in Bioinformatics)
   CS 5336 Scientific and Program Visualization
   CS 5341 Advanced Computer Architecture
   CS 5350 Advanced Algorithms
CS 5351 Interval Computations
CS 5353 Topics in Emerging Computing Paradigms
CS 5383 Topics in Software Assurance
MATH 5330 Computational Methods of Linear Algebra
MATH 5335 Techniques in Optimization
MIT 5316 Web-Based Computing
MIT 5328 Applied Multiprocessing Computing
STAT 5336 Analysis of Categorical Data
STAT 5386 Stochastic Processes
STAT 5388 Multivariate Data Analysis
STAT 5390 Nonparametric Statistics
STAT 5391 Time Series Analysis
STAT 5392 Statistical Computing
All CS and MIT electives require prior approval from the Department of Computer Science before enrollment.

b) Project/Internship courses.
BINF 5353 Bioinformatics Internship
BIOL 5302 Research in the Biological Sciences
CHEM 5396 Graduate Research in Chemistry
CS 5391 Individual Studies
CS 5396/7 Graduate Projects
MATH 5396 Graduate Research
STAT 5396 Graduate Research

3. With the approval of the Bioinformatics Program Committee and the Graduate School, up to 6 semester hours of graduate work may be transferred from another accredited institution to replace equivalent courses listed in 1 and 2 a) above. Only credit hours that have not been counted towards a previously awarded degree are allowed to be transferred.

For Graduate Students Only

Bioinformatics (BINF)

5110 Biology Seminar for Bioinformatics (1-0)
Reading and discussions of various topics in the biological sciences related to bioinformatics. Each student is expected to give at least one presentation during the course. Prerequisite: Department approval.

5111 Chemistry Seminar for Bioinformatics (1-0)
Reading and discussions of various topics in Chemistry related to bioinformatics. Each student is expected to give at least one presentation during the course. Prerequisite: Department approval.

5112 Computer Science Seminar for Bioinformatics (1-0)
Reading and discussions of various topics in computer science related to bioinformatics. Each student is expected to give at least one presentation during the course. Prerequisite: Department approval.
5113 **Mathematics Seminar for Bioinformatics (1-0)**
Reading and discussions of various topics in mathematical sciences related to bioinformatics. Each student is expected to give at least one presentation during the course. *Prerequisite:* Department approval.

5341 **Analysis and Modeling of Biological Structures (2-3)**
Introduction to the principles and methods used for the three-dimensional structural determination and simulation of macromolecules of biological interest. Molecular recognition, conformational analysis, and molecular dynamics; ligand design and docking; and modern methods for protein structure determination. *Prerequisite:* Department approval. (BINF 5341 is the same course as CHEM 5341.) Laboratory fee required.

5351 **Introduction to Bioinformatics I: Basic Sequence Comparisons (2-3)**
Theory and practice of sequence analysis, with an emphasis on nucleic acid comparisons and homologue determination. Includes understanding and use of Internet and computational tools with both public sequencing databases and experimental data. *Prerequisite:* Department approval. (BINF 5351 is the same course as BIOL 5351.) Laboratory fee required.

5352 **Introduction to Bioinformatics II: Gene Finding and Genomic Comparisons (2-3)**
A continuation of BINF 5351 with an emphasis on the analysis of protein structural information. Also includes gene annotation and whole genome comparisons. (BINF 5352 is the same course as BIOL 5352.) *Prerequisite:* Department approval. Laboratory fee required.

5353 **Internship in Bioinformatics (0-0-6)**
Practical on-the-job experience as an intern in academic, industry, or government institution which is a current or potential employer of bioinformatics professionals. No more than 3 hours of BINF 5353 may count toward a graduate degree. *Prerequisite:* Department approval.

5354 **Post-Genomic Analysis (2-3)**
The extraction and confirmation of information from entire and partially assembled genome sequences. Includes the design and use of DNA arrays, SNP's and applied proteomics in the identification and verification of expressed genes of interest. (BINF 5354 is the same course as BIOL 5354 and STAT 5354.) *Prerequisite:* Department approval. Laboratory fee required.

5398 **Thesis (0-0-3)**
Initial work on the thesis. *Prerequisite:* Department approval.

5399 **Thesis (0-0-3)**
Continuous enrollment required while work on thesis continues. *Prerequisites:* BINF 5398 with a grade of “B” or better and department approval.

Course descriptions for other required and elective courses may be found in the Biological Sciences, Chemistry, Computer Science (CS and MIT), and Mathematical Sciences departmental listings of this Graduate Catalog.
Master of Science in Environmental Science

401-B Geology Building
(915) 747-5968
langford@geo.utep.edu

PROGRAM DIRECTOR: Richard Langford

Requirements for Admission

The admission requirements include: (1) a bachelors degree in a science or engineering discipline, (2) a statement of purpose outlining the prospective student’s area of interest within environmental science, (3) three letters of recommendation, and (4) GRE scores. Foreign students who have not completed a degree at an English speaking university are required to take the TOEFL exam and must obtain the minimal score specified by the Graduate School for admission into graduate programs.

Degree Requirements

Each student must complete at least 30 hours including, 24 hours in organized courses, and a thesis (6 hours). The curriculum must include the ES core courses. However these can be replaced with electives depending on the student’s prior experience and B.S. coursework. Specific courses will be established by each student’s Advisory Committee. A maximum of 6 hours may be taken in independent studies classes and 6 hours may be taken in upper division undergraduate classes after approval from the program. No more than 6 semester hours of elective courses can be taken from departments outside the Colleges of Science and Engineering. Up to six semester hours of graduate work may be transferred from another accredited institution. All course work transferred from other institutions requires approval of both the graduate studies committee and the Graduate School. Courses for which a grade of “C” or lower was earned may not be transferred. Correspondence courses are also not accepted for graduate credit.

All students must register for ESCI 5101 each semester they are in residence. All candidates are required to pass an oral defense of their thesis in an open forum. Candidates must submit a draft of the thesis at least 7 days prior to the defense date.

Semester Credit Hour Requirements

Environmental Science Core 13
Electives 11
Thesis research 6
Total (SCH) 30

Foundation courses

Courses required of all students in the proposed program:

Environmental Science Core (13 semester hours)

ESCI 5101 Graduate Seminar (must be taken 2 times)

Two courses from the following:

ESCI 5401 Environmental Biology
ESCI 5402 Environmental Chemistry
ESCI 5403 Environmental Geology
One course from the following:

- POLS 5380  Selected Problems in Government
- ENGL 5312  Technical Writing Proseminar
- ENGL 5315  Professional Writing Seminar

**Courses freely elected by students** (11 semester hours)

Students must complete at least 11 semester hours of elective courses. No more than 6 semester hours of approved upper-division undergraduate course work may be taken and no more than 6 semester hours may be in directed study course work.

**Thesis Research** (6 semester hours required)

- ESCI 5398  Thesis Research
- ESCI 5399  Thesis Research

**Environmental Science (ESCI)**

**5101  Graduate Seminar (1-0)**
Presentation and discussion of topics in environmental science and engineering by graduate students, faculty and visitors. **Prerequisite:** Enrollment in the MS program in Environmental Science.

**5315  Topics in Environmental Science (3-0)**
Study of topics in fields such as environmental justice, environmental chemistry, environmental biology, environmental justice, environmental health, physics, hydrology and environmental law. May be repeated when topics vary. **Prerequisites:** Graduate standing and instructor approval.

**5401  Environmental Biology (3-3)**
Examination of the relationship between biological and physical environments. Topics will include ecology and biogeochemical cycles. **Prerequisites:** Enrollment in the MS program in Environmental Science or permission of program director and one semester of course work in introductory biology.

**5402  Environmental Chemistry (3-3)**
Physical and chemical processes influencing the behavior of contaminants in the air, water and soil. Includes acidity, basicity, redox properties, solubility, partitioning and transport in the environment. The laboratory will emphasize analytical protocols utilized in environmental laboratories. **Prerequisites:** Enrollment in the MS program in Environmental Science or permission of program director.

**5403  Environmental Geology (3-3)**
Addresses the relation of earth sciences to environmental issues. Topics will include geohazards, engineering geology, ground and surface water, erosion, geochemistry, and global change. Local and national problems in environmental geology will be highlighted. The laboratory will emphasize analysis of earth materials, mapping, and problem solving. **Prerequisites:** Enrollment in the MS program in Environmental Science or permission of program director.

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

**5399  Thesis Research II (0-0-3)**
Continuous enrollment required while work on thesis continues. **Prerequisite:** ESCI 5398.
The Master of Science in Interdisciplinary Studies (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. The committee, in consultation with the student, determines courses for the individual study plan. 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.
The Department of Biological Sciences offers a Master of Science degree and a Doctor of Philosophy degree in Biological Sciences.

Master of Science in Biological Sciences

Requirements for Admission

1. Bachelor’s degree from an accredited institution in the United States or proof of equivalent education at a foreign institution
2. Undergraduate degree in biology or a related field and at least eight semester hours of general chemistry
3. Competitive scores in the Verbal, Quantitative and Analytical Writing components of the Graduate Record Examination (GRE)
4. Competitive TOEFL score 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.
Ph.D. 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. Competitive scores in the Verbal, Quantitative, and Analytical Writing components of the Graduate Record Examination (GRE)
4. Personal statement of research and professional interests
5. Three letters of recommendation indicating endorsement of the applicant for doctoral study
6. Competitive TOEFL score 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. Successful candidates typically have scores above 550/computerized TOEFL 213.

Requirements for the 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 dissertation research
3. 6 semester hours of dissertation (BIOL 6398 and BIOL 6399)

With Department approval, 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 5130 Biological Sciences Seminar (taken 3 times)
   - BIOL 5131 Ethical, Social, and Political Dimensions of Science
   - BIOL 5328 Biostatistics
   - BIOL 5340 Structure and Function of Macromolecules
   - BIOL 6301 Environmental Pathobiology
   - BIOL 6310 Advanced Research Techniques

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. Dissertation research (30 semester hours minimum)
   Options include:
   BIOL 6390 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.

For Undergraduate and Graduate Students

Biology (BIOL)

3119 Experimental Embryology
3318 Developmental Biology
3320 Genetics
3120 Virtual Genetics
3321 Evolutionary Theory
3326 Animal Ecology
3330 Histology
3341 Plants in Southwest Cultures
3414 Molecular Cell Biology
3416 Ecology
3427 Desert Ecology
4198 Special Problems
4223 Transmission Electron Microscopy
4225 Field Biology
4298  Special Problems  
4317  Plant Ecology  
4322  Biological Ultrastructure Interpretation  
4324  Animal Behavior  
4325  Field Biology  
4326  Bioarchaeology  
4370  History and Philosophy of Biology  
4388  Mammalian Physiology  
4390  Biological Practicum  
4398  Special Problems  

Botany (BOT)  
3330  Comparative Plant Morphology  
3332  Economic Botany  
3340  Plant Physiology  
3437  Plant Taxonomy  

Microbiology (MICR)  
3128  Microbial Ecosystems Techniques  
3328  Microorganisms in Ecosystems  
3443  Pathogenic Microbiology  
3445  Microbial Physiology  
3449  Prokaryotic Molecular Genetics  
4152  General Virology Techniques  
4351  General Virology  
4355  Medical Mycology  
4453  Immunology  

Zoology (ZOOL)  
3464  Medical Parasitology  
3468  Entomology  
4155  Vertebrate Paleontology Techniques  
4157  Advanced Vertebrate Paleontology Techniques  
4181  Vertebrate Physiology Methods  
4354  Paleozoic and Mesozoic Vertebrate Paleontology  
4356  Cenozoic Vertebrate Paleontology  
4380  Vertebrate Physiology  
4384  Neurobiology  
4476  Fish, Amphibians, and Reptiles  
4478  Birds and Mammals  

For Graduate Students Only  

Biology (BIOL)  
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)**
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.

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. *Prerequisite*: Department approval. Laboratory fee required.

5322 **Advances in Evolutionary Theory (3-0)**
Study of evolutionary processes and phenomena at selected levels of biological organization with respect to current hypotheses and research technologies. *Prerequisites*: BIOL 5301 with a grade of “C” or better and department approval.

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 **Biostatistics (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.

5351 **Introduction to Bioinformatics I: Basic Sequence Comparisons (2-3)**
Theory and practice of sequence analysis, with an emphasis on nucleic acid comparisons and homologue determination. Includes understanding and use of Internet and computational tools with both public sequencing databases and experimental data. *Prerequisite*: Department approval. Laboratory fee required.

5352 **Introduction to Bioinformatics II: Gene Finding and Genomic Comparisons (2-3)**
A continuation of BIOL 5351 with an emphasis on the analysis of protein structural information. Also includes gene annotation and whole genome comparisons. *Prerequisite*: Department approval. Laboratory fee required.

5353 **Internship in Biological Science (0-0-6)**
Practical on-the-job experience as an intern in government and/or private industry. No more than 3 hours of BIOL 5353 may count toward a graduate degree. *Prerequisite*: Department Approval.

5354 **Post-Genomic Analysis (2-3)**
The extraction and confirmation of information from entire and partially assembled genome sequences. Includes the design and use of DNA arrays, SNP's and applied proteomics in the identification and verification of expressed genes of interest. *Prerequisite*: Department approval. Laboratory fee required.

5355 **Genomic Analysis and Assembly (2-3)**
Theory and practice of whole genome sequence assembly using a combination of shotgun and directed techniques. *Prerequisite*: Department approval. Laboratory fee required.

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.

For Doctoral Students Only

6301  Environmental Pathobiology (3-0)
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.

6303  Gene Regulation (3-0)
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.

6304  Physiological Regulatory Mechanisms (3-0)
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.

6305  Cell Physiology (3-0)
Physiological aspects of cells and cellular organelles, with emphasis on the potential effects of adverse conditions and cell stress.

6306  Membrane Biology (3-0)
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.

6310  Advanced Research Techniques (0-0-6)
An overview of advanced research methods and strategies. Students will rotate through three laboratories and spend 3-4 weeks at each lab.

6312  Biodiversity (3-0)
Genotypic and phenotypic diversity at the population, species, and community levels. Role of bioconservation in maintaining intact communities and preserving genetic heterogeneity.

6345  Molecular Parasitology (3-0)
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.

6390  Independent Research (0-0-3)
6490  Independent Research (0-0-4)
6590  Independent Research (0-0-5)
6690  Independent Research (0-0-6)
May be repeated.

6398  Dissertation (0-0-3)
Initial work on the doctoral dissertation.

6399  Dissertation (0-0-3)
Completion of work on the doctoral dissertation. Continuous enrollment required while work on the dissertation continues.
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.

Master of Science in Chemistry

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. Submission of official Graduate Record Examination (GRE) scores
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.

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.

Chemistry (CHEM)
For Undergraduate and Graduate Students

3110 Laboratory for Chemistry 3310
3124 Laboratory for Chemistry 3324
3125 Laboratory for Chemistry 3325
3151 Laboratory for Chemistry 3351
3152 Laboratory for Chemistry 3352
3221 Laboratory for Chemistry 3321
3222 Laboratory for Chemistry 3322
3310 Analytical Chemistry
3321 Organic Chemistry
3322 Organic Chemistry
3324 Organic Chemistry
3325 Organic Chemistry
3351 Physical Chemistry
3352 Physical Chemistry
4165 Laboratory for Inorganic Chemistry
4176 Introduction to Research
4211 Instrumental Methods of Analytical Chemistry
4212 Laboratory for Chemistry 2411
4328 Advanced Topics in Organic Chemistry
4330 Topics in Biochemistry
4332 Biochemistry
4362 Structure of Matter
4365 Inorganic Chemistry
4376 Introduction to Research
4380 Polymer Chemistry

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.

5301 Modern General Chemistry (3-0)
An intensive course intended for schoolteachers, which presents a thorough grounding in the basic principles of chemistry. May not be counted toward the MS Degree in Chemistry. Prerequisite: 18 semester hours of undergraduate Chemistry.

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.

5322 Advanced Organic Chemistry II (3-0)
A continuation of CHEM 5321. Prerequisite: CHEM 5321.

THE UNIVERSITY OF TEXAS AT EL PASO
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.

5341 **Analysis and Modeling of Biological Structures (2-3)**
Introduction to the principles and methods used for the three-dimensional structural determination and simulation of macromolecules of biological interest. Molecular recognition, conformational analysis, and molecular dynamics; ligand design and docking; and modern methods for protein structure determination. Laboratory fee required.

5342 **Physical Biochemistry (3-0)**
The physical properties of biological macromolecules and the methods used to analyze their structure and function. Topics include: thermodynamics, electrostatics; protein folding; dynamics and transport processes; enzyme kinetics; IR, UV, EPR, fluorescence, and NMR spectroscopy; X-ray crystallography.

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.
The Department of Geological Sciences offers a Doctor of Philosophy (PhD) degree in Geological Sciences and the Master of Science (MS) degree in Geological Sciences and in Geophysics (in collaboration with the Department of Physics).

Master of Science in Geological Sciences

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, with no deficiencies in science courses required for the BS degree in Geological Sciences 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. Submission of official Graduate Record Examination (GRE) scores
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 (six 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 14 days prior to the defense. Two complete copies of the thesis in PDF electronic format, turned in on floppy disk, zip disk, or CD, must be turned into the Graduate School for the Semester in which the student intends to graduate. See “Thesis Requirements” in General Degree Requirements in this catalog. One unbound copy and a PDF or Word electronic copy also must be submitted to the student’s departmental Graduate Advisor.
Master of Science 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. Submission of official Graduate Record Examination (GRE) scores
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. Students should also consult the Department of Physics section for additional requirements.

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 14 days prior to the defense. Two complete copies of the thesis in PDF electronic format, turned in on floppy disk, zip disk, or CD, must be turned into the Graduate School for the semester in which the student intends to graduate. See “Thesis Requirements” in General Degree Requirements in this catalog. One unbound copy and a PDF or Word electronic copy also must be submitted to the student’s departmental 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.

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, or engineering, institution 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. Submission of official Graduate Record Examination (GRE) scores
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 (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 6 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 master’s candidate, the committee will consist of three members of the graduate faculty, two from the Department of Geological Sciences and one from outside the department. For each doctoral candidate, a Doctoral Committee will consist of the dissertation advisor, at least three 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 14 days before the defense and any suggested corrections must be made. A copy of the dissertation in PDF or Word electronic format must be submitted to the Graduate School via the University Microfilms International website (umni.bepress.com), for a format check. This must be submitted prior to the deadline date published in the Class Schedule for the semester in which the student intends to graduate. See “Dissertation Requirements” in General Degree Requirements of this catalog. One unbound copy and a PDF or Word electronic copy also must be submitted to the student’s departmental 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. 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. Furthermore, 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.

For Undergraduate and Graduate Students

Geology (GEOL)

4155 Vertebrate Paleontology Techniques
4157 Advanced Vertebrate Paleontology Techniques
4166 Directed Study, Geology
4266 Directed Study, Geology
4354 Paleozoic and Mesozoic Vertebrate Paleontology
4356 Cenozoic Vertebrate Paleontology
4362 Stratigraphy
4366 Directed Study, Geology
4380 Environmental Geology and Geophysics

Geophysics (GEOP)

4167 Directed Study, Geophysics
4267 Directed Study, Geophysics
4332 Exploration Geophysics, Seismic Methods
4334 Exploration Geophysics, Non-Seismic Methods
4367 Directed Study, Geophysics

For Graduate Students Only

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 for credit when the topics vary.

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 magma 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. CHEM 3351-3352 recommended. Prerequisite: GEOL 3315 or equivalent. 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 3425, or instructor approval.

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 3425 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 you agree with those who have defined real stratigraphic units. Prerequisite: GEOL 4362 or department approval. Laboratory fee required.

5375 Quantitative Techniques in the Geological Sciences (2-3)
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.

5376 Low Temperature Geochemistry (2-2)
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.

5379 Petroleum Geochemistry (3-0)
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.

5383 Physical Hydrogeology (2-3)
The first part of the class will highlight subsurface geology and groundwater flow, recharge and discharge of groundwater and the interaction between surface water bodies and groundwater. The second part of the course will focus on well hydraulics with aquifer tests to determine hydraulic parameters such as transmissivity, hydraulic conductivity, and storage in various types of aquifers.
5384 Nuclear Waste Disposal (3-0)
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.

5387 Applied Quaternary Geology (3-0)
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.

5388 Geohydrobiology (3-0)
Study of the interaction of groundwater geology with the microbial population of the subsurface. Emphasis is placed on the transport of viruses and bacteria in various subsurface media, microbial effects on water chemistry, and the use of microbes for environmental cleanup of contaminated sites. Prerequisite: Graduate standing.

5392 Environmental Risk Assessment (2-3)
Risk assessment techniques to evaluate the risk to human health and the environment posed by air-, soil-, and water-contamination (both groundwater and surface water). Special emphasis will be placed on desert and wetland environments for which case studies will be presented. Prerequisite: Graduate standing.

5397 Geology and Mineral Resources of Mexico (3-0)
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.
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.

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.

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 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.

For Doctoral Students Only

Geology (GEOL)

6105 Directed Study in Geology (0-0-1)
6205 Directed Study in Geology (0-0-2)
6305 Directed Study in Geology (0-0-3)
Prerequisites: Doctoral graduate standing and instructor approval.

6115 Advanced Topics in the Geological Sciences (1-0)
6315 Advanced Topics in the Geological Sciences (3-0)
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.

6296 Doctoral Research in Geological Sciences (0-0-2)
6396 Doctoral Research in Geological Sciences (0-0-3)
Cannot be used to satisfy minimum degree requirements. Grade of
S or U. Prerequisites: Doctoral standing and instructor approval.

6320 Dissertation (0-0-3)
Initial work on dissertation.

6321 Dissertation (0-0-3)
Continued enrollment required while work on dissertation continues.
Prerequisite: GEOL 6320.
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

124 Bell Hall
(915) 747-5761
mathdept@math.utep.edu

CHAIRPERSON: Helmut Knaust

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.

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 or STAT 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 full-time MS students must enroll in MATH 5195 or STAT 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 STAT 5380.

Specific Requirements for the Master’s Degree in Statistics

Specific course requirements for the MS in Statistics are STAT 5380, STAT 5381, STAT 5388, MATH 5321, and MATH 4326. Comprehensive examinations must be passed in Mathematical Statistics (STAT 5380-81) and Applied Statistics (STAT 5385-88).
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; students should consult the College of Education section for such information.)

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 are 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.

For Undergraduate and Graduate Students

Mathematics (MATH)

3300 History of Mathematics*
3319 Elementary Number Theory
3320 Actuarial Mathematics
3327 Applied Algebra
3328 Foundations of Mathematics
3335 Applied Analysis I
3341 Introduction to Analysis
4199-
4399 Individual Studies in Mathematics
4326 Linear Algebra
4329 Numerical Analysis
4336 Applied Analysis II
4370 Topics Seminar

Statistics (STAT)

3330 Probability
3380 Sampling Techniques
3381 Nonparametric Statistical Methods
4380 Statistics I

*Graduate credit only for MAT students.
For Graduate Students Only

Mathematics (MATH)

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.

5310  Introduction to Functional Analysis (3-0)
Elements of functional analysis for applications in statistics,
optimization and computational partial differential equations (PDEs):
normed spaces, Banach spaces, Lebesgue spaces, basic
inequalities, inner product, Hilbert spaces, orthogonal projections,
Riesz theorem, elements of Sobolev spaces. Prerequisite: MATH
2313 and MATH 3323 each with a grade of “C” or better.

5311  Applied Mathematics (3-0)
Mathematics 5311 is designed to introduce the student to those areas
of mathematics that 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.

5314  Partial Differential Equations (3-0)
Partial derivatives and differential operators, classification of partial
differential equations with emphasis on elliptic, parabolic and
hyperbolic, examples from physics, maximum principle and well-
posedness, boundary conditions, weak formulations, Lax-Milgram
lemma, overview of existence and uniqueness results. Prerequisite:
MATH 5310 with a grade of “C” or better.

5321  Principles of Analysis (3-0)
Investigation of convergence, continuity, differentiability, compactness
and connectedness, the Riemann-Stieljes 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:
MATH 3323 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.
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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.

5335 Techniques in Optimization (3-0)
An introduction to the formulation of optimization problems and their
numerical solution with application to problems in science and
engineering. Emphasis on deterministic and stochastic techniques
such as Newton type methods and simulated annealing. Prerequisites:
Math 1411 with a grade of “C” or better and knowledge of a high-level
programming language.

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 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.

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.
Statistics (STAT)

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.

5328 **Introduction to Statistical Analysis (2-3)**
Fundamental techniques for statistical data analysis, including basic probability concepts, inference about the means and variances of two populations, analysis of variance and covariance, least squares and logistic regression, categorical data analysis, nonparametric tests and experimental design. Emphasis will be placed on analysis of biological and other data sets using statistical software packages, checking validity of modeling assumptions, and alternatives when modeling assumptions are not satisfied. Computer simulations are used to illustrate concepts such as power and confidence level. Open to students of all disciplines. **Prerequisites:** STAT 2380 and STAT 2182 each with a grade of “C” and instructor approval. Laboratory fee required.

5336 **Categorical Data Analysis (3-0)**
Analysis of multifactor contingency tables: table structure, summary measures of association, goodness-of-fit and independence tests, exact tests for small samples. Generalized linear models: logit, probit and loglinear models, estimating model parameters, model selection and checking. Emphasis will be placed on application of these techniques to analyze biological data. **Prerequisite:** STAT 5328 with a grade of “C” or better, or equivalent.

5354 **Post-Genomic Analysis (2-3)**
Extraction and confirmation of information from entire and partially assembled genome sequences based on experimental and statistical analysis. Includes the experimental design, application, and data analysis of DNA arrays, SNPs, and applied proteomics in the identification and verification of expressed genes of interest. (Same as BINF 5354 and BIOL 5354. Credit cannot be earned for more than one of BINF 5354, BIOL 5354, and STAT 5354). **Prerequisite:** Department approval. Laboratory fee required.

5370 **Special Topics (3-0)**
Various topics not included in regular course 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:** STAT 5380 with a grade of “C” or better.
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. Prerequisites: MATH 3323 and STAT 4380 each with a “C” or better 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 or MATH 5321, and (2) STAT 3330 or STAT 5380 each with a grade of “C” or better.

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: STAT 5385 with a grade of “C” or better, 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: STAT 5380 with a grade of “C” or better, 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 non-stationary series. An introduction to the analysis of multiple time series. Some use of statistical software will be included. Prerequisite: STAT 5380 with a grade of “C” or better.

5392  Statistical Computing (3-0)
A study of stochastic simulation and select numerical methods used in statistical computation. Prerequisites: MATH 4326 and STAT 4380 each with a grade of “C” or better, or equivalent and a high-level programming language.

5396  Graduate Research (3-0)
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  MS Thesis (0-0-3)
Initial work on the thesis.

5399  MS Thesis (0-0-3)
Continuous enrollment required while work on thesis continues. Prerequisites: STAT 5398 with a grade of “C” or better and 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, biophysics and optics, computational physics, condensed matter and surface physics, geophysics, nuclear, physics education, and space physics. Through a cooperative program with the Geological Sciences Department, the Master of Science in Geophysics is offered. For details, students should contact the Graduate Advisor of the Physics Department.

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.

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.

Students at the University of Texas at Brownsville may also pursue the MS degree through distance learning sections of regular graduate courses. These sections will be offered on an as-needed basis.

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.

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.

Physics (PHYS)

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.)

- 3243 Advanced Laboratory Practice
- 3323 Physical Optics
- *3325 Survey of Modern Physics
- *3331 Thermal Physics
- *3351 Analytical Mechanics I
- 3352 Analytical Mechanics II
- *3359 Astrophysics
- 4328 Theoretical Geophysics
- *4341 Electromagnetics I
- 4342 Electromagnetics II
- *4348 Fundamentals of Acoustics
- 4355 Introduction to Quantum Mechanics
- 4356 Atoms, Molecules, and Solids
- 4357 Relativity, Nuclei, and Particles

For Graduate Students Only

- 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.
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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. Offered during fall semester. Prerequisite: PHYS 3352.

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. Offered during spring semester. Prerequisite: PHYS 4356.

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 typewritten 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 PROGRAMS

Interdisciplinary Degree Programs

Doctoral Programs

PhD Environmental Science and Engineering
PhD Interdisciplinary Health Sciences
PhD Materials Science and Engineering

Master’s Programs

MAIS Master of Arts in Interdisciplinary Studies
MA Master of Arts in Latin American and Border Studies
MA Master of Arts in Leadership Studies
MBA/MPA Master of Business Administration and Master of Public Administration
MFA Master of Fine Arts in Creative Writing
MIT Master of Information Technology
MPA Master of Public Administration
MS Master of Science in Environmental Science
MSIS Master of Science in Interdisciplinary Studies

Graduate School Courses
Interdisciplinary Programs

Ph.D. in Environmental Science and Engineering

Center for Environmental Resource Management
(915) 747-5433
jgardea@utep.edu

PROGRAM DIRECTOR: John Walton
Program Coordinator: Cindy Conroy

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 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 (BECC) in Ciudad Juárez, Mexico, and UTEP’s already established base of collaborations with Mexico on environmental problems, UTEP and El Paso have 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

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. At least 30 hours are organized course work, which must include certain ESE core courses, including ESE 6306, Principles of Experimental and Engineering Design and ESE 6307, Interdisciplinary Environmental Problem Solving. The balance of the required 30 semester hours of organized course work will be fulfilled by a selection of elective courses. Enrollment of the candidate in research and dissertation courses will complete the remainder of the 60 semester hours.
Prior to taking ESE core courses, all students are generally expected to have had the equivalent of basic courses in biology, chemistry, physical geology, and calculus, including differential equations. All full-time students are required to enroll in ESE 6107 during the fall and spring semesters. All students must complete a minimum of 2 hours of ESE 6107. A maximum of six hours of ESE 6107 will count towards fulfilling the requirements of the degree.

**Note:** All degree requirements must be completed within eight years.

### Semester Hour Requirements

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation/Leveling Courses</td>
<td>as needed</td>
</tr>
<tr>
<td>ESE Core Course</td>
<td>18</td>
</tr>
<tr>
<td>Environmental Project</td>
<td>6</td>
</tr>
<tr>
<td>Elective Courses*</td>
<td>6-12</td>
</tr>
<tr>
<td>Research</td>
<td>18-24</td>
</tr>
<tr>
<td>Dissertation</td>
<td>6</td>
</tr>
</tbody>
</table>

*May include six hours of ESE 6107 and additional core courses, if approved by the student’s Doctoral Advisory Committee.

Students are required to pass a qualifying examination based on material from the ESE core courses and any leveling courses they may have taken during the first two semesters of residence. Students are eligible to sit for the qualifying examination a maximum of two times.

All of the core classes are required and the student must obtain a grade of “B” or better in each of the core courses.

Students are encouraged to begin a research germane to their dissertation topic early in the course of study. The student must identify a dissertation supervisor during the first two semesters of full-time or part-time participation in the ESE program. Within this same period, a Doctoral Committee must be formed, a dissertation proposal prepared for review and approval by the student’s committee, and an abstract of the proposal distributed to the ESE faculty for comment. Students will not be allowed to register for additional course work until these requirements have been met.

Prior to enrolling in the dissertation courses, each student will take a comprehensive examination administered by the student’s Doctoral Advisory Committee. The examination may be written, oral or both. Students are eligible to sit for the qualifying exam a maximum of two times.

The dissertation must demonstrate the ability to perform independent research and the competence for scholarly exposition. It should present original investigation at an advanced level of a significant problem in environmental science and engineering and should provide the basis for a publishable contribution to the research literature in the field. Students should enroll in ESE 6398 during the first term of dissertation work and ESE 6399 each term thereafter. Each doctoral candidate must successfully defend the dissertation before the Doctoral Advisory Committee.

### Environmental Science and Engineering (ESE)

The ESE core consists of ESE 6301, ESE 6303, ESE 6402, ESE 6404 and ESE 6405. Required course work includes ESE 6306, and ESE 6307. ESE 6398 and ESE 6399 must also be completed for the degree.

#### 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 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.

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

Ph.D. in Interdisciplinary Health Sciences

See information regarding this degree in the College of Health Sciences section of this catalog on page 237.

Ph.D. in Materials Science and Engineering

Materials Research
and Technology Institute (MRTI)
M-201 Engineering
(915) 747-5468
fekberg@utep.edu

PROGRAM DIRECTOR: Lawrence Murr

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 structure, properties, synthesis and processing, and performance of materials. 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
• Instrumentation and Modeling Short Courses
• Doctoral Research Symposium I & II
Requirements for Admission

Admission to the Ph.D. program in materials science and engineering with a BS or MS degree in a related field (Physics, Chemistry, Electrical and/or Electronic Engineering, etc.) 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

All students who enter the program are required to take 4 core courses and three hours of research symposia for a total of 17 credit hours. Students who enter with an M.S. degree may receive credit for up to 30 credit hours. The core and elective courses (discussed below) are traditional lecture or seminar courses. The student will take a minimum of 6 credit hours of Doctoral Dissertation, and additional credit hours of Advanced Study, Graduate Research, Independent Study, or Dissertation. A minimum of eighty-five (85) credit hours are required.

The number and subject area of elective courses in advanced topics are determined by the student and his/her research advisor in consultation with the student’s Dissertation Committee; although generally 12 hours of advanced topics (beyond the core) will be required. Depending on the background and preparation of the student, and/or the nature of the student’s research, the student’s mentor and/or the Dissertation Committee, acting together with the student, may suggest additional courses not chosen from the list of electives.

The UTEP MASE program currently does not offer a terminal Masters degree. However, MASE Ph.D. students may choose to complete a Masters degree in an appropriate science or engineering department, or in MSIS, Masters Degree in Interdisciplinary Studies. Requirements for these M.S. degrees can be found elsewhere in the catalog.

Students are required to pass an oral Qualifying Examination administered by their Research Committee. This examination consists of defending a written Dissertation Proposal and answering questions of either a broad or specific nature in relationship to preparation to conduct dissertation research. This examination is usually administered after a minimum of 2 semesters of work. Students may not register for dissertation credits until after the Qualifier Examination has been passed. Research undertaken prior to passing the examination can use appropriate graduate research projects or independent study courses.

At the conclusion of the research program, the student will make a public presentation of the dissertation. This will also constitute a Final Oral Examination or Dissertation Defense with questions from both the Research (Dissertation) Committee and the general public.

Materials Science and Engineering (MASE)

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. \textit{Prerequisite}: MME 5401, MME 5303 or equivalent, or instructor approval.

\textbf{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. \textit{Prerequisites}: MME 5401, MME 5303, MME 5304, and MME 5305 or equivalent, or instructor approval.

\textbf{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. \textit{Prerequisite}: MASE 5371 or equivalent.

\textbf{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. \textit{Prerequisite}: Instructor approval.

\textbf{5392 Special Topics in Materials Engineering (3-0)}
Selected topics in materials engineering including advanced materials and processes, structure and properties of advanced materials, advanced materials performance, etc. May be repeated for credit when topic varies.

\textbf{*6103 Instrumentation and Modeling Short Courses (0-1)}
Each short course will provide detailed instruction and hands-on experience in the use of one instrument (TEM or SEM/EDS, or XPJ/LEEDS/Auger, etc.) or a cluster of related instruments (DTA and DSC and DMA, for example) or an advanced software package for modeling or simulation of materials.

\textbf{6191 Individual Studies (0-0-1)}
\textbf{6291 Individual Studies (0-0-2)}
\textbf{6391 Individual Studies (0-0-3)}
Independent studies in materials science and engineering.

\textbf{*6195 Doctoral Research Symposium I & II (0-0-1)}
MASE 6195 involves formal presentations and discussion by research students in the program (first year). MASE 6196 taken in subsequent semesters or years, but students do not make presentations. Outside speakers on related topics to materials science and engineering. \textit{Prerequisite}: Take MASE 6195 first, then MASE 6196 at least twice.

\textbf{*6196 Doctoral Research Symposium I & II (0-0-1)}
MASE 6195 involves formal presentations and discussion by research students in the program (first year). MASE 6196 taken in subsequent semesters or years, but students do not make presentations. Outside speakers on related topics to materials science and engineering. \textit{Prerequisite}: Take MASE 6195 first, then MASE 6196 at lease twice.

\textbf{6294 Graduate Research Projects (0-0-2)}
\textbf{6394 Graduate Research Projects (0-0-3)}
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.

Dissertation (0-0-3)
Initial work on the dissertation.

Dissertation (0-0-3)
Continuous enrollment required while work on the dissertation continues. Prerequisite: MASE 6398.

Advanced Concepts in Materials Science and Engineering (4-0)
A blend of topics on contemporary solid state physics and chemistry emphasizing structure and properties including processing (synthesis) and performance, and 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.

Materials Applications and Engineering (3-1)
A series of investigations in the application of scientific and engineering principles to practical materials systems. The course emphasizes the complexity of successful materials applications, and the interplay between processing and performance. Three to four investigations will be performed during the semester. Each investigation begins with introductory reading, discussion, and planning (including application of qualitative and quantitative experimental design concepts). Then the class performs process experiments, followed by characterization of product microstructure and performance. Students will be evaluated on the basis of their team contributions (to discussions, design of investigations, performance of the investigations, and communication of the results) as well as their individual knowledge and understanding of fundamental principles and techniques (as proven on tests).

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.

Core Courses
Master of Arts in Interdisciplinary Studies (MAIS)

See information regarding this degree in the College of Liberal Arts section under Liberal Arts Interdisciplinary Studies.

Master of Arts in Latin American and Border Studies

See information regarding this degree in the College of Liberal Arts section under Liberal Arts Interdisciplinary Studies.

Master of Arts in Leadership Studies

Institute for Policy and Economic Development
302 Kelly Hall
(915) 747-7974

DIRECTOR: Dennis Soden
COORDINATOR: Debra Little
GRADUATE FACULTY: Erbert, Joplin, Soden, Weaver, Witherspoon
CONTRIBUTING FACULTY: Bretting, Dalton
ADJUNCT FACULTY: Conary, Little, McElroy, Olmedo

The Master in Leadership Studies (MLS) is a program preparing its graduates for positions of responsibility in education, military, private industry, government and the not-for-profit sectors dedicated to the improvement of both the substance and processes of leadership in a variety of roles. The Master in Leadership Studies degree provides professional education for students interested in leadership careers. The interdisciplinary program is designed to stress the knowledge, skills, values, and behaviors essential to the successful organizational leader. Some flexibility in curriculum is permitted to meet the diverse educational needs of students at different points of time in their careers and in need of specialization in light of their career goals. The curriculum components are designed to produce professionals capable of intelligent and creative analysis, communication, and action in leadership functions.

Requirements for Admission

1. Submission of transcripts according to the requirements of the Graduate School.
2. Bachelor’s degree from an accredited college or university.
3. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework.
4. A one- to two-page statement of purpose that addresses educational and career goals and reasons for pursuing a MLS degree.
5. Three letters of recommendation from instructors, job supervisors or others in a position to evaluate your ability to succeed in a MLS program.
6. For international students, a score of 600 on the TOEFL and an in-person or telephone interview.

Requirements for the MLS Degree

Completion of at least 33 semester hours of course work consisting of the following:

1. At least 24 hours of courses in the theoretical, methodological, and technical aspects of Leadership studies.
   - MLS 5300 Essentials of Leadership
   - MLS 5310 Assessing and Evaluating Leadership: Leadership Colloquium
   - MLS 5320 Leadership Principles and Practice: A Management Perspective
   - MLS 5330 Leadership Principles and Practice, Leading Change: A Communication Perspective
   - PAD 5350 Organizational Theory & Behavior
   - PAD 5300 Research Methods
   - PAD 5360 Applied Statistics for Public Administrators
   - MLS 5350 MLS Leadership Studio – Capstone

2. Completion of an additional 9 hours of approved courses in an area of concentration developed by the student. Areas of concentration may be chosen from any area of the curriculum, to include, but not limited to, Financial Management, Human Resource Management, Public Administration, Economic Development, Communication, Health Administration, Border and International Administration, Not-for-Profit Administration, and Urban and Regional Planning. No more than 3 hours of electives can be at the undergraduate level in courses approved for graduate-level credit.

3. The final program requirement is completion of the capstone course, MLS 5350 Leadership Studio – Capstone (3 semester hours).

Master of Arts in Leadership Studies Concentrations

Examples of possible concentration areas consisting of three courses (9 credit hours) are:

A. Public Administration
Students selecting the Public Administration concentration must elect three of the following courses:
   - PAD 5310 Public Policy Process and Institutions
   - PAD 5311 Economic Analysis for Public Administrators
   - PAD 5352 Public Budgeting and Financial Management
   - PAD 5353 Human Resources Management
   - PAD 5364 Public Participation and Democratic Process
   - PAD 5365 Policy Analysis and Decision Making

B. Economic Development
The Economic Development concentration consists of two required courses and one elective. Students selecting this concentration must also have completed all of the prerequisite coursework in micro/macro-economics and undergraduate statistics.
   - PAD 5368 Regional Economic Development: Research Methods (Required)
   - PAD 5369 Economic Impact Models (Required)
   - ECON 3334 Regional Economics
ECON 3335  Urban Economics  
REST 3300  Real Estate Principles  
PAD 5360  Urban Administration  

C. Communication  
Students selecting the Communication concentration must elect three of the following courses:  
COMM 5337  Seminar in Organizational Communication (Any topic)  
COMM 5337  Seminar in Organizational Communication (May be repeated for credit when topic varies)  
COMM 5335  Seminar in Intercultural/International Communication  
COMM 5332  Seminar in Contemporary Rhetoric or  
COMM 5362  Organizational Communication  

D. Health Administration  
Students selecting the Health Administration concentration must:  
Take at least one course from the following context courses:  
SOCI/ ANTH 4346  Health and Illness in Cross-Cultural Perspective  
SOCI 5340  Seminar in Demography  
SOCI 5341  Special Graduate Topics: Medical Sociology  
SOCI 5362  Seminar in Health Services Delivery  

Take at least one course from these planning and administration courses:  
HSCI 5356  Planning and Administering Health Promotion Programs  
HSCI 5359  Grant Writing in Health Professions  
PSCI 5340  Management and Health Systems in Physical Therapy  
NURS 5335  Management Roles and Operations  
NURS 5337  Health Care Financial management  
NURS 5338  Health Law, Policy and Ethics  
NURS 5365  Managing Health Care Outcomes  

Take at least one course from the following list, but not any course counted in other categories.  
SOCI/ ANTH 4346  Health and Illness in Cross-Cultural Perspective  
SOCI 5340  Seminar in Demography  
SOCI 5341  Special Graduate Topics  
SOCI 5362  Seminar in Health Services Delivery  
HSCI 5356  Planning and Administering Health Promotion Programs  
HSCI 5359  Grant Writing in Health Professions  
PT 5340  Management and Health Systems in Physical Therapy  
NURS 5335  Management Roles and Operations  
NURS 5337  Health Care Financial Management  
NURS 5338  Health Law, Policy and Ethics  
NURS 5365  Managing Health Care Outcomes  

E. Border and International Administration  
The Border and International Administration concentration consists of two required courses and one elective. The two required courses are:  
PAD 5355  Comparative Public Administration  
POLS 5344  Seminar in Border Theory
The one elective may be selected from the following course options:

ECON 5368 Border Economics
LABS 5301 Issues in Border Studies
POLS 5331 Seminar in International Organizations and Law
POLS 5336 Seminar in Southwestern Border Politics
POLS 5338 Seminar in International Political Economy
SOCI 5355 U.S.-Mexico Borderlands in Change
SOCI 5341 Special Topics Criminal Justice on the U.S.-Mexico Border

Graduate Certificate in Leadership Studies

The certificate in Leadership Studies is an interdisciplinary non-degree program that builds upon leadership courses and research in order to provide relevant practice for contemporary work environments. The program of study for the certificate in Leadership Studies has a research/practice format. All students take core leadership courses covering the topics of contemporary leadership theories/concepts, principles, and practices. Ethics is prominent in this core, not only as an individual topic or as a stand-alone topic, but also woven throughout the course of study, reflecting its pervasiveness in the demands and needs of today’s societies and organizations.

The certificate program is designed for those employed in leadership positions and students interested in career development utilizing core knowledge related to leadership skills, theory, management, communication, and organizational theory. Government employees and professionals in the military, private, non-profits, and public organizations, especially for those in community and economic development agencies will find value in this program.

For the certificate, five courses (15 semester hours) are required of all students. Each non-degree seeking student will undertake a capstone course that will involve demonstrating leadership competency in a professional format.

Certificate Admission Requirements

The certificate program is designed for students holding an undergraduate degree. Prospective students must apply through the Graduate School and provide transcripts according to the requirements of the Graduate School. Students may be classified as non-degree seeking students or have the certificate program incorporated into departmental degree requirements after meeting all program requirements for admission. Admission into the program will be based on the applicant’s undergraduate record and statement of interest. Students who enroll in the certificate program and decide at a later date to pursue a graduate degree may apply to the appropriate graduate program and request that the units be incorporated in the degree program at admission.

Curriculum (15 Semester Hours)

MLS 5300 Essentials of Leadership
MLS 5320 Leadership Principles and Practices: A Management Perspective
MLS 5320 Leadership Principles and Practices, Leading Change: A Communication Perspective
PAD 5350 Organizational Theory & Behavior
MLS 5350 Leadership Studio – Capstone
Leadership Studies (MLS)

5300 Essentials of Leadership (3-0)
A review of fundamental principles and concept of leadership with analysis of classic literature and applications to current issues. Prerequisite: Department approval.

5310 Assessing and Evaluating Leadership: Leadership Colloquium (3-0)
This course is a pro-seminar which involves attendance at lectures, seminars, and interaction with community leaders and a professional evaluation. Prerequisite: Department approval.

5320 Leadership Principles and Practice: A Management Perspective (3-0)
Review of best practices and applications of management within and outside of organizational institutions. Prerequisite: Department approval.

5330 Leadership Principles and Practice, Leading Change: A Communication Perspective (3-0)
Identification and evaluation of best practices in leadership communication during processes of organizational change. Prerequisite: Department approval.

5350 MLS Leadership Studio – Capstone (3-0)
Requires students to integrate and apply core knowledge and research skills to the analysis of a major leadership problem. This course is taken in the student’s final semester in the program. Prerequisite: Department approval.

Public Administration (PAD)

5300 Research Methods (3-0)
Introduction to methods used in public management research. Five components of research design and evaluation are covered: 1) framing leadership questions and/or problems; 2) developing testable questions; 3) situating questions with regard to past research (literature reviews); 4) empirical testing and evaluation methods; 5) presenting findings. Prerequisite: Department approval.

5350 Organizational Theory & Behavior (3-0)
Introduction to the major theories in organizational theory and administrative behavior and their uses in diagnosing organizational problems. Addresses key organizational functions and emphasis on organization-environment relationships. Prerequisite: Department approval.

5351 Applied Statistics for Public Administrators (3-0)
Course covers the quantitative methods used by public managers in policy analysis and evaluation, preparing students to be intelligent users of research and evaluation studies. Students design, conduct, and report on a research question of their choosing. Prerequisites: PAD 5300 with a grade of “B” or better and department approval.
Master of Business Administration and Master of Public Administration: Two Degree Option (MBA/MPA)

See information regarding this two degree option under the College of Business Administration and in the Interdisciplinary Programs section under the Public Administration Program.

Master of Fine Arts in Creative Writing (MFA)

See information regarding this degree in the College of Liberal Arts section under Liberal Arts Interdisciplinary Studies.

Master of Information Technology (MIT)

234 Computer Science Building
(915) 747-5480 (ph)
(915) 747-5030 (fax)
http://www.mit.utep.edu

PROGRAM DIRECTORS: David Novick and Godwin John Udo
IDS GRADUATE FACULTY: Bagchi, Gemoets, Hall, Joseph, Kirs, Mahmood, Udo

The Information and Decision Sciences and Computer Science departments administer the Master of Information Technology degree program. This program is designed to train graduates from any academic discipline in the application of information technology. The program provides application-level, technical knowledge in computer fundamentals and in the areas of database, data communications, networks, and the management of information technology. Upon completion of this professional degree, graduates will be able to apply information technology tools and skills in their work environments. Training in the areas of information technology impact assessment and innovation will enable graduates of this program to utilize and manage information technology with the objective of increasing organizational productivity and competitive advantage.

Requirements for Admission

Applicants must have earned a Baccalaureate Degree from an accredited university with a minimum upper-level undergraduate GPA of 3.0 and must have a Graduate Record Examinations (GRE) score of at least 450 on both the verbal and quantitative portions of the exam. Students whose college education was in a language other than English need a written TOEFL score of at least 600. Applicants must also be able to demonstrate knowledge of the interaction between data structures and algorithms. This can be demonstrated by completion of a course such as CIS 3355-Business Data Structure or CS 2302-Data Structures, or by other means determined by the program committee.
Requirements for the Degree

Thesis Program - 24 semester hours of course work plus
6 semester hours of thesis (MIT 5398 and MIT 5399)
30 total semester hours minimum

Project Program - 24 semester hours of course work plus
6 semester hours of project work (MIT 5398 and MIT
5399 plus satisfactory performance in a
comprehensive final examination
30 total semester hours minimum

Coursework Option
30 semester hours of course work plus satisfactory performance in a
comprehensive final examination
30 total semester hours minimum

All students must successfully complete the five following courses:
MIT 5310 Fundamentals of Computers
MIT 5312 Systems Analysis and Design
MIT 5314 Database Applications
MIT 5316 Web-based Computing
MIT 5318 Evaluation of the Impact of Information Technology

Select three courses from the following menu:
MIT 5322 Hardware Software Computing Environments
MIT 5324 Object-Oriented Analysis and Design
MIT 5328 Applied Multiprocessing Computing
MIT 5330 Computer Networks and Data Communications
MIT 5332 Data System Administration
MIT 5334 Management of Information Technology
MIT 5390 Special Topics in Information Technology

Select one from the following:
COMM 5362, ENGL 5311, ENGL 5314, or ENGL 5315

Coursework Option
Students who choose to complete the coursework option may take any
two UTEP graduate courses related to the application of technology to that
academic discipline (approval of the graduate advisor is required). Students
may also use non-required MIT courses to fulfill their coursework requirement.
Students who elect this option are required to complete the comprehensive
final exam.

Master of Information Technology (MIT)

5310 Fundamentals of Computers (3-0)
A review of fundamental programming concepts proceeding to topics
in algorithm development, data structures, and intelligent
combinations of data structures and algorithms for production-quality
software development. Prerequisite: Department approval.

5312 Systems Analysis and Design (3-0)
This course presents an overview of the systems development life
cycle. It focuses on tools and techniques that the programmer or
analyst can use to document information systems. Tools for describing data flow, data structure, process flow, file design, input and output design, and program specifications are applied to documenting systems. The course surveys other important skills for the systems analyst such as fact finding, communications, project management, and cost-benefit analysis. **Prerequisite:** Department approval.

5314 **Database Applications (3-0)**
A programmer-level class in developing database application software, focusing on schema, query, and host language interfaces, culminating in 4GL software development. **Prerequisite:** Department approval.

5316 **Web-based Computing (3-0)**
A user-level data communications class for developing multimedia web-based systems in modern development environments. Topics include applied telecommunications and computer networks. **Prerequisite:** Department approval.

5318 **Evaluation of the Impact of Info Technology (3-0)**
A study of the impact of information technology on industrial management, productivity, personnel, privacy, competitive advantage, innovation, organizational design, organizational intelligence, individual learning, and communication. This course will include a term project where each student will study the impact of information technology on an industry (e.g., health care, manufacturing, banking) depending on her/his background/interest and prepare a term paper. **Prerequisite:** Department approval.

5322 **Hardware Software Computing Environments (3-0)**
A programmer-level course in the basic functions of an OS including memory, CPU device, and file management; concurrency issues; command and window-based interfaces; and distributed operating systems. **Prerequisite:** Department approval.

5324 **Object-Oriented Analysis and Design (3-0)**
Object-oriented techniques as they apply to software engineering and software architecture design and implementation. Instruction focuses on a formal specification and design language. **Prerequisite:** Department approval.

5328 **Applied Multiprocessing Computing (3-0)**
This course will provide students with a general understanding of parallel and distributed computer systems and the ability to design and implement programs for such systems. The course focuses on the motivation for the use of parallel and distributed systems, the high-level architecture of these systems, key parallel and distributed programming concepts, and the implementation of these concepts in a distributed programming language. **Prerequisite:** Department approval.

5330 **Computer Networks and Data Communication (3-0)**
This course will provide students with a general introduction to data communications theory and technology. Covered topics include: networking media and hardware, multiplexing, switching, network topologies, internetworking, address resolution, protocol layering, routing methods, and network security. **Prerequisite:** Department approval.
5332 **Data System Administration (3-0)**
This course will provide students with a general understanding of fundamental system administration tasks such as systems planning, maintenance, data recovery strategies, user group design and administrator tools. Includes a study of policy and procedure development and system documentation. *Prerequisite:* Department approval.

5334 **Management of Information Technology (3-0)**
This course entails the management of the development, planning, and utilization of information systems within organizations. Among the topics discussed are the approval and decision process for the development of systems, information technology (IT) strategic planning, and IT outsourcing, IT project management, evaluation of strategic investments in IT. The course utilizes case studies and the student is expected to do a project utilizing the professional literature. *Prerequisite:* Department approval.

5390 **Special Topics in Information Technology (3-0)**
Advanced topics of contemporary interest in Information Technology. May be repeated once if topic is varied. *Prerequisite:* Department approval.

5398 **Thesis/Project (3-0)**
Students will apply knowledge developed in the MIT program courses to a project relevant to their areas of interest/expertise.

5399 **Thesis/Project (3-0)**
Students will apply knowledge developed in the MIT program courses to a project relevant to their areas of interest/expertise. *Prerequisite:* Department approval.
The Master of Public Administration (MPA) degree provides professional education for students interested in public service careers. The interdisciplinary program is designed to stress the knowledge, skills, values, and behaviors 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. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework.
3. A one- to two-page statement of purpose that addresses educational and career goals and reasons for pursuing a MPA degree.
4. Three letters of recommendation from instructors, job supervisors or others in a position to evaluate your ability to succeed in a MPA program.
5. For international students, a score of 600 on the TOEFL and an in-person or telephone interview.

Specific Requirements for the MPA Degree

Completion of at least 43 semester hours of course work consisting of the following:

1. At least 28 hours of courses in the theoretical, methodological, and technical aspects of public management
   
   - PAD 5100 Introduction to Public Administration (one SCH)
   - PAD 5300 Introduction to Research Methods
   - PAD 5310 Public Policy Process and Institutions
   - PAD 5311 Economic Analysis for Public Administrators
   - PAD 5350 Organizational Theory and Behavior
   - PAD 5351 Applied Statistics for Public Administrators
   - PAD 5352 Public Budgeting and Financial Management
   - PAD 5353 Human Resources Management
   - PAD 5364 Public Participation and Democratic Process
   - PAD 5365 Policy Analysis and Decision Making

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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 courses in an area of concentration. Areas of concentration are offered in: Border and International Administration, Communications, Economic Development, Financial Management, Health Administration, Human Resources Management, Leadership, and Urban and Regional Planning. No more that 6 hours of electives can be at the undergraduate level in courses approved for graduate-level credit.

3. The final program requirement is completion of the capstone course, PAD 5367 Comprehensive Integration of Public Administration (3 semester hours) or a thesis (six semester hours). (PAD 5367 is not included in either the 28 hours of requirements or the 12 hours of courses in an area of concentration.)

4. Three semester hours of PAD 5366 Internship in Public Administration are required for students who do not possess significant administrative experience as part of the 12 hours of courses in the area of concentration.

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, and petition for candidacy.

The program consists of 61 semester hours of graduate study, of which 31 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 28 semester hours of core MPA courses, 24 semester hours of core MBA courses, 6 semester hours of graduate business electives, and PAD 5367, 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.
Graduate Certificate Programs

Certificate in Border Administration

The Certificate in Border Administration is a 15 semester hour interdisciplinary program in border administration at the graduate level. The program is designed for persons employed in regional governments and non-profits and students interested in careers in border administration. The certificate program provides core knowledge in border theory and border issues: the geography, globalization, economics, security, foreign policy, regional planning, and social, political and multi-cultural dynamics of borders.

The Certificate in Border Administration is available to students in the Master of Public Administration and the Master of Arts or Science in Economics, Political Science, Environmental Science and Sociology. It is also designed for government employees and professionals in military, private and non-profit organizations, especially those working for agencies that are charged with the administration of border-related and bi-national programs.

Certificate Requirements

Five courses (15 semester hours) are required of all students. Non-degree seeking students will take a capstone course (PAD 5367, Comprehensive Integration of Public Administration) that calls for demonstration of competency on border issues in a professional format. Each student will design and complete a research project that demonstrates the ability to synthesize and apply border administration knowledge and skills to a public service problem. For degree seeking students, the capstone course may be aligned to degree requirements.

Certificate Admission Requirements

Prospective students must apply through the Graduate School. Students may be classified as non-degree seeking students or have the certificate program incorporated into departmental degree requirements after meeting all program requirements for admission. Admission into the program will be based on the applicant’s undergraduate record and statement of interest. Students who enroll in the certificate program and decide at a later date to pursue a graduate degree may apply to the appropriate graduate program and request that the units be incorporated in the degree program at admission.

Curriculum (15 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAD</td>
<td>5355</td>
<td>Comparative Public Administration</td>
</tr>
<tr>
<td>POLS</td>
<td>5331</td>
<td>Seminar in International Organizations and Law</td>
</tr>
<tr>
<td>PAD</td>
<td>5361</td>
<td>Political Economy of Borders</td>
</tr>
<tr>
<td>POLS</td>
<td>5344</td>
<td>Seminar in Border Theory</td>
</tr>
<tr>
<td>PAD</td>
<td>5367</td>
<td>Comprehensive Integration of Public Administration</td>
</tr>
</tbody>
</table>

Certificate in Economic Development

The Graduate Certificate Program in Economic Development is a 15 semester hour interdisciplinary program designed for persons either employed or interested in careers with economic development agencies and seeking core knowledge in economic development theory and practice. The Certificate in Economic Development is available to students in the Master of Public Administration and the Master of Arts or Science in Economics, Political
Science, Environmental Science and Sociology. It is also designed for government employees and professionals in military, private and non-profit organizations, especially those working for community service and economic development agencies.

Certificate Requirements

Five courses (15 semester hours) are required of all students. Non-degree seeking students will take a capstone course (PAD 5367 Comprehensive Integration of Public Administration) that calls for the demonstration of competency on economic development issues in a professional format. Each student will design and complete a research project that demonstrates the ability to synthesize and apply economic development knowledge and skills to a current problem in the field. For degree seeking students, the capstone course may be aligned to degree requirements. Students enrolled in the Certificate in Economic Development program must also complete any prerequisite coursework in micro/macro-economics and undergraduate statistics.

Certificate Admission Requirements

The certificate program is designed for students holding an undergraduate degree. Prospective students must apply through the Graduate School and provide transcripts according to the requirements of the Graduate School. Students may be classified as non-degree seeking students or have the certificate program incorporated into departmental degree requirements after meeting all program requirements for admission. Admission into the program will be based on the applicant’s undergraduate record and statement of interest. Students who enroll in the certificate program and decide at a later date to pursue a graduate degree may apply to the appropriate graduate program and request that the units be incorporated in the degree program at admission.

Curriculum (15 semester hours)

Three required courses (nine semester hours):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAD 5368</td>
<td>Regional Economic Development: Research Methods</td>
</tr>
<tr>
<td>PAD 5369</td>
<td>Economic Impact Models or FIN 5394 Current Issues in Finance</td>
</tr>
<tr>
<td>PAD 5367</td>
<td>Comprehensive Integration of Public Administration</td>
</tr>
</tbody>
</table>

Two courses (six semester hours) selected from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3334</td>
<td>Regional Economics</td>
</tr>
<tr>
<td>ECON 3335</td>
<td>Urban Economics</td>
</tr>
<tr>
<td>MKT 4308</td>
<td>Real Estate Principles</td>
</tr>
</tbody>
</table>

Certificate in Urban and Regional Planning

The UTEP Graduate School offers a Graduate Certificate Program in Planning which is a 15 semester hour interdisciplinary program based in the Institute for Policy and Economic Development and associated with the Master of Public Administration Program. The certificate program is aimed at professionals with bachelor’s or master’s degrees who wish to enhance their knowledge and skills in the area of planning and at students in the MPA, or other master’s or doctoral programs (in fields such as economics, political science, environmental science, and engineering) who wish to incorporate a certificate in planning in their graduate degree program. The certificate is designed for those employed as planners and students interested in a career in planning.
in planning to provide them with core knowledge in economics, demography, law and administration and the technology (such as GIS) necessary for planning activities.

Certificate Requirements

The certificate program is a 15 semester hour program, including a required seminar (PAD 5359) and a required capstone course (PAD 5367). Where appropriate, courses that meet the requirements for the Certificate may also be applied to degree programs. Students who are not enrolled in degree programs who later decide to pursue a degree program may request that these courses be applied to their degree upon admission.

Certificate Admission Requirements

Prospective students must apply through the Graduate School. Applicants should complete the Graduate School application and indicate the certificate area. The application fee will be waived for students already enrolled in a degree program. Applicants must provide transcripts according to the requirements of the Graduate School if these are not already on file in the Graduate School.

Students enrolled in the MPA program may select Urban and Regional Planning as an area of concentration. Courses taken to meet core curriculum requirements in the MPA program (PAD 5310 Public Policy Process and Institutions, PAD 5367 Comprehensive Integration of Public Administration) may not be included in the 12 semester hours of area concentration even though they are included in the Graduate Certificate Program in Planning.

Curriculum (15 semester hours)

Two required courses (6 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAD 5359</td>
<td>Regional and Urban Planning</td>
</tr>
<tr>
<td>PAD 5367</td>
<td>Comprehensive Integration of Public Administration</td>
</tr>
</tbody>
</table>

One course in Policy and Administration (3 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PAD 5310</td>
<td>Public Policy Process and Institutions</td>
</tr>
<tr>
<td>PAD 5360</td>
<td>Urban Administration</td>
</tr>
<tr>
<td>PAD 5363</td>
<td>Intergovernmental Relations</td>
</tr>
</tbody>
</table>

One course in Economics and Demography (3 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 5340</td>
<td>Seminar in Demography</td>
</tr>
<tr>
<td>ECON 3334</td>
<td>Regional Economics</td>
</tr>
<tr>
<td>ECON 3335</td>
<td>Urban Economics</td>
</tr>
</tbody>
</table>

One tool course from the following (3 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 4308</td>
<td>Real Estate Principles</td>
</tr>
<tr>
<td>PAD 5368</td>
<td>Regional Economic Development Research Methods</td>
</tr>
<tr>
<td>PAD 5369</td>
<td>Economic Impact Models</td>
</tr>
<tr>
<td>PAD 5380</td>
<td>Selected Problems in Public Administration (topics to include Geographic Information Systems)</td>
</tr>
</tbody>
</table>

Only one undergraduate course (below a 5000 listing) is allowable for the certificate.
Master in Public Administration Program Concentrations

Each concentration consists of four courses (12 credit hours) in the area of study. Three semester hours of PAD 5366 Internship in Public Administration is substituted for one of the elective courses in the concentration for students without appropriate professional experience.

A. Border and International Administration

The Border and International Administration concentration consists of two required courses and two electives. The two required courses are:

- PAD 5355 Comparative Public Administration
- POLS 5344 Seminar in Border Theory

The two electives may be selected from the following course options.

- PAD 5361 Political Economy of Borders
- LABS 5301 Issues in Border Studies
- PAD 5363 Intergovernmental Relations
- POLS 5331 Seminar in International Organizations and Law
- POLS 5336 Seminar in Southwestern Border Politics
- POLS 5338 Seminar in International Political Economy
- SOCI 5355 U.S.-Mexico Borderlands in Change
- SOCI 5341 Special Topics Criminal Justice on the U.S.-Mexico Border

B. Communications

Students selecting the Communications concentration must elect four of the following courses:

- COMM 5337 Seminar in Organizational Communication (Any topic)
- COMM 5337 Seminar in Organizational Communication (New topic: Administrative Communication)
- COMM 5335 Seminar in Intercultural/International Communication
- COMM 5332 Seminar in Contemporary Rhetoric or
- COMM 5362 Organizational Communication

C. Economic Development

The Economic Development concentration consists of two required courses and two electives. Students selecting this concentration must also have completed all of the prerequisite coursework in micro/macro-economics and undergraduate statistics.

- PAD 5368 Regional Economic Development: Research Methods (Required)
- PAD 5369 Economic Impact Models (Required) or
- FIN 5394 Economic Impact Models (Required)
- ECON 3334 Regional Economics
- ECON 3335 Urban Economics
- MKT 4308 Real Estate Principles
- PAD 5360 Urban Administration
- PAD 5363 Intergovernmental Relations
D. Financial Management

The Financial Management concentration consists of two required courses and two electives. Students selecting this concentration must also have completed any prerequisite coursework in economics and accounting.

The two required courses are:
- ACCT 5301 Financial Accounting
- FIN 5305 Financial Concepts and Analysis

The two electives may be selected from the following course options.
- ECON 4330 Public Sector Economics
- PAD 5362 Public Sector Accounting
- ACCT 5312 Controllership
- ACCT 5323 Advanced Auditing
- FIN 5311 Financial Management

E. Health Administration

Students selecting the Health Administration concentration must:

Take at least one course from the following context courses:
- SOCI/ANTH 4346 Health and Illness in Cross-Cultural Perspective
- SOCI 5340 Seminar in Demography
- SOCI 5341 Special Graduate Topics: Medical Sociology
- SOCI 5362 Seminar in Health Services Delivery

Take at least two courses from these planning and administration courses:
- HSCI 5356 Planning and Administering Health Promotion Programs
- HSCI 5359 Grant Writing in Health Professions
- PSCI 5340 Management and Health Systems in Physical Therapy
- NURS 5335 Management Roles and Operations
- NURS 5337 Health Care Financial Management
- NURS 5338 Health Law, Policy and Ethics
- NURS 5365 Managing Health Care Outcomes

The following courses are Public Health (PH) University of Texas-Houston School of Public Health courses.
- PH 3615 Introduction to Management and Policy Sciences
- PH 3616 Health and Safety Program Management
- PH 3617 Health Care Finance
- PH 3618 Social and Economic Determinants of Health
- PH 5110 Health Service Delivery and Performance

Take at least one course from the following list without restrictions, but no double counting.
- SOCI/ANTH 4346 Health and Illness in Cross-Cultural Perspective
- SOCI 5340 Seminar in Demography
- SOCI 5341 Special Graduate Topics
- SOCI 5362 Seminar in Health Services Delivery
- HSCI 5356 Planning and Administering Health Promotion Programs
- HSCI 5359 Grant Writing in Health Professions
PT 5340  Management and Health Systems in Physical Therapy
NURS 5335  Management Roles and Operations
NURS 5337  Health Care Financial Management
NURS 5338  Health Law, Policy and Ethics
NURS 5365  Managing Health Care Outcomes

F. Human Resource Management
Students choosing the Human Resource Management concentration must take four of the following courses.

MGMT 5336  Effective Management of Human Resources
PAD 5354  Administrative Law and Regulation
PAD 5358  Administrative Ethics and Responsibility
PAD 5356  Non-Profit Sector Administration
PAD 5357  Women and Men in Management
POLS 5312  Seminar in Political Leadership
PAD 5360  Urban Administration
SOCI 5330  Social Inequality

G. Leadership
Students selecting the Leadership concentration must elect four of the following courses:

PAD 5358  Administrative Ethics and Responsibility
POLS 5312  Seminar in Political Leadership
POLS 5313  Seminar in Political Communication
COMM 5362  Organizational Communication
MLS 5300  Essentials of Leadership
MLS 5320  Leadership Principles and Practices: A Management Perspective
MLS 5330  Leadership Principles and Practices, Leading Change: A Communications Perspective

H. Urban and Regional Planning
The Urban and Regional Planning concentration consists of one required course, one course in Policy and Administration, one course in Economics and Demography and one tool course.

PAD 5359  Regional and Urban Planning (required)

One course in Policy and Administration:
PAD 5360  Urban Administration
PAD 5363  Intergovernmental Relations

One course in Economics and Demography:
SOCI 5340  Seminar in Demography
ECON 3334  Regional Economics
ECON 3335  Urban Economics

One tool course:
MKT 4308  Real Estate Principles
PAD 5368  Regional Economic Development: Research Methods
PAD 5369  Economic Impact Models
PAD 5380  Selected Problems in Public Administration (topics to include Geographic Information Systems)
Public Administration (PAD)

5100 Introduction to Public Administration (1-0)
Introduction for MPA students to: a) the scope and nature of the field and the skills and competencies required of public administrators; b) UTEP, university resources, the MPA program, and graduate school standards and expectations; and c) public policy issues-the art and practice of policy analysis. Prerequisite: Department approval.

5190 Selected Topics in Public Administration (1-0)
The study of selected problems and/or current issues in public management. Course provides professional training opportunities, including the hands-on development of specialized skill sets and techniques for non-profits and public organizations. Examples of topics are: information technology and government, survey design, public marketing, strategic planning, and performance budgeting. Prerequisite: Department approval.

5300 Introduction to Research Methods (3-0)
Introduction to methods used in public management research. Five components of research design and evaluation are covered: 1) framing public policy problems; 2) developing testable questions; 3) situating questions with regard to past research (literature reviews); 4) empirical testing and evaluation methods; 5) presenting findings. Prerequisite: Department approval. (PAD 5300 is the same course as POLS 5300).

5310 Public Policy Process and Institutions (3-0)
This course covers the history of public administration and the basic issues confronted, both legal and political, the role of bureaucratic expertise in contemporary government and in solving public problems, and public participation in administration. Prerequisite: Department approval. (PAD 5310 is the same course as POLS 5364).

5311 Economic Analysis for Public Administrators (3-0)
Introduction to microeconomic concepts and analysis and their application to the public sector. Topics to be covered include: supply and demand theory, firms and markets, consumer theory, market equilibrium, welfare economics, public choice theory and the economics of planning. Prerequisite: Department approval.

5350 Organizational Theory and Behavior (3-0)
Introduction to: the major theories in organizational theory and administrative behavior and their uses in diagnosing organizational problems; key organizational functions; emphasis on organization-environment relationships. Prerequisite: Department approval.

5351 Applied Statistics for Public Administrators (3-0)
Course covers the quantitative methods used by public managers in policy analysis (ANOVA; Ordinary Least Squares and variants) and prepares students to be intelligent evaluators of public sector research and evaluation studies. Students design, conduct and report on a research question of their choosing; use of SPSS required. Prerequisites: PAD 5300 with a grade of “B” or better and department approval.

5352 Public Budgeting and Financial Management (3-0)
Introduction to the theories and practice of budgeting, financial management, tax analysis, and the role budgets play in public policy making and implementation. Course covers approaches and techniques of budget analysis. Prerequisites: PAD 5311 with a grade of “B” or better and department approval.
5353 Human Resources Management (3-0)
Introduction to the social, political and legal dimensions of public personnel management (history, values in the American political system, employee selection, compensation, job design, evaluation, labor relations, staff development and training, administrative ethics, affirmative action, comparable worth, sexual harassment).
Prerequisite: Department approval.

5354 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. Prerequisite: Department approval.

5355 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. Prerequisite: Department approval.

5356 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, fundraising, volunteer management, government and public relations, and the organization of nonprofit institutions. Prerequisite: Department approval.

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

5358 Administrative Ethics and Responsibility (3-0)
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. Prerequisite: Department approval.

5359 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. Prerequisite: Department approval.

5360 Urban Administration (3-0)
Public administration at the level of service delivery with emphasis upon the management of and policy problems facing local agencies. Prerequisite: Department approval.

5361 Political Economy of Borders (3-0)
This course provides an introduction to the field of international border economics with special emphasis on topics dealing with the border zone between Mexico and the United States. We will intensely examine
the role of public policy on economic issues of the border. This includes, but is not limited to the following topics: international trade agreements, monetary policy, environmental and natural resource policy, immigration (legal and illegal), the underground economy, and economic development. Prerequisite: Department approval.

5362 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. Prerequisite: Department approval.

5363 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. Prerequisite: Department approval.

5364 Public Participation and Democratic Process (3-0)
This course addresses public policy formation, implementation, and evaluation as a democratic process. Surveys issues and best practices for public participation: roles of experts and publics, opening the full policy cycle to public participation, involving stakeholders, communicating effectively, working with complex and conflicitive communities, and the ethics of democratic participation. Prerequisite: Department approval.

5365 Policy Analysis and Decision Making (3-0)
Course covers the use of quantitative decision tools and formal modeling in the evaluation of policy outcomes: cost-benefit analysis, decision-tree analysis, logistic modeling of categorical choice decisions, etc., with examples from legislative, executive and judicial decision-making environments. Use of SPSS required. Prerequisites: PAD 5300 and PAD 5351 each with a grade of “B” or better and department approval.

5366 Internship in Public Administration (3-0)
Practical internship experience with a public or non-profit 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. Prerequisite: Department approval.

5367 Comprehensive Integration of Public Administration (3-0)
MPA Studio course and capstone experience in the MPA program. Requires students to integrate and apply core knowledge and research skills to the analysis of a major administrative or policy problem. Students must complete 33 semester hours in the program before enrolling in this course. Prerequisite: Department approval.

5368 Regional Economic Development: Research Methods (3-0)
Covers the key research, analytical tools, and data sources employed in the work of economic development professionals: cluster analysis, use of public consumption data, e.g., market and demand data for industrial space, collecting primary economic development information,
benchmarking community economic progress, managing and presenting data, and identifying target industries. *Prerequisite:* Department approval.

5369 **Economic Impact Models (3-0)**
Examines the basic principles and variables employed in economic impact modeling; includes training in the types of models currently used in the economic development field. *Prerequisite:* Department approval.

5380 **Selected Problems in Public Administration (3-0)**
Independent study, research, and writing on a topic agreed upon by the student and professor. *Prerequisite:* Department approval.

5398 **Thesis (0-0-3)**
As part of this course, the student will successfully prepare and defend a proposal for the MPA thesis. The proposal 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 MPA program. *Prerequisite:* Department approval.

5399 **Thesis (0-0-3)**
Continuous enrollment required while work on the thesis continues. *Prerequisites:* PAD 5398 with a grade of “B” or better and department approval.

**Master of Science in Environmental Science**

See information regarding this degree in the College of Science section of this catalog.

**Master of Science in Interdisciplinary Studies (M.S.I.S.)**

See information regarding this degree in the College of Science section of this catalog.
Graduate School Courses

Graduate School (GRAD)

5194  Graduate Research (0-0-1)
5294  Graduate Research (0-0-2)
5394  Graduate Research (0-0-3)
       Individual variable-credit research. Cannot be used to satisfy
       minimum degree requirements. Grade of S or U. Prerequisite:
       Graduate standing.

6000  Issues in Higher Education (0-0)
6100  Issues in Higher Education (1-0)
6300  Issues in Higher Education (3-0)
       Multidisciplinary seminar on current issues in higher education.
       Professor approval.

6194  Doctoral Research (0-0-1)
6294  Doctoral Research (0-0-2)
6394  Doctoral Research (0-0-3)
       Individual variable-credit research. Cannot be used to satisfy
       minimum degree requirements. Grade of S or U. Prerequisite:
       Doctoral standing.
# FACULTY AND STAFF

<table>
<thead>
<tr>
<th>Category</th>
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<tbody>
<tr>
<td>Faculty</td>
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</tr>
<tr>
<td>Professional Library Staff</td>
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</tr>
<tr>
<td>Administrative Staff</td>
<td>467</td>
</tr>
</tbody>
</table>
FACULTY

MELISSA COLGIN ABELN, Associate Professor of Music, 1987
B.M., The University of Alabama; M.M., D.M.A., The University of Texas at Austin

LONNIE LEE ABERNETHY, Professor Emeritus of Metallurgical and Materials Engineering, 1963
B.Cer.E., North Carolina State University; M.Sc., Ph.D., Ohio State University

CAROLYN ADAMS, Professor of Nursing, 2001
B.A., Franklin and Marshall College; M.S., Villanova University;
M.S.N., The University of Delaware; Ed.D., The University of San Francisco

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MARY LOUISE ZANDER AHO, Associate Professor Emerita of Elementary and Secondary Education Studies, 1963
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B.A., William Paterson University; M.F.A., Brown University; Ph.D.,
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STEPHEN B. ALEY, Associate Professor of Biological Sciences, 1995
B.S., California Institute of Technology; Ph.D., Rockefeller University

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B.A., Stanford University; M.P.A., M.S.W., The University of Southern California

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M.Sc., D.Sc., Escola Paulista de Medicina, Brazil; Pharmacy Degree,
Universidade Estadual Da Paraiba, Brazil

JON AMASTAE, Professor of Languages and Linguistics, 1980
B.A., The University of New Mexico; Ph.D., The University of Oregon

MARIA ALVAREZ AMAYA, R.N., Professor of Nursing, 1986
B.S.N., The University of Texas at El Paso; M.S.N., Texas Woman’s
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CHARLES H. AMBLER, Professor of History, 1984
B.A., Middlebury College; M.A., Ph.D., Yale University

THE UNIVERSITY OF TEXAS AT EL PASO
JAIME P. ANAYA, Clinical Assistant Professor of Pharmacy, 2000  
B.S., Pharm.D., The University of New Mexico

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B.S., Union College, Lincoln, Nebraska; M.S., Dr.P.H., The University of Hawaii

ELIZABETH YOUNGBLOOD ANTHONY, Associate Professor of Geological Sciences, 1988  
B.A., Carleton College; M.S., Ph.D., The University of Arizona

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B.S., M.S., Colorado State University; Ph.D., Michigan State University

PABLO ARENAZ, Professor of Biological Sciences, 1984  
B.S., M.S., The University of Nevada, Reno; Ph.D., Washington State University

MIGUEL ARGAEZ, Assistant Professor of Mathematics, 2002  
B.S., Universidad del Valle, Columbia; M.S., Universidad Nacional, Columbia; M.A., Ph.D., Rice University

BEVERLY ARGUS-CALVO, Assistant Professor of Educational Psychology and Special Services, 2000  
B.A., Mercer University; M.A., The George Washington University; Ph.D., New Mexico State University

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Sc.D., M.Sc., Instituto Politecnico Nacional; M.D., Central University of Ecuador

SHELLEY S. ARMITAGE, Professor of English, 1996  
B.A., M.A., Texas Tech University; Ph.D., The University of New Mexico

JOHN CLEVELAND ARNOLD, Associate Professor Emeritus of Art, 1965  
B.A., The University of Minnesota; M.F.A., Arizona State University

ROY M. ARROWOOD, JR., Associate Professor of Metallurgical and Materials Engineering, 1989  
B.S., North Carolina State University; M.S., Ph.D., The University of California, Davis

MICHAEL EVAN AUSTIN, P.E., Professor Emeritus of Electrical Engineering, 1963  
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B.B.A., M.B.A., Texas Tech University; Ph.D., The University of Texas at Austin

CAROLYN AWALT, Assistant Professor of Teacher Education, 2003  
B.A., M.A.T., Antioch University; M.A., Ph.D., The University of Texas at Austin

ERIN E. BACA, Assistant Professor of Marketing and Management, 2001  
B.B.A., M.B.A., New Mexico State University; Ph.D., The University of Mississippi

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B.A., M.A., The University of Texas at El Paso; Ph.D., New Mexico State University
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A.B., Baylor University; M.A., The University of Missouri; Ph.D., The University of Kentucky

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B.S., M.S., Calcutta University (India); P.G. Diploma, Ph.D., Jadavpur University, India; Ph.D., Florida Atlantic University

KENNETH KYLE BAILEY, Professor Emeritus of History, 1960
B.A., M.A., Ph.D., Vanderbilt University

LISA J. BAIN, Associate Professor of Biological Sciences, 2001
B.S., The University of Georgia; Ph.D., North Carolina State University

STELLA BAKARICH, Clinical Instructor of Physical Therapy, 2000
B.A., Texas Tech University; B.S., M.S., Texas Woman’s University

SAMUEL M. BAKER, Visiting Assistant Professor of Theatre Arts and Film, 2001
B.F.A., M.A., Southwest Texas State University; M.F.A., The University of Cincinnati

WILLIAM S. BALDWIN, Assistant Professor of Biological Sciences, 2001
B.S., Central Michigan University; Ph.D., North Carolina State University

PHILLIP W. BARBEE, Assistant Professor of Educational Psychology and Special Services, 2001
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<td>Classroom Bldg.</td>
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<td>Cotton Memorial</td>
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<td>Durham Sports Center</td>
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<tr>
<td>El Paso Natural Gas Conference Center</td>
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<td>Education Bldg.</td>
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<td>Engineering/Science Complex</td>
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<td>Engineering Bldg. Expansion</td>
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<td>Kelly Hall</td>
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<td>Physical Plant Complex</td>
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<td>University Police/Info. Center</td>
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<td>University Police/Info. Center</td>
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<td>University Relations</td>
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<td>Wonnell Hall</td>
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</tbody>
</table>

#### Numerical Listing

1. Hertzog Bldg.
2. University Library
4. Child Care Center
5. Center for Inter-American and Border Studies
6. Hawthorne Bldg.
7. Energy Center
8. Engineering/Science Complex
10. Classroom Bldg.
12. Academic Advising Center
13. Honors House
14. Liberal Arts Bldg.
15. Administration Bldg.
16. de Wetter Center
17. Central Energy Plant
18. Benedict Hall
19. Ball Hall
20. El Paso Natural Gas Conference Center
21. Student Health Center
22. Kelly Hall
23. Barry Hall
24. Chihuahuan Desert Gardens
25. Undergraduate Learning Center
26. Burgess Hall
27. Centennial Museum
28. Hudson Hall
29. Wonnell Hall
30. Miners Hall
31. Fox Fine Arts Center
32. Magoffin Auditorium
33. Cotton Memorial
34. Geological Sciences Bldg.
35. Seaman Hall
37. Quinn Hall
38. Old Main
39. Psychology Bldg.
40. Union Bldg. East
41. Union Bldg. West