

Office of the Graduate School

The **Office of the Graduate School**, 201 Administration Building, 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 8-5 daily, extending to 7 p.m. on Monday and Tuesday, during the Fall and Spring semesters; our telephone number is (915) 747-5491. We are pleased to respond to e-mail and can be contacted at GradSchool@utep.edu, or 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 Degree Plans and Final Programs of Study
- Academic status communication
- Graduate assistantships
- Application for graduation

We look forward to serving you.

REFERENCE TELEPHONE NUMBERS

Graduate School	(915) 747-5491
Registration and Records	(915) 747-5550
Financial Services	(915) 747-5806
Financial Aid	(915) 747-5204
Office of International Programs	(915) 747-5664
Housing Services	(915) 747-5352
Dean of Students	(915) 747-5648

THE UNIVERSITY OF TEXAS AT EL PASO

2002-2004 GRADUATE CATALOG



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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, 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.

WELCOME TO UTEP

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General Information

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 component 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, boasting a student population of more than 9,000.

Since then, enrollment has grown and the scope of programs has expanded to include 67 bachelor's, 60 master's, and 10 doctoral degrees to meet the needs of our region. The 367-acre UTEP campus consists of 81 buildings, including the 50,364-seat Sun Bowl Stadium, the 12,200-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, and the Larry K. Durham Sports Center.

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 a component 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 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 offers 67 baccalaureate degrees. Graduate degrees offered by UTEP include 60 master's degrees in disciplines from all six colleges. Doctoral degrees are offered in Biological Sciences, Computer Engineering, Environmental Science and Engineering, Geological Science, History, Materials Science and Engineering, Psychology, and an Ed.D. degree is offered in Educational Leadership and Administration. Doctoral degrees in Pharmacy and Nursing are offered in cooperation with other institutions.

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 Juarez region. Approximately two-thirds of UTEP's students are Hispanic, more than 70 percent work while in college, and about half are first-generation college students. UTEP students typically represent more than 40 states and 70 countries, with about 10.5 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

OFFICERS

CHARLES MILLER, Chairman
RITA C. CLEMENTS, Vice Chairman
WOODY L. HUNT, Vice Chairman
A. W. "DUB" RITER, Vice Chairman
FRANCIE A. FREDERICK, Executive Secretary

MEMBERS

Terms Expire February 1, 2003:
PATRICK C. OXFORD, Houston
A.W. "DUB" RITER, JR., Tyler
A. R. (TONY) SANCHEZ, JR., Laredo

Terms Expire February 1, 2005:
ROBERT A. ESTRADA, Dallas
W.L. (WOODY) HUNT, El Paso
CHARLES MILLER, Houston

Terms Expire February 2, 2007:
RITA C. CLEMENTS, Dallas
JUDITH L. CRAVEN, M.D., Houston
CYNDI TAYLOR KRIER, San Antonio

OFFICE OF THE CHANCELLOR

MARK G. YUDOF, Chancellor
TERESA A. SULLIVAN, Executive Vice Chancellor for Academic Affairs
JAMES C. GUCKIAN, M.D., Executive Vice Chancellor for Health Affairs
KERRY L. KENNEDY, Executive Vice Chancellor for Business Affairs

Administrative Officers

DIANA S. NATALICIO, *President*, 1971

B.S., St. Louis University; M.A., Ph.D., University of Texas at Austin

STEPHEN RITER, P.E., *Provost and Vice President for Academic Affairs*, 1980

B.A., B.S.E.E., Rice University; M.S., Ph.D., University of Houston

RICHARD PADILLA, *Vice President for Student Affairs*, 1994

B.A., Bellarmine College; M.Div., Catholic Theological Union; Ed.D., University of Houston

CYNTHIA VILLA, CPA, *Interim Vice President for Finance and Administration*, 1986

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

RICARDO ADAUTO III, *Vice President for Institutional Advancement*, 1988

B.S., University of Texas at El Paso; J.D., University of California at Berkeley School of Law

PAUL MAXWELL, *Vice President for Research and Sponsored Projects*, 1999

B.S., University of Texas at El Paso; M.S., Ph.D., Stanford University

PABLO ARENAZ, *Associate Vice President for Academic Affairs*, 1984

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

KAREN SCHMALING, *Associate Vice President for Academic Affairs*, 2001

Ph.D., University of Washington

HENRY T. INGLE, *Associate Vice President for Technology Planning and Distance Learning*, 1994

B.A., Texas Western College; M.S., Newhouse School of Communication, Syracuse University; Ph.D., Stanford University

EVELYN J. POSEY, *Associate Vice President for Instructional Design and Technology Integration*, 1985

B.A., M.A., University of Texas at El Paso; Ph.D., New Mexico State University

CHARLES H. AMBLER, *Dean, Graduate School*, 1984

B.A., Middlebury College; M.A., Ph.D., Yale University

MAGGY SMITH, *Dean, University College*, 1987

B.A., M.A., State University of New York, Fredonia; Ph.D., Rensselaer Polytechnic Institute

CHARLES CRESPIY, *Dean, College of Business Administration*, 2001

B.U.S., M.B.A., M.A., Ph.D., University of New Mexico

JOSEFINA V. TINAJERO, *Interim Dean, College of Education*, 1981

B.S., M.Ed., University of Texas at El Paso; Ed.D., Texas A & M University at Kingsville

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ANDREW H. P. SWIFT, JR., *Dean, College of Engineering*, 1983
B.S., B.S.M.E., Union College; M.S., Sc.D., Washington University

JOHN B. CONWAY, *Dean, College of Health Sciences*, 2001
B.S., M.S., San Diego State University; M.P.H., Ph.D., University of Minnesota

HOWARD C. DAUDISTEL, *Dean, College of Liberal Arts*, 1974
B.A., M.S., Ph.D., University of California at Santa Barbara

THOMAS BRADY, *Dean, College of Science*, 1997
B.A., Beloit College; M.A., Ph.D., Yale University

WILLIAM SCHAFER, *Dean of Students*, 1998
B.S., M.A., Ph.D., University of Colorado at Boulder

Academic Calendar

Listed below are the tentative 2002-2004 Academic Calendars. For information on calendar changes on specific dates, students should refer to each term's **Class Schedule**, access to the website is found at www.utep.edu/register, or contact the Registration and Records Office at (915) 747-5550/5544.

	<u>Fall 2002</u>	<u>Fall 2003</u>
Graduate admission application deadline (\$15.00 late fee begins) *	July 1	July 1
Graduate admission deadline for international applicants *	July 1	July 1
Telephone and Web Registration	July 9 – Aug. 2	July 8 – Aug. 1
Undergraduate admission document due date	July 31	July 31
Late Registration and schedule adjustment prior to classes	Aug. 22-23	Aug. 21-22
Classes begin	Aug. 26 (Mon.)	Aug. 25 (Mon.)
Late Registration and schedule adjustment - continued	Aug. 26-29	Aug. 25-28
Last day of class	Dec. 5 (Thurs.)	Dec. 4 (Thurs.)
Last day of Final Examinations	Dec. 13	Dec. 12
	<u>Wintermester 2002 and Spring 2003</u>	<u>Wintermester 2003 and Spring 2004</u>
Graduate admissions application deadline (\$15.00 late fee begins) *	Nov. 1	Nov. 1
Graduate admission deadline for international applicants *	Nov. 1	Nov. 1
Telephone and Web Registration for Wintermester and Spring	Nov. 1 - 27	Nov. 3 – Dec. 1
Late Registration	Dec. 30	Dec. 29
Classes begin for Wintermester	Dec. 30	Dec. 29
Last day of class	Jan. 9	Jan. 9
Last day of Final Examination for Wintermester	Jan. 10	Jan. 10 (Sat.)
Late Registration and schedule adjustment prior to classes for Spring	Jan. 9-10	Jan. 8-9

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Classes begin for Spring	Jan. 13 (Mon.)	Jan. 12 (Mon.)
Late Registration and schedule adjustment - continued	Jan. 13-16	Jan. 12-15
Last day of class	May 1 (Thur.)	April 29 (Thur.)
Last day of Final Examinations	May 9	May 7
	<u>Maymester and Summer 2003**</u>	<u>Maymester and Summer 2004**</u>
Graduate admission application deadline (\$15.00 late fee begins) *	April 1	April 1
Graduate admission deadline for international applicants *	April 1	April 1
Telephone and Web Registration for Maymester and Summer I and II	April 1-25	March 29-April 22
Undergraduate admission document due date	April 30	April 30
Late Registration and schedule adjustment	May 9	May 7
Classes begin for Maymester	May 12	May 10
Last day of classes	May 22	May 20
Last day of Final Examinations for Maymester	May 23	May 21
Late Registration and schedule adjustment prior to classes for Summer I	May 30	May 28
Classes begin for Summer I	June 2 (Mon.)	June 1 (Tue.)
Late Registration and schedule adjustment - continued	June 2	June 1
Last day of class for Summer I	June 26	June 24
Last day of Final Examinations for Summer I	June 27	June 25
Late Registration and schedule adjustment prior to class for Summer II	June 27	June 25
Classes begin	June 30	June 28
Late Registration and schedule adjustment – continued	June 30	June 28
Last day of classes for Summer II	July 25	July 23
Last day of Final Examination for Summer II	July 28, 29	July 26, 27

* 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

What's Inside

Graduate School Administration

- Graduate Council

Graduate Programs

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General Degree Requirements

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Graduate School Administration

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 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 Geological Sciences, Computer Engineering, Materials Science and Engineering, Psychology, Environmental Science and Engineering, Biological Sciences, History, and the Doctor of Education in Educational Leadership and Administration, and master's degrees in 60 areas.

The Graduate School is comprised of professors and scholars designated as Members of the Graduate Faculty and of students 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.

CHARLES H. AMBLER, *Dean*

B.A., Middlebury College; M.A., Ph.D., Yale University

LORENA LA PUMA, *Associate Director*

B.A., Arizona State University; M.P.A., The University of Texas at El Paso

YVONNE LOPEZ, *Assistant Director*

B.A., The University of Texas at Pan-American

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 parenthesis.

MARIA ALVAREZ AMAYA (2004)

Professor of Nursing
Member-at-Large

CHARLES H. AMBLER

Dean, Graduate School
Ex-Officio Member

GARY BRAUN (2004)

Assistant Professor of Accounting
College of Business Administration Representative

SERGIO D. CABRERA (2005)

Associate Professor of Electrical and Computer Engineering
College of Engineering Representative

THE UNIVERSITY OF TEXAS AT EL PASO

SATISH CHUKKA

Graduate Student Representative
Student Government Association

KENTON CLYMER (2004)

Professor of History
College of Liberal Arts Representative

SIDDHARTHA DAS (2005)

Associate Professor of Biological Sciences
College of Science

SANDRA HURLEY (2004)

Associate Professor of Teacher Education
College of Education Representative

STEPHEN JOHNSON (2003)

Assistant Professor of Educational Psychology and Special Services
College of Education Representative

STEVE A. JOHNSON (2003)

Associate Professor of Economics and Finance
President of Faculty Senate

DAVID V. LEMONE (2003)

Professor of Geological Sciences
College of Science Representative

SOHEIL NAZARIAN (2003)

Associate Professor of Civil Engineering
College of Engineering Representative

RICHARD POSTHUMA (2005)

Assistant Professor of Marketing and Management
College of Business Administration

BRENDA SMITH (2005)

Associate Professor of Health Sciences
College of Health Sciences Representative

DARLA SMITH (2005)

Associate Professor of Kinesiology
Member-at-Large

DOROTHY STUPPY (2004)

Associate Professor of Nursing
College of Health Sciences Representative

ROBERTO E. VILLARREAL (2003)

Professor of Political Science
Chair of Graduate Council

ROBERT WEBB (2003)

Associate Professor of Biology
Member-at-Large

JAMES WOOD (2004)

Associate Professor of Psychology
College of Liberal Arts Representative

MICHAEL ZARATE (2005)

Associate Professor of Psychology
Member-at-Large

Graduate Programs

DOCTORAL PROGRAMS

Doctor of Education

Educational Leadership and Administration

Doctor of Philosophy

Biological Sciences
 Computer Engineering
 Environmental Science and Engineering
 Geological Sciences
 History
 Materials Science and Engineering
 Psychology
 Human Behavior in Organizations
 Psychology and Health

MASTER'S PROGRAMS

Master of Accountancy

Master of Arts

Art
 Art Education
 Studio Art
 Communication
 Education
 English
 English and American Literature
 Professional Writing and Rhetoric
 History
 History
 Border History
 Linguistics
 Political Science
 Psychology
 Clinical
 General Experimental
 Sociology
 Spanish
 Theatre Arts

Master of Arts in Interdisciplinary Studies

Master of Arts in Teaching

Education
 English
 Mathematics

Master of Business Administration

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

Master of Education

- Education
- Administration
- Educational Diagnostician
- 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 in Physical Therapy

Master in Public Administration

Master of Science

- Biological Sciences
- Chemistry
- Civil Engineering
- Computer Engineering
- Computer Science
- Electrical Engineering
- Engineering
- Geological Sciences
- Geophysics
- Health and Physical Education
- Industrial Engineering
- 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 Environmental Engineering

Master of Science in Financial Economics

Master of Science in Interdisciplinary Studies

Master of Science in Latin American Studies

Master of Science in Nursing

Adult Health Nursing
 Community Health Nursing
 Family Nurse Practitioner
 Nurse Midwifery
 Nursing Administration
 Psychiatric/Mental Health Nursing
 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

MBA/MSN Master of Business Administration/Master of Science in Nursing

ON-LINE PROGRAM

Master of Science in Kinesiology/UT Telecampus

CERTIFICATES AND NON-DEGREE PROGRAMS

College of Business Administration
 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

Non-Degree Option

Students selecting the non-degree option are placed in an unclassified status,

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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 increase their grade point average. 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.

Doctoral Program in Border Studies/UT Austin

The University of Texas at El Paso and The University of Texas at Austin have long shared a vibrant interest in Latin America, Mexico, and the U.S.-Mexico borderlands. Strong faculty, dynamic research centers, outstanding libraries, and exceptional field laboratories enable this program to offer unique opportunities for graduate study and research in these fields.

Through the Cooperative Doctoral Program in Border Studies, a graduate student may pursue studies focusing on the U.S.-Mexico borderlands within the following academic majors: sociology, geography, applied linguistics, history, economics, government (political science), anthropology, social work, community and regional planning, and Latin American Studies.

Since UT Austin is the degree-granting institution, the details of each student's program of studies must be developed within the context of departmental requirements and procedures currently in effect at UT Austin. Every student will be required to spend at least one full academic year at the Austin campus. At least six semester hours of course work and/or research must be completed at UTEP.

Admission to this program may be initiated at either institution. Students must qualify for admission to the Graduate Schools at UTEP and UT Austin and comply with all of the academic regulations of both campuses throughout the duration of the program. Students must also demonstrate oral and written competency in both English and Spanish to participate in the program.

Further information about the program may be obtained at the Center for Inter-American and Border Studies at UTEP, or the Graduate School at either institution.

Doctor of Pharmacy/UT Austin

The University of Texas at 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.

Cooperative Master of Science in Information Science

The University of Texas at Austin provides a graduate program in Library and Information Science at UTEP. Students may study for an MSIS degree or public school certification in library science.

Two courses are offered each semester and two are offered in the summer. Students may enter the program at any time. The courses are taught by faculty from UT Austin; most are televised distance learning classes.

Further information about the program can be obtained from the Associate University Librarian for Technical Services at (915) 747-6718. Or, the UT Austin contact, Judy McClung, Student Liaison/Academic Advisor can be reached at home at (915) 581-4775, at UT Austin's GSLIS toll-free number, 1-800-551-0294, or on her cell phone at (915) 422-3075.

Master of Public Health/ UT Health Science Center, Houston

The University of Texas Health Science Center at Houston offers the Masters in 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 Masters 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 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 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 Dean of the Graduate School.

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 doctoral programs.

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 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 Dean of 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 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 Dean of the Graduate School. The Graduate School discourages students from working toward more than one graduate degree at the same time.

Fall and Spring

Full-time = 9 or more hours per semester
 Part-time = 8 or less hours
 Maximum course load is 15 semester hours.

Maymester and Wintermester

Full-time = 3 or more hours per term
 Part-time = 2 or less hours
 Maximum course load is 6 hours.

Summer sessions

Full-time = 3 hours or more per term
 Part-time = 2 or less hours
 Maximum course load is 6 hours.

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. VA students are recommended to consult with the campus Veterans Affairs Office.

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 for the semester/term.

The full-time classification 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 per semester
	1/2 time	= 4-5 hours per semester
	Less than 1/2	= 3 or fewer hours per semester

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

Summer sessions	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 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.

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.

Two completed and bound copies of the thesis, 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* for the semester in which the student intends to graduate. Both copies of the completed thesis submitted to the Graduate School must bear original signatures of the members of the thesis committee.

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.

Substitutions for Thesis

Some programs do not require a thesis. This particular option must be approved by the departmental graduate advisor and the Dean of the Graduate School for each student. 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 bound copies, 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, nor in 6398 and 6399 simultaneously.

An unbound copy and two bound copies of the dissertation must be presented to the Graduate School prior to the deadline date published in the *Class Schedule* 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) and must bear the

original signatures of the supervising committee. With the dissertation, the student must also present to the Graduate School two copies of an abstract not to exceed 350 words in length (double-spaced). The abstract will be forwarded to University Microfilms International for publication in "Dissertation Abstracts International."

The Graduate School also forwards the signed unbound copy of the dissertation to University Microfilms International in Ann Arbor, Michigan, for micropublication. The student is required to pay the cost of microfilm reproduction to the Graduate School. Students presenting dissertations to the Graduate School must also complete and sign microfilm agreement forms that are available in that office.

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. 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 the 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 the 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. 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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Admission

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. Official transcripts, with the baccalaureate degree posted, of all upper-division and graduate work at accredited U.S. institution(s) or equivalent work and degree at a foreign institution. Applicants must submit one official copy of each transcript and two additional photocopies for institutions other than UTEP.
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 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 will notify 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 of the following 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.

Miller's Analogy Test

The Miller's Analogy Test (MAT) is designed to evaluate mental and reasoning abilities. The MAT is taken at the applicant's expense at licensed sites.

Test of English as a Foreign Language

The Test of English as a Foreign Language (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 (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.

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 Test of English as a Foreign Language (TOEFL) are offered throughout the year; scores may be considered only by UTEP. In addition, the Miller's Analogy Test (MAT) is administered in this office.

Transfer of Credit

Ordinarily 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, an official transcript is required from each institution from which 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 the TASP (Texas Academic Skills Program), and development of an approved plan of study. Eligible applicants for certification and endorsement programs will be notified that they may enroll as non-degree students but will need to contact the Certification Office in the College of Education immediately for eligibility into one of several certification or endorsement programs. 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 criteria 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; however, such enrollment 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. Such approval is limited to nine semester hours. 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.

Registration

The **Registration and Records Office** houses several functions: 1) **Scheduling** coordinates faculty and classroom assignments; 2) the **Records Office** is responsible for the maintenance of student records and all registration transactions. This office also processes 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 107. The office telephone number is (915) 747-5342; the office e-mail is veterans@utep.edu.

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 enrolled. Students must be enrolled during any term in which they utilize any University facilities, equipment, and resources, including research work, consultation with faculty, or required examination(s). 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 Records Office.

University policy and dates governing registration and changes in registration are printed in the *Class Schedule* that is available prior to each semester.

LATE REGISTRATION

Any student who registers after the appointed days for registering 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 may be counted as absences.

AUDIT REGISTRATION

Courses may be audited under the following provisions:

- No grades will be provided, no credit will be awarded, and no records will be maintained for audited courses. The extent of class participation is at the **discretion** of the instructor. Credit by examination for audited courses will not be permitted unless tuition and all appropriate fees are paid.

- The following courses are **not** available for audit: clinical, laboratory, studio activity, individual instruction, private lessons, or courses specified in a student's degree plan.
- Audit-only students will be afforded use of the Library through the purchase of a community user card and access to campus parking through the purchase of a parking decal. Other students privileges such as ID's, tickets to events, and the health center are not available to audit-only students.
- Audit registration must be filed after classes have begun and prior to the twelfth day of class during the fall and spring semesters and by the fourth day of class during the summer session. Students should report to the Records Office counter to obtain an Audit Registration form.
- This form must be signed by the instructor teaching the course and the department chair. The completed form must be submitted to the Student Business Services Office, located in the Academic Services Building, for payment. The "paid" Audit Registration form remains with the cashier and is filed with the Records Office. A copy of the audit form, stamped "paid", will be forwarded to the instructor.
 - Audit Fees:
 - \$5.00 per course for students concurrently enrolled at UTEP for other credit courses.
 - \$25.00 per course for students not concurrently enrolled at UTEP for other credit courses.
 - No charge for persons over 65 years of age.

The audit fees are charged to defray the expense of administering the audit and are non-refundable.

STUDENT-INITIATED REGISTRATION CHANGES

The student should refer to the academic calendar at the beginning of this catalog or in the *Class Schedule* to identify the period during which adds, drops, withdrawals, and pass/fail registration may be accomplished. All student changes in registration must follow the procedures outlined in the *Class Schedule*.

WITHDRAWAL FROM COURSES

It is the student's responsibility to officially drop any course that he/she no longer wishes to attend. Failure to do so may result in a grade of "F" on the student's academic record. Students dropping all classes are withdrawing and should consult the below section "Withdrawal from the University."

Classes dropped prior to the official census date of any semester will be deleted from the student's semester record. Course drops filed after this period but prior to the final deadline, as outlined in the *Class Schedule*, will result in a grade notation of "W." Any drop after the deadline must receive a grade of "F"; the grade of "W" can be assigned only under exceptional circumstances. The student must petition for the "W" grade in writing and provide the necessary supporting documentation. No grade of "W" will be approved after the end of the semester in which the registration occurred.

At the discretion of the instructor, a student may be dropped from a course because of excessive absences or lack of effort with a grade of "W" before the course drop deadline. A copy of the Faculty Drop Form will be mailed to the student by the Records Office.

A grade of "F" received due to the disciplinary sanction imposed by the University overrides a grade of "W" received through a student-initiated withdrawal.

Students appointed as teaching or research assistants or who are receiving stipends are expected to maintain the approved course load. Any course drops resulting in a change to less than full-time enrollment will jeopardize a student's appointment.

WITHDRAWAL FROM THE UNIVERSITY

Withdrawal from the University must be done through the Records Office. If the withdrawal is completed prior to the deadline for student-initiated course drops, the student will receive "W's." If the withdrawal is completed after that deadline, instructors will determine grades of "W" or "F."

Curriculum and Classroom Policies

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 = precollege 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.

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 usually not eligible to take graduate courses. 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 courses are taken.
3. Total enrollment for all work must not exceed 15 semester hours (or nine hours in a summer session).
4. All enrollment in graduate courses must be approved prior to registration by the departmental graduate advisor, the undergraduate dean, and the Dean of 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 51.925 of the *Texas Education Code* related to absences by students for observance of religious holy days states that the institution will allow a student who is absent from classes for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence when the following conditions are met. The student must notify the instructor of each course (not later than the 15th day of the semester) that the student will be absent for a religious holy day. The student's notification must be in writing and must be either (a) delivered by the student personally to the instructor of each class, with receipt of the notification acknowledged and dated by the instructor, or (b) by certified mail, return receipt requested, addressed to the instructor of each class. The student may not be penalized for these excused absences if missed assignment or examination is completed within a reasonable time.

Dead Day

This specific day will be scheduled one day after the last day of classes only during the fall and spring semesters. No classes will be held on this day, except classes that meet once a week on that day.

Scholastic 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, 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. A grade of "A" in a thesis or dissertation course, or in a specifically authorized seminar, conference, or research course involving a report in lieu of a thesis, may not be used to affect the GPA. Although all work will be listed on a 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 counted in the GPA. These grades include "I" (incomplete), "P" (in progress), "W" (withdrawal), and "S" or "U" (pass/fail). The grade of "W" can be assigned after the drop deadline *only under exceptional circumstances*. Any drop after the deadline must receive a grade of "F." The student must petition for the "W" grade in writing and provide the necessary supporting documentation. No grade of "W" will be approved after the end of the term in which the registration occurred.

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 Dean of 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 after the receipt of the grade as possible 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 Dean of the Graduate School. Students will receive notification of approved changes.

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 Dean 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. Section 1232g, and the *Texas Public Information Act, Texas Government Code, Section 552.001 et seq.*, are respectively a federal and state law that provide for the review and disclosure of student educational records. In accordance with these laws, the University has adopted the following policy. Individuals are informed of their rights under these laws through this policy that is included in the *University Handbook of Operating Procedures (HOP)*, the *Undergraduate Catalog*, and the *Graduate Catalog*. The University catalog will be made available for inspection through the Dean of Students' Office and HOPs are available in the University Library and most administrative offices.

The University will not permit access to or the release of personally identifiable information contained in student education records without the written consent of the student to any party, except as authorized by FERPA. FERPA's authorization for release without consent includes the following:

1. to appropriate university officials who require access to educational records in order to perform their legitimate educational duties;
2. to officials of other schools in which the student seeks or intends to enroll, upon request of these officials, and upon the condition that the student be notified and receive a copy of the record if desired;
3. to federal, state, or local officials or agencies authorized by law;
4. in connection with a student's application for, or receipt of, financial aid;
5. to accrediting organizations or organizations conducting educational studies, provided that these organizations do not release personally identifiable data and destroy such data when it is no longer needed for the purpose it was obtained;

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6. to the parents of a dependent student as defined in section 152 of the *Internal Revenue Code of 1954*, provided a reasonable effort is made to notify the student in advance;
7. in compliance with a judicial order or subpoena, provided a reasonable effort is made to notify the student in advance unless such subpoena specifically directs the institution not to disclose the existence of a subpoena;
8. in an emergency situation if the information is necessary to protect the health or safety of the students or other persons; or
9. to an alleged victim of any crime of violence, the results of the alleged perpetrator's disciplinary proceeding may be released.

The University will release information in student education records to appropriate University officials as indicated in (1) above when there is a legitimate educational interest. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Regents; or a student serving on an official committee or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

Where required by regulations, a record of requests for disclosure and such disclosure of personally identifiable information from student education records shall be maintained by the Admissions Office, Graduate School, Registration and Records Office, office of the student's academic dean, and the office of the student's departmental major for each student, and will also be made available for inspection pursuant to this policy. If the institution discovers that a third party who has received student records from the institution has released or failed to destroy such records in violation of this policy, it will prohibit access to educational records for five (5) years. Respective records no longer subject to audit nor presently under request for access may be purged according to regular schedules.

Directory Information

At its discretion, the University may release Directory information that shall include:

1. name, local and permanent address, telephone number
2. date and place of birth
3. major field of study
4. participation in officially recognized activities and sports
5. dates of attendance
6. most recent previous educational institution attended
7. classification
8. degrees, certificates, and awards (including scholarships) received
9. date of graduation
10. physical factors (height and weight) of athletes
11. photographs
12. e-mail address
13. enrollment status

Students may have all directory information withheld by notifying the 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 must be filed each semester or session in the Records Office. At any time during the semester or session, a student may elect to cancel their request for nondisclosure of directory information.

A student who elects to withhold directory information will restrict its release for use

in such activities as the annual Student Directory, off-campus mailing listings, and enrollment verifications for off-campus parties. A student who elects to withhold directory information may not receive this same information on the telephone or e-mail. A student wishing to obtain this information must come to the Records Office.

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 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 Records Office.

Access to Educational Records

Upon written request, the University shall provide a student with access to his or her educational records. The University's Vice President for Finance and Administration has been designated by the institution to coordinate the inspection and review procedures for student education records, which include admissions files, academic files, and financial files. Students wishing to review their education records must make written requests to the Vice President for Finance and Administration listing the item or items of interest. Education records covered by the Act will be made available within 45 days of the request.

A list of education records and those officials responsible for the records shall be maintained at the Office of the Vice President for Finance and Administration. This list includes:

1. Academic Records
 - Admissions Office: Director
 - Graduate School: Dean
 - Registration and Records Office: Registrar
 - College, Division, Department, and Faculty Offices
2. Student Services Records
 - University Counseling Services: Director
 - Student Activities Center: Director
 - Student Services: Dean of Students
3. Financial Records
 - Business Office: Vice President for Finance and Administration
 - Financial Aid Office: Director
 - Scholarship Office: Director

Educational records do not include:

1. financial records of the student's parents or guardian;
2. confidential letters of recommendation which were placed in the educational records of a student prior to January 1, 1975;
3. records of instructional, administrative, and educational personnel which are kept in the sole possession of the maker and are not accessible or revealed to any other individual except a temporary substitute for the maker;
4. records of law enforcement units;
5. employment records related exclusively to an individual's employment capacity;
6. medical and psychological records;
7. thesis or research papers; or
8. records that only contain information about an individual after the individual is no longer a student at the institution.

Challenge to Educational Records

Students may challenge the accuracy of their education records. Students who believe that their education records contain information that is inaccurate or misleading, or is otherwise in violation of their privacy or other rights may discuss their problems informally with the official responsible for the records. If agreement is reached with respect to the student's request, the appropriate records will be amended. If not, the student will be notified within a reasonable period of time that the records will not be amended, and they will be informed by the official responsible for the records of their right to a formal hearing.

Student requests for a formal hearing must be made in writing to the Vice President for Finance and Administration who, within a reasonable period of time after receiving such requests, will inform students of the date, place, and time of the hearing. Students may present evidence relevant to the issues raised and may be assisted or represented at the hearings by one or more persons of their choice, including attorneys, at the student's expense. The hearing officer that will adjudicate such challenges will be appointed by the Vice President for Finance and Administration in non-academic matters and by the Provost and Vice President for Academic Affairs in academic matters.

Decisions of the hearing officer will be final, will be based solely on the evidence presented at the hearing, will consist of the written statements summarizing the evidence and stating the reasons for the decisions, and will be delivered to all parties concerned. The education records will be corrected or amended in accordance with the decision of the hearing officer if the decision is in favor of the student. If the decision is unsatisfactory to the student, the student may place with the education records statements commenting on the information in the records or statements setting forth any reasons for disagreeing with the decision of the hearing officer, or both. The statements 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 in keeping with the provisions of the Act may request in writing, assistance from the President of the University.

Copies of Educational Records

Students may have copies made 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.

Complaints

Complaints regarding alleged failures to comply with the provisions of the FERPA may be submitted in writing to the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue SW, Washington, D.C. 20202-4605. Additional FERPA information can be found at www.ed.gov/offices/om/ferpa

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

What's Inside

Financial Assistance

- Merit-Based Awards
- Need-Based Awards
- Financial Support

Tuition and Fees

Housing Expenses

Residency Determination

- Student Responsibilities
- Penalties

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 – H.B. 2061.

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 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
2002-2003

Name of Charge	Classification	Residency	Amount	Notes
Tuition:				
	Undergraduates or Graduates in Liberal Arts, Science or Education	Resident	\$86/sch*	Set by Legislature at a rate not to exceed \$86 per semester credit hour. Tuition revenue is used to fund general university instructions and operative expenses.
		Non-Resident	\$304/sch*	Set by Legislature at a rate not to exceed \$304 per semester credit hour.
	Graduate in Business, Engineering, Nursing, Science, MASE & ESE Majors	Resident Non-Resident	\$114/sch* \$324/sch*	Governing board may set at twice statutory rates for undergraduate programs.
Required Fees:				
Student Services Fee	All Students	All Students	\$12.50/sch up to a maximum of \$150	A compulsory fee to fund student-related services such as intramural activities, student government, disabled student organizations, career services, cheerleaders, student publications, health services, intercollegiate athletics, others.
Library Fee	Undergraduate Students	All Students	\$3.00/sch	A fee to purchase library materials, to replace maintain and acquire new equipment, and to provide technical support for personal computers and terminals.
	Graduate Students		\$4.00/sch	
Student Union Fee	All Students	All Students	\$30 /semester	Fee may be used for finance, construction, operation, and maintenance of a student union building and its programs.
International Education Fee	All Students	All Students	\$1 /semester	For funding an international education financial aid fund for University students.

Recreation Fee	All Students	All Students	\$12/semester	Fee for financing, constructing, maintaining, and operating new and existing recreational facilities and programs.
Registration Fee	All Students	All Students	\$5/semester	To defray the costs associated with technology services for telephone registration.
Technology	All Students	All Students	\$10/sch, up to a maximum of \$150	An incidental fee that provides for development of campus computers and network facilities for students.
Health Center Fee	All Students	All Students	\$12/semester	Fee to provide support and medical services to the student population.
Incidental Fees:				
Variety (see Catalog)	All Students	All Students	Variable	For specific services such as late registration, library fines, add/drop fees, bad check charges, application processing fees, and others as approved by the governing board.
Laboratory Fees:				
Variety (see Catalog)	All Students (depending on courses taken)	All Students	Variable	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.
Supplemental Fees:				
Variety (see Catalog)	All Students (depending on courses taken)	All Students	\$10-\$50	Charges in addition to regular tuition for certain course-related materials and/or for individual instruction.
Voluntary Fees:				
Variety (see Catalog)	Students desiring the specific service	All Students	Variable	May include such items as parking fees, orientation fees, and installment tuition fees.

* Effective fall semester, 1997, the former general use fee has become part of tuition charges per action of the Texas Legislature. Revised March 6, 2002.

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

THE UNIVERSITY OF TEXAS AT EL PASO
Summary of Tuition and Fee Charges
2003-2004 Academic Year

Name of Charge	Undergraduate In Business, Educ., LA, & Science	Undergraduate in Engineering & Nursing	Graduate in Education & LA	Graduate in Business, Engineering Nursing, & Science
	12 SCH	12 SCH	9 SCH	9 SCH
Resident tuition ^{1**}	1,104.00	1,104.00	828.00	1,080.00
Add: Required Fees ²				
Student Services Fee	150.00	150.00	112.50	112.50
Library Fee	36.00	36.00	36.00	36.00
Student Union Fee	30.00	30.00	30.00	30.00
Registration Fee	5.00	5.00	5.00	5.00
International Education Fee	1.00	1.00	1.00	1.00
Recreational Fee	12.00	12.00	12.00	12.00
Technology Fee	120.00	120.00	90.00	90.00
Health Center Fee	12.00	12.00	12.00	12.00
Major Fee	0.00	30.00	0.00	30.00
Subtotal-Required Fees	1,470.00	1,500.00	1,126.50	1,408.50
Add: Average for college and course-related laboratory, incidental, and supplemental fees, and/or optional student services fees	75.00	50.00	75.00	50.00
Total Charges (Tuition plus subtotal-required fees plus averages for college and course-related fees and/or optional student services fees)	1,545.00	1,550.00	1,201.50	1,458.50
AVERAGE COST PER SEMESTER CREDIT HOUR	128.75	129.17	133.50	162.06

¹ Resident undergraduate tuition as established by the Texas Legislature is \$92/semester credit hours (SCH); non-residents undergraduate tuition is \$328/SCH. Graduate tuition might be twice the statutory rates for undergraduate students. For graduate rates, consult the *Graduate Catalog* or the most current *Class Schedule*.

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 catalog and in the *Class Schedules*.

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

**** Effective with the fall semester, 1997, the former general use fee has become part of tuition charges per action of the Texas Legislature. Revised March 3, 2003.**

Note: The Texas Legislature does not set the specific amount for any particular student fee. The student fees assessed 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.

The charges shown in this schedule must be paid by all students registering for credit. The amount includes the following:

TUITION

TEXAS RESIDENTS - \$92.00 per semester hour.

TEXAS RESIDENT GRADUATE TUITION - Enrolling in courses offered in Business, Engineering, ESE, MASE, Nursing, and Science - \$120.00 per semester hour.

NON-RESIDENT/INTERNATIONAL TUITION - \$328.00 per credit hour. Non-resident International students will be assessed the actual cost of education per semester hour as determined by the Texas Higher Education Coordinating Board.

NON-RESIDENT/INTERNATIONAL GRADUATE TUITION - Enrolling in courses offered in Business, Engineering, ESE, MASE, Nursing, and Science - \$348.00 per semester hour.

MANDATORY FEES

LIBRARY FEE - \$3.00 per semester hour, for undergraduates / \$4.00 graduates.

STUDENT SERVICE FEE - \$12.50 per semester hour, to a maximum of \$150.00 (12 semester hours).

TECHNOLOGY FEE - \$10.00 per student per semester credit hour, to a maximum of \$150.00 (15 semester hours).

INTERNATIONAL EDUCATION FEE - \$1.00 per student for each term.

STUDENT UNION FEE - \$30.00 per student per term.

RECREATION FEE - \$12.00 per student per term.

REGISTRATION FEE - \$5.00 per student per term.

HEALTH CENTER FEE - \$12.00 per student per term.

COURSE-RELATED FEES - Assessment of varying amount, based on courses for which the student is enrolled.

CLINICAL LABORATORY SCIENCE MAJOR FEE- \$30.00 per semester with a declared major in clinical laboratory science.

ELECTRICAL AND COMPUTER ENGINEERING MAJOR FEE -\$25.00 per semester with a declared major of Engineering, including Pre-Engineering and Graduate Students.

NURSING MAJOR FEE- \$86.00 per semester with a declared major in Nursing.

OCCUPATIONAL THERAPY MAJOR FEE- \$25.00 per semester with a declared major in Occupational Therapy.

UT TELECAMPUS DISTANCE LEARNING TUITION AND FEES*

(MBA, Med, Other UT TeleCampus Offerings)

Tuition	\$ 92.00 sch
Differential Tuition	\$ 28.00 sch
Institutional Fees (estimate)	\$ 58.00
Assessments based on 3 semester credit hours	\$420.00
Tuition	\$276.00
Differential Tuition	\$ 84.00
Institutional Fees	\$ 58.00

UTEP DISTANCE LEARNING TUITION AND FEES***(Non-UT TeleCampus Video and Audio Distance Learning, CD based courses)**

Tuition	\$ 92.00 sch
Differential Tuition	\$ 28.00 sch
Library Fee	\$ 4.00 sch
Technology Fee	\$ 10.00 sch
International Fund Fee	\$ 1.00 per semester
Health Center Fee	\$ 12.00 per semester
Registration Fee	\$ 5.00 per semester

Assessment based on 3 semester credit hours	\$ 420.00
Tuition	\$ 276.00
Differential Tuition	\$ 84.00
Library Fee	\$ 12.00
Technology Fee	\$ 30.00
International Fund Fee	\$ 1.00
Health Center Fee	\$ 12.00
Registration Fee	\$ 5.00

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 AND MANDATORY FEES 2003-2004

Sem. Hours	Resident UG/ in Educ & LA	Resident Grad in Educ & LA	Non-Res UG/ in Educ & LA	Non-Res Grad in Educ & LA	Graduate Resident in Bus, Engr, ESE, MASE, NHS, & Science	Graduate Non-Resident in Bus, Engr, ESE, MASE, NHS, & Science
1	\$ 177.50	\$ 178.50	\$ 206.50	\$ 413.50	\$ 414.50	\$ 434.50
2	295.00	297.00	353.00	767.00	769.00	809.00
3	412.50	415.50	499.50	1120.50	1123.50	1183.50
4	530.00	534.00	646.00	1474.00	1478.00	1558.00
5	647.50	652.50	792.50	1827.50	1832.50	1932.50
6	765.00	771.00	939.00	2181.00	2187.00	2307.00
7	882.50	889.50	1085.50	2534.50	2541.50	2681.50
8	1000.00	1008.00	1232.00	2888.00	2896.00	3056.00
9	1117.50	1126.50	1378.50	3241.50	3250.50	3430.50
10	1235.00	1245.00	1525.00	3595.00	3605.00	3805.00
11	1352.50	1363.50	1671.50	3948.00	3959.50	4179.50
12	1470.00	1482.00	1818.00	4302.00	4314.00	4554.00
13	1575.00	1588.00	1952.00	4643.00	4656.00	4916.00
14	1680.00	1694.00	2086.00	4984.00	4998.00	5278.00
15	1785.00	1800.00	2220.00	5325.00	5340.00	5640.00
16	1880.00	1896.00	2344.00	5656.00	5672.00	5992.00
17	1975.00	1992.00	2468.00	5987.00	6004.00	6344.00
18	2070.00	2088.00	2592.00	6318.00	6336.00	6696.00
19	2165.00	2184.00	2716.00	6649.00	6668.00	7048.00
20	2260.00	2280.00	2840.00	6980.00	7000.00	7400.00
21	2355.00	2376.00	2964.00	7311.00	7332.00	7752.00

* This table of Tuition and Mandatory Fees does not include incidental fees, course related fees, or individual major fees. Students should refer to the current University Catalog.

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

To the above quoted tuition and fees, the following must be added if you are a:

New Student

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.

International Student (ONLY)

International Student Services Fee - \$20 per student per term

LABORATORY FEES

ARTE	3317,5322	\$	15.00
ARTF	1301,1303	\$	10.00
ARTF	1302,1304	\$	4.00
ARTF	3315	\$	20.00
ARTG	2216,2306,2316,3316,3326,3336,4306,4316,4326	\$	25.00
ARTG	5350	\$	20.00
ASTR	1107,1108	\$	5.00
BIOL	1107,1103	\$	10.00
BIOL	4195	\$	10.00
BIOL	4298	\$	16.00
BIOL	4198,4326,5305,5318,5320,5324	\$	8.00
BIOL	1104	\$	6.00
BIOL	2111,2113	\$	15.00
BIOL	2117,3119,4223,4398,5302,3414,5502	\$	30.00
BIOL	3330	\$	10.00
BIOL	3427	\$	20.00
BOT	2410	\$	12.00
BOT	3437	\$	8.00
CERM	2304,2314,3304,3314,3324,4304,4314,4324	\$	15.00
CERM	5350	\$	18.00
CHEM	1105	\$	4.00
CHEM	1106	\$	10.00
CHEM	2161,3110,3124,3125,3221,3222,4212	\$	18.00
CHEM	4165	\$	8.00
CHEM	3151,3152,1408	\$	12.00
CHEM	1407	\$	15.00
CHEM	4176,4376	\$	5.00
COMM	2342	\$	10.00
COMM	3317	\$	20.00
COMM	2371,3311,3313,4311	\$	5.00
COMM	2343,3331	\$	15.00
COMM	3333	\$	7.00
COMM	3331	\$	15.00
DRAW	2308,3318	\$	8.00
DRAW	2318	\$	20.00

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DRAW	3308	\$	15.00
GEOG	1106	\$	18.00
GEOL	1101,1102,3321	\$	18.00
GEOL	4155,4157,3325,4362	\$	20.00
GEOL	2411,2314	\$	25.00
GEOL	3311	\$	30.00
GEOL	1303,1304	\$	18.00
GEOL	2412,3315,3355,3405,4380,5343,5344,5363,5367,5375,5376, 5380,3420,5405	\$	20.00
GEOG	4332,4334,5351,5357	\$	20.00
GEOG	5362	\$	25.00
KIN	4312,4313,4330	\$	10.00
MICR	3128,4152	\$	8.00
MICR	3449	\$	10.00
MICR	2440,3443,4453	\$	30.00
MICR	3445	\$	24.00
MS	1113,1116	\$	20.00
PHYS	1120,1121,3243,1403,1404	\$	5.00
PHYS	4371	\$	15.00
PNTG	2301,2331,3301,3331,3341,4301,4331,4341,5350	\$	12.00
PRNT	2305,2325,3305,3325,3335,5350	\$	30.00
PRNT	4305,4325,4335	\$	22.00
PSCI	2303,3304	\$	15.00
PSYC	1301	\$	8.00
PT	5207	\$	2.00
PT	5317,5319,5320,5321,5327,5329,5337,5408,5418,5528	\$	4.00
PT	5311,5409	\$	5.00
PT	5406	\$	30.00
SCI	1401,1402	\$	8.00
SCUL	2302,2332,3302,3332,3342,4302,4332,4342,5302,5350	\$	30.00
ZOOL	3464,2406	\$	16.00
ZOOL	4155,4157,4476,4478	\$	8.00
ZOOL	4181	\$	30.00
ZOOL	3468	\$	20.00

SUPPLEMENTAL TUITION AND COACHING FEES

ART	5393	\$	10.00
ARTE	5399	\$	10.00
ARTG	5350	\$	10.00
CERM	4304,4314,4324,5350	\$	10.00
DRAW	4310,4320,4330,5350	\$	10.00
MTLS	4303,4313,4323,5350	\$	10.00
MUSA	1281,1291,3291,5281	\$	35.00
MUSA	1381,1391,3391,5381,5391,1491,3491	\$	50.00
PNTG	4331,4341,5350	\$	10.00
PRNT	4305,4335,5350	\$	10.00
SCUL	4302,4332,4342,5302,5350	\$	10.00

COURSE SPECIFIC FEES

ART	1300,3307	\$	5.00
ART	3339	\$	15.00
ART	1310	\$	10.00
ARTE	4347	\$	15.00

ARTH	1305,1306,3310,3329,4309,4319,5329	\$ 5.00
ASTR	1107,1108	\$ 5.00
CHEM	4176	\$ 10.00
CHEM	4376	\$ 20.00
CHIC	3302,3303	\$ 15.00
COMM	2390,4359	\$ 15.00
COMM	4335	\$ 10.00
FREN	2301,2302,1401,1402	\$ 5.00
GEOL	3311,3423	\$ 20.00
GEOL	4665	\$ 450.00
GEOP	5258	\$ 20.00
GERM	2301,2302,1401,1402	\$ 5.00
GREK	1405,1406	\$ 5.00
HSCI	2303	\$ 10.00
HSCI	2309,4301,4311	\$ 5.00
KIN	3201,3202,3203,3204,3205,3206,3207,3209,3210,3211,3318, 4319,4321	\$ 8.00
KIN	4309,4315	\$ 20.00
KIN	4334,5361,5371,5372,5374	\$ 25.00
LATN	2301,2302,1401,1402	\$ 5.00
LING	2403,2404	\$ 2.00
MUSA	1143,1144,1146,1271,1272,2271,2272,1279,2375,2376,3371	\$ 5.00
OT	4640,4642,4644	\$ 180.00
PE	1101,1104,1110,1116,1122,1125,1149,1151,1152,1157,1161, 1170,1173,1186,1188	\$ 8.00
PE	1107,1164,1176,1178,1180,1182,1184,1191,1194,1196	\$ 12.00
PE	1128,1129	\$ 14.00
PHYS	1120,1121,3243,1403,1404	\$ 5.00
PORT	2301,2302	\$ 5.00
PSYC	5333	\$ 25.00
PSYC	4352,5301	\$ 20.00
PSYC	5398,5399,6320,6321	\$ 30.00
RUSS	2301,2302,1401,1402	\$ 5.00
SPAN	2301,2302,2303,2304,1401,1402	\$ 5.00
SPED	4330	\$ 15.00
SPLP	4340,5369,5373	\$ 20.00
THEA	1313,2321,3342	\$ 10.00
THEA	2322,2390,4390	\$ 25.00
THEA	3302,3303,3390,3391,3392,3393,3394,3395	\$ 15.00
THEA	3341	\$ 23.00

INCIDENTAL FEES

ADD/DROP FEE - A fee of \$5.00 is assessed per transaction each time a change is made to the initial registration.

AUDIT FEE - A fee of \$5.00 per audited course will be assessed to a student who is currently enrolled at the University. A fee of \$25.00 will be assessed to individuals not enrolled for per credit courses at the university

ART HISTORY MATERIALS FEE - A fee of \$5.00 per course will be assessed to defray costs of slides and videos in art history and art appreciation courses. (See above)

ATHLETIC TRAINING FEE - A fee of \$30.00 per course will be assessed to defray costs of providing supplies and equipment for academic courses which provide instruction and practical experience in athletic training. (See above)

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- CATALOG FEE - A fee of \$1.00 will be assessed to students who pick up the University Catalog. A fee of \$3.50 will be assessed to students that request a University Catalog be mailed.
- 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-\$30.00 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 \$5.00 will be assessed to a student requesting a replacement diploma within one (1) year of the original order. A fee of \$25.00 will be assessed to a student requesting a replacement diploma after the one (1) year period.
- DISSERTATION FEE - A fee of \$55.00 will be assessed to defray costs of microfilming and mailing graduate dissertations.
- DISTANCE EDUCATION FEE - A fee of \$25.00 per semester 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.
- ENTERING STUDENT ADMINISTRATIVE FEE - To defray costs of service made available to new undergraduate students including student orientation, institutional placement testing, and testing to meet the TASP requirement:
First-time UTEP Students Not Transferring From Another Institution - \$100.00
New Transfer Students - \$70.00
New International Students - \$120.00
- EQUIPMENT FEES - A fee of \$5.00 - \$25.00 per course will be assessed to defray cost of providing equipment for academic courses that provide instruction and practical experience in various courses. (See above)
- 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.
- FIELD TRIP FEE -To defray transportation and related costs associated with field trips. (See above)
- 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 \$25.00 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.
- 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** - \$20.00 per long semester and \$10.00 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 who 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/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
- | | |
|--|---------------------------------|
| | \$1.00 per semester credit hour |
|--|---------------------------------|
- PHYSICAL EDUCATION COURSE FEES** - A fee of \$4.00 to \$20.00 will be assessed to defray costs of the purchase of supplies and maintenance of equipment. (See above)
- PROFESSIONAL LIABILITY INSURANCE FEE** - A fee of \$10.00 to \$80.00 will be assessed to defray costs of insurance for students working in clinical settings in courses in health sciences, nursing, speech-language pathology, and social work.

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PSYCHOLOGY RESEARCH COURSE FEE - A fee of \$10.00 to \$60.00 will be assessed to all students enrolled in psychology research courses to defray costs of course supplies. (See above)

REGISTRATION FEE - A \$5.00 per semester fee will be assessed each registering student to defray costs associated with technology services for telephone registration.

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.

RETURNED CHECK FEE - A fee of \$25.00 per check will be assessed to students who 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 \$75.00 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.

1. 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;
2. 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
3. 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 only assessed 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 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.

STUDENT MINER GOLD CARD

Card Issuance

All students must have one 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 ID (e.g., license, state ID, passport) must be shown before the card is issued. The card is official identification and will be activated after each term's registration. 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 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. The center's telephone number is (915) 747-7334, or e-mail: studentid@utep.edu. The center's web site can be found at: www.miner.gold.utep.edu

Charges

A one-time nonrefundable 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 due to theft or loss, it is deactivated and cannot be reactivated should it be found later. A request of a name change, resulting in the issuance of a replacement card, will also follow the replacement fee. 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.

Smart Chip

The Smart Chip is used to store electronic dollars on the Miner Gold Card. The money added to the Smart Chip can be used in vending machines (soda or candy) and to purchase photocopies. Money may be added to the Smart Chip by depositing cash on the card at any of the cash-to-card machines located throughout campus. Money added to the chip has a maximum limit of \$50. A Pin Number is not used to secure this money; it can be used by anyone should the card be lost. Money on the chip should be considered the same as cash.

Smart Chip Cash balances are NOT refundable unless one of these two conditions is met:

1. **Damaged Cards:** Immediate transfer of the remaining value from a damaged card to the new card will be made ONLY if the chip can be read. The damaged card must be relinquished to the card office.
2. **Separation from the University:** Upon permanently leaving the university, a refund for the balance remaining on the card may be obtained by submitting a written request and surrendering the card within 45 days after the date of graduation or other date established by the university as the permanent departure date. Balances equal to or under \$10 will not be refunded. Refund checks for balances in excess of \$10 will be processed within 3 work days after the request is received. Any unclaimed balance remaining after the end of the 45-day period shall become the property of the university. All refunds are subject to reduction by the amount of any outstanding debt owed to the university.

Magnetic Strip

The magnetic strip on the back of the Miner Gold Card can be used for: 1) storing funds for meals and a variety of campus purchases; 2) access to campus facilities; and 3) validation for enrollment or employment. Money may be added to the magnetic strip by depositing cash with either the Student Business Services Office or Miner Gold Card Office during normal business hours.

Bar Code

The bar code on the back of the Miner Gold Card can be used for checking out materials at the UTEP Library and the Music Library, and for other services.

Safeguards

Protect the Miner Gold Card from damage by keeping it in the protective sleeve or plastic holder provided 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 to avoid unauthorized use. Smart Chip cash on a lost or stolen card 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.

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
Rates are subject to change Spring 2003Perimeter Parking Lots

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

Class A-P	\$ 25.00	All Students (including Graduates)
	\$ 19.00	If purchased during the Spring Semester
	\$ 10.00	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	\$ 10.00	All Students
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Other Class Permits

Class H	\$ -0-	No charge if vehicle is in compliance
Class M	\$ 10.00	All Student motorcycles
	\$ 6.50	If purchased during the Spring Semester
	\$ 4.00	If purchased during the Summer Session
Class MV	\$ -0-	No charge for residents of UTEP Miner Village

Replacement Decal	\$ 1.00	With remnants of decal
Replacement Decal	\$ 5.00	Without remnants of decal

METHODS OF PAYMENT

Cash, checks or credit cards will be accepted for payment of tuition and fees. Payments may be made by credit card (Discover, MasterCard, Visa, or American Express) by using the TTR telephone system at 747-1145 or the website at <http://www.utep.edu> and click on the Goldmine icon (this is a secure website). You can also call the Student Business Services Office at 747-5116. Have the credit card number and expiration date when calling.

PAYMENT OPTIONS

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
- Optional Incidental Fees (such as Late Registration, Add/Drop, Installment Tuition Handling Fees, etc.)

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

The following additional policies will apply to deferral of payments:

1. All student account balances due from prior semesters, including items associated with payment deferred, must be paid in full before a student is allowed to register 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 due by the term's payment due date. An Installment Tuition Late 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. Student Business Services has implemented an e-mail notification system to notify students of installment(s) payment plan and emergency loan payment deadlines. Student Business Services will no longer mail bills. Please note that this notification will only be sent to "utep.edu" e-mail addresses. If you do not have a "utep.edu" e-mail address, we encourage you to obtain one by calling the university help desk at 747-4357. Without one, you will receive NO billing notifications during the term. You can also obtain your "utep.edu" e-mail address by logging onto the following website: getmail.utep.edu. Student Business Services will continue to mail, via US Post Office, invoices prior to the first school day that provides the class schedule and tuition and fees assessed for that term.

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. delinquent accounts are referred to a collection agency for follow-up; and/or
 - c. disenrollment from classes,
 - d. withholding of grades, degree, and official transcript; and
 - e. 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: assessed 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 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 in 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 Exemption Summary*

DESCRIPTION	ELIGIBILITY	FEES EXEMPTED***
**Accredited School Scholarship (permissive), <i>Texas Education Code</i> <u>§54.201</u>	<ul style="list-style-type: none"> Highest ranking graduate of an accredited Texas high school 	Tuition during first two semesters (long session) following graduation
Children of Texas veterans, <i>Texas Education Code</i> <u>§54.203</u>	<ul style="list-style-type: none"> 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 For orphans of members of the Texas National Guard killed since January 1, 1946, while on active duty Must be Texas resident and resided in the state at least 12 months immediately preceding date of registration 	Tuition Laboratory fees General Fee NOT TO EXCEED 150 CREDIT HOURS

<p>Texas ex-servicemen, <u><i>Texas Education Code</i></u> §54.203</p>	<ul style="list-style-type: none"> • Resided in Texas for 12 months prior to registration • A bona fide legal resident of Texas at time entered service • Served in armed forces in World War II, Korean Conflict, the Cold War, Vietnam, Grenada era, Lebanon, Panama, Persian Gulf • Honorably discharged • Not eligible for federal education benefits 	<p>Tuition Laboratory fees General Fee NOT TO EXCEED 150 CREDIT HOURS</p>
<p>Children of disabled/deceased Texas firefighters and peace officers, <u><i>Texas Education Code</i></u> §54.204</p>	<ul style="list-style-type: none"> • For children under 21 years of age (or 22 if the student was eligible to participate in special education under Texas Education 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 • Disability/death occurred in the line of duty 	<p>Tuition Required Fees NOT TO EXCEED 120 UNDERGRADUATE CREDIT HOURS OR ANY SEMESTER BEGUN AFTER AGE 26</p>
<p>**Disabled Peace Officers (permissive) <u><i>Texas Education Code</i></u> §54.2041</p>	<ul style="list-style-type: none"> • Texas resident who has resided in Texas for 12 months immediately preceding registration • Permanently disabled as a result of injury sustained in performance of duties as Texas peace officer • Unable to continue duties as peace officer 	<p>Tuition Fees excluding class fees and laboratory fees NOT TO EXCEED 12 SEMESTER IN UNDERGRADUATE PROGRAM</p>
<p>Blind and deaf students, <u><i>Texas Education Code</i></u> §54.205</p>	<ul style="list-style-type: none"> • A blind disabled person, or a person whose sense of hearing is nonfunctional • Must be a Texas resident 	<p>Tuition Required fees General property deposit</p>
<p>**Good Neighbor Scholarship (permissive), <u><i>Texas Education Code</i></u> §54.207</p>	<ul style="list-style-type: none"> • 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 	<p>Tuition</p>
<p>Firefighters enrolled in fire science courses, <u><i>Texas Education Code</i></u> §54.208</p>	<ul style="list-style-type: none"> • Firefighters enrolled in course offered as a part of fire science curriculum 	<p>Tuition Laboratory fees</p>
<p>Children of prisoners of war or persons missing in action, <u><i>Texas Education Code</i></u> §54.209</p>	<ul style="list-style-type: none"> • 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 	<p>Tuition Required fees</p>

<p>**Senior citizen (permissive), <u>Texas Education Code §54.210</u></p>	<ul style="list-style-type: none"> • Individuals 65 years of age or older on space available basis 	<p>Tuition NOT TO EXCEED 6 CREDIT HOURS PER SEMESTER</p>
<p>Foster Children, <u>Texas Education Code §54.211</u></p>	<ul style="list-style-type: none"> • 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 	<p>Tuition Required fees</p>
<p>**Fully Funded Courses (permissive), <u>Texas Education Code §54.217</u></p>	<ul style="list-style-type: none"> • Individuals enrolled in courses that are fully funded by federal or other sources 	<p>Tuition and fees for particular course</p>
<p>ROTC Students, <u>Texas Education Code §54.212</u></p>	<ul style="list-style-type: none"> • 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 maintains 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 	<p>Tuition Fees Lodging & Board (1st two years of enrollment) NOT TO EXCEED 4 YEARS</p>
<p>TANF Students, <u>Texas Education Code §54.212</u></p>	<ul style="list-style-type: none"> • For a student 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 	<p>Tuition Fees NOT TO EXCEED FIRST ACADEMIC YEAR</p>

	<ul style="list-style-type: none"> • Younger than 22 years of age on the date of enrollment • Enrolls at the institution as an undergraduate student not later than the first 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 	
Educational Aides, <u><i>Texas Education Code §54.214</i></u>	<ul style="list-style-type: none"> • 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, <u><i>Texas Education Code §54.503(e)</i></u>	<ul style="list-style-type: none"> • When payment of fee causes undue economic hardship -- number of exceptions limited to 5 percent of total enrollment 	General fee
Early High School Graduates, <u><i>Texas Education Code §56.201-209</i></u>	<ul style="list-style-type: none"> • 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. <u><i>Texas Govt. Code, §615.0225</i></u>	<ul style="list-style-type: none"> • For the surviving spouse or children of certain public peace officers, probation officers, parole officers, jailers, police reservists, fire fighters, and emergency medical personnel. <u><i>Texas Govt. Code, §615.003</i></u> • Death occurred in the line of duty as a result of a risk inherent in the duty • Must be enrolled full time 	Tuition and fees Student Housing and Food Contract Costs Textbook Costs NOT TO EXCEED BACHELORS 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 July 2, 2002.**

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 within ten class days after receiving written notice. Students will be assessed a \$25 fee for each check not honored by payor's bank. This assessment is subject to change without prior notice.

Housing Expenses

UTEP students choosing to live in Miner Village may select to contract for either a 9-month or 12-month contract. Miner Village living offers the following rates on a per resident, per month basis.

Efficiency Unit for two persons.....	\$295 per person* per month
Four-Bedroom Unit.....	\$390 per person* per month
Two-Bedroom Unit.....	\$413 per person* per month
Efficiency Unit for one person.....	\$440 per person* per month

* Monthly rates include utilities paid, furnished units, local telephone service, internet connections, basic cable television, and one parking sticker for the Miner Village area. A \$200 Miner Village deposit and a \$30 telephone maintenance fee paid once a year is required at the time of reservation and/or check in.

All housing rates are subject to change by action of the Board of Regents, The University of Texas System. For further information about Miner Village, UTEP's apartment-style residence halls, students should contact:

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

Residency Determination

The Admissions Office is responsible for determining residence 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. While these State requirements for establishing residency are complex and should be referred to in each particular circumstance, they generally require a minimum of 12 months residence in Texas prior to enrollment. 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. An individual who is classified as a non-resident or foreign student may qualify, under certain exceptions specified below, for resident tuition rates and other charges while continuing to be classified as a non-resident or a foreign student. 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, L-1, L-1a, L1b, L-2 NATO 1-7, O-1, O-3 dependents of O-1, R-1, R-2, T-1, T-2, and V. In order for these cardholders to be eligible for resident tuition, residency must be established.

STUDENT RESPONSIBILITIES

Oath of Residency

Sec. 54.0521, Texas Education Code, provides for an oath of residency. The student is responsible for registering under the proper residence classification and for providing documentation as required by the University. If there is any question as to right to classification as a resident of Texas, it is the student's obligation, prior to or at the time of enrollment, to raise the question with the University's residency officer for official determination. Students classified as Texas residents must affirm the correctness of that classification as part of the admission procedure. If the student's classification as a resident becomes inappropriate for any reason, it is the responsibility of the student to notify the proper administrative officials at the institution. Failure to notify the institution constitutes a violation of the oath of residency and may result in disciplinary action and/or other penalties.

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, those students 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 are presumed to be non-residents while they continue as students. The presumption may be overcome only upon timely application and presentation of the required evidence which must include evidence unequivocally indicative of a fixed intention to reside permanently in the state. In order to have residence status reconsidered, students must complete the university's Residence Questionnaire and submit it with appropriate documentation to the Admissions Office 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. Normally, the refund must be requested and substantiated during the current term.

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.

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
- Aliens who are residents of Texas based on high school graduation or receipt of GED (Texas Education Code 54.0521j).

Detailed information on residency, reclassification, tuition exceptions, and waivers is available in the Admissions Office and in the Class Schedule.

PENALTIES

Student Compliance with Institutional Rules and Regulations

Each institution has been authorized by statute to assess and collect from non-resident students failing to comply with the provisions of the tuition statute and with these interpretations concerning non-resident fees a penalty not to exceed \$10 a semester. In addition, if students have obtained residence classification by virtue of deliberate concealment of facts or misrepresentation of fact, they may be subject to appropriate disciplinary action, in accordance with the rules and regulations of The University of Texas at El Paso.

STUDENT LIFE POLICIES AND PROCEDURES

What's Inside

General Regulations

- Student Conduct
- Prohibited Conduct
- Illegal Substances Policy
- Disruptive Acts Policy
- Hazing Policy
- Solicitation
- Immunization Requirement
- AIDS, HIV, and Hepatitis B Infection Policy
- Bacterial Meningitis
- Student Right-to-Know and Campus Security Act
- Collection of Personal Information
- Student Grievance Procedures
- Discrimination Complaints

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://www.utep.edu/dos>. The handbook supplements the rules and regulations of the Board of Regents and covers student conduct and discipline, use of University facilities, student organizations, educational records, and student publications. The *Rules and Regulations* of the Board of Regents of The University of Texas System are 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, Part One, Chapter VI, Section 3, 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 in the Office of the Dean of Students, 102 W. Union, on reserve at the Library, and on the homepage of The Dean of Students at www.utep.edu/dos.

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: admonition, 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, although permanent expulsion from the University could result.

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* (Part One, Chapter VI, Section 3.28). 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 prosecuted. 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.

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 by calling 747-5624 to obtain information. 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 full cost of the HBV. All other immunizations listed below available for a small service fee.

- **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 with the exception of X-ray screening for Tuberculosis for which there is a modest charge. The HB vaccine is also available for a nominal charge for students enrolled in medical-related programs.

AIDS, HIV, AND HEPATITIS 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
- Lethargy
- Vomiting
- Stiff neck
- Nausea
- Seizures
- Severe headache
- Rash or purple patches on skin
- Confusion and sleepiness
- Light sensitivity

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.

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 3-5 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, by appointment at 747-5624.
- The City County Health Department, Immunization Outreach at 591-2050
- Pro Action-Tillman Health Center at 533-3414

HOW CAN I FIND OUT MORE INFORMATION?

- Contact your own health care provider.
- Contact your Student Health Center at 747-5624
- Contact your local or regional Texas Department of Health Office at 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.

STUDENT RIGHT-TO-KNOW AND CAMPUS SECURITY ACT

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 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 can be found at the following website: 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 can obtain a copy of the grievance form and instructions on the Dean of Students web page at www.utep.edu/dos.

Non-Academic Grievances

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

DISCRIMINATION COMPLAINTS

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

FACILITIES AND STUDENT SERVICES

What's Inside

Academic and Research Facilities

Academic Support Services

- Tutoring and Learning Center

Student Services

- Campus Life
- Personal Support
- Career and Professional Development
- Health and Fitness

Extracurricular Services

- Student Development Center
- Office of Special Events
- Student Government Association
- Student Publications
- Department of Intercollegiate Athletics

Cultural Services

- Campus Fine Arts
- El Paso Centennial Museum
- KTEP Public Radio
- Texas Western Press

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.

UNIVERSITY LIBRARY

The University Library, housed in an elegant and comfortable six-story building with seating capacity for 1,418 users, is open on a daily basis, 94 hours a week. It houses over one million books and government publications, as well as over one million microforms. Subscriptions are maintained to 4,000+ journals and newspapers. Most materials are available for loan to University students, faculty, and staff.

Books, journals, and audio-visual materials are listed in the Library's computerized catalog. This catalog allows users to conduct searches by author, title, subject, and key word. It is accessible from computers located on all floors of the library, campus offices, and at home. In addition, the Library LAN (Local Area Network) provides access to over 250 electronic 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 catalogs of other academic libraries is also available.

The professional staff of the Reference Department provides instruction and assistance in locating and using traditional hardcopy as well as the electronic resources of the Library. Librarians are available to provide assistance with specialized collections in departments such as Government Documents, which receives 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, and microforms. Support for students and faculty, who are involved in distance education, is provided by the library. Support includes delivery of books and other materials by mail, consultation with librarians, and access to electronic resources via the Internet.

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

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, 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.

OFFICE OF TECHNOLOGY PLANNING AND DISTANCE LEARNING (TPDL)

The Office of Technology Planning and Distance Learning (TPDL) serves as an academic resource and campus support unit for UTEP faculty, students, and staff engaged in asynchronous and distance delivered instruction. Founded in 1997 under the auspices of the Office of the Provost and Vice President for Academic Affairs, the mission of the TPDL is to provide graduate and undergraduate students, who are unable to take advantage of a traditional class schedule, with appropriate opportunities to participate in the learning process through the use of alternative media and methods for the delivery of instruction. The TPDL office serves as the UTEP campus center for design, delivery, course management, and evaluation of distance education; it also promotes and implements campus policies and practices to guide the growth and development of distance education for the campus. In carrying out its mission, the TPDL office collaborates with public and private institutions to meet the expanding needs for higher education and workforce retooling in the region, and works with faculty to develop appropriate instructional programs responding to these needs that integrate a variety of print materials, and electronic digital media materials, face-to-face interactions, World Wide Web (WWW), Internet, interactive videoconferencing, CD ROM, and other telecommunications technologies for teaching and learning.

In addition, the TPDL office oversees the scheduling and technical coordination for using the videoconferencing facilities across campus, the network service areas, and at other learning sites. The TPDL office services are focused on technical production, instructional design and pedagogical support to faculty in the design and adaptation of instructional materials for fully online and hybrid courses delivered at a distance. Through its new Faculty Instructional Technology (F.I.T.) Collaboratory Lab, the TPDL office provides UTEP faculty with state-of-the art professional development and training opportunities in the principles of good online practices; assistance in the proper use of equipment in the distance learning classrooms; and staffing and related technical support to design instructional units and effectively use the videoconferences and multimedia classroom facilities.

Located in UTEP's Undergraduate Learning Center (UGLC), the office of TPDL also enables UTEP to be an active partner with the new "virtual university" of Texas, the UT TeleCampus. Individual on-line courses and fully delivered on-line graduate degrees are offered by the TPDL office across various University of Texas component campuses

using both digital, web-based media and compression video technology-based delivery systems. In addition, many of the online courses listed in this catalog offered by UTEP are the result of a working partnership with the UT TeleCampus. The UT TeleCampus is the centralized support center for online education throughout The University of Texas System. At their website (www.telecampus.utsystem.edu) you will find: online classrooms, a digital library, free online tutorial services, 24 by 7 technical support, 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. To see a full listing of courses and host universities in the UT System for UT TeleCampus programs of study, you may access the website at <http://www.telecampus.edu>. The designated UTEP campus contact for the TeleCampus is the TPD Office located in Suite 316 of the UGLC (915/747-8901). We are available to assist you in your queries for distance delivered instruction, as are the student services support staff of the UT TeleCampus. Please call the TeleCampus with your questions toll-free at 1-888-TEXAS-16 (1-888-839-2716) or contact them via email, as noted above.

Three of the fully delivered on-line degrees offered by UTEP through the UT TeleCampus (UTTC) are the MBA-On-line, offered by UTEP's College of Business Administration and seven other University of Texas campuses; the MEd Tech (Educational Technology On-Line), which UTEP, UT Brownsville, UT Austin, and several other Texas universities are delivering via the Internet; a new Masters in Kinesiology, and a Health Care Educators certificate program involving the College of Health Sciences and the School of Nursing.

Students interested in undertaking distance courses through UTEP and the UT TeleCampus must be fully admitted to a UT academic university component and complete the Inter-Institutional Distance Education Admission and Registration (IDEAR) form 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 via the distance education delivery options of the UT TeleCampus. Students are required to abide by the host university policies, procedures, and requirements regarding course drop/withdrawal and graduation policies. For further details on the registration process and student qualifications, students should visit the UT TeleCampus at www.telecampus.utsystem.edu. UTEP's online courses that are part of a collaborative degree program with other University of Texas campuses include: LING 3315, History of the Spanish Language; SPAN 3315, History of the Spanish Language; COMM 5350, Working with Technology and a Changing Student Demography; COMM 5350, Interactive Telecommunications, Networking and Distance Communication technologies; KIN 5369, Early Childhood Development; KIN 5361, Biomechanical Basis of Sport; KIN 5357, Psychological Foundations of Sports; CIS 5394, Information Systems for Managers; MGMT 5335, Global Strategic Management; NURS 5345, Curriculum Development; NURS 5347, Effective Teaching Strategies; and NURS 5380, Evaluation of Learning.

The TPD staff can be contacted via e-mail at tpdl@utep.edu or by visiting their Internet website at <http://www.utep.edu/tdl>. It contains a complete listing and description of all distance education course and degree program offerings, as well as links that will connect you directly to the main UT TeleCampus website in Austin, Texas.

MATERIALS RESEARCH AND TECHNOLOGY INSTITUTE (MRTI)

The Materials Research and Technology Institute (MRTI) is UTEP's hub for research and doctoral program activities related to materials science and engineering. Through MRTI, the University hopes to promote interdisciplinary research and foster excellence in materials research and engineering. Activities include the UTEP-Stanford Gateway

Program which gives faculty and students an opportunity to use the Synchrotron, a high-energy x-ray device and the Materials Corridor Initiative, a bi-national, multi institutional research effort to develop new materials technologies and processes in the border region. MRTI also researches materials science in fields such as anthropology, music, and art.

INSTITUTE FOR MANUFACTURING AND MATERIALS MANAGEMENT (IM³)

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

TEXAS CENTER FOR BORDER ECONOMIC AND ENTERPRISE DEVELOPMENT

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

CENTER FOR ENVIRONMENTAL RESOURCE MANAGEMENT (CERM)

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

PAN AMERICAN CENTER FOR EARTH AND ENVIRONMENTAL SCIENCE (PACES)

Established through a five-year, \$6.4 million grant from the National Aeronautics and Space Administration, the Pan American Center for Earth and Environmental Science (PACES) contributes to NASA's Mission to Planet Earth by maintaining a database of remote sensing, geophysical, geological, and environmental data generated by NASA and other agencies, focused on the southwestern United States and northern Mexico. Faculty and students affiliated with PACES are developing a high-level computer language to facilitate the access and integrated analysis of the data and use the Center's

databases for pure and applied research in the earth and environmental sciences. PACES represents a collaboration between UTEP and NASA's Goddard Space Flight Center, Ames Research Center, and Jet Propulsion Laboratory, along with other universities and agencies.

BORDER BIOMEDICAL RESEARCH CENTER (BBRC)

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

LABORATORY FOR ENVIRONMENTAL BIOLOGY

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

CENTER FOR GEOTECHNICAL AND HIGHWAY MATERIALS RESEARCH

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

CENTER FOR INTER-AMERICAN AND BORDER STUDIES (CIBS)

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

INSTITUTE FOR POLICY AND ECONOMIC DEVELOPMENT (IPED)

Established in 1996, the Institute for Policy and Economic Development (IPED) coordinates UTEP's efforts to research, analyze, and interpret public policy. Faculty and students from a variety of disciplines analyze issues in three broad areas: general

economic policy; international trade policy, with an emphasis on the North American Free Trade Agreement; and investment in both physical and social infrastructure. Recent research has addressed issues related to regional economic development, criminal justice, water policy, regional transportation networks, and health care reform. IPED sponsors community forums on policy issues, and students undertake activities such as conducting exit interviews at polls during local, state, and national elections.

FAST CENTER FOR THE STRUCTURAL INTEGRITY OF AEROSPACE SYSTEMS

The FAST Center for the Structural Integrity of Aerospace Systems was established in 1995. Funded primarily by the Air Force Office of Scientific Research, FAST is a partnership among UTEP, Texas A&M University, Sandia and Los Alamos National Laboratories, and the Jet Propulsion Laboratory. FAST's interdisciplinary teams of faculty and students conduct research to test the safety of aging military aircraft, using nondestructive evaluation to detect and characterize flaws before they reach critical size that could lead to catastrophic failure. The Center also offers a series of technical seminars, bringing experts in the field to campus to interact with UTEP faculty and students.

Academic Support Services

TUTORING AND LEARNING CENTER (TLC)

Academic success for UTEP students is the goal of the Tutoring and Learning Center (TLC). Services made available by the center are focused on helping students successfully meet the high academic standards of UTEP's regular college courses, helping students prepare for and pass various standardized exams, including the TASP Test, and helping students make up learning deficiencies in course content to prepare themselves for regular college courses. All services are free to enrolled, eligible UTEP students. The office is located in the UTEP Library, 3rd Floor (Room 300). Students are encouraged to call (915) 747-5466 (fax: 915-747-5486).

The Center offers the following services:

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

Computer Assisted Instruction in math, reading, writing, standardized test preparation, and other areas is open to all students on a walk-in basis, but priority is given to TASP required students referred by the Academic Advising Center.

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.

TASP Support: Free assistance with preparation for the Texas Academic Skills Program

Test (TASP) is available in reading, writing, and math non-credit courses. Additionally, many of the Special Topic Classes and Workshops address the basic skills tested by TASP. Individualized instruction is also available through tutoring by appointment and Computer Assisted Instruction upon referral from academic advisors. Sample practice tests and study guides are available in the Learning Assistance Lab.

Non-Credit Courses: The TLC offers sixteen-week, non-credit courses in College Study Skills and eight-week courses in College Reading and Critical Thinking. START, bilingual, and TASP-required students are placed in these courses by the Academic Advising Center, but all the non-credit courses are free and open to eligible UTEP students. Students may register for courses during the regular registration process except as noted. Courses available are:

Tutoring and Learning Center (TLC)

0001 College Reading and Study Skills

This course provides help with goal setting, time management, note taking, TASP preparation, and other basic techniques needed for academic success. No prerequisites; required of beginning START students; highly recommended beginning students; returning adults; students wanting to study more efficiently; probationary students; and students experiencing motivational, organizational, time management, and/or learning difficulty. (Sixteen weeks of class instruction.)

0002 Extended START TASP Lab

This course provides extended START students instruction in study skills and preparation for a specific section of the TASP. No prerequisites; required of Extended START students. (Sixteen hours of instruction over six weeks.)

0003 College Reading and Critical Thinking

This course emphasizes the active reading skills necessary for the TASP and college reading assignments. No prerequisites. Open to all UTEP students; required of students scoring 100-113 on the reading portion of the placement test. Recommended for all students experiencing difficulty in completing and comprehending reading assignments. (Eight weeks of instruction and six hours of lab.)

0011 Bilingual College Reading and Study Skills

For ESOL students only. Students must have a course authorization to enroll.

0013 Bilingual College Reading and Thinking

For ESOL students only. Students must have a course authorization to enroll.

0017 Bilingual TASP Composition Lab:

For ESOL students only. Students must have a course authorization to enroll.

0024 CAI Math TASP Test

Computer Assisted Instruction for TASP Math. *Prerequisite:* Departmental approval.

0025 CAI Reading TASP Test

Computer Assisted Instruction for TASP Reading. *Prerequisite:* Departmental approval.

0026 CAI Writing TASP Test

Computer Assisted Instruction for TASP Writing. *Prerequisite:* Departmental approval.

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

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

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

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

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

Library Building, Room 300
(915) 747-5349/8602
www.utep.edu/trioprogram

DIRECTOR: Gladys Shaw

This federally funded 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.

0021 SSSP Study Skills

For students in the Student Support Services Program only. Course authorization required for enrollment.

0023 SSSP College Reading and Critical Thinking

For students in the Student Support Services Program only. Course authorization required for enrollment

Student Services

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

As a great way to get involved in the growing on-campus spirit at The University of Texas at El Paso, students are encouraged to live on campus. UTEP offers apartment-style, residence halls in Miner Village, which opened in Fall 2001. Miner Village is definitely 'Campus Living at its Best', providing residents with efficiency, two-bedroom and four-bedroom units, all of which are furnished. 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, food services, meeting rooms, Bookstore, Memorial Gymnasium, and the Education Building, which are all minutes away. Mesa Street is just one block over offering a variety of eating establishments and businesses.

Applications for admission to The University of Texas at El Paso and application for Miner Village are separate transactions. All information regarding Miner Village, UTEP's New Era in Campus Living, may be obtained from:

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

Sodexo Services

A whole new dining experience is located throughout the University Campus. The new 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 and subs), and a new campus **C-Store**. A new upscale beverage and pastry shop located on the 1st floor of the Union building features world famous **Starbucks Coffee and Freshens** (fresh yogurt products). The El Paso Natural Gas Conference Center features a full service corporate style cafeteria and Italian eatery, **Guiseppe's Pizzeria**. **UTEP Catering by Sodexo** offers a full range of services from conferencing to banquets, receptions, meetings, and private functions. For refreshments and quick snacks, **Snack Stop** kiosks are conveniently located throughout campus. Sodexo also offers complete **Concession** services to all UTEP sporting and special events.

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, emblematic clothing and gift items, commencement apparel and invitations, graduation rings, magazines, paperbacks, sundries, and convenience snacks. Other services include year-round book buy backs, special book and software orders, specialty plaques, computer hardware orders, and

check cashing. 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.-2:00 p.m. The University bookstore's telephone number is (915) 747-5594 and their web address is www.utepbookstore.com.

PERSONAL SUPPORT

University Counseling Center

The University Counseling Center provides a variety of psychological services to the UTEP community. These services include both personal and career counseling 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 computerized occupational and academic decision-making programs 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. Their telephone number is (915) 747-5302.

Women's Resource Center

The Women's Resource Center serves to foster the personal growth and development of women as competent, independent, confident, and healthy individuals and to expand understanding within the University community of personal, political, and social issues of concern and interest to women. 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 where equality, responsibility, and personal empowerment are encouraged and fostered. Following a feminist model of empowerment, the Center works toward fostering, recognizing, and affirming the abilities, accomplishments, and potential of UTEP women.

Through a variety of educational programs, culturally diverse events, resource opportunities, and comprehensive support services, the Women's Resource Center provides a centralized resource for meeting the various needs of women students, faculty, and staff of UTEP. The Women's Resource Center offers informational and interactive Lunch Bag Seminars, educational programming on a range of issues from gender communication to sexual assault, informational resources/referrals, support and advocacy, scholarship opportunities, small emergency loans, and a book/video resource library. The center itself provides space for studying, relaxing, socializing, research, and computer usage. Everyone is welcome! Volunteers are invited and encouraged.

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.

University Child Care Center

Child care is available for children of all students, faculty, and staff 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 from 7:15 a.m. to 9:00 p.m. Hours for the academic year Fridays and summer are 7:15 a.m. to 6:00 p.m. Children aged three months to 12 years are accepted, depending on availability of space (hourly, daily, weekly care available; Summer Camp for school age). Age

appropriate early childhood developmental programs are offered in the curriculum. The University Child Care Center is licensed by the Texas Department of Human Services and is an approved vendor for Child Care Management Services. Financial assistance is available for qualifying parents through Child Care Management 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. DSSO provides the following services to eligible students registered with DSSO: note taking, sign language interpreter services, reader and/or scribe services, priority registration, use of adaptive technology, diagnostic testing for learning disabilities, assistance with learning strategies/tutoring, alternative test format and location, and advocacy. To register 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 to DSSO. The documentation and must clearly state symptoms and limitations that adversely affect academic performance. **All information provided to DSSO will be kept with the strictest rules of confidentiality.** If students have or suspect a disability (such as hearing impairment, etc.) and/or a learning disability that is adversely affecting academic performance in math and/or foreign language requirements for a degree, they should contact this office immediately to discuss available options. Students should be aware that faculty are not obligated to provide accommodations for a disability without proper notification from DSSO. Therefore, for needed accommodations, students should contact DSSO at (915) 747-5148 or e-mail dss@utep.edu. Students can also visit DSSO's website at www.utep.edu.dssso or their office located in Room 106 East Union Building.

Inter-American Program (Programa Interamericano Estudiantil) (PIE)

The Inter-American Program (Programa Interamericano Estudiantil) 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 and 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.

CAREER AND PROFESSIONAL DEVELOPMENT

Career Services

Career Services, also known as The Career Connection, provides assistance to students in finding professional employment after graduation and part-time employment while enrolled. Career Services sponsors CIRCUS (Career Information Resource Center for UTEP Students), a resource library that houses information on employers, government agencies, school districts, graduate schools, career choices, internships, and job search preparation in print and on videotape, and online. Materials of interest to women, minorities, and disabled students are included. Many publications on current job trends and careers are available. CIRCUS is located in the Union 114 West, 915-747-5978.

Career Services also provides career advising and aids students on resume preparation, interviewing skills, and future job opportunities. The office arranges interviews with agencies, organizations, or schools and counsels students on the best approach to identify and contact prospective employers. The office provides forms, applications, and literature necessary for interviews. Drop-in resume reviews are available in Career Services as well as opportunities for practice interviews. The department sponsors a variety of career and job fairs held on campus.

For professional employment, companies from all over the United States, as well as the local area, schedule interviews during the months of October, November, December, February, March, and April. The office works with hundreds of applicants and thousands of job opportunities each year by arranging for on-campus interviews and referring resumes. This service can save time, minimize effort and, in the final analysis, help students plan for the future. After having attended an introduction to career services workshop, seniors and alumni can participate in on-campus interviewing or have their resume referred for the purpose of finding professional employment in their chosen field. Many interviews are conducted through interactive video conferencing. Seniors interested in permanent employment after graduation should register at least a full year prior to receiving their degree.

Part-time job opportunities are posted on the Career Services web page. After filling out the proper application, students review jobs and self-refer to employment opportunities. The requirements for consideration for part-time campus employment are met with an application along with proof of enrollment.

The University has a Cooperative Education Program (Co-op) which has been established with industries and government agencies. The UTEP Cooperative Education Program provides students with the opportunity to apply their classroom learning to major related employment opportunities. The program 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 the University for additional course work. For more information on the Co-op Program, students should contact Career Services at (915) 747-5640.

Internships in both technical and non-technical positions are also offered. Career Services utilizes the latest in computer and interactive technology to provide students with the broadest access possible to career opportunities. Career Services is located in the Union 103 West. Their website is <http://www.utep.edu/~careers>.

Division of Professional and Continuing Education

The Division of Professional and Continuing Education is a University-wide operation that conducts seminars, short courses, institutes, and programs for the general public, business and industry, professionals, and government agencies. The role of the Division

is to offer a variety of continuing education and professional development opportunities. Professional and Continuing Education consists of eight major program areas:

1. **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.
2. **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.
3. **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.
4. **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.
5. 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 that 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.
6. **Summer Camps/Athletic Programs** consist of a wide variety of youth outreach activities including, but not limited to, commuter and residential camps in cheerleading, marching auxiliaries, 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.
7. 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, administrators, and counselors to prepare and motivate students for college.
8. 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.

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, and a pharmacist. The majority of services, 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 on the second and fourth Wednesday of each month from 11:00 a.m. to 2:00 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, evening hours, 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.

The **Intramural Sports Program** includes approximately 40 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 basketball, 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 9:00 a.m. to 3:00 p.m. and Sundays 10:00 a.m. to 3:00 p.m., 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. 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, Pilates, Kickboxing, Weightlifting, 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 Memorial Gym (915) 747-5103 or the Swimming and Fitness Center (915) 747-8100.

Extracurricular Services

STUDENT DEVELOPMENT CENTER

The Student Development Center (SDC) is a one-stop clearinghouse of information and resources for UTEP students involved, or wanting to become involved, in University activities. The SDC is where students go if they are wanting to get involved in leadership activities, campus activities, health awareness programs or events, or student organizations including fraternities, sororities, special-interest clubs, honor societies, and professional and service organizations.

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 Programs, Campus Activities Board, Health Education Programs, and Student Organizations. The Center promotes student growth and development and augments the overall educational process via the following:

- To foster 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;
- To assist students with the transition into and out of the UTEP community;
- To help remove personal obstacles, provide the information, and teach the competencies students need to benefit from the UTEP learning environment;
- To provide direct support and services to students to facilitate the attainment of an education; and
- To provide 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. Past events have included Minerpalooza, Homecoming, Pep Rallies, and Minerfest.

Health Awareness Program

The Health Awareness Program focuses on alcohol and substance abuse prevention and HIV/AIDS awareness and education. The Student Development Center 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 Stress Free Zones during finals.

Greek Life

The Greek Life component of the Student Development Center works with five fraternities and five sororities to develop campus events and community service programs. Greek Week takes place in the Spring semester. Summer activities include information tables during orientation programs. Fall activities include Rush Week and other recruitment programs.

Leadership Development Program

With the assistance of student leaders, the Student Development Center coordinates the Leadership Development Program. The Women's Leadership Conference and the annual Leadership Retreat are examples of programs in which students can participate campus-wide and challenge themselves to become the leaders they choose to be.

Student Organizations

The Student Development Center works with over 135 student organizations on campus. These organizations can be categorized as follows: honorary, social, service, professional, 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.

Special Interest Organizations: 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 Organizations: 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.

Service Organizations: Service organizations, as their name indicates, are dedicated to volunteerism and service within the El Paso and University community.

Religious Organizations: 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.

Coordinating/Governing Organizations: 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.

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://www.utep.edu/stuact>.

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 The Eagles, Goo Goo Dolls, Scorpions, Ricky Martin, N'SYNC, The Rolling Stones, Luis Miguel, Enrique Iglesias, Juan Gabriel, HBO's Oscar de la Hoya Fight, and WWF 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.

STUDENT GOVERNMENT ASSOCIATION

The Student Government Association (SGA) is the official voice of the student body in the University decision making process. SGA acts 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 of Internal Affairs, and Vice President of 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 Group is an addition to the Student Government Association. The three UTSSAG delegates work on legislation that affects the entire UT System and is an advisory to the Board of Regents on student issues.

STUDENT PUBLICATIONS

All UTEP students with a GPA of at least 2.0 may serve as reporters, editors, photographers, or advertising salespersons for the University's student publications program. Those publications include The Prospector, the campus newspaper; The Rio Grande Review, a literary magazine; and other publications sanctioned by the University, including a Spanish-language newspaper, El Minero. At The Prospector, students learn professional newspaper production techniques that eventually can be used to build up a resume or working portfolio for a journalism career. To insure freedom of expression, student publications are overseen by a duly elected committee composed of UTEP faculty, staff, and students. A professional publications staff, comprised of a director, advertising manager, and an editorial adviser, directs the daily activities of the student editors, reporters, ad reps, and ad designers. The professional staff meets regularly with the publications committee to review business operations and to address editorial concerns. Student publications exist to produce fine, professional journalists, photographers, and ad designers through quality training and a hands-on setting. Student publications produces bilingual journalists who have the ability to work in Spanish-speaking countries or in other border cities as well.

DEPARTMENT OF INTERCOLLEGIATE ATHLETICS

UTEP is an NCAA Division I school and is a member of the Western Athletic Conference. 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, men's and women's outdoor track, women's tennis, women's rifle, women's soccer, and women's volleyball.

Football is played in the 50,364-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 play in the 12,222-seat Don Haskins Center; and women's volleyball plays at Memorial Gymnasium, which seats 4,000 people. Soccer has a brand new field and scoreboard in the University Soccer Field, with the Rocky Mountains as a backdrop. The track program runs at Kidd Field, which seats 10,000 people and has undergone a one million dollar renovation. Teams nationally ranked in recent years include men's basketball, men's golf, cross country, indoor and outdoor track, 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 FINE ARTS

The Departments of Art, Music, Theatre Arts and Film along with the Student Union sponsor ballet and dance, music, music theatre, plays, and the visual arts. All are available to UTEP students as participants and audiences. Students may perform in, work behind the scenes for, or attend more than two hundred performances of ballet, musical concerts, Broadway musicals, opera, and plays each year. Many are free. In addition, campus art galleries provide thousands of hours of free admission to exhibitions by students, faculty, and guest artists.

The Fine Arts Center's facilities include more than a hundred studios and practice spaces for sculpture, painting, printmaking, ceramics, metalwork, graphic design, dance, instrumental and vocal music, acting, theatre design, and set-costume construction. There are also two art galleries, a music library, several student lounges, three theatres, and a recital hall.

Ballet, theatre, and music theatre productions are seen in the Wise Family Theatre, Magoffin Auditorium, and the Studio Theatre in the Fox Fine Arts Center as well as the University Dinner Theatre located in the Student Union. Music activities such as the University's Symphony, Opera, Wind, Percussion, Jazz Bands, Choirs, Jazz Singers, and chamber groups as well as Ballet-In-Focus and Zarzuela are held in the Fine Arts Center's Recital Hall or the adjacent, 1000-seat, Magoffin Theatre. Faculty and student art shows are presented in the Fine Arts Art Gallery and the Glass Gallery. The Student Union also sponsors a provocative film series and additional art exhibitions of students, faculty, and guest artists.

Yearly schedules of Chicano Studies, African-American Studies, the Department of English, Women Studies, and the Office of International Programs often include public cultural activities. Bilingual and multicultural events and presentations are a part of every season.

The El Paso Arts Resource Department, The El Paso Symphony, the El Paso Museum of Art, The El Paso Opera, and Ciudad Juárez provide the region with ample opportunities to see professional local, national and international artists.

EL PASO CENTENNIAL MUSEUM

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 5:00 p.m., except on National and University holidays.

KTEP PUBLIC RADIO

KTEP 88.5 FM Public Radio provides news, information, and music 24 hours per day for the University as well as Juárez, El Paso, and Southern New Mexico. UTEP 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. Through an affiliation agreement with The University of Texas Press in Austin, the Press's award-winning books are sold nationally and internationally through chain bookstores, independent booksellers, the University of Texas Press, 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

What's Inside

- College of Business Administration
- College of Education
- College of Engineering
- College of Health Sciences
- College of Liberal Arts
- College of Science
- Interdisciplinary Programs

COLLEGE OF BUSINESS ADMINISTRATION

Accounting
Economics and Finance
Information and Decision Sciences
Marketing and Management

Dr. Charles T. Crespy, Dean
Dr. Robert D. Tollen, Associate Dean
Dr. Frank Mayne, Associate Dean

Business Bldg., Room 101
(915) 747-5241 (ph)
(915) 747-5147 (fax)
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+
MBA/MSN	Business Administration/Nursing+
MIT	Master of Information Technology*
MSFE	Master of Science in Financial Economics
MSLAE	Master of Science in Latin American Economics

+Combined Program

*Interdisciplinary Program

College of Business Administration

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

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

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

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

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

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

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 of the Graduate Advisor in the College of Business Administration in order to enroll in graduate courses offered by the College.

Requirements for Admission into Graduate 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.]

1. An official transcript from an accredited institution demonstrating completion of a bachelor's degree (or equivalent in the case of an international institution) and official transcripts from all colleges or universities attended.
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, describing the applicant's socio-economic and educational background, professional experience, and education and career goals.
4. For foreign students, official scores for the TOEFL.

Admissions decisions are based on demonstration of academic performance and potential as measured by undergraduate GPA, standardized test scores, and other factors. As a guideline, a GPA of 2.7 or higher (4.0 scale) on all university work is indicative of satisfactory academic performance. Admissions decisions may also reflect consideration of candidates' socio-economic background, professional experience, and commitment to the program.

International applicants are required to have a score of at least 250/600 on the TOEFL.

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 – The International Association for Management Education. 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 51 semester hours (15 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)

The parentheses () below indicate the equivalent undergraduate courses.

Accounting:	ACCT 5301 or (ACCT 2301 and 2302)
Business Law:	BLAW 5306 or (BLAW 3301)
Economics:	ECON 5304 or (ECON 2303 and 2304)
Finance:	FIN 5305 or (FIN 3310)
Marketing:	(MKT 3300)

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 (If the student has already taken ACCT 3314 or ACCT 3323, ACCT 5312 should be substituted for this course.)
CIS	5311	Management Information Systems Theory and Practice*
CIS	5313	Strategic Information Systems
ECON	5311	Managerial Economics
ECON	5360	Global Economic Environment for Manager
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 or 3310)
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	4301	Advanced Accounting I
ACCT	4305	Not-For-Profit Accounting
ACCT	4321	Advanced Cost Accounting
ACCT	4325	International Accounting
ACCT	4328	Federal Income Tax - Partnerships and Corporations
ACCT	5310	Contemporary Accounting Issues
ACCT	5312	Controllership
ACCT	5322	Tax Concepts, Research and Procedure
ACCT	5323	Advanced Auditing

ACCT	5324	Computer Applications in Accounting and Auditing
ACCT	5326	Advanced Corporate Taxation
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	4305	Advanced Business Systems Development
CIS	4365	Database Management
CIS	5317	Information Resources Policy and Management
CIS	5330	Expert and Decision Support Systems

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

NURS	5335	Nursing Administration
NURS	5336	Advanced Nursing Administration
NURS	5338	Health Law, Policy and Ethics
NURS	5339	Nursing Administration in Policy Analysis (An administration practicum is required which must be taken in last semester.)

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	4325	International Marketing

h. Production and Operations Management

POM	5310	Manufacturing Strategy
And three of the following:		
POM	5311	Inventory and Materials Management
POM	5325	Global Operations and Supply Chain Management
POM	5394	Current Issues in Production/Operations Management
MGMT	5346	Total Quality Management
POM	5392	Directed Individual Study in Production/Operations Management
POM	4371	Transportation and Warehousing Systems
MKT	4356	Logistics and Supply Chain 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.

Master of Business Administration and Master of Science in Nursing: Two-Degree Option (MBA/MSN)

The MBA/MSN option is a two-degree program in which students pursue the MBA with a Health Systems Concentration and MSN in Nursing Administration simultaneously. Students must specify the option at the time of application to the Graduate School and must meet prerequisites for each degree program. Among the many advantages of this program is the opportunity to reduce the total number of semester hours required for the

individual degrees (36 for the MBA and 36 for MSN) to 60 semester hours by using required course work in the MSN toward the Health Systems Concentration for the MBA.

Requirements for Admission

Applicants must qualify for admission to both the MBA and MSN in Nursing Administration programs. Specific admissions criteria are listed in this section for the MBA and in the School of Nursing (College of Health Sciences) section for the MSN.

Requirements for the Graduate Degrees

- Completion of all MBA and MSN prerequisites
- Completion of a minimum of 60 semester hours, normally evenly divided by MBA and MSN
- Completion of the core courses for each program
- Preliminary and Final Degree Plans approved by the Graduate Advisors for each program and 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.

Accounting

260 Business Administration Building
 (915) 747-5192
 cobacct@utep.edu

CHAIRPERSON: Gary J. Mann

ASSOCIATE PROFESSORS EMERITUS: Walter G. Austin, Jr., Janet S. Omundson

GRADUATE FACULTY: Braun, Eason, S. Glandon, T. Glandon, Haynes, Mann, Mayne, Putnam, Zimmermann, Zlatkovich

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

The BBA-Accounting option and the Master of Accountancy degrees are accredited by AACSB International.

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 nine-hour business core, an eighteen-hour accounting option, a three-hour communications requirement, and a three-hour approved graduate elective.

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 (18 semester hours)

(The course in parenthesis indicates the equivalent undergraduate course.)

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

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	Coast 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 (9 semester hours)

- 3 MGMT 5336
- 3 MGMT 5325 or MGMT 5335 (Taken last semester)
- 3 Approved graduate business elective

2. Accounting Major Requirements (18 semester hours)

a. Tax Concentration

18 - ACCT 4328*, 5322, 9 hours within ACCT 5320, 5321, 5325, 5326, and approved nontax graduate credit accounting elective

b. Financial Accounting/Auditing Concentration

18 - ACCT 4301*, 5310, 5323, 5324, 5397 (or approved graduate credit accounting elective), and an approved graduate credit accounting elective. A minimum of 12 of the 18 hours in this option must be ACCT 53xx. (The other 6 hours may be undergraduate ACCT courses available for graduate credit.)

c. Managerial Accounting Concentration

18 - ACCT 4321*, 5312, 5324, 5391, 5397 (or approved graduate credit accounting elective) and three hours of approved graduate accounting electives. A minimum of 12 of the 18 hours in this option must be ACCT 53xx. (The other 6 hours may be undergraduate ACCT courses available for graduate credit.)

d. General Concentration

18 - 3 ACCT 5324

3 One course from ACCT 5312 or ACCT 5391

3 One course from ACCT 5310 or ACCT 5323

3 One course from ACCT 5320, ACCT 5321, ACCT 5322, ACCT 5325, or ACCT 5326

6 Approved graduate-level accounting electives

A minimum of 12 of the 18 hours in this 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 Elective (3 semester hours)

3 - Approved graduate free elective

ACCT 5397 (Professional Report in Accounting) must be written in the area of concentration of the option chosen.

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 and the concurrent award of the BBA in Accounting and the Master of Business Administration with a concentration in accounting. Both plans require a 150-hour course of study, completion of 117 semester hours of undergraduate study, and 33 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 Course Work

- 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.
- Completion of 9 hours of non-accounting Business Core courses.
- Completion of 12 hours of accounting courses, including ACCT 3321, ACCT 3322, and 2 of the following: ACCT 3320, ACCT 3323, or ACCT 3327.
- Achievement of a minimum grade point average (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

- Official scores on the GMAT or GRE (GMAT preferred).
- A GPA of at least 2.7 on all undergraduate and graduate level work already completed.
- A statement, not to exceed one page, describing the applicant's socio-economic and educational background, professional experience, and education and career goals.
- Foreign students must achieve a minimum TOEFL score 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 (117 semester hours)

Non-Business Foundation Requirements	48 semester hours
Business Foundation Requirements	15 semester hours
Business Core Requirements	27 semester hours
Accounting Major Requirements	21 semester hours
Electives	3 semester hours
Program Specific	3 semester hours

Graduate-BBA/MAcc plan (33 semester hours)

Business Core Requirements	9 semester hours
Accounting Major Requirements	18 semester hours
Electives	6 semester hours

Graduate-BBA-MBA plan (33 semester hours)

MBA Core Requirements	21 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 semester hours)

All of these courses except ENGL 3355 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 - 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 (27 semester hours)

- 3 - ACCT 3321
- 3 - QMB 3301
- 3 - CIS 3340
- 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 - Elective from CIS 3350, 4330, 4365, 4370, or 4398

Electives (3 semester hours)

- 3 - Upper-division non-accounting elective

Program specific (3 semester hours)

- 3 - BBA/MAcc requires ENGL 3359; BBA/MBA requires BLAW 3301

Graduate Course of Study for the Combined BBA/MAcc Plan1. **Business Core Requirements** (9 semester hours)

- 3 - BLAW 5306
- 3 - Approved non-accounting business elective
- 3 - MGMT 5325 or MGMT 5335 (Taken last semester)

2. **Accounting Major Requirements** (18 semester hours)

- a. **Tax Concentration**
 - 6 - ACCT 4328* and 5322
 - 9 - Choose three credits from ACCT 5320, 5321, 5325, or 5326
 - 3 - Approved non-tax graduate credit accounting elective
- b. **Financial Accounting/Auditing Concentration**
 - 12 - ACCT 4301*, 5310, 5323, and 5324
 - 3 - ACCT 5397 or approved graduate credit accounting elective
 - 3 - Approved graduate credit accounting elective

A minimum of 12 of the 18 hours in this concentration must be 5300-level accounting courses.

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c. Managerial Accounting Concentration

12 - ACCT 4321*, 5312, 5324, and 5391

3 - ACCT 5397 or approved graduate credit accounting elective

3 - Approved graduate accounting elective

A minimum of 12 of the 18 hours in this concentration must be 5300-level accounting courses.

d. General Concentration

18 - 3 - ACCT 5324

3 - ACCT 5312 or ACCT 5391

3 - ACCT 5310 or ACCT 5323

3 - ACCT 5320, ACCT 5321, ACCT 5322, ACCT 5325, or ACCT 5326

6 - Approved graduate level accounting courses

A minimum of 12 of the 18 hours of accounting in this 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. Electives (6 semester hours)

3 - Approved graduate business elective

3 - Approved graduate free elective

ACCT 5397 (Professional Report in Accounting) must be written in the area of concentration of the option chosen.

Up to 9 hours of specified undergraduate courses allowed for graduate credit may substitute for graduate hours in the graduate portion of the BBA/MAcc plan. 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

MBA Core Requirements (21 semester hours)

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)

12 - Choose four from the following: ACCT 4301, ACCT 4305, ACCT 4321, ACCT 4325, ACCT 4328, ACCT 5310, ACCT 5312, ACCT 5322, ACCT 5323, ACCT 5324, ACCT 5326, ACCT 5391

A minimum of 6 of 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

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.

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. The prerequisite course should not have been completed more than five years prior to enrollment. *Prerequisite:* ACCT 5311, ACCT 3314, or ACCT 3323 with a grade of "C" or better.

5315 Taxation and Management Decisions (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 or Accounting concentration option of the MBA (may be counted toward the other MBA options).

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)

This practicum in accounting is under the supervision of accounting practitioners. May be counted as a business or free elective but not as an accounting elective in the accounting degrees. *Prerequisite:* Department approval.

5397 Professional Report in Accounting (0-0-3)

Must be in the area of the student's MAcc option. May be taken only once. *Prerequisite:* 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: Brannon, Fullerton, Herbst, Herendeen, Holcomb, James Johnson, Roth, Schauer, Smith, Sprinkle, Tollen

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 including completion of ECON 5397 and submission of two bound research papers which may be drawn from previous graduate courses in economics. Both the thesis and the reports must be presented to a committee charged with the responsibility of conducting a final examination.

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. The student may elect to write a thesis for 6 hours of credit or may enroll in ECON 5397 for 3 hours of credit and submit two bound research papers, which may be drawn from previous graduate courses in economics. A representative from the minor or interdisciplinary area must be a member of the thesis or report committee.

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)
21 - Graduate course hours in Economics
or
Nine hours of graduate courses in Economics and twelve hours in an approved minor.
3 - ECON 5397
3. **Interdisciplinary Option** (24 semester hours)
18 - Graduate course hours in an approved minor
6 - ECON 5398 and ECON 5399
or
6 - ECON 5397 and Elective

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.
- 5312 The Economic Environment (3-0)**
An evaluative study of the determinants of levels of national income, employment, and prices. (Students in the MS program in Economics may not count this course for graduate credit.) *Prerequisite:* ECON 2303 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 each with a grade of "C" or better or department 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. *Prerequisite:* ECON 2303, ECON 5304, 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.
- 5392 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.
- 5397 Professional Report in Economics (0-0-3)**
May be taken only once for credit. *Prerequisites:* Instructor approval and Graduate Advisor approval.
- 5398 Thesis (0-0-3)**
Initial work on the thesis. *Prerequisite:* Graduate Advisor approval.
- 5399 Thesis (0-0-3)**
Continuous course enrollment required while work on the thesis continues. *Prerequisites:* ECON 5398 and Graduate Advisor approval.

Finance (FIN)

- 5305 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.
- 5311 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.
- 5315 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.
- 5316 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:* Graduate standing.
- 5318 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.
- 5322 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 5301 and ECON 5370, 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.

5397 Professional Report in Finance (0-0-3)

May be taken only once for credit. *Prerequisites:* Instructor approval and Graduate Advisor approval.

INFORMATION AND DECISION SCIENCES

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PROFESSOR EMERITUS: Edward Y. George

GRADUATE FACULTY: Gemoets, Guthrie, Hall, Kirs, Lopez, Mahmood, Ruiz-Torres, Solis

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, 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

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.

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.

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.

5397 Professional Report in Quantitative Methods in Business (3-0)

May be taken only once for credit. Continuous enrollment required while work on the professional report continues. *Prerequisite:* Department approval.

MARKETING AND MANAGEMENT

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GRADUATE FACULTY: Baca-Dickerson, Crespy, Hadjimarcou, Hoy, Ibarreche, Joplin,
 Michie, Posthuma, Sullivan

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.

5325 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.

5335 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.

5336 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.

5345 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.

5346 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.

5392 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.

5394 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.

5397 Professional Report in Management (0-0-3)

May be taken only once for credit. *Prerequisite:* Department approval.

Marketing (MKT)**5311 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.

5355 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

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

Dr. Josefina Tinajero, Associate Dean
Dr. Sandra Hurley, Associate Dean

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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

College of 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.

The College of Education offers graduate programs and a doctoral program. Graduate degree programs offered by the College of Education include a Master of Arts degree in Education and the Master of Education degree with majors in Education, Educational Administration, Educational Diagnostician, Guidance and Counseling, Instructional Specialist, Reading Education, and Special Education. For information regarding degree programs in Instructional Specialist and Reading Education (Teacher Education Department) or Educational Psychology and Guidance (Education Psychology and Special Services Department), 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, Reading Specialist, and Master Reading 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 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. For students separately admitted to the Master of Education degree, Instructional Specialist major, some course work may apply toward the graduate degree. For more information, students should contact the Director of Alternative Certification, Education 801, and the Graduate Advisor for the Teacher Education Department.

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

Prerequisites

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

Admission

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

Program

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 from an accredited college or university, successful completion of the TASP (Texas Academic Skills Program), and development of an approved plan of study. Eligible applicants for certification 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 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.

EDUCATIONAL LEADERSHIP AND FOUNDATIONS

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

INTERIM CHAIR: Josefina V. Tinajero
PROFESSORS EMERTI: Herbert K. Heger, John B. Peper
GRADUATE FACULTY: Brooks, Daresh, Hughes, Navarro, Pacheco, Rincones,
Rippberger, Satterfield, Sorrenson
DOCTORAL FACULTY: Brooks, Daresh, Gonzalez, Hughes, Navarro, Pacheco,
Rincones, Rippberger, Satterfield, Sorrenson, Staudt, Villarreal

The Educational Leadership and Foundations Department offers a MA degree with a major in Education and a MEd degree with a major in Educational Administration. The department also offers a Doctor of Education degree (EdD) in Educational Leadership and Administration. In addition to these degree programs, the Department offers course work leading to certification by the State Board for Educator Certification in the following areas:
Provisional Principal
Provisional School Superintendent

Master of Education

Students who wish to pursue graduate study directed toward developing leadership skills and their knowledge base may pursue a major in educational administration.

Admission Requirements

Students seeking admission to any of the graduate degree programs in the Department must complete the following prior to the semester in which they first plan to enroll:

1. Application for admission to the Graduate School
2. Submission of official Graduate Record Examination scores.
3. 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.

Additional Admission Requirements

Core Requirements (18 semester hours)

EDAD	5310	Introduction to Educational Administration
EDAD	5312	Instructional Leadership and Supervision I
EDAD	5314	School-Based Budgeting
EDAD	5342	Educational Law
EDAD	5345	Multicultural Perspectives in Leadership
EDAD	5346	Educational Program Planning and Evaluation

Academic Area (6 semester hours)

Elective outside the Department

Elective outside the Department

Specialization (15 semester hours)

EDRS 5305 Educational Research and Statistics

EDRS 5306 Qualitative Research

EDAD 5340 Human Factors in Education

EDAD 5348 Administration of School Personnel and Services

Comprehensive Examination

Written comprehensive examination. *Prerequisite:* Completion of all required EDAD courses or department approval.

Total: 36 semester 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 Administration, 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.

EdD in Educational Leadership and Administration

The Doctor of Education (EdD) 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 Assessment, 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, a plan of study enabling entering students to acquire a basic understanding of this field will be completed prior to beginning full-time doctoral studies. Normally, this plan will include EDAD 5310, EDAD 5312, and other learning experiences identified as relevant to the entering student by the Initial Program Advisor.
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 showing all previous university course work, 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 6310, POLS 6303 and EDAD 6310)	18 hours
• Program Focus Area Courses	12 hours
• Research Design and Methodology	6 hours
• Electives	12 hours
• Field-Based Learning	6 hours
• Dissertation	6 hours

Doctoral Core: All entering students will enroll in three Doctoral Core courses (EDAD 6301, EDAD 6303, and EDAD 6304) during the first Fall semester after they have been admitted to the program. Also, all students must enroll for three additional core courses during the first Spring semester (EDAD 6302, EDAD 6310, and POLS 6303).

Program Focus Area Courses: During the first semester of residency, each student identifies a program Focus Area (Central Office Leadership; Leadership in Assessment, 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. EDAD 6302 is also required of all students.

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; EDAD 5375 and EDAD 5376; or EDAD 5389 and EDAD 6350.

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.

Residency

Doctoral students must complete at least 2 semesters of residency (full-time study). Full-time study is defined as enrollment for 9 or more semester hours during the Fall or Spring semesters or 6 hours during the Summer session. The first 2 semesters of study will be in-residency semesters.

Time for Completion of the EdD Degree

Students in the EdD 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 Advisement: As each student is admitted into the Doctoral Program, he or she is assigned an Initial Program Advisor by the Director of the Doctoral program. The Initial Program Advisor will develop a tentative plan of studies with each assigned advisee to guide the student through the first stages of the academic program.

Program/Research Advisement: After the student has successfully completed the Qualifying Examination, he/she is admitted to Doctoral Candidacy. At this point, 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.

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 EdD 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. *Prerequisites:* 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 Perspectives in Educational Leadership (3-0)**
An overview of issues associated with ethnic, racial, and other forms of cultural diversity that are to be understood as part of the responsibilities and professional world of the educational leader. *Prerequisites:* EDAD 5310, EDAD 5312, and EDRS 5305.
- 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:* EDRS 5306, EDAD 5310, EDAD 5312, and TED 5301; 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:* Completion of all other course work required for the Professional Principal Certificate and department approval.
- 5376 School Management Internship II (1-0-4)**
Continuation of EDAD 5375. *Prerequisites:* EDAD 5375 and department approval. EDAD 5375 may be taken concurrently with EDAD 5376.
- 5380 Organizational Development in Education (3-0)**
Describes the systems approach to the renewal of educational organizations; emphasizes institutionalization of organization development in school districts and essential competencies for organization 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.
- 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.
- 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.
- 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.

- 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.

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.

EDUCATIONAL PSYCHOLOGY AND SPECIAL SERVICES

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

CHAIRPERSON: Sandra R. Lloyd

GRADUATE FACULTY: Argus-Calvo, Combs, Cortez-Gonzalez, Hammond, Ingalls, Johnson, Lloyd, Wood

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 MEd 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 submit:

1. An application to the Graduate School including a writing sample.
2. Official Graduate Record Exam scores.

Applicants may also be invited for an interview.

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 upper-division work in advanced Professional Special Education with a grade of "B" or better. Three years of classroom teaching experience is also required.

Program (36 semester hours)

EDPC	5335	Principles of Appraisal and Assessment
EDPC	5336	Advanced Appraisal and Assessment
EDPC	5340	Learning Theories Across the Lifespan
EDPC	5344	Use and Interpretation of Standardized Tests
EDPC	5623	Internship for Educational Diagnostician
SPED	5320	Special Education: Historical and Legal Basis
SPED	5322	The Bilingual Exceptional Child
SPED	5345	Remediating Students with Learning Disabilities
SPED	5347	Parents of Exceptional Children
SPED	5348	Differential Diagnosis of Handicapping Conditions
SPED	5361	Applied Behavior Analysis or
SPED	5363	Interventions for Learners with Behavior Disorders

Comprehensive Examination: Written comprehensive examination. *Prerequisite:* Completion of all required courses or permission of Department. ExCET (Examination for the Certification of Educators in Texas) also required.

Certification: ExCET (Examination for the Certification of Educators in Texas)

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 or Behavioral Science (Psychology, Social Work, Sociology) with grades of "B" or better (must be completed prior to admission to program) and completion of SPED 5320.

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 and Related Ethical and Legal Issues
EDPC	5338	Group Counseling
EDPC	5339	Techniques of Counseling
EDPC	5345	Abnormal Human Behavior
EDPC	5346	Social and Cultural Aspects of Counseling
EDPC	5347	Substance Abuse: Current Theory and Practice
EDPC	5360	Introduction to Marriage and Family Therapy
EDPC	5362	Children Adolescents and Their Families

Related Area (6 semester hours)

EDRS	5305	Educational Research and Statistics
EDPC	5335	Principles of Appraisal and Assessment

Clinical Sequence (9 semester hours)

(May not be taken concurrently)

EDPC	5371	Counseling Applications
EDPC	5372	Counseling Internship I
EDPC	5373	Counseling Internship II

Comprehensive Examination

Department approval during final semester.

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. Three years classroom teaching experience
3. Satisfactory completion of the Examination for Certification of Educators in Texas (ExCET) 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. 2,000 clock hours of supervised experience
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 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, social work, sociology) with grades of "B" or better (must be completed prior to admission to program).

Core Requirements (6 semester hours)

EDPC	5317	Human Growth and Development
EDPC	5341	Theories of Counseling

Specialization (27 semester hours)

EDPC	5320	Lifestyles and Career Development
EDPC	5322	Community Counseling and Related Ethical and Legal Issues
EDPC	5338	Group Counseling
EDPC	5339	Techniques of Counseling
EDPC	5345	Abnormal Human Behavior
EDPC	5346	Social and Cultural Aspects of Counseling
EDPC	5347	Substance Abuse: Current Theory and Practice
EDPC	5360	Introduction to Marriage and Family Therapy
EDPC	5362	Children, Adolescents, and Their Families

Related Area (6 semester hours)

EDRS	5305	Educational Research and Statistics
EDPC	5335	Principles of Appraisal and Assessment

Clinical Sequence (9 semester hours)

(May not be taken concurrently)

EDPC	5371	Counseling Practicum
EDPC	5372	Counseling Internship I
EDPC	5373	Counseling Internship II

Comprehensive Examination: Department approval during final semester.

Licensure: For licensure as a Professional Counselor in Texas, in addition to the 48 hours Master's Program, a student must have:

1. 2,000 clock hours of supervised experience
2. Satisfactory completion of the Texas State Board Examination 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; all options require a valid Texas Teaching Certificate in Generic Special Education.

Core Requirements (12 semester hours)

EDRS	5305	Educational Research and Statistics I
SPED	5320	Special Education: Historical and Legal Basis
SPED	5322	Teaching Culturally and Linguistically Diverse Learners with Special Needs
SPED	5347	Working with Parents of Learners with Special Needs

Specialization (24 semester hours in only one of the following options)***Learning Disabled (Option 1)**

EDPC	5335	Principles of Appraisal and Assessment
EDPC	5340	Theories of Learning Across the Lifespan
SPED	5330	Early Intervention for Young Children and their Families
SPED	5345	Remediating Students with Learning Disabilities
SPED	5363	Interventions for Learners with Behavior Disorders or
SPED	5361	Applied Behavior Analysis
SPED	5367	Characteristics of Students with Learning Disabilities
SPED	5369	Teaching Reading to Learners with Mild Disabilities
SPED	5370	Teaching Secondary Students with Mild Handicaps

***Severely Emotionally Disturbed (Option 2)**

EDPC	5340	Theories of Learning Across the Lifespan
SPED	5330	Early Intervention for Young Children and their Families
SPED	5361	Applied Behavior Analysis
SPED	5363	Interventions for Learners with Behavior Disorders
SPED	5367	Characteristics of Students with Learning Disabilities
SPED	5369	Teaching Reading to Learners with Mild Disabilities
SPED	5370	Teaching Secondary Students with Mild Handicaps
SPED	5373	Teaching Students with Autism

***Bilingual Special Education (Option 3)**

SPED	5361	Applied Behavior Analysis or
SPED	5363	Interventions for Learners with Behavior Disorders
SPED	5345	Remediating Students with Learning Disabilities
SPED	5350	Special Topic: Diagnosis and Placement
SPED	5331	Bilingual/Bicultural Curriculum
SPED	5370	Practicum in Special Education
SPED	5337	Assessment: Disabilities and Cultural/Linguistic Factors
SPED	5321	Trends and Issues in Bilingual Special Education
Elective: SPED 5330, 5370, 5363, or 5367		

Comprehensive Examination: Written comprehensive examination. *Prerequisite:* Completion of all required courses or permission of the Department.

Total: 36 semester hours

EndorsementSpecial 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)

SPED 5347	Parents of Exceptional Children
SPED 5363	Interventions for Learners with Behavior Disorders
SPED 5367	Characteristics of Students with Learning Disabilities
SPED 5371	Teaching Students with Severe Disabilities

Total: 12 semester hours

A special certification plan must be on file and fee paid to the Certification Office.

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.

5317 Human Growth and Development (3-0)

Descriptive analysis of the typical patterns of human physical, social, emotional, moral, intellectual, cognitive, and personality growth and development.

5320 Lifestyles and Career Development (3-0)

An overview of the various theories of career counseling. Emphasis on incorporating an understanding of what is 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 and Related Ethical and Legal Issues (3-0)

Analysis of the organization and administration of school counseling programs and services, to include professional orientation issues. A significant emphasis is placed on ethical and legal aspects of practice to include mastery of the process involved in ethical decision-making. Ethical issues related to accountability are also highlighted. The Texas Family Code will be reviewed. *Prerequisites:* EDPC 5317, EDPC 5341, EDPC 5345, and EDPC 5360 each with a grade of "B" or better. EDPC 5317, EDPC 5341, EDPC 5345, and EDPC 5360 may be taken concurrently with EDPC 5321.

5322 Community Counseling and Related Ethical and Legal Issues (3-0)

Analysis of the organization and administration of community and agency counseling programs and services, to include professional orientation issues. A significant emphasis is placed on ethical and legal aspects of practice to include mastery of the process involved in ethical decision-making. Ethical issues related to accountability are also highlighted. The Texas Family Code will be reviewed. *Prerequisites:* EDPC 5317, EDPC 5341, EDPC 5345, and EDPC 5360 each with a grade of "B" or better. EDPC 5317, EDPC 5341, EDPC 5345, and EDPC 5360 may be taken concurrently with EDPC 5322.

- 5335 Principles of Appraisal and Assessment (3-0)**
Principles of psychological testing including purposes, methods, and procedures; analysis, evaluation, and administration of educational and psychological instruments.
- 5336 Advanced Appraisal and Assessment (3-0)**
Analysis, evaluation, and administration of individual instruments such as Stanford-Binet Intelligence Scale, and two of the Wechsler Tests (WAIS, WISC-III, WPPSI); includes preparation of individualized professional reports.
Prerequisite: EDPC 5335 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 communication process, curative factors, stages of group development, and therapeutic leadership, to include techniques, skills, and styles unique to the group process. Restricted to Counseling majors.
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. To be taken during the semester immediately preceding enrollment in EDPC 5371. Restricted to Counseling majors. *Prerequisites:* EDPC 5338 with a grade "B" or better and 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.
- 5341 Theories of Counseling (3-0)**
Study and analysis of the major affective, cognitive, and behavioral theories and therapeutic approaches to counseling. Emphasis on historical perspectives and practical application. *Prerequisite:* Admission to counseling program.
- 5344 Use and Interpretation of Standardized Tests (3-0)**
Identifies techniques and procedures to interpret results of various commonly used standardized tests and other procedures to diagnose learning problems; emphasis on the use of data to treat disabilities and develop potentialities.
Prerequisite: EDPC 5335 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.

5346 Social and Cultural Aspects of Counseling (3-0)

A study of societal changes and trends, human role, societal subgroups, social mores and interaction patterns, and differing life styles. Focus on social/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.

5347 Substance Abuse: Current Theory and Practice (3-0)

Designed as an introduction to the field of substance use and/or abuse in the United States. Etiological theories and current forms of treatment, prevention, and research will be highlighted. *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 5347.

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.

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 Applications (3-0)

Advanced training in the development of basic counseling skills and interventions in an on-campus laboratory setting. May include actual work with clients. To be taken during last semester of formal course work, immediately preceding enrollment in Counseling Internship I. *Prerequisites:* EDPC 5338, EDPC 5339, 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 community or school setting. Students are required to complete 150 hours of supervised on-site experience. *Prerequisites:* Satisfactory completion of EDPC 5371 based on pass/fail grading option and department approval.
- 5373 Counseling Internship II (0-0-3)**
Advanced experience in the application of counseling theory and techniques in a school or community setting. Students will be required to complete a minimum of 150 hours of supervised on-site experience. *Prerequisites:* Satisfactory completion of EDPC 5372 based on pass/fail grading option 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.
- 5623 Internship in Educational Diagnostician (0-0-6)**
Supervised experience in public schools working with educational diagnosticians. Includes comprehensive assessments, preparation of written reports of assessment and other required paperwork, attendance at ARDs and presentation of test data and interpretation. Comprehensive assessments cover a variety of handicapping conditions. *Prerequisites:* Completion of all core and specialization requirements with a grade of "B" or better 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 Trends and Issues in Bilingual Special Education (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 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.
- 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.
- 5348 Differential Diagnosis of Handicapping Conditions (3-0)**
Diagnosis of and state eligibility criteria for all handicapping conditions with emphasis on the learning disabled, mentally retarded, and emotionally disturbed student. Focuses on factors affecting diagnosis and eligibility including language, culture, lifestyle, and educational background. *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.
- 5367 Characteristics of Students with Learning Disabilities (3-0)**
Focuses on the various theoretical, etiological, sociological, and behavioral approaches to the understanding of children with language and learning disabilities. Emphasis is on the characteristics of this population and assessment strategies. *Prerequisite:* SPED 5320 with a grade of "B" or better.
- 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 and SPED 5367 each with a grade of "B" or better.

- 5370 Teaching Secondary Students with Mild Handicaps (3-0)**
Focuses on learning disabled students; provides information on how to teach the secondary learning-disabled student word attack, comprehension content subject mastery, and the study skills. *Prerequisite:* Twelve graduate semester hours in special education (SPED) or department approval.
- 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.

TEACHER EDUCATION

601 Education Building
(915) 747-5426
teachered@utep.edu

CHAIRPERSON: Elena Izquierdo

PROFESSORS EMERTI: Lou Ella Burmeister, Norma G. Hernandez, Joe Lars Klingstet, James Milson

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

GRADUATE ADVISOR: Antonio Gonzalez

GRADUATE FACULTY: Ainsa, Bixler-Marquez, Blake, Casas, Chapman, Descamps, DeVillar, Gonzalez, Hampton, Hurley, Izquierdo, Licon, Munter, R. Rodriguez, Rossatto, Seda, Tchoshanov, Tinajero, Treadway

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 in Education is designed for students wishing to pursue research and continue studies beyond the master's degree level. The Master of Education degree is directed toward mastery of professional education practice. Students pursuing the Master of Education may major in Instructional Specialist or Reading Education.

Master of Arts in Education

The Master of Arts in Education is designed for students wishing to pursue research and to continue studies beyond the master's degree. Students may work with the Department of Teacher 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 Graduate Advisor: (915) 747-5426.

Master of Education Instructional Specialist or Reading Education

Admission Requirements

Applicants must be certified teachers or have at least 12 semester hours of undergraduate upper-division education courses, and provide letters of recommendation. Applicants may also be invited to an interview.

Program for Instructional Specialist or Reading Education

Thirty-six semester hours, including at least 27 semester hours at the graduate level. All upper-division undergraduate course work proposed for inclusion in this graduate degree must be recommended for approval by the program Graduate Advisor.

Students wishing to pursue the Master of Education degree may do so through majors in Instructional Specialist or Reading Education. Students whose professional needs are not met by these majors may major in Education and plan a special program around those needs; students should contact the program Graduate Advisor for information and assistance. Specific information on the other two majors is presented below.

Instructional Specialist

In this major, students may choose to concentrate course work in the areas of elementary education, secondary education, early childhood education, bilingual education, educational technology, or health and physical education. Subject matter emphases; e.g., mathematics or history, may occur within elementary or secondary concentrations.

Professional Development Specialization Area	TED 5300, 5301, 5302, and 5303 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 Advisor of the Department.
Resource Area	Six semester hours in courses approved for graduate credit, which provide support for the academic specialization area or for professional development.
Electives	Six semester hours in courses approved for graduate credit.

Reading Education

This program major follows State Board of Educator Certification guidelines and leads to an All-Levels Reading Certificate. The program does not allow for electives. Students interested in a concentration in reading not at "all-levels" should pursue the Instructional Specialist major with an elementary concentration and a reading emphasis.

Professional Development Reading Specialization	TED 5300, 5301, 5302, and 5303 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 semesters hours of Multicultural Concepts

Students holding a Provisional Secondary Certificate also will need six semester hours of graduate-level courses with Elementary Education focus.

Students holding a Provisional Elementary Certificate will also need six semester hours of graduate-level courses with Secondary Education focus.

Final Comprehensive Examination and Scholarly Paper

A written comprehensive examination, satisfactory to the Graduate Faculty of Teacher Education, must be completed before the degree will be awarded. All MED degree candidates will be expected to write several scholarly papers, one of which must be presented to the Graduate Advisor for inclusion in the student's file.

Program Advising

It is the responsibility of the student to consult the Graduate Advisor of the Department regarding admission and degree requirements. The student is expected to maintain a continuing advising relationship which includes preparing a degree plan, submitting a Preliminary Program of Study and a Final Program of Study, and requesting a comprehensive examination or thesis defense. The Department cannot assure that courses taken before admission and/or before degree plan preparation will apply to degree requirements.

Master Reading Teacher Certification

Master Reading Teacher (MRT) certification prepares teachers to teach reading at elementary, middle, or high school level and to mentor, coach, and consult with other teachers in reading. Courses taken for MRT certification may, if all graduate school requirements are met, be applied toward a Master's degree in Reading Education.

Program Requirements

Prerequisites

Photocopy of valid Texas Teaching Certificate

Three (3) years teaching experience

RED 3340 or RED 3342

Must demonstrate mastery of MRT Standards (12 credit hours)

Maximum/6 credit hours minimum and develop an MRT Portfolio

Standard I

RED	5343	Psychology of Reading, or
BED	5332	Teaching Reading in Spanish

Standard II

RED	5341	The Diagnostic Teaching of Reading, or
RED	5346	Clinical Diagnosis of Reading Difficulties, or
BED	5333	Oral Language Assessment

Standard III

RED	5343	Psychology of Reading, or
RED	5344	Seminar in Reading, or
BED	5332	Teaching Reading in Spanish

Standard IV

BED	5336/RED 5341	Literacy/Biliteracy Development
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Standard V

RED	5341	The Diagnostic Teaching of Reading, or
RED	5346	Clinical Diagnosis or Reading Difficulties, or
BED	5333	Oral Language Assessment

Standard VI

RED 5350/BED 5337 Mentoring for Literacy Educators

Exit Procedure

- Passing score on State MRT or Reading Specialist Test (59)
- Passing score on MRT Portfolio

Teacher Certification

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.

A degree program is not the same as a certificate program. 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 and certain endorsement programs may be applied toward a graduate degree, and most can be combined with a graduate degree program. However, a perfect match between state certification and degree requirements is not likely.

Bilingual Education (BED)

5330 Current Topics in Bilingual Education (3-0)

Opportunity to develop competencies necessary to deal effectively with bilingual education instruction; includes curriculum, concepts, teaching strategies, and skills necessary to integrate content and teaching strategies. May be repeated for credit when topic varies.

5331 Bilingual/Bicultural Curriculum Design and Development (3-0)

Identification of principles, problems, and issues affecting bilingual curriculum. Examination of rationale and philosophies of various models of bilingual education programs. *Prerequisite:* ELED 3302.

5332 Teaching Reading in Spanish (3-0)

Fundamental principles for teaching reading in Spanish to Spanish-dominant children. Examination of classroom reading materials representative of various bilingual reading programs and development of criteria for the selection of materials appropriate for various types of bilingual reading classes. *Prerequisite:* RED 3340.

5333 Oral Language Assessment (3-0)

Analysis of oral language tests and procedures, and their application to the bilingual classroom.

5334 Teaching Content in Spanish (3-0)

Analysis and evaluation of Spanish curriculum materials in the content areas. Emphasis on the development of methods for teaching content in Spanish using specialized language at various levels.

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.

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.

Educational Technology (EDT)**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 when topic varies.

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 The Diagnostic 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.

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.

5345 Remedial Reading (3-0)

Operation and administration of remedial reading programs, including the screening procedures for selection of students as well as criteria for selecting and designing materials suitable for use in remedial reading. Strategies for counseling and teaching disabled readers are also emphasized. *Prerequisite:* RED 3340 or 3342.

5346 Clinical Diagnosis of Reading Difficulties (3-0)

Comprehensive study of, and clinical practice in, the diagnosis of specific, limiting, and complex cases of reading and writing disability. Offers the opportunity for experience in administering and interpreting formal and informal assessment tools and in the analysis and synthesis of findings for case studies. *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)

In-depth exploration of issues and problems in the field of adult literacy including family, basic, workplace, and academic literacy. *Prerequisite:* RED 3340 or RED 4341 or RED 5341.

- 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.

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.

Teacher Education (TED)

- 5119 Graduate Workshop in Education (1-0)**
Studies in a designated area. May be repeated for credit when topic varies.
- 5214 Current Topics in Science Education (2-0)**
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.
- 5300 Research for the Classroom Teacher (3-0)**
Research methodology relating to the problems and needs of classroom teachers with major emphasis on interpreting professional literature and conducting classroom-based action research. A scholarly paper will be required. *Prerequisite:* Admission to, or completion of, a Master's degree program.
- 5301 Curriculum Theory and Design (3-0)**
Theoretical foundations and principles of curriculum design. *Prerequisite:* Admission to, or completion of, a Master's degree program.
- 5302 Instructional Strategies and Classroom Management (3-0)**
Decision-making methodologies and human interactions as they relate to classroom management.
- 5303 Construction and Use of Classroom Evaluation Instruments (3-0)**
Construction and use of norm-referenced and criterion-referenced achievement measures for summative and formative evaluation. *Prerequisite:* Admission to, or completion of, a Master's degree program.

- 5313 Current Topics in Multicultural Education (3-0)**
Opportunity to develop competencies necessary to deal effectively with multicultural education instruction; includes curriculum, concepts, teaching strategies, and skills necessary to integrate content and teaching strategies. May be repeated for credit when topic varies.
- 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)**
Opportunity to develop 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.
- 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.
- 5323 Energy Education (3-0)**
Offers the opportunity for experience with the content, materials, and teaching strategies used in energy education.
- 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.
Prerequisite: Department approval.
- 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. *Prerequisites:* Admission to the Master's Degree program and possession of an initial teaching 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
Computer Science
Electrical and Computer Engineering
Mechanical and Industrial Engineering
Metallurgical and Materials Engineering

Dr. Andrew Swift, Dean
Dr. Darrell Schroder, Associate Dean
Dr. Patricia Teller, Assistant Dean
Dr. Roberto Osegueda, Assistant Dean

Engineering/Science Complex
Engineering Bldg., Room E230
(915) 747-5460 (ph)
(915) 747-5616 (fax)
engineer@utep.edu

Degree Programs

Ph.D.	Computer Engineering 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
MSEnE	Environmental Engineering

* Interdisciplinary Program

College of Engineering

The University of Texas at El Paso has a long-standing commitment to quality engineering education. Today the College of Engineering strives to educate engineers to formulate and solve the technical problems of today and tomorrow.

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

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 scale) from all Master's work or, if 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 and experience 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 Comprehensive 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.

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 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

201B Engineering Science
(915) 747-5464
civilengineering@utep.edu

CHAIRPERSON: Carlos M. Ferregut

GRADUATE FACULTY: Ashur, Carrasco, Ferregut, Gurian, Li, Nazarian, Oey, Osegueda, Tandon, Tarquin, Turner, Walton

The Civil Engineering Department offers the degrees of Master of Science in Civil Engineering (MS), Master of Science in Environmental Engineering (MSEnE), Master of Engineering in Environmental Engineering (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.

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. <i>Prerequisite:</i> 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. <i>Prerequisite:</i> Department approval.

- 5195 Graduate Seminar (1-0)**
Conferences and discussions of various topics in Civil 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 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.

5317 Similitude and Statistical Methods (3-0)

Dimension and model theory and its use in analyzing physical experiments. Applications of probability and statistical analysis. *Prerequisite:* Instructor approval.

5320 Advanced Soil Mechanics (3-0)

Shear strength, earth pressure calculation on retaining structures, soil bearing capacity theories, stress on shaft and funnel linings, introduction to bearing capacity on permafrosts, slope stability. *Prerequisites:* CE 4448 and 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 radio active, are addressed as case studies. *Prerequisite:* A BS degree in Engineering or Chemistry, graduate standing in engineering or chemistry, or 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.

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.

5336 Rock Mechanics (3-0)

Classification and index properties, rock strength and failure criteria, initial stresses and their measurements, planes of weakness, deformability, underground openings, slope stability, application to foundation engineering. *Prerequisites:* Graduate standing, 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.
- 5343 Environmental Analysis Techniques (2-3)**
The course covers advanced procedures for laboratory analysis of water and wastewater. Experiments using AA, GC, IC, TOC and other instruments are conducted. Emphasis is placed on laboratory technique, data reporting and the student to be able to properly execute procedures specified in standard methods for accurate collection and reporting of research data. *Prerequisite:* CE 5409.
- 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.
- 5346 Industrial and Hazardous Waste Characterization and Treatment (3-0)**
Design course focusing on the removal/degradation of contaminants from waste streams at industrial plants, municipal facilities, and hazardous waste sites. Waste minimization of industrial processes developed as an alternative to waste treatment. Advanced design process development including anaerobic and aerobic bioreactors for hazardous contaminant degradation, vapor/liquid extraction, liquid/liquid extraction, super critical extraction, catalytic combustion, and solidification/stabilization. Design project on current topics. *Prerequisites:* CE 5343 or CE 5344, and department approval.
- 5347 Vadose Zone Hydrology (3-0)**
Study of the movement of water and contaminants in unsaturated zone. Covers soil moisture potential, unsaturated constitutive relationships, static systems, steady flow, transient flow, transport of dissolved constituents, vapor phase contaminant transport, heat transfer, and mathematical modeling. *Prerequisite:* Department approval.

- 5348 Design of Water and Wastewater Systems (3-0)**
Design aspects of water and wastewater systems ranging from pipelines to treatment plants are covered. A detailed design of at least one unit will be completed as either an individual or class project. Cost estimating will be covered. *Prerequisite:* Department 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.
- 5350 On-Site Wastewater Treatment (3-0)**
On-site wastewater treatment considerations from wastewater generation rates through final disposal are discussed. Appropriate alternatives ranging from conventional to innovative systems are covered for single-family residences, commercial, and institutional establishments. Alternative analyses include consideration of installation costs, operating cost, and technical performance. *Prerequisite:* Department approval.
- 5351 Mechanistic Pavement Design and Analysis (3-0)**
Stresses and deformations in flexible and rigid pavements. Traffic loading and volume. Material characterization. Drainage design. Definition of pavement performance. Application of reliability to pavement design. Flexible and rigid pavement design. Design of overlays. *Prerequisite:* Instructor approval.
- 5352 Advanced Foundation Engineering (3-0)**
Determination of lateral earth pressure. Design of mechanically stabilized retaining walls for excavation, and cofferdams. Design of foundations on difficult soils. Study of soil-structure interaction, mechanics of laterally-and axially-loaded piles. *Prerequisite:* Instructor approval.
- 5353 Subsurface Site Investigation (2-3)**
Subsurface data requirements. Conduct of investigations. Field mapping. Geological constraints. Engineering geophysics. Soil and rock sampling. Hydrogeology. Laboratory testing. Compilation and presentation of information. *Prerequisite:* CE 4448 or instructor 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.

COMPUTER SCIENCE

234 Computer Science Building
(915) 747-5480
(915) 747-5030
<http://cs.utep.edu>

CHAIRPERSON: David Novick

GRADUATE FACULTY: Bernat, Gates, Kreinovich, Longpré, Novick, Roach, Sassenfeld, Teller, Ward

The Computer Science Department offers a Master of Science in Computer Science and participates with the Electrical and Computer Engineering Department in the Ph.D. program in Computer Engineering. Specific courses of study include database theory, artificial intelligence, software engineering, theory of computation, algorithms, computer systems, and computing applications. The department also offers an undesignated Master of Science with a major in Engineering. In addition, the department co-administers the Master of Information Technology (MIT) degree with the Information and Decision Sciences department in the College of Business Administration. Information pertaining to the MIT degree can be found in the Interdisciplinary Programs section of this catalog.

Requirements for Admission

Students should consult the Introduction to the College of Engineering section for information about general requirements. Additionally, applicants must submit evidence of at least 13 semester hours of undergraduate course work in Computer Science to include:

CS	2302	Data Structures
CS	3350	Automata, Computability, and Formal Languages
CS	3330	Problem Oriented Programming Languages
CS	3432	Assembler Language Programming
MATH	1411	Calculus

Requirements for the Degree

Thesis Program - 27 semester hours of course work plus
 6 semester hours of thesis (CS 5398 and CS 5399)
 33 total semester hours minimum, OR

Project Program - 30 semester hours of course work plus
 6 semester hours of project (CS or EE 5398 and CS or EE 5397)
 36 total semester hours minimum.

All students must successfully complete at least four of the following courses:

CS	5322	Database Theory
CS	5315	Theory of Computation
CS	5340	Advanced Operating Systems
CS	5341	Advanced Computer Architecture
CS	5350	Advanced Algorithms

Computer Science (CS)

For Undergraduate and Graduate Students

Courses marked with an asterisk (*) may not be applied toward the Master of Science degree in Computer Science.

- *3330 Problem Oriented Programming Languages**
- *3432 Assembler Language Programming**
- *3333 Basic Concepts in Computer Science**
- *3335 Systems Programming**
- *3350 Automata, Computability and Formal Language**
- *3360 Design and Implementation of Programming Languages**
- 3370 Computer Graphics**
- 4310 Software Engineering I**
- 4311 Software Engineering II**
- 4320 Artificial Intelligence**
- 4342 Database Management**
- 4352 Translation of Programming Languages**
- *4371 Computer Science Problems**
- 4375 Theory of Operating Systems**
- 4390 Special Topics in Computer Science**

For Graduate Students Only

- 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 Turing Machines with an in-depth study beginning with the Universal Turing Machine, followed by Undecidability, Computational Complexity Theory, and Intractable Problems. *Prerequisite:* CS 3350 or equivalent.

- 5322 Database Theory (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 4320.
- 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 asymptotic notation, followed by mathematical techniques for analysis of computer algorithms, and techniques for design of efficient algorithms (including sorting, searching, and graph algorithms). *Prerequisite:* CS 2302 or instructor approval.
- 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.
- 5394 Graduate Research (0-0-3)**
5694 Graduate Research (0-0-6)
Individual variable-credit research of contemporary topics in Computer Science. *Prerequisite:* Permission of Graduate Advisor.
- 5396 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. *Prerequisite:* Instructor approval.
- 5397 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.
- 5398 Thesis (0-0-3)**
Initial work on the thesis.
- 5399 Thesis (0-0-3)**
Continuous enrollment required while work on thesis continues. *Prerequisite:* CS 5398.

ELECTRICAL AND COMPUTER ENGINEERING

301B Engineering Science Complex
(915) 747-5470
ece@ece.utep.edu

CHAIRPERSON: Mehdi Shadaram

GRADUATE FACULTY: Austin, Cabrera, Diong, Flores, Gonzalez, Liu, Lush, Moya, Nava, Pierluissi, Riter, Schroder, Shadaram, Starks, Usevitch, Williams, Zubia

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

Requirements for Admission

Students should consult the Introduction to the College of Engineering section for information on general admission requirements.

Requirements for 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 Department Chairperson.

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 Electrical Engineering including at least three sets of 6 hour sequences. (Current course sequences are available from the Department.)

Specific Requirements for the Master of Science with a Major in Electrical Engineering Degree

All students enrolled in the 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 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.
- 6195 Doctoral 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 doctoral students during each semester of full-time enrollment until preliminary exam is satisfactorily completed. *Prerequisite:* Doctoral standing.
- 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 Solid State Physical Electronics
4356 Real Time Signal Processing and Communication
4361 Fiber Optic Communications
4364 Systems and Controls
4365 Neural Networks
4372 Microcontroller Applications
4374 Operating System Design
4375 VLSI Design I
4378 Microprocessors Systems II
4379 Advanced 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**

Normally, required undergraduate electrical engineering courses may not be applied toward the MS in Electrical Engineering or Computer Engineering.

For Graduate Students Only

- 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.
- 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.
- 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 5311 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.
- 5324 Statistical Detection and Estimation Theory (3-0)**
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.
- 5330 Data Communications (3-0)**
Study of modern telecommunication and data networks; packet and circuit switched networks; ATM; congestion control; mathematical modeling of networks; economics.
- 5332 Coding and Error Correction (3-0)**
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.
- 5336 Fiber Optic Communication Systems (3-0)**
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.
- 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 representation, matching, and inference. *Prerequisite:* Instructor approval.
- 5370 Operating Systems (3-0)**
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.
- 5371 Digital Signal Processing (3-0)**
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.

5372 Image Processing (3-0)

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.

5374 Advanced Digital System Design I (3-0)

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.

5375 Advanced Digital System Design II (3-0)

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.

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.

MECHANICAL AND INDUSTRIAL ENGINEERING

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CHAIRPERSON: Louis Everett

GRADUATE FACULTY: Bronson, Choudhuri, Contreras, Craver, Dowdy, Everett, Fuentes, Gutierrez, Huerta, Kypuros, McLean, Pennathur, Quintana, Swift, Wicker

The Mechanical and Industrial Engineering Department offers a Master of Science with majors in Mechanical Engineering, Industrial Engineering, and Manufacturing 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. 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 Mechanical and 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 three degree programs. Students enrolled in a thesis option follow a 30-hour program that is composed of 24 hours of course work plus 6 hours of thesis (MECH, IE, or MFG 5398 and MECH, IE, or MFG 5399). 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. For the Mechanical Engineering

degree, the non-thesis option may include up to 6 credit hours for Graduate Projects (MECH 5396 and MECH 5397). Students selecting the non-thesis option in Industrial or Manufacturing Engineering are required to take a comprehensive examination (IE 5291 or MFG 5291) upon completion of their coursework.

All students enrolled in the Mechanical or 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 Department of Mechanical and Industrial Engineering 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 Mechanical, 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 Department.

International Manufacturing Certificate

An applied internship in a local manufacturing plant where the student applies the 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 with problems. The mid-term and final examinations will consist of a written report and presentation based on the research/design/analysis performed in a department to the faculty mentor and industrial partner.

For Undergraduate and Graduate Students

Industrial Engineering (IE)

Courses marked with an asterisk (*) may not be applied toward the Master of Science degree in Industrial Engineering.

- 4332 Safety Engineering**
- *4384 Industrial Layout**
- *4385 Statistical Quality Control and Reliability**
- *4391 Production and Inventory Control**
- *4392 Probabilistic Operations Research**
- 4395 Special Topics in Industrial Engineering**
- *4466 Senior Project**

Mechanical Engineering (MECH)

Courses marked with an asterisk (*) may not be applied toward the Master of Science degree in Mechanical Engineering.

- *4311 Automatic Controls**
- 4312 Fluid Power and Control Systems**
- 4355 Gas Dynamics**
- 4356 Applications of Solar Energy**
- *4364 Mechanical Design**
- 4395 Special Topics in Mechanical Engineering**
- *4451 Heat Transfer**

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.

5291 Comprehensive Integration of Industrial Engineering (0-0-2)

This course is designed to prepare the non-thesis student for the written and oral components of the final comprehensive examination. Key technical concepts, methodologies, and issues in the core subject areas will be reviewed and integrated. This course is to be taken in the student's final semester in the non-thesis MS program. If a student fails the exam (and thus the course), the student can re-enroll for IE 5291 the following semester, up to a total of three attempts. *Prerequisite:* Department approval.

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.

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:* IE 3326 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)**
5494 Graduate Research (0-0-4)
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.

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, stream function, potential flow, conformal transformation, theory of 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.

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.
- 5315 Analysis of Material Handling Systems (3-0)**
Study of the most recent developments in research and applications of material handling systems. Special emphasis will be placed on models and techniques that allow a good design of integrated material handling systems in a discrete production environment. The course will consist of lectures, class discussions, and student projects.
- 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.
- 5330 Concepts in Advanced Manufacturing (3-0)**
Introduction to modern concepts in manufacturing systems with special emphasis on discrete production systems. Production control systems such as MRP, KANBAN, and Just-In-Time are covered. The advantages of group technology and FMS will be studied.
- 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.

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.

METALLURGICAL AND MATERIALS ENGINEERING

M201 Engineering Science Complex
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CHAIRPERSON: Lawrence E. Murr

GRADUATE FACULTY: Arrowood, Fisher, Golding, Herrera, McClure, Murr, Stafford, Varma

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

The Metallurgical and Materials Engineering Department offers a Master of Science with a major in Metallurgical and Materials Engineering and an undesignated Master of Science with a major in Engineering.

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
	<u>6</u>	semester hours of thesis (MME 5398 and MME 5399)
	30	

Project Program	-30	semester hours of course work plus
	<u>6</u>	semester hours of project (MME 5396 and MME 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

Manufacturing

MECH/IE/ MFG	5390	Special Topics in Mechanical, Industrial, and Manufacturing Engineering
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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 6402, 6400, and 5302, 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.

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

**School of Nursing
School of Allied Health
Health Sciences
Kinesiology
Physical Therapy
Speech-Language Pathology**

Dr. John B Conway, Dean
Dr. Audree Reynolds, Interim Director School of Nursing
Dr. Gretchen Schmalz, Director School of Allied Health
Connie Gamboa, Assistant Dean

1101 N. Campbell
(915) 747-8217 (ph)
(915) 747-7207 (fax)
chs@utep.edu

Degree Programs

MSN	Community Health Nursing Family Nurse Practitioner Nurse Midwifery Nursing Administration Women's Health Care/Nurse Practitioner
MBA/MSN	Business Administration/Nursing ⁺
MS	Health and Physical Education Kinesiology Speech-Language Pathology
MPT	Therapy

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

On-Line Program

MS	Kinesiology/UT Telecampus
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+Combined Program

College of Health Sciences

The College of Health Sciences offers masters programs in Nursing, Health and Physical Education, Kinesiology, Physical Therapy, and Speech-Language Pathology. Students enrolling in the Master of Science in Nursing degree program may elect options in adult health nursing, community health nursing, family nurse practitioner, nursing administration, nurse-midwifery, psychiatric-mental health nursing, or women's health care nurse practitioner. The Master of Science in Nursing degree is offered for Registered Nurses in an accelerated RN to MSN program. These nursing degree programs are accredited and qualify students for national certification in their specialty.

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

The Master of Science in Health and Physical Education 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 College of Health Sciences also participates in cooperative degree programs 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. 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.

SCHOOL OF NURSING

1101 N. Campbell, Room 711
(915) 747-8217
son@utep.edu

INTERIM DIRECTOR: Audree Reynolds

GRADUATE FACULTY: Adams, Amaya, Brunk, Fullerton, Nelson, Poss, Reynolds, Stuppy

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;
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 Business Administration and Master of Science in Nursing (MBA/MSN)

The MBA/MSN option is a two-degree program in which students pursue the MBA with a Health Systems Concentration and MSN in Nursing Administration simultaneously. Students must specify the option at the time of application to the Graduate School and must meet prerequisites for each degree program. Among the many advantages of this program is the opportunity to reduce the total number of semester hours required for the individual degrees (36 for the MBA and 36 for the MSN) to 60 semester hours by using required course work in the MSN towards the Health Systems Concentration for the MBA.

Requirements for Admission

Applicants must qualify for admission to both the MBA and MSN in Nursing Administration programs. Specific admissions criteria are listed under the College of Business Administration introductory section for the MBA and Requirements for Admission into Nursing for the MSN.

Requirements for the Graduate Degree

1. Completion of all MBA and MSN prerequisites
2. Completion of a minimum of 60 semester hours, normally evenly divided by MBA and MSN
3. Completion of the core courses for each program
4. Preliminary and Final Degree Plan approved by the Graduate Advisors for each program and the Graduate School

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 community health nursing, family nurse practitioner, nursing administration, nurse-midwifery, and women's health care nurse practitioner. 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 recommendations regarding admission are made by the Director of the School of Nursing upon the recommendation of the Graduate Nursing Studies Committee. Student profiles are evaluated on an individual basis.

Requirements for Admission

1. Bachelor's degree from an accredited baccalaureate nursing program in the United States or equivalent education at a foreign institution
2. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE), or the Miller's Analogy Test (MAT), and upper level undergraduate and graduate coursework.
3. Documentation of competency in undergraduate statistics
4. Current Texas licensure as a registered nurse; international applicants must be authorized to practice in their own country and pass the GSFSN
5. Evidence of current Provider CPR, liability insurance, and health clearance
6. 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.
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 Studies Committee of the School of Nursing.

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. 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.

All degree requirements for the MSN must be completed within six years.

Graduate Core Hours (9 hours)

NURS	5310	Nursing Theories and Processes
NURS	5370	Research Methods I

And one of the following (depending on major):

NURS	5300	Organizational Culture
NURS	5305	Community Mental Health Nursing
NURS	5338	Health Law, Policy, and Ethics
NURS	5364	Primary Care of Women
NURS	5407	Introduction to Epidemiology
NURS	5408	Overview of Environmental Health

Advanced Practice Core Courses (Clinical Majors - 9 hours)

*NURS	5303	Advanced Health Assessment
NURS	5319	Advanced Pathophysiology
NURS	5362	Pharmacotherapeutics

Role Courses (Clinical Majors - 5 hours)

NURS	5254	Advanced Practice Nursing Role
*NURS	5332	Advanced Practice Clinical AND/OR
*NURS	5356	Nursing Preceptorships

Thesis (9 hours)**Thesis**

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**Community Health Nursing (37 hours)**

Graduate Core Courses (6 hours)

Advanced Practice Core Courses (9 hours)

Major Courses (26 hours)

NURS	5407	Introduction to Epidemiology
NURS	5408	Overview of Environmental Health
*NURS	5409	Community Health Nursing I
*NURS	5510	Community Health Nursing II
*NURS	5314	Community Health Nursing III
*NURS	5618	Advanced Community Practicum

Family Nurse Practitioner

Required Spanish Courses

Conversational and Medical Spanish I (noncredit)

Conversational and Medical Spanish II (noncredit)

Graduate Core Courses (9 Semester Credit Hours)

Advanced Practice Core Courses (9 Semester Credit Hours)

Major Courses (30 Semester Credit Hours)

*NURS	5106	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	5380	Special Topics: Perspectives on Border Health
*NURS	5440	Working with Multicultural Communities
*NURS	5473	Advanced Practice Clinical
*NURS	5573	Advanced Practice Clinical

Role Courses (2 Semester Credit Hours)

NURS	5254	Advanced Practice Nursing Role
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Nurse-Midwifery (50 hours): The Nurse Midwifery major is accredited by the American College of Nurse-Midwives, Division of Accreditation, 818 Connecticut Avenue NW, Washington, DC 20006

Graduate Core Courses-NURS 5310, NURS 5370, NURS 5364

Advanced Practice Core Courses (3 hours)

NURS	5319	Advanced Pathophysiology
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Major Courses (32 hours)

NURS	5264	Professional Role Development I
NURS	5269	Professional Role Development II
*NURS	5563	Family Planning and Well Women Gynecology
*NURS	5565	Management of the Antepartum Period of the Childbearing Cycle

*NURS	5566	Management of the Postpartum and Neonatal Periods of the Childbearing Cycle
*NURS	5567	Management of the Intrapartum Period of the Childbearing Cycle
*NURS	5568	Comprehensive Nurse-Midwifery Practice

Nursing Administration (36 hours)

Graduate Core Courses (9 hours)

Major Courses (18 hours)

NURS	5335	Nursing Administration
*NURS	5336	Advanced Nursing Administration
NURS	5337	Health Care Financial Management
NURS	5338	Health Law, Policy, and Ethics
*NURS	5339	Nursing Administration Policy Analysis
*NURS	5341	Nursing Supervision in Health Care Agencies

Women's Health Care/Nurse Practitioner (48 hours)

Graduate Core (6 hours)

Advanced Practice Core (9 hours)

Major Courses (24 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	5956	Nursing Preceptorship

Master's completion degree plans are available in Nurse-Midwifery and Women's Health Care/Nurse Practitioner. Post-masters non-degree course work in Family Nurse Practitioner, Women's Health Care/Nurse Practitioner, and Nurse-Midwifery is available. Students should contact the Graduate Nursing Coordinator for additional information.

*Includes a practicum

***Note:** Students enrolling in any course with a practicum component must present to the Graduate Nursing Program Office documentation of current license, CPR, liability insurance, and health clearance.

***Note:** Students enrolling in any practicum course must present to the Graduate Nursing Program Office documentation of attendance at City-Wide Orientation within the past calendar year.

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.

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 alleviating 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.

- 5103 Community Practicum I (0-0-3)**
 Practice/Laboratory component that is associated with NURS 5406. Includes practicum. *Corequisite:* NURS 5406.
- 5106 Primary Care Practicum I (0-0-3)**
 Practice/Laboratory component for family nurse practitioner students. Includes practicum. *Corequisite:* NURS 5307.
- 5194 Independent Study (0-0-3)**
5294 Independent Study (0-0-6)
5394 Independent Study (0-0-9)
 A course designed by the student to meet an individual learning need.
Prerequisites: Instructor approval and consent of Graduate Advisor
- 5197 Graduate Research (0-0-3)**
5297 Graduate Research (0-0-6)
 Variable credit for approved research activity. Up to three semester hours may be applied toward degree requirements.
- 5204 Community Practicum II (0-0-6)**
 Practice/Laboratory component that is associated with NURS 5507. Includes practicum. *Corequisite:* NURS 5507. *Prerequisites:* NURS 5103 and NURS 5406.
- 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)**
 Practicum/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.
- 5264 Professional Role Development I (2-0-0)**
 Historical development of the profession of nurse-midwifery in the United States and internationally. The concept of advanced nursing practice and role change is explored. For nurse-midwifery majors only.

5269 Professional Role Development II (2-0-0)

Multiple aspects of responsibilities as a nurse-midwife, including practice ethics, political and professional issues. Emphasis is on content that will be encountered on entry into nurse-midwifery practice. For nurse-midwifery majors only.

Corequisite: NURS 5568. *Prerequisite:* NURS 5264 with a grade of "B" or better.

5300 Organizational Culture (3-0-0)

The values, beliefs, and structures in an organization are analyzed in relation to their influence on corporate decision-making and administrative practices.

Topics discussed include management rituals, symbolism, leadership, setting standards, interpersonal behaviors, and effective presentations within various organizational subcultures. Open to other graduate students.

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. Equipment Maintenance fee required.

5305 Community Mental Health Nursing (2.5-0-1.5)

Focuses on role of community mental health nursing in relation to primary, secondary, and tertiary levels of prevention. Analyzes social, political, legal, and cultural issues influencing community mental health nursing. Includes practicum. Research ideas are formulated based on both theory and practice.

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. *Prerequisite:* Departmental approval.
- 5311 Parent-Child Nursing I (2-0-3)**
Focus on advanced nursing care of well pregnant women and well children, and children and pregnant women with selected health problems with emphasis on primary prevention and health promotion. Includes practicum. *Prerequisites:* Core courses and Advanced Practice Core.
- 5314 Community Health Nursing III (3-0-0)**
Continuation of community health nursing process with emphasis on Integration of advanced practice community health nursing role and program administration. *Prerequisite:* NURS 5510.
- 5315 Parent-Child Nursing II (1-0-6)**
Focus on advanced nursing care of children and pregnant women with acute, major, and/or chronic health problems. Includes practicum. *Prerequisite:* NURS 5311.
- 5317 School Health (3-0-0)**
Focuses on the health care provider's role in the school health program. Current issues and trends in school health, administrative patterns, and health care policies are analyzed.
- 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.
- 5320 Adult Health Nursing I (2-0-3)**
Focuses on developing a base of specialty knowledge and advanced nursing therapeutics in a selected clinical area within adult nursing practice. Incorporates knowledge of nursing theories/frameworks and research with clinical practice. Direct care specialty practice skills are developed in clinical practicum. *Prerequisites:* NURS 5310, NURS 5370, NURS 5303, and NURS 5319.
- 5321 Adult Health Nursing II (1-0-6)**
Continued development of clinical expertise in direct patient care in a specialty area of adult nursing practice with added focus on development of collaboration and consultation skills needed for advanced nursing practice. Incorporation of research and theory in practicum. *Prerequisites:* NURS 5320 and NURS 5362. NURS 5362 may be taken concurrently with NURS 5321.
- 5323 Gerontological Health (2.5-0-1.5)**
Focuses on the aging process and the health care provider's role in assisting older persons to achieve successful aging. Health promotion and disease prevention strategies are evaluated. Economic, ethical, and political issues are analyzed in terms of quality of life for older persons. Includes practicum.
- 5325 Psychiatric-Mental Health Nursing I (2-0-3)**
Systematic study of the theoretical foundations of psychotherapeutic nursing practice. Clinical practicum focuses on individual therapy with patients/clients. Includes practicum. *Prerequisite:* Core courses.

- 5327 Psychiatric-Mental Health Nursing II (1-0-6)**
Social systems approach to the study of mental health and mental illness. Focuses on use of group approach to treatment and therapeutic interventions with dysfunctional families. Emphasizes cultural aspects of family models and techniques of family therapy. Includes practicum. *Prerequisite:* NURS 5325.
- 5332 Advanced Clinical Practice (0-0-9)**
This three-hour course provides lecture and application of content in various clinical areas. Concepts of advanced practice and models of care are discussed as they relate to specific clinical majors and subspecialties.
- 5335 Nursing Administration (3-0-0)**
Focuses on theories and principles of administration and management; application to nursing service supervision and administration.
Prerequisite: Core courses.
- 5336 Advanced Nursing Administration (2-0-3)**
Apply management models to the systematic assessment and evaluation of administrative elements in a health care organization. Students use and evaluate selected computer applications and information systems in a management role as a means to improve management effectiveness in health care settings. A management practicum is required. *Prerequisite:* NURS 5335.
- 5337 Health Care Financial Management (3-0-0)**
An introduction to basic financial and accounting concepts relating to health care management. Programming, budgeting, and controlling processes in health care organizations will be discussed within the nurse manager's role.
- 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 Nurse Administration Majors.
- 5339 Nursing Administration Policy Analysis (1-0-6)**
Focuses on the analysis and evaluation of management policies, issues, and problems relevant to the regulation of health care delivery systems. A research or evaluation project in management is required and is designed to offer relevant learning activities in nursing administration. An administrative practicum is required in a hospital or community health care agency. The last required course for Nurse Administration Majors only.
- 5340 Community Health and Family Theories for Advanced Practice Nursing (3-0-0)**
Community and family perspective and approach for advanced practice nursing. Examines families, groups, and communities in the U.S./Mexico border region from a socio-cultural stance.
- 5341 Nursing Supervision in Health Care Agencies (2-0-3)**
Analyzes the development of nursing administration/supervision within health care settings. Focuses on supervision, organization, and administration of nursing services for client care. Includes practicum. *Prerequisite:* NURS 5335.

- 5342 Primary Care Management of Adult Health Problems I (3-0-0)**
Focuses on the clinical management of common, recurring primary adult health problems of women from adolescence through menopause. Emphasis on assessment skills and clinical decision making in primary care settings. *Prerequisites:* NURS 5106, NURS 5319, and NURS 5362. NURS 5106 may be taken concurrently with NURS 5342.
- 5343 Primary Care Management of Adult Health (3-0-0)**
Focuses on clinical management of acute and chronic health problems affecting men and elders. Emphasis on health promotion, primary prevention, and interdisciplinary collaboration in primary care settings. *Prerequisites:* NURS 5342, NURS 5553, or NURS 5568, and department approval.
- 5345 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. *Prerequisite:* NURS 5310 or permission of faculty.
- 5347 Effective Teaching Strategies (2-0-3)**
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. Includes practicum. Web-based online course. *Prerequisite:* NURS 5345 or permission of faculty.
- 5350 International Health (3-0)**
Focuses on major international health programs as they relate to cultural, ecological, and economic factors. The roles of the local, state, national, and international agencies in relation to health are studied.
- 5351 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 "C" or better.
- 5356 Nursing Preceptorship (0-0-9)**
5656 Nursing Preceptorship (0-0-18)
5956 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.
- 5362 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 "C" or better or equivalent, and department approval.

- 5364 Primary Care for Women (2.5-0-1.5)**
Assessment, management, and co-management of the primary care of women within a community and family health prospective. Emphasis on health conditions that are not pregnancy or gynecological in nature. Includes practicum. Nurse-midwifery majors only or instructor approval.
- 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.
- 5371 Research Methods II (3-0-0)**
Advanced study of research methods, design, instrumentation, statistical techniques, use of computers for data analysis, and interpretation of results. Focus on health care and related research. Required for all thesis students in nursing. *Prerequisites:* NURS 5370 or equivalent in a related discipline and department approval.
- 5373 Advanced Practice Clinical (0-0-9)**
5473 Advanced Practice Clinical (0-0-12)
Integrates didactic and clinical content into intensive clinical practicum for family nurse practitioner students. *Prerequisites:* NURS 5309 and department approval. Nursing Liability Insurance fee required.
- 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.
- 5406 Community and Primary Care Nursing I (4-0-0)**
Discuss the dynamics and nature of the Southwest Texas health service area and the way in which people who live in the border areas perceive themselves in terms of their health-care needs and available resources.
- 5407 Introduction to Epidemiology (4-0-0)**
(Cross-listed as PH 2610) Introduces students to principles and concepts of epidemiology through lectures, discussion groups, assigned readings, and exercises. Students are given the opportunity to acquire an understanding of these principles and concepts, the vocabulary of epidemiology, methods of epidemiologic investigation, and interpretation and evaluation of reports of epidemiologic research.
- 5408 Overview of Environmental Health (4-0-0)**
(Cross-listed as PH 2110) First course for graduate students in Environmental Health or an overview course for other graduate students wishing to gain an understanding of the elements of environmental health. External factors in the environment that impact on human health, biological mechanisms that maintain homeostasis and defend humans against environmental insults, and adverse health effects induced by environmental agents and efforts to minimize the occurrence of these adverse health effects are covered. Concepts derived from the environmental sciences, physiology and biochemistry, ecology, toxicology, epidemiology, and environmental management are utilized. *Prerequisite:* NURS 5407.

- 5409 Community Health Nursing I (3-0-3)**
 Conceptual basis for practice of community health nursing at the advanced practice level. Emphasis on health care delivery to groups, families, and aggregates within communities along U.S./Mexico border. Application of community health nursing process with aggregates and communities with focus on community assessment. Includes practicum. Nursing liability insurance required. *Prerequisites:* NURS 5407, NURS 5408, and NURS 5310. NURS 5408 may be taken concurrently with NURS 5409.
- 5440 Working with Multicultural Communities (3-0-3)**
 This course utilizes epidemiology and a cultural lens to explore community health assessment, interventions, and evaluations of multicultural communities on the U.S./Mexico border. Emphasis is placed on understanding the social context of community health practice, building collaborative relations within multicultural communities, advancing the student's role as an empowerment agent, and conducting community level interventions and evaluations. Includes practicum. *Prerequisites:* NURS 5473 and department approval. NURS 5473 may be taken concurrently with NURS 5440.
- 5507 Community and Primary Care Nursing II (3-0-6)**
 Explores community health policy issues, research potential and community health planning, program development and evaluation. Includes practicum. *Prerequisite:* NURS 5406.
- 5508 Community and Primary Care Nursing III (3-0-6)**
 Explores community health policy, issues, research potential and community health planning, program development and evaluation. Includes practicum. *Prerequisite:* NURS 5507.
- 5510 Community Health Nursing II (3-0-6)**
 Application of community health nursing process with aggregates and communities. Emphasis on program planning, community and environmental health interventions, and program evaluation. Includes practicum. *Prerequisite:* NURS 5409.
- 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.
- 5563 Family Planning/Well Woman Gynecology (2-0-12)**
 Nurse midwifery management process is applied to the reproductive care of the essentially well woman across the life span exclusive of pregnancy. Emphasis is placed on maintenance of reproductive health including the breast, fertility management, human sexuality, and identification of common gynecologic problems from adolescence to the post-menopausal years. Focus is on the normal in this first reproductive course. For nurse-midwifery majors only. Includes practicum.

- 5565 Management of the Antepartum Period of the Childbearing Cycle (2-0-12)**
First course of the actual maternity cycle utilizes the nurse-midwifery management process in the comprehensive prenatal care of women experiencing normal childbearing. Emphasis is placed on assessment for maternal and fetal well being with screening for deviations from normal, which would require referral. Educational needs and social/cultural context are included. Includes practicum. *Prerequisites:* NURS 5362 with a grade of "C" or better; NURS 5264 and NURS 5563, each with a grade of "B" or better.
- 5566 Management of the Postpartum and Neonatal Periods of the Childbearing Cycle (2-0-12)**
Care of the essentially healthy mother and newborn using the nurse-midwifery management process with intervention in emergency situations associated with the postpartum period or the transition from fetus to newborn. Breast-feeding support, educational needs, cultural context, and family concepts are included. The impact of deviations is considered for both parts of the mother-baby unit. Includes practicum. *Corequisite:* NURS 5567. *Prerequisites:* NURS 5563 and NURS 5565, each with a grade of "B" or better.
- 5567 Management of the Intrapartum Period of the Childbearing Cycle (2-0-12)**
Nurse-midwifery management process is applied to the care of the essentially healthy maternal-fetal dyad during labor. Emphasis is on assessment for normalcy while identifying deviations that would require intervention or management of obstetric emergencies. Psychosocial, sexual, educational and cultural aspects are considered. Includes practicum. *Corequisite:* NURS 5566. *Prerequisites:* NURS 5563 and NURS 5565, each with a grade of "B" or better.
- 5568 Comprehensive Nurse-Midwifery Practice (1-0-16)**
Final course of the reproductive sequence. Knowledge and skills gained in the preceding courses are applied through the life span including the childbearing cycle. Nurse-midwifery management of common deviations and collaborative management of selected complications are included. Emphasis is on increasing independence of practice and comprehensiveness of care. Includes practicum. *Prerequisites:* NURS 5563, NURS 5565, NURS 5566, and NURS 5567, each with a grade of "B" or better.
- 5573 Advanced Practice Clinical (0-0-15)**
This course integrates didactic and clinical content into an intensive clinical practicum for family nurse practitioner students. Includes practicum. *Prerequisites:* NURS 5309 and department approval.
- 5618 Community Health Nursing Practicum (0-0-18)**
Synthesizing course that allows students to apply previous nursing and environmental health knowledge in various community practice sites. Preceptor or faculty supervision is provided. Nursing liability insurance required. *Prerequisites:* NURS 5510, NURS 5314, and NURS 5370. NURS 5314 may be taken concurrently with NURS 5618.

SCHOOL OF ALLIED HEALTH

1101 N. Campbell, Room 701
 (915) 747-7280
 soah@utep.edu

DIRECTOR: Gretchen Schmalz

PROFESSORS EMERITI: Donald Hardin, William Harris, James G. Mason, Grace Middleton, Joseph A. Perozzi

ASSOCIATE PROFESSORS EMERITI: Gail Ackall, Ben W. Collins, Julie A. Patten

GRADUATE FACULTY: Acosta, Bennett, Biswas, Bybee, Carlson, Dillon, Dionne, King, Meeuwesen, O'Quinn, Reynolds, Ryberg, Salvatore, B. Smith, D. Smith, Tomaka

The School of Allied Health offers degrees in Health and Physical Education, Kinesiology, Physical Therapy, and Speech-Language Pathology.

HEALTH SCIENCES

1101 N. Campbell St.
 (915) 747-8214
 hsci@utep.edu

PROGRAM COORDINATOR: Brenda Smith

GRADUATE FACULTY: Smith, Tomaka

Prospective graduate students in Health Science may select either the MS in Health and Physical Education, 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 and Physical Education is primarily directed toward students who wish to go beyond the Master's degree or to work as a professional in related fields in the private sector. The MA in Education with a Health Education emphasis and the MEd with a Health Education emphasis are designed for individuals teaching or employed in schools.

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 and Physical Education

Admission Requirements

- An undergraduate degree
- At least 12 semester hours of upper-division undergraduate level courses in Health Sciences
- 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 21 semester hours at the graduate level, HSCI 5355, EDRS 5305-EDRS 5306. The thirty semester hours also include six semester hours of thesis. A thesis, satisfactory to the Graduate Faculty, must be completed and orally defended before the degree will be awarded.

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 and Physical Education should be advised by the Graduate Advisor for Health Sciences 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.
- 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.

KINESIOLOGY

1101 N. Campbell Street, Room 502
(915) 747-7245
rmdiaz@utep.edu

PROGRAM DIRECTOR: Harry Meeuwsen
GRADUATE FACULTY: Brooks, King, Meeuwsen, O'Quinn, Pederson, Smith

The Master of Science degree with a major in Kinesiology is directed toward students who wish to: (a) increase their knowledge and competency as a professional physical educator, (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.

Degree Requirements for the MS in Kinesiology

A total of 30 hours, distributed as follows:

Required of all students

Graduate level research methods	3 hours
Graduate level statistics	3 hours
*Elective graduate courses in Kinesiology	12 hours

Thesis Option

*Directed electives	6 hours
KIN 5398, 5399 Thesis	6 hours

Non-Thesis Option

*Directed electives	9 hours
KIN 5397 Graduate Project	3 hours

* Elective courses must be selected with the approval of the program graduate advisor.

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 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 students enrolled in the graduate program at UTEP.

The admission and the degree requirements are the same for the online program and the traditional program. Online courses offered by the other UT System universities can count toward the UTEP degree. The first courses were offered in the Fall 2000 term and a total of 15 courses will be available online by 2003.

To register for an online course offered by another UT System university, students must fill out an IDEAR form and return it to the graduate coordinator for signature. The form is located in the back of the semester course schedule or students can download a schedule from the TeleCampus website <http://www.telecampus.utsystem.edu/>. Students also have to register with the TeleCampus by following the "Registration Instructions" link on the TeleCampus site. To register for a UTEP course offered online, students follow the traditional registration process (phone or web) at UTEP **and** register with the TeleCampus.

For more information regarding the Online Degree, students can visit the UT TeleCampus Kinesiology web page <http://uttelecampus.utsystem.edu/programs/kinesiology/home.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.

5279 Graduate Research (0-0-2)

5379 Graduate Research (0-0-3)

Department approved research in special areas of student or faculty interest.
Prerequisites: Instructor approval and program director approval.

- 5361 Biomechanical Basis of Sport (3-0)**
Advanced level kinesiological, mechanical, and physiological aspects as a basis for physical education. *Prerequisite:* KIN 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 Health and Physical Education (3-0)**
Individual problems in the field of health and physical education. May be repeated for credit.
- 5365 Programs of Physical Activity (3-0)**
Factors affecting the selection of physical activity participation in various settings and cultural environments.
- 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 Psychological Foundations of Physical Activity and Sports (3-0)**
This course centers upon the mental processes involved during motor skill acquisition and performance. Major topics include the psychological aspects of sport performance in novice and elite athletes, from the performer's viewpoint, as well as how teachers and coaches use the principles of motor learning concepts to accelerate the progress of their students/athletes.
Prerequisite: KIN 3232 or instructor approval.
- 5374 Measurement Techniques in Biomechanical Analysis (3-0)**
An in-depth study of the methods used in the Biomechanics Laboratory. Topics include techniques related to cinematography, video analysis, force transducers, data filtering, and collection of human body characteristics.
Prerequisite: Instructor approval. Course fee required.
- 5377 Graduate Seminar in Current Issues (3-0)**
Discussion and presentation of pertinent and current issues in the areas of physical education, exercise science, and sport. May not be taken more than one time.

- 5397 Graduate Projects (0-0-3)**
Individual research or development of a project/proposal under the direct supervision of a graduate faculty member. Requires satisfactory completion of the course, including a written report and oral presentation. *Prerequisite:* Permission of advisor.
- 5398 Thesis (0-0-3)**
Initial work on the thesis. *Prerequisite:* Instructor approval.
- 5399 Thesis (0-0-3)**
Continuous enrollment required while work on the thesis continues.
Prerequisite: KIN 5398.

PHYSICAL THERAPY

500 College of Health Sciences
(915) 747-8207
pt@utep.edu

INTERIM PROGRAM COORDINATOR: J. Alan Ryberg
GRADUATE FACULTY: Acosta, Bakarich, Bois, Bybee, Carlson, Dillon, Dionne, Ryberg

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 Sciences, 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.

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) license examination in Physical Therapy. Successful completion of that examination allows the graduate to practice as a licensed physical therapist.

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 affiliations and a research project.

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)

ENGL	1311 (ENGL 1301)*	3 hrs
ENGL	1312 (ENGL 1302)*	3 hrs
ENGL	3359	3 hrs

Chemistry (8 credit hours)

CHEM	1305/1105 (CHEM 1311/1111)*	4 hrs
CHEM	1306/1106 (CHEM 1312/1112)*	4 hrs

Biology (8 credit hours)

BIOL	1305/1107 (BIOL 1306/1106)*	4 hrs
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And either:

BIOL	1306/1108*	
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Or

BIOL	3414	
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Or

ZOOL	2406	
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Physiology (4 credit hours)

Upper-level physiology with laboratory (human, animal, or vertebrate physiology)

ZOOL	4380/4181	4 hrs
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Or

BIOL	4388/ZOOL 4181	
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Note: BIOL 2313/2113 Human Anatomy and Physiology (BIOL 2302/2102) does **not** meet requirements as upper level.

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	1404 (PHYS 1402)*	4 hrs

both courses must include labs

Communication (3 credit hours)

COMM	1301*	3 hrs
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Or

COMM	1302 *	3 hrs
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prefer psychology or education based

Statistics (3 credit hours)

PSYC	1303 (PSYC 2317)	3 hrs
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must include analysis of variance (ANOVA)

Or

¹ All prerequisites must be completed by the end of the Spring semester of the year the student plans to matriculate. 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. UTEP undergraduates without a degree must complete UTEP Core Curriculum requirements.
 - b. Undergraduates without a degree from other Texas universities must document that they have completed the University Core Curriculum requirements at their home university.
 - c. Students with a baccalaureate degree and undergraduates from non-Texas universities 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) in math/science (biology, chemistry, physics).
4. 150 clock hours of documented volunteer or paid work experience in a physical therapy setting (must be completed prior to December 1st of the application year).
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. Official transcripts (plus two copies) of all colleges or community colleges attended.
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 math/science GPA of at least 3.0 by the end of the Fall semester for the following Fall admission.
3. Submit an *Application for Graduate Admission* with the required fee and a written plan for prerequisite course completion by November 1st for the following Fall admission. (The application packet including all necessary forms is available beginning August 1st.)
4. Complete and submit, by December 1st, a minimum of 150 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 by December 1st. International applicants must arrange for the TOEFL score to be sent to the Graduate School.
6. Submit official transcripts of all course work and three confidential reference forms by December 1st.
7. Submit transcripts of current Fall enrollment by January 1st.
8. Interviews for qualified applicants will occur on the UTEP campus in February and early March.
9. Letters of admission will be sent from the Graduate School beginning March 15 for Fall admission.

All applications, supporting documentation, transcripts, and test scores should be sent to:

Graduate School
 201 Administration 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
 lszatkowski@utep.edu

Professional Course of Study

Year 1, Fall Semester (15 academic weeks)

PT	5406	Human Anatomy for Physical Therapists	4
PT	5212	Basic Sciences for Physical Therapists	2
PT	5408	Introduction to Patient Care and Therapeutic Procedures	4
PT	5207	Kinesiology for Physical Therapists	2
PT	5310	Legal, Ethical and Professional Aspects of Practice	3
Total Credit Hours			15

Year 1, Spring Semester (15 academic weeks)

PT	5418	Cardiorespiratory Disorders and Other Medical Conditions	4
PT	5311	Thermal Agents and Electrotherapeutics	3
PT	5409	Advanced Therapeutic Exercise and Muscle Testing	4
PT	5216	Research Methods for Physical Therapists	2
PT	5317	Neuroscience for Physical Therapists	3
Total Credit Hours			16

Year 1, Summer Semester (8 academic weeks)

PT	5115	Clinical Education Seminar I	1
PT	5319	Introduction to Evaluation and Management of Orthopedic Problems	3
PT	5329	Related Topics in Neurologic Physical Therapy	3
Total Credit Hours			7

214 / PHYSICAL THERAPY**Year 2, Fall Semester** (8 clinical weeks, 7 academic weeks)

PT	5413	Clinical Education in Physical Therapy I	4
PT	5321	Orthopedic Evaluation and Management of the Lower Quarter	3
PT	5422	Related Topics in Orthopedic Physical Therapy	4
PT	5226	Designing and Conducting Research in Physical Therapy	2
Total Credit Hours			13

Year 2, Spring Semester (7 academic weeks, 8 clinical weeks)

PT	5425	Clinical Education in Physical Therapy II	4
PT	5528	Evaluation and Management of Adult Neurological Disorders	5
PT	5320	Orthopedic Evaluation and Management of the Upper Quarter	3
PT	5123	Clinical Education Seminar II	1
Total Credit Hours			13

Year 2, Summer Semester (8 academic weeks)

PT	5150	Independent Study	1
PT	5233	Clinical Education Seminar III	2
PT	5327	Foundations for Management of Neurological Patients	3
Total Credit Hours			6

Year 3, Fall Semester (7 academic weeks, 8 clinical weeks)

PT	5337	Evaluation and Management of Pediatric Disorders	3
PT	5443	Clinical Education in Physical Therapy III	4
PT	5340	Management and Health Systems in Physical Therapy	3
PT	5346	Research Project I	3
Total Credit Hours			13

Year 3, Spring Semester (2 academic weeks, 6 clinical weeks)

PT	5324	Clinical Education in Physical Therapy IV	3
PT	5256	Research Project II	2
(Clinical Education V will occur during the first 8 weeks of the semester.)			
Total Credit Hours			5

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, basic sciences) 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.
- 5207 Kinesiology for Physical Therapists (1-1)**
Students will be given the opportunity to: (1) apply biomechanical principles to normal static and dynamic motor control of the human body; (2) recognize normal and abnormal human posture and gait; and (3) demonstrate knowledge of the structure and functions of the musculoskeletal system. Laboratory fee required.
- 5212 Basic Sciences for Physical Therapists (2-0)**
Students will be given the opportunity to: (1) acquire basic knowledge of disease and injury at the cellular and tissue levels; (2) demonstrate an understanding of the healing process of various body tissues; (3) explain the basic concepts of pharmacotherapeutics; and (4) appreciate the importance of health maintenance behaviors in the prevention of disease and injury.
- 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.
- 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 Clinical Education Seminar III (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.

5317 Neuroscience for Physical Therapists (3-0)

Students will be given the opportunity (1) to participate in advanced studies in human neurosciences; (2) to acquire the ability to identify and describe structures and functions of the nervous system; and (3) to correlate underlying lesions with neurological dysfunction encountered in his/her professional practice. Laboratory fee required. Restricted to MPT majors.

5319 Introduction to Evaluations and Management of Orthopedic Problems (2-3)

Students will be given the opportunity (1) to study the basic pathophysiology occurring in tissues of the musculoskeletal system; (2) to study the basic principles of medical and surgical care of orthopedic problems; (3) to study and practice the basic physical therapy techniques used in the assessment of orthopedic problems; and (4) to study and practice the basic principles of physical therapy management of orthopedic problems. Laboratory fee required.

5320 Orthopedic Evaluation and Management of the Upper Quarter (2-3)

Students will be given the opportunity (1) to study the pathomechanical and pathophysiological etiology of common upper quarter orthopedic problems; (2) to study and discuss the medical and surgical treatment of upper quarter orthopedic problems; (3) to discuss the recommendations and concerns of physicians and surgeons regarding the physical management of problems resulting from upper quarter orthopedic problems; and (4) to develop skill in clinical physical therapy assessment, information analysis, problem solving, clinical treatment, patient education, and management commonly used by physical therapists for clients with upper quarter orthopedic problems. Laboratory fee required.

5321 Orthopedic Evaluation and Management of the Lower Quarter (2-3)

Students will be given the opportunity (1) to study the pathomechanical and pathophysiological etiology of common lower quarter orthopedic problems; (2) to study and discuss the medical and surgical treatment of lower quarter orthopedic problems; (3) to discuss the recommendations and concerns of physicians and surgeons regarding the physical management of problems resulting from lower quarter orthopedic problems; (4) to develop skill in clinical physical therapy assessment, information analysis, problem solving, clinical treatment, patient education, and management commonly used by physical therapists for clients with lower quarter orthopedic problems. 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.

- 5327 Foundations for Management of Neurological Patients (2-3)**
Students will be given the opportunity (1) to describe the neurophysiological basis for the treatment alternatives frequently employed with neurological patients; (2) to describe the principles of normal human development and the basis of motor control; and (3) to relate the implications for each of the above to the management of patients with neurological disabilities. Laboratory fee required.
- 5329 Related Topics in Neurologic Physical Therapy (2-3)**
Students will learn about a variety of neurological conditions and treatment approaches including: (1) understanding the neurophysiological principles, indications and application of inhibitive casting; (2) evaluating and treating vestibular disorders and other neurological conditions affecting balance; (3) developing advanced knowledge and skill in the selection of specialized equipment and technological devices (4) gaining knowledge and skill in the performance and teaching of functional activities; (5) selecting and modifying or creating orthotic devices. Laboratory fee required.
- 5337 Evaluation and Management of Pediatric Disorders (2-3)**
Students will be given the opportunity (1) to study the etiology and pathology of pediatric clients with neurological and orthopedic dysfunction. Laboratory fee required.
- 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; and (5) determine the resources available within the community for health care practitioners and clients; and (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. 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.
- 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.

5413 Clinical Education in Physical Therapy I (0-0-21)

Students will be given the opportunity: (1) to apply basic physical therapy knowledge and skills to patients in clinical settings, (2) to develop a preliminary understanding of expected clinical behavior, (3) 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, and (4) to complete competencies as specified in The Blue MACS, 6th edition. Grading will be pass/fail. Restricted to MPT majors.

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.

5422 Related Topics in Orthopedic Physical Therapy (3-3)

Students will be given the opportunity (1) to understand the principles, application, and use of common orthotic appliances; (2) to study peripheral nerve injuries and orthotic devices; (3) to study amputations and prosthetic devices; (4) develop skill in the analysis of abnormal gait; (5) to study the etiology and pathology of arthritis; (6) to develop skills in the evaluation and treatment of clients with arthritis; and (7) to develop skill in electrodiagnostic procedures.

5425 Clinical Education in Physical Therapy II (0-0-21)

Students will be given the opportunity: (1) to apply advanced physical therapy knowledge and skills to patients in orthopaedic settings, (2) to demonstrate competency in solving complex patient problems, and (3) to complete competencies as specified in The Blue MACS, 6th edition. Grading will be pass/fail.

5443 Clinical Education in Physical Therapy III (0-0-21)

Students will be given the opportunity: (1) to apply advanced physical therapy knowledge and skills to patients in rehabilitation settings, primarily with neurologically involved patients, (2) to demonstrate competency in solving complex patient problems, and (3) to complete competencies as specified in The Blue MACS, 6th edition.

5528 Evaluation and Management of Adult Neurological Disorders (3-6)

Students will be given the opportunity (1) to study the etiology and pathology of disabilities resulting from central nervous dysfunction; (2) to discuss the current medical/surgical and pharmacological management of adult neurological disorders; (3) apply the principles of normal development as related to adult neurological disorders; (4) apply neurophysiological themes for the treatment alternatives frequently employed with the neurologically impaired adult; and (5) develop skills in the assessment and management of adults with central nervous system disabilities. Laboratory fee required.

SPEECH-LANGUAGE PATHOLOGY

1101 N. Campbell St.
 (915) 747-7250
 spchlang@utep.edu

PROGRAM COORDINATOR: Anthony P. Salvatore
 GRADUATE FACULTY: Bennett, Biswas, Reynolds, Salvatore

The Master of Science degree in Speech-Language Pathology is accredited by the Council on Academic Accreditation of the American Speech, Language, Hearing Association. Students who successfully complete the master's fulfill academic course work and clinical practicum requirements for the Certificate of Clinical Competence and the Texas License in Speech-Language Pathology.

Admission Requirements

1. Bachelor's degree from an accredited U.S. institution or equivalent degree at 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.

MS Degree Requirements

Majors in Speech-Language Pathology must complete the following:

1. A minimum of 39 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 350 clock hours of supervised clinical practicum is required. In addition, 25 clock hours of supervised clinical observation must be completed prior to beginning the initial practicum experience.

Comprehensive written and oral examinations are required for students who choose not to write a thesis. Students who write a thesis are required to defend the thesis in an oral examination. Students who choose to write a thesis must enroll in SPLP 5398 and 5399.

Grade Criteria

1. A "D" or "F" grade in any graduate course will result in immediate dismissal from the graduate program and no reconsideration of the student for readmission will be taken.
2. No more than 2 "C" grades will be permitted. A third "C" grade will lead to immediate dismissal from the graduate program and no reconsideration of the student for readmission will be taken. If a "C" grade is earned, it must be matched with an "A" grade in a course within the program's required SPLP courses and this must be accomplished the semester (Fall/Spring/Summer) immediately following the semester the "C" was earned.

Required Courses (39 hours)

SPLP 5300	Aural Rehabilitation
SPLP 5320	Research Design in Communication Disorders
SPLP 5330	Differential Diagnosis of Communication Disorders
SPLP 5359	Fluency Disorders
SPLP 5360	Aphasia and Related Disorders
SPLP 5362	Language Disorders in School-Aged Children
SPLP 5363	Phonatory Disorders of Voice
SPLP 5364	Motor Speech Disorders
SPLP 5365	Advanced Audiology
SPLP 5370	Dysphagia
SPLP 5375	Articulation in Phonological Disorders
SPLP 5376	Multicultural Issues
SPLP 5377	Treatment Efficacy

Practicum

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 5367	Conservation of Hearing
SPLP 5372	Problems and Projects in Speech-Language Pathology
SPLP 5373	Advanced Clinical Practicum in Audiology
SPLP 5374	Problems and Projects in Audiology
SPLP 5398	Thesis
SPLP 5399	Thesis

The graduate advisor must approve out-of-department graduate electives.

Recommended Sequence**First Year**

Fall: SPLP 5320, 5330, 5362, 5369	12 semester hours
Spring: SPLP 5359, 5360, 5369, 5376	12 semester hours
Summer: SPLP 5369, 5375	6 semester hours

Second Year

Fall: SPLP 5364, 5365, 5370, 5379, or 5389	12 semester hours
Spring: SPLP 5300, 5363, 5377, 5379, or 5389	12 semester hours
Summer: SPLP 5379 or 5389 (if necessary)	3 semester hours

Total 54

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.

- 5310 Gerontology and Communication Disorders (3-0)**
A description of the sociological, psychological, medical, and educational aspects of adult development and aging as they relate to communication processes and disorders.
- 5320 Research Design in Communication Disorders (3-0)**
Typical and single-subject designs utilized in the research of speech, hearing, and language disorders.
- 5330 Differential Diagnosis of Communication Disorders (3-0)**
Selection, application, and interpretation of formal and informal assessment procedures for the diagnosis and description of speech and language disorders. Topics include multicultural issues related to the diagnosis of communication.
- 5359 Fluency Disorders (3-0)**
Theoretical foundations, diagnosis, and treatment of fluency disorders in children and adults.
- 5360 Aphasia and Related Disorders (3-0)**
Study of the etiology, symptomatology, diagnosis, and treatment of aphasia and related neurogenic disorders including traumatic brain injury, right hemisphere syndrome, and dementia. Bilingual aspects of aphasia are discussed.
- 5362 Language Disorders in School-Aged Children (3-0)**
Theoretical influences, diagnosis, and intervention for language impairments in school-aged populations including aspects of both spoken and written language. Topics include multicultural issues related to language disorders in this population.
- 5363 Phonatory Disorders of Voice (3-0)**
Perceptual and instrumental identification of organic and functional phonatory voice disorders in children and adults.
- 5364 Motor Speech Disorders (3-0)**
Study of the dysarthrias, apraxia of speech, and dysphagia.
Prerequisite: SPLP 4312.
- 5365 Advanced Audiology (3-0)**
Procedures utilized in diagnostic audiology to describe the type, degree, and, whenever possible, the site of auditory dysfunction.
- 5367 Conservation of Hearing (3-0)**
Current laws and procedures leading to effective programs in the conservation of hearing for all age groups.
- 5369 Graduate Practicum in Speech-Language Pathology, University Clinic (3-0)**
Supervised clinical practicum in providing services for individuals who are speech and language impaired at the University Clinic. University practicum during some semesters includes participation in off-campus sites. Enrollment is limited. May be repeated one time for elective credit. Liability insurance and TB clearance required. Course fee required. *Prerequisites:* 21 semester hours of upper-division undergraduate course work in communication disorders and proficient use of Standard American Oral English.

5370 Dysphagia (3-0)

This course provides the student with information regarding normal and disordered swallowing. Anatomy, physiology, and neurology of deglutition will be presented, followed by discussion of appropriate assessment procedures and treatment protocols. Dysphagia and its relation to motor speech disorders will be discussed.

5372 Problems and Projects in Speech-Language Pathology (3-0)

Special projects under faculty supervision. May be repeated for credit with a change in area of emphasis.

5373 Advanced Clinical Practicum in Audiology (3-0)

Supervised clinical practicum in providing audiological services. Enrollment is limited. Liability insurance and TB clearance required. *Prerequisite:* SPLP 5365. Course fee required.

5374 Problems and Projects in Audiology (3-0)

Special projects under faculty supervision. May be taken more than once with a change in area of emphasis.

5375 Articulation and Phonological Disorders (3-0)

This course will address theory and research on phonological development and disorders. Data sampling, analysis procedures, and interaction techniques will be emphasized.

5376 Multicultural/Multilingual Issues in Communication Disorders: an Hispanic Focus (3-0)

This course will promote students' awareness of cultural and language variables that will influence provision of services to clients and families of bilingual Spanish/English and monolingual Spanish speakers, particularly along the U.S./Mexico border. Students will review the emerging literature on normal language development of Spanish-speaking children who live in the U.S., on bilingualism, language loss, and cultural factors that can influence diagnosis, treatment, and counseling for fluency, voice, swallowing disorders, and hearing loss. *Prerequisite:* Department approval.

5377 Treatment Efficacy in Communication Disorders (3-0)

This course reviews the theoretical and procedural issues involved in the assessment of treatment efficacy. The value and use of single-subject treatment designs will be emphasized. Models of patient care and their impact on efficacious treatment will be examined.

5379 Graduate Practicum in Speech-Language Pathology, School Setting (0-0-3)

Supervised clinical practicum in providing services to the speech and language impaired in school settings. Offered Fall and Spring semesters only. Enrollment is limited. Liability insurance and TB clearance are required. *Prerequisites:* 50 clock hours of supervised practicum; SPLP 5369 with a grade of "B" or better, SPLP 5330, and SPLP 5362.

5389 Graduate Practicum in Speech-Language Pathology, Hospital/Agency (0-0-3)

Supervised clinical practicum in providing services to the speech and language impaired in hospitals and/or agencies. Enrollment is limited. Liability insurance, TB clearance required, and CPR certification are required. *Prerequisites:* 50 clock hours of supervised practicum; SPLP 5369 with a grade of "B" or better, SPLP 5330, SPLP 5360, and SPLP 5364.

5398 Thesis (0-0-3)

Initial work on the thesis.

5399 Thesis (0-0-3)

Continuous enrollment required while work on the thesis continues.

Prerequisite: SPLP 5398.

COOPERATIVE PROGRAMS

UTEP-UT AUSTIN COOPERATIVE PHARMACY PROGRAM

1100 N. Stanton, Suite 301
(915) 747-8519

PROGRAM DIRECTOR: Jose O. Rivera

REGIONAL DIRECTOR, EL PASO INTERNSHIP PROGRAM: William A. Klein III

PROFESSOR: Jose O. Rivera

CLINICAL ASSOCIATE PROFESSOR: Rivera

CLINICAL ASSISTANT PROFESSORS: C. Taylor, E. Taylor

CLINICAL COORDINATORS: Reilly

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 pharmaceuticals, 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 Pharm. D., degree from The University of Texas at Austin College of Pharmacy, in cooperation with the Cooperative Pharmacy Program at UTEP.

Further information about the program can be obtained 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>.

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
 Luis Escobedo, M.D., S.M., M.P.H. Epidemiologist
 Joao Ferreira-Pinto, Ph.D., Behavioral Scientist
 Nuria Homedes, M.D., Dr. P.H., Health Policy and Management and Assistant Dean
 Kathleen O'Rourke, Ph.D., Epidemiologist
 Melchor Ortiz, 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.

COOPERATIVE DOCTOR OF SCIENCE IN NURSING

Graduate Nursing Program Office
 (915) 747-7230

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

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

Liberal Arts Bldg., Room 343
(915) 747-5666 (ph)
(915) 747-5905 (fax)
libarts@utep.edu

Degree Programs

Ph.D.	Border Studies+ History Psychology	
MA	Art Education Communication English History Linguistics Political Science	Psychology Sociology Studio Art Spanish Theatre Arts
MAIS	Interdisciplinary Studies, Liberal Arts*	
MAT	Teaching/English	
MFA	Creative Writing*	
MM	Music Education Performance	
MPA	Public Administration	
MPA/MBA	Public Administration/Business Administration**	

*Interdisciplinary Program

**Combined Program

+Cooperative program with UT/Austin

College of Liberal Arts

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. In addition to the MA, the Political Science Department offers the Master in Public Administration Degree (MPA) and, in conjunction with the College of Business Administration, a joint MBA/MPA degree option. The Department of Music offers the Master of Music (MM) degree with options in Performance and Music Education. The Master of Fine Arts (MFA) with a major in creative writing is an interdisciplinary program with options in English, Spanish, or bilingual. In September 1993, the first students began course work in the Ph.D. program in Psychology-- the first doctoral degree program in Liberal Arts. In September 1999, the first students entered the Ph.D. in History.

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

Also offered is a joint UTEP-UT Austin doctorate with a concentration in Border Studies. Students in this program can complete much of their course work in residence at UTEP with the doctoral degree awarded by UT Austin. For more information on this program, students should consult the Graduate School section, under Cooperative Programs.

ART

350 Fox Fine Arts
(915) 747-5181
artdept@utep.edu

CHAIRPERSON: Willie Ray Parish

GRADUATE FACULTY: Bauer, Fajardo, Fensch, Parish, Quinnan, Segal,
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 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
4. At least two confidential letters of recommendation
5. A written statement by the applicant about his/her art

Art Education

Requirements for Admission to the Department

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

1. A bachelor's degree in Art, Art History, Art Education, or the equivalent from an accredited U.S. institution or proof of equivalent education in a foreign institution
2. A satisfactory score on the Graduate Record Examination (GRE) or TOEFL (for international students)
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. An official transcript from the appropriate undergraduate college or university
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*)
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 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

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 Coaching fee required.

5395 Graduate Seminar (3-0)

Conference and discussions of various topics in Art by faculty, graduate students, and outside speakers. Required of all graduate Art majors. May be repeated one time.

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. Supplemental Tuition and Coaching fee required.

5399 Thesis (0-0-3)

Continuous enrollment required while work on the thesis continues.
Prerequisite: ARTE 5398. Supplemental Tuition and Coaching fee required.

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.

5329 Modern and Contemporary Art Theory (3-0)

A seminar that reviews art theory from Kant to Baudrillard. Issues such as art-for-art's sake, Marxism, phenomenology, interpretation, deconstruction, multiculturalism, and hypereality will be discussed. Course fee required.

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. Supplemental Tuition and Coaching fee required.

5350 Directed Studio Problems (0-6)

Independent creative research with regular consultation between student and assigned faculty member. Supplemental Tuition and Coaching fee required.

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

GRADUATE FACULTY: Barrera, Byrd, Erbert, Ingle, Riccillo, Ruggiero, Trejo, Witherspoon

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.
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 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.
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 of 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. 33 hours of course work numbered 5100-5390. In addition, a bound 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 who have designated undergraduate course work for graduate credit to enrich the graduate offering.

For Graduate Students Only

Communication (COMM)

5332 Seminar in Contemporary Rhetoric (3-0)

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

5343 Seminar in Communication Theory (3-0)

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

5350 Directed Study (3-0)

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

5362 Organizational Communication (3-0)

Philosophy, methods, and designs for studying the communication systems and practices in a complex organization.

5398 Thesis (0-0-3)

Initial work on thesis.

5399 Thesis (0-0-3)

Continuous enrollment required while work on the thesis continues.
Prerequisite: COMM 5398.

CRIMINAL JUSTICE

101 Jack Vowell Hall
(915) 747-7943
crimjust@utep.edu

DIRECTOR: Roy S. Malpass

GRADUATE FACULTY: Curry, Daudistel, Graves, Hosch, Lee, Malpass, Rodriguez, Smithey

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

Both basic and specific requirements for the MPA degree are found under the Political Science department section in this catalog.

Criminal Justice (CRIJ)

5300 Seminar in Criminal Justice Administration (3-0)

Research, writing, and discussion.

5308 Seminar in Juvenile Justice (3-0)

Research, writing, and discussion.

5320 Seminar in Corrections (3-0)

Research, writing, and discussion.

5340 Seminar in Selected Topics (3-0)

Research, writing, and discussion.

ENGLISH

113 Hudspeth Hall
(915) 747-5731
english@utep.edu

CHAIRPERSON: Tony Jason Stafford

GRADUATE FACULTY: Abarca, Antone, Armitage, Bledsoe, Chacon, Clark, Dick, Fredericksen, Gladstein, Gmuca, Jussawalla-Dasenbrock, Lawson, Mangelsdorf, Marchino, Meyers, Petit, Polette, Posey, Saénz, Scenters-Zapico, Schmid, Smith, Stafford, Taylor, Ullman, West, Williford

MA Degree and MAT Degree in English

The English Department offers a Master of Arts in English degree with two concentrations available: 1) English and American Literature and 2) Professional Writing and Rhetoric; and a Master of Arts in Teaching with a major in English.

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 Ph.D. programs in British and American Literature.

Requirements for Admission

1. A bachelor's degree from an accredited U.S. institution or proof of equivalent education in a foreign institution
2. Submission of official Graduate Record Examination (GRE) scores.
3. 18 hours of advanced level English courses.
[for the MAT-English] 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 Degree

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

MA Degree - Professional Writing and Rhetoric Concentration

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

Requirements for Admission

1. A bachelor's degree from an accredited U.S. institution or proof of equivalent education at a foreign institution
2. Submission of official Graduate Record Examination (GRE) scores
3. Nine hours of upper-division course work in English, including Advanced Composition 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

36 semester hours consisting of

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

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 in 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

36 semester hours consisting of:

1. 130 semester hours of course work, a six-hour thesis (ENGL 5398-5399), and an oral examination
2. 15 hours of field experience in ENGL 5344
 - a. **Core Curriculum (12) hours**
 Research Methods (3 hours): ENGL 5300
 English Teaching Methods (6 hours): ENGL 5344 and 5345
 Rhetoric/Writing (3 hours): 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.

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 Degree Plan signed by their Graduate Advisor. The Preliminary Degree Plan 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 Degree Plan signed by their Graduate Advisor. The Final Degree Plan 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.

Creative Writing

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

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 consent of the Dean of the Graduate School.

5197 Master of Arts Research Paper (English and American Literature Concentration) (0-0-1)

The student submits to the Director of Graduate Studies a proposal for expansion and revision of a graduate research paper under the supervision of a director, English Department reader, and an outside reader, and then follows the Graduate School guidelines for preparing and submitting the paper.

5300 Introduction to Graduate Studies in English (3-0)

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

5301 British Literature to 1485 (3-0)

Survey of Old English and Middle English literature ranging from Beowulf to the Arthurian romances and covering such writers as Chaucer, the Gawain poet, and Malory.

5302 British Literature 1485-1660 (3-0)

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

5303 British Literature 1660-1832 (3-0)

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

5304 British Literature 1832-Present (3-0)

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

5305 American Literature to 1860 (3-0)

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

5306 American Literature since 1860 (3-0)

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

5310 Rhetorical Theory (3-0)

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

5311 Persuasion and Argument (3-0)

A writing course stressing the application of classical and contemporary rhetorical theory to a variety of practical writing tasks involving argument and persuasion.

5312 Technical Writing Proseminar (3-0)

A writing course focusing upon rhetorical techniques for technical writing, graphics, and editing.

5314 Computers and Writing Seminar (3-0)

A variable topics course focusing on the application of computers to professional writing. May be repeated when topic varies.

5315 Professional Writing Seminar (3-0)

Intensive study and practice in a range of professional writing fields, such as organizational and managerial communication, report writing, writing for publication, biography, and translation. May be repeated once when topic varies.

- 5317 Professional Writing Internship (0-3)**
Supervised professional writing internship in business, industry, government, or the university. *Prerequisite:* Instructor approval.
- 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 Literary Criticism: Theory and Practice (3-0)**
A survey of the basic critical texts and arguments about literature in the western tradition. Students will examine and practice the translation of these arguments into practical readings and valuation of selected literary texts. Coursework includes at least one substantial research project carried out under close faculty supervision.
- 5325 Genre: Theory and Practice (3-0)**
Studies in the theory of genre with focus on one genre, such as the novel, the lyric, comedy, or the epic. Course may be repeated when the topic varies.
- 5327 Variable Topics in Contemporary Literature (3-0)**
Detailed study of contemporary works in fiction, poetry, or non-fiction, often with bicultural emphasis. The course will stress close analysis of text and technique. May be repeated when the topic varies.
- 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.
- 5344 Integrated Teaching Methods (3-0)**
An advance course in English teaching methods, stressing research and theory and their classroom applications, and focusing on teaching literature, composition/rhetoric, grammar/usage, and creative writing in an integrated format.
- 5345 English Teaching Methods (3-0)**
An advanced course in English teaching methods, stressing theory and its classroom applications, and focusing alternately on such topics as teaching literature, composition, grammar, creative writing, or appropriate combinations of these. May be repeated when topic varies.
- 5350 Seminar: Special Topics (3-0)**
Studies in comparative literature, current literary thought or techniques, or a focus on a prescribed area such as a subgenre or literary group.
- 5351 Seminar: Studies in British Literature to 1485 (3-0)**
Detailed study of one or more major authors, schools, literary trends, or genres from the Anglo-Saxon period to the Renaissance.
- 5352 Seminar: Studies in British Literature 1485-1660 (3-0)**
Detailed study of one or more major authors, schools, literary trends, or genres from the early Renaissance to the Restoration.

- 5353 Seminar: Studies in British Literature 1660-1832 (3-0)**
Detailed study of one or more major authors, schools, literary trends, or genres from the Restoration through the Romantics.
- 5354 Seminar: Studies in British Literature 1832-Present (3-0)**
Detailed study of one or more major authors, schools, literary trends, or genres from the Victorian period to the present.
- 5355 Seminar: Studies in American Literature To 1860 (3-0)**
Detailed study of one or more major authors, schools, literary trends or genres from the Colonial period to the Civil War.
- 5356 Seminar: Studies in American Literature Since 1860 (3-0)**
Detailed study of one or more major authors, schools, literary trends, or genres from the Civil War to the present.
- 5364 Forms and Techniques of Fiction (3-0)**
A course in directed reading and writing that leads the student to an understanding of the creative process through analysis and imitation of important contemporary works of fiction. May be repeated once.
Prerequisite: Department approval.
- 5365 Forms and Techniques of Poetry (3-0)**
A course in directed reading and writing that leads the student to an understanding of the creative process through analysis and imitation of important contemporary works of poetry. May be repeated once.
Prerequisite: Department approval.
- 5366 Advanced Fiction Writing (3-0)**
Intensive study and practice in the various forms and approaches of fiction writing, including workshop discussion of individual student manuscripts. May be repeated once. *Prerequisite:* Department approval.
- 5367 Advanced Poetry Writing (3-0)**
Intensive study and practice in the various forms and approaches within the writing of poetry, including workshop discussion of individual student poems. May be repeated once. *Prerequisite:* Department approval.
- 5368 Creative Writing Seminar (3-0)**
A variable topics course that provides intensive practice and study in one of the genres of imaginative writing, such as novel writing, screenwriting, non-fiction freelancing, or biography/autobiography. May be repeated when topic varies.
Prerequisite: Department approval.
- 5370 Tutorial in Fiction (3-0)**
Advanced workshop course in which the student is guided towards the production of works of fiction of professional quality. May be repeated once.
Prerequisite: Department approval.
- 5371 Tutorial in Poetry (3-0)**
Advanced workshop course in which the student is guided towards the production of works of poetry of professional quality. May be repeated once.
Prerequisite: Department approval.

- 5375 Creative Writing Workshop (3-0)**
A workshop designed for non-MFA students in either fiction, poetry, creative non-fiction, dramatic forms, or some combination of the above, depending on the instructor, for students in any discipline. Submission of writing sample and permission of the instructor required. May be repeated when topic varies.
- 5395 Writing Practicum (0-0-3)**
Initial work on a six-hour professional writing and rhetoric practicum.
- 5396 Writing Practicum (0-0-3)**
Continuous enrollment required while work on the six hour professional writing and rhetoric practicum continues. *Prerequisite:* ENGL 5395.
- 5397 Writing Practicum (0-0-3)**
Enrollment required in the three-hour professional writing and rhetoric practicum. *Prerequisite:* ENGL 5396.
- 5398 Thesis (0-0-3)**
Initial work on the thesis.
- 5399 Thesis (0-0-3)**
Continuous enrollment required while work on the thesis continues. *Prerequisite:* ENGL 5398.
- 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.

HISTORY

334 Liberal Arts
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CHAIRPERSON: Michael Topp

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

GRADUATE FACULTY: Ambler, Brunk, Chavez, Clymer, Dailey, Edison, Etcheson, Hackett, Jackson, Kawashima, C.E. Martin, C.H. Martin, McGee Deutsch, Pérez, Topp, Weber

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.

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

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

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

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

Minor in Public History

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

Border History Degree Plans (III 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. Course substitution is permitted with the approval of the Border Studies Graduate Committee.

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

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

Thesis: HIST 5398-HIST 5399.

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

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

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

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

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

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

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

Course Requirements

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

The **core courses** (15 hours) for the degree are as follows:

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 5305-5321

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 and
6399 Dissertation

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

Language Requirement

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

Transfer with Graduate Credit

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

Maximum Time for Completion of the Ph.D. Degree

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

Qualifying Examinations

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

Dissertation

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

Ph.D. Oral Examination

On completion of the dissertation, the candidate will be required to make an oral defense of the dissertation before the dissertation committee, the faculty, and the general public.

Microfilming of Dissertations

The doctoral candidate who has successfully completed the above requirements will be required to pay the cost of a microfilm copy of the dissertation. The signed original copy (unbound) of the dissertation will be sent by the Graduate School to University Microfilms in Ann Arbor, Michigan, for reproduction.

Along with the original copy of the dissertation, the student must submit to the Graduate School two copies of an abstract, not to exceed 350 words in length (double-spaced), which has been approved in final form by the dissertation committee. This will be published in *Dissertation Abstracts International*.

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**
- 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 Interwar Years, 1918-1941**
- 3308 United States since 1941**
- 3309 Mexican-American History**
- 3310 American Legal History**
- 3311 History of American Foreign Relations to 1914**
- 3312 History of American Foreign Relations since 1914**
- 3313 American Military History**
- 3314 Main Currents in American Thought to 1865**
- 3315 Main Currents in American Thought since 1865**
- 3316 Southwest Frontier**

- 3317 History of Texas since 1821
- 3321 19th Century American West
- 3322 20th Century American West
- 3323 American Indian History
- 3324 The United States in Vietnam and Southeast Asia
- 3325 History of Immigration and Ethnicity in the U.S.
- 3326 Life and Labor in the U.S. in the 19th and 20th Centuries
- 3327 Racial Thought in U.S. History
- 3328 History of Hispanic Peoples in the United States
- 3330 East Asia
- 3331 History of Religion in the East
- 3332 Russia
- 3333 The Soviet Union
- 3337 Modern Africa
- 3339 Pyramids and Prophets: Ancient Egypt, Mesopotamia and Palestine
- 3340 The Middle East and Islam
- 3342 The Spanish Borderlands
- 3346 Central America and the Caribbean
- 3347 Argentina, Brazil, and Chile since 1810
- 3349 History of Mexico to 1900
- 3350 The Mexican Revolution
- 3354 England to 1603
- 3355 England since 1603
- 3359 History of Religion in the West
- 3360 Ancient Greece
- 3361 Hellenism and the Coming of Rome
- 3362 The Medieval World
- 3363 The Roman Empire
- 3364 The Age of Renaissance
- 3365 The Age of the Reformation
- 3366 The Age of Absolutism and Enlightenment
- 3369 Twentieth Century Europe, 1900 to the Present
- 3370 The Holocaust in Europe
- 3374 Modern Germany since 1866
- 3381 The History of Spain and Portugal
- 3382 Spain in the Age of Expansion, Eighth-Sixteenth Centuries
- 3390 History, Special Topics
- 3391 History of Women
- 3399 History and Historians

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.

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 MA or Ph.D. degree. Consent of the Graduate Advisor required. *Prerequisite:* Departmental 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.
- 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 MA or Ph.D. degree. Consent of the Graduate Advisor required. *Prerequisite:* Departmental approval.

LANGUAGES AND LINGUISTICS

137 Liberal Arts
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CHAIRPERSON: Sandra S. Beyer

PROFESSORS EMERITI: Joan H. Manley, Edgar T. Ruff, John McCarty Sharp

GRADUATE FACULTY: Amastae, Antrim, Armengol, Bagby, Beyer, Blansitt, Elerick, Ford, Garabano, García, Goodall, Loudon, Pérez, Ramos, Teschner

The department offers three graduate degrees: (1) the MA in Linguistics with concentrations in Applied Linguistics and in Hispanic Linguistics, (2) the MA in Spanish, and (3) the MFA in Creative Writing. Information about the MFA may be found under Liberal Arts Interdisciplinary Studies in this catalog.

Linguistics

Requirements for Admission

1. Bachelor's degree from an accredited institution in the U.S. or proof of equivalent education in a foreign institution
2. Undergraduate degree or satisfactory subject preparation in linguistics, a language, or a related field resulting in a satisfactory grade point average (GPA)
3. Successful completion of a statistics course (for applied linguistics)
4. Competency in both Spanish and English (for Hispanic linguistics or Spanish applied linguistics)
5. Submission of official Graduate Record Examination (GRE) scores
6. 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 (30 hours)

Core (9 hours)

LING	5301	Principles of Linguistic Analysis
LING	5309	Generative Syntax
	or	
LING	5312	Functionalist Syntax
LING	5320	Phonology

Electives (21 hours)

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

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

Applied Linguistics

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

Plus the courses in one of the following two groups:

English

LING	5310	Pedagogical Issues in English Structure
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Three additional hours chosen from the following:

LING	5331	Teaching Second Language Composition
LING	5341	Psycholinguistics and Reading
LING	5374	Language Testing
LING	5388	Bilingualism
LING	5389	Problems in Language Instruction

Spanish

Six hours chosen from the following:

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

Hispanic Linguistics

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

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

Spanish**Admission to the Program**

1. Fulfillment of all general requirements for admission to the Graduate School
 2. A satisfactory score on the Departmental Advanced Spanish examination
- Students seeking conditional admission with deficiencies will be required to complete advanced level undergraduate courses as directed by the Graduate Advisor. Such courses will not count toward the degree.

Degree Requirements**MA in Spanish**

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

Must select Plan I or Plan II below:

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

Plan II (Thesis Option): Complete SPAN 5398-SPAN 5399, Thesis, which counts for 6 of the required 36 hours of work. 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 3472, SPAN/LING 3585, or SPAN/LING 3588.
 - 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

German (GERM)

- 4301 Methods of Foreign Language Instruction
 4387 Poetry
 4388 Prose
 4389 Theater
 4390 Topics in German

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 computer to enhance second language learning. Includes the study of current research and developing skills for using computers effectively.
- 5331 Teaching Second Language Composition (3-0)**
A study of the writing process in second-language learning and the principles and practice of teaching composition to this population.
- 5341 Psycholinguistics and Reading (3-0)**
An inquiry into the fundamental aspects of the reading process--linguistic, psychological, and physiological.
- 5348 Second Language Acquisition (3-0)**
An investigation of the results and techniques of current research in second language acquisition, with some attention to implications for second language teaching.
- 5370 Study in Language (3-0)**
Topic to be discussed will be selected. May be repeated for credit when topic varies.
- 5373 Linguistic Variation (3-0)**
A study of linguistic varieties and variation; particular attention to methods and hypotheses of different approaches.
- 5374 Language Testing (3-0)**
A study of the principles of effective language testing, with special attention to second-language testing.
- 5378 Language Universals and Typology (3-0)**
A survey of findings regarding language and typology and language universals. Attention to major questions that motivate ongoing research.
- 5381 Spanish Phonetics and Phonology (3-0)**
Analysis of the sounds and sound patterns of Spanish. *Prerequisites:* LING 5301 and LING 5320.
- 5382 Spanish Syntax (3-0)**
A survey of the major syntactic phenomena of Spanish. *Prerequisites:* LING 5301 and LING 5309.
- 5383 Spanish Morphology (3-0)**
Analysis of the major morphological structures of Spanish. *Prerequisite:* LING 5301.

- 5385 Spanish Historical Linguistics (3-0)**
A study of the origins of Spanish as a reflex of Latin and as a Romance language. Reading of texts of historical interest. Attention to the nature of linguistic change. Examination and use of standard research tools.
- 5388 Bilingualism (3-0)**
A study of the formal and sociolinguistic dimensions of bilingualism. Attention to aspects of language planning and linguistics as a contributing factor in the devising of public policy.
- 5389 Problems in Language Instruction (3-0)**
A course designed for language teachers involving study of psychological, linguistic, and methodological aspects of language instruction and testing, especially with reference to English. May be repeated for credit when topic varies.
- 5397 Seminar in Linguistic Research (3-0)**
Advanced linguistic description, argumentation, and research design. Emphasizes discussion, reading, and writing; students will make a formal presentation of their own work and will analyze the work of others. Bibliographic methods and information retrieval. Requires the completion of a paper that meets Graduate School standards for a final M.A. project. For non-thesis option students only.
- 5398 Thesis (0-0-3)**
Initial work on the thesis.
- 5399 Thesis (0-0-3)**
Continuous enrollment required while work on the thesis continues.
Prerequisite: LING 5398.

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.
- 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 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.

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*.

5333 Golden Age Drama (3-0)

Readings in major works of Spain's classical theater, by authors such as Lope de Vega, Tirso de Molina, and Calderon de la Barca.

5334 Golden Age Prose and Poetry (3-0)

Representative readings from Spain's major poets and/or writers of the sixteenth and seventeenth centuries.

5335 Cervantes (3-0)

A thorough reading and substantial analysis of *El Ingenioso Hidalgo Don Quixote de la Mancha*, plus two or three of the *Novelas Ejemplares*.

5340 The Generation of 1898 (3-0)

Selections from the writings of important members of this literary generation, including Unamuno, Azorin, Ortega y Gasset, Baroja, and Antonio Machado.

5341 Twentieth Century Spanish Literature (3-0)

Readings in the works of modern Spanish literature, with emphasis on poetry and/or narrative prose fiction written after the Generation of 1898 to the present.

Hispanic Linguistics

5381 Spanish Phonetics and Phonology (3-0)

Analysis of the sounds and sound patterns of Spanish. *Prerequisites:* LING 5301 and LING 5320.

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.

Creative Writing

5305 Literary Subgenres: Theory and Practice (3-0)

Study of the theory and techniques implied in a specific literary subgenre such as the detective novel, the fantastic short story, the autobiographical essay, mystical poetry, etc. Course may be repeated for credit when topic varies.

5364 Forms and Techniques of Fiction (3-0)

A course in directed reading and writing that leads the student to an understanding of the creative process through analysis and imitation of important contemporary works of fiction. May be repeated once.

5365 Forms and Techniques of Poetry (3-0)

A course in directed reading and writing that leads the student to an understanding of the creative process through analysis and imitation of important contemporary works of poetry. May be repeated once.

5366 Advanced Fiction Writing (3-0)

Intensive study and practice in the various forms and approaches within the writing of fiction, including workshop discussion of individual student manuscripts. May be repeated once under a different instructor.

5367 Advanced Poetry Writing (3-0)

Intensive study and practice in the various forms and approaches within the writing of poetry, including workshop discussion of individual student poems. May be repeated once under a different instructor.

5368 Creative Writing Seminar (3-0)

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

5370 Tutorial in Fiction (3-0)

Advanced workshop course in which student is guided towards the production of works of fiction of professional quality. May be repeated once for credit.

5371 Tutorial in Poetry (3-0)

Advanced workshop course in which student is guided towards the production of works of poetry of professional quality. May be repeated once for credit.

LIBERAL ARTS INTERDISCIPLINARY STUDIES

The College of Liberal Arts offers two interdisciplinary studies programs leading toward the master's degree. These programs are the Master of Arts in Interdisciplinary Studies (MAIS) and the Master of Fine Arts in Creative Writing (MFA).

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 Plan of Study
5. Acceptance by the MAIS Advisory Committee and by the Graduate School

Specific Requirements for the MAIS Degree

1. Thirty-nine semester hours of course work, no more than nine of which may be in a single disciplinary area, and of which no more than nine may be outside of the College of Liberal Arts. Exceptions to the nine-hour limitations may be made under unusual circumstances. Exceptions must be approved by the MAIS Advisory Committee and by the Graduate School.

2. A minimum of 30 semester hours of graduate-level courses; the remaining nine hours may be selected from among graduate-level courses and/or upper-division undergraduate courses. (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, three copies 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.

MASTER OF FINE ARTS IN CREATIVE WRITING

112 Worrell Hall
(915) 747-5529
lullman@utep.edu

PROGRAM DIRECTOR: Leslie Ullman

The MFA with Major in Creative Writing is a program designed to provide the highest professional preparation and training to individuals who wish to pursue careers in writing or the teaching of writing. The program is interdepartmental. Students may choose to take creative writing and literature courses in English, Spanish, or a combination of the

two languages. An additional concentration focuses on the literature and culture of the US-Mexico border. This concentration requires bilingual creative writing and literature and includes courses from other disciplines as well. The MFA curriculum, in both the literature and border culture concentrations, culminates in the writing of a book length manuscript of original poetry or fiction (thesis).

Admission Requirements

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

1. Minimum undergraduate grade point average (GPA) of 3.0, submission of official Graduate Record Examination (GRE) score
2. A writing sample (10 poems or 20-30 pages of fiction)
3. A Statement of Purpose, not to exceed three pages
4. Three letters of recommendation
5. Demonstration of academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE) and upper level undergraduate and graduate coursework.
6. Other evidence of background and experience that may be available.

Specific Requirements – Literature Concentration

Forty-eight (48) hours of course work, distributed as follows:

Creative writing courses	18 hours
Literature courses	18 hours
Electives	6 hours
Thesis	6 hours

1. Creative Writing Courses (18 hours)

	Semester Hours
Six hours from	6
ENGL or SPAN 5364	Forms and Techniques of Fiction
ENGL or SPAN 5365	Forms and Techniques of Poetry
Six hours from	6
ENGL or SPAN 5366	Advanced Fiction Writing
ENGL or SPAN 5367	Advanced Poetry Writing
Six hours from	6
ENGL or SPAN 5368	Special Topics in Creative Writing
ENGL or SPAN 5370	Tutorial in Fiction
ENGL or SPAN 5371	Tutorial in Poetry

2. Literature Courses (18 hours)

ENGL	5300	Introduction to Graduate Studies in English	3
or			
ENGL	5320	Literary Criticism: Theory and Practice	
or			
SPAN	5301	Critical Approaches to Hispanic Literature	

One or two courses from period survey and genre 3 or 6* courses in English, American, and Spanish-American literature:

ENGL	5301	British Literature to 1485
ENGL	5302	British Literature 1485-1660
ENGL	5303	British Literature 1660-1832
ENGL	5304	British Literature 1832-Present
ENGL	5305	American Literature to 1860

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ENGL	5306	American Literature since 1860
SPAN	5304	Hispanic Essay
SPAN	5311	Indigenous and Colonial Literature
SPAN	5314	Nineteenth Century Spanish-American Literature
SPAN	5315	Premodernist and Modernist Poetry
SPAN	5317	Postmodernist and Contemporary Poetry
SPAN	5319	Spanish-American Short Story
SPAN	5321	Twentieth Century Spanish-American Novel

One or two courses from seminars in English and 3 or 6* American Literature and Spanish Literature:

ENGL	5351	Seminar: Studies in British Literature to 1485
ENGL	5352	Seminar: Studies in British Literature 1485-1660
ENGL	5353	Seminar: Studies in British Literature 1660-1832
ENGL	5354	Seminar: Studies in British Literature 1832-Present
ENGL	5355	Seminar: Studies in American Literature to 1860
ENGL	5356	Seminar: Studies in American Literature 1860-Present
SPAN	5332	Spanish Literature to 1500
SPAN	5333	Golden Age Drama
SPAN	5334	Golden Age Prose and Poetry
SPAN	5335	Cervantes
SPAN	5340	The Generation of 1898
SPAN	5341	Twentieth Century Spanish Literature

Analysis of literature from writer's standpoint:		3
ENGL	5327	Variable Topics in Contemporary Literature or
SPAN	5305	Literary Subgenres: Theory and Practice or Approved Elective

3. Approved Electives (6 hours) 6**4. Thesis 6**

ENGL/SPAN	5398	Thesis
ENGL/SPAN	5399	Thesis

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

* Students in English may elect to take 3 hours in each of the survey and seminar blocks, and choose from the above courses plus ENGL 5325 (Genre: Theory and Practice) and ENGL 5350 (Special Topics) and/or any of the Spanish Literature courses for their remaining 6 hours.

Descriptions of all courses specified above are contained in the respective listings for the Departments of English and Languages and Linguistics.

Specific Requirements, - Border Culture Concentration

Forty eight (48) hours of course work, distributed as follows:

Creative writing courses (6 hours of workshop must be in the second language)	18 hours
Literature courses	15 hours
Electives (6 hours of literature or electives must be in the second language)	9 hours
Thesis	6 hours

1. Creative Writing Courses (18 hours)

See listings under Literature concentration

2. Literature Courses (15 hours)

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

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

3. Core Elective Courses (9 hours)

POLS	5336	Seminar in Southwest Border Politics	
POLS	6303	Seminar in Cultural, Linguistic and Political Borders	
HIST	5309	Studies in Latin American History	
HIST	5377	Seminar in Latin American and Border History	
SOCI	5355	U.S.-Mexico Borderlands in Change	
SOCI	5375	Seminar in Southwest Cultures	
ART	4329	Multicultural Art in America	
SPAN	5319	Spanish-American Short Story	9
or			

Other electives **as approved by the advisor**

4. Thesis (6 hours)

Students should see listings under Literature concentration. 6

MUSIC

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

CHAIRPERSON: Lowell Graham

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

Master of Music

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

Specific Requirements for the Master of Music in Performance

1. A Bachelor's degree in Music or its equivalent
2. Acceptance into the performance program via audition with a three-person panel of area faculty; vocal majors must demonstrate knowledge of Italian, French, German, Latin, and English diction
3. Completion of the following required courses with a "B" or above:

3 hours	MUSL	5371	Bibliography and Research
3 hours	MUSE	5396	Pedagogy of Vocal Music, OR
	MUSE	5397	Pedagogy of Instrumental Music
2 hours	MUST	5217	Theory of Twentieth Century Music
2 hours	MUSL	5211	Music History
9 hours	MUSA	5391	Applied Music
3 hours	MUSG	5398	Thesis
3 hours	MUSG	5399	Thesis
<u>6 hours</u>	Electives (Approved upper-division undergraduate or graduate courses)		
31 hours			

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

Specific Requirements for the Master of Music in Music Education

1. A Bachelor's degree in Music or its equivalent with certification to teach music in the public schools or significant and equivalent professional teaching experience.
2. Acceptance into the music education program via the approval of a three-person panel of area faculty after appropriate interviews and/or auditions.
3. Completion of the following required courses with a "B" or above:

3 hours	MUSL	5371	Bibliography and Research
3 hours	MUSE	5396	Pedagogy of Vocal Music, OR
	MUSE	5397	Pedagogy of Instrumental Music
2 hours	MUST	5217	Theory of Twentieth Century Music
2 hours	MUSL	5211	Music History
3 hours	MUSE	5331	Music Education
3 hours	MUSG	5335	Field Work in Music
4 hours	MUSA	5281	Applied Music OR
	MUSA	5261	Applied Music
3 hours	MUSG	5398	Thesis
3 hours	MUSG	5399	Thesis
<u>6 hours</u>	Electives (Approved upper-division undergraduate or graduate courses)		
32 hours			

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

For Undergraduate and Graduate Students

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

Applied Music (MUSA)

- 3253 Music Theatre Workshop
 3254 Music Theatre Workshop
 4293 Pedagogy of Voice

Music Literature and History (MUSL)

- 3219 **Music in the Middle Ages and Renaissance**
 3220 **Music in the Baroque Period**
 3221 **Music in the Viennese Classical Period**
 3222 **Music in the Late Romantic Period**
 3223 **Music in the Twentieth Century**
 3228 **Topics in Music History**
 3230 **World Music Seminar**
 3243 **History of Ballet**
 3244 **History of Ballet**
 3325 **Music on the Border**

Music Theory (MUST)

- 3215 **Analytical Process in Music**
 3216 **Theory Seminar**
 3319 **Advanced Composition**

For Graduate Students Only

Applied Music (MUSA)

- 5261 **Applied Lessons (0-0-2)**
 5361 **Applied Lessons (0-0-3)**
 Used by Music Education majors to develop playing skills on a new secondary instrument. Supplemental Tuition and Coaching fee required.
- 5281 **Applied Lessons (0-0-2)**
 5381 **Applied Lessons (0-0-3)**
 It can be used as: 1) a secondary applied area for a performance major; 2) the principal applied area for a music education major; or 3) an elective by graduate students in fields other than music. Admission requires proficiency of upper-level undergraduate major as certified either by audition or the previous undergraduate upper-level number admission. Supplemental Tuition and Coaching fee required.
- 5391 **Applied Lessons (0-0-3)**
 For performance majors. Requires acceptance into degree program by a three-person committee of area faculty. Supplemental Tuition and Coaching fee required.

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 Field Work in Music (0-0-3)**

The student works individually on a selected topic with an assigned specialist in that area under supervision of area specialist. May be repeated for credit.

Prerequisites: Twelve semester hours of advanced courses in Music and a bachelor's degree.

5336 Independent Study (0-0-3)

Independent academic study for students in the Master of Music Degree Program.

5398 Thesis (0-0-3)

Initial work on the thesis.

5399 Thesis (0-0-3)

Continuous enrollment required while work on the thesis continues.

Prerequisite: MUSG 5398.

Music Literature and History (MUSL)**5211 Selected Topics in Music History (0-0-2)**

Historical examination of important musical documents selected from the Medieval, Renaissance, Baroque, Classic, Romantic, and Contemporary periods.

5314 Music History Survey (3-0)

Music history survey from Middle Ages to twentieth century. Emphasis on stylistic identification of scores and performances. Will not count for Master of Music degree.

5371 Bibliography and Research (3-0)

A study of research methods and materials designed to equip the student for scholarly research. Includes research project.

Music Theory (MUST)**5217 Theory of Twentieth Century Music (2-0)**

Survey of important theoretical systems used to analyze twentieth-century music including those of Schoenberg, Hindemith, and Schenker.

5313 Survey of Music Theory (3-0)

Theory of the common practice period in western music. Includes figured bass realization, soprano harmonization, ear training, harmonic analysis, and form. Will not count for Master of Music degree.

PHILOSOPHY

113 Hudspeth Hall
 (915) 747-6617
 philos@utep.edu

CHAIRPERSON: Steven Best
 PROGRAM DIRECTOR: Julius Simon
 GRADUATE FACULTY: Best, Haddox, Robinson, Springer

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

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.

POLITICAL SCIENCE

111 Benedict Hall
 (915) 747-5227
 politicalscience@utep.edu

CHAIRPERSON: Gregory G. Rocha
 GRADUATE FACULTY: Barracca, Brenner, Coronado, Graves, Kruszewski, Mack, Manganaro, Peterson, Price, Rocha, Soden, Staudt, Villarreal, Weaver, Webking

Programs

Political Science graduate students may pursue one of two graduate programs: the Master of Arts degree or the Master in Public Administration degree.

Master of Arts in Political Science

Basic Requirements for Admission to the MA Program

1. Bachelor's degree from an accredited college or university with a degree in Political Science or a related area
2. 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. No more than 9 hours of eligible upper-division undergraduate courses, taken for graduate credit, are permitted in a program. No more than 6 of these hours may be included in a major.

The MA Degree Plan shall include:

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

Total Hours: 30

Master in Public Administration

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

Basic Requirements for Admission to the MPA Program

1. Bachelor's degree from an accredited college or university
2. 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. Other evidence of background and experience that may be available.

Specific Requirements for the MPA Degree

Completion of at least 42 semester hours of course work consisting of the following:

1. At least 27 hours of courses in the theoretical, methodological, and technical components of public management
 - POLS 5300 Seminar in Research Methods in Political Science
 - POLS 5350 Seminar in Administrative Theory
 - POLS 5351 Seminar in Advanced Research Methods in Public Administration
 - POLS 5352 Seminar in Financial Management Administration
 - POLS 5353 Seminar in Human Resources Management
 - POLS 5354 Seminar in Administrative Law and Regulation
 - POLS 5358 Administrative Ethics and Responsibilities

POLS 5362 Seminar in Public Sector Accounting

POLS 5364 Seminar in Public Policy Analysis

Selected MBA core courses may be substituted for some of these courses, depending on course offerings by each program. Advance approval of MPA director is required for substitution.

2. Completion of an additional 12 hours of approved electives. No more than 6 hours of electives can be at the undergraduate level in courses approved for graduate-level credit.
3. Students are required to enroll in and successfully complete POLS 5367 before being permitted to write and defend the paper. (POLS 5367 is not included in either the 27 hours of requirements or the 12 hours of electives.) During the final semester of course work, degree candidates must complete and successfully defend a professional research paper.
4. Upon admission, the MPA Director may direct students who do not already possess significant administrative experience to enroll in POLS 5366 (Internship in Public Administration) as part of their 12-hour elective requirement.

Those students who want to take courses in Criminal Justice to satisfy the 12-hour elective requirement for the MPA degree must take the following courses:

CRIJ 5300 Seminar in Criminal Justice Administration

CRIJ 5308 Seminar in Juvenile Justice

CRIJ 5320 Seminar in Corrections

CRIJ 5340 Seminar in Selected Topics

Two Degree Option – MPA/MBA

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

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

Specific Requirements for the MPA/MBA Two-Degree Option

1. Students must meet all requirements for admission to both programs.
2. The same leveling work required of an MBA student without a BBA will be required, subject to the waiver procedures currently operative in the MBA program.
3. The program consists of 27 semester hours of core MPA courses, 24 semester hours of core MBA courses, 6 semester hours of graduate business electives, POLS 3567, and a comprehensive written exam in the core subject areas of public administration, plus any additional required courses. The number of hours necessary to complete the two-degree option will vary depending upon each student's background and previous academic work.
4. The core curriculum in each of the separate degree programs must be satisfactorily completed.
5. Electives must be approved by the academic advisor of both programs; upon such approval, the core courses of one program may be used to meet the elective requirements of the other.
6. Admission and continuance decisions are handled separately by the MPA and MBA graduate committees and by the Graduate School.

Registration

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

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

- 3310 Political Socialization and Political Culture**
- 3313 Public Opinion and Public Policy**
- 3333 State and Society**
- 3353 State Administration**
- 4310 The Legislative Process**
- 4311 The Presidency**
- 4314 Women, Power, and Politics**
- 4321 Philosophy of Law**
- 4331 Relations of Post-Communist States**
- 4333 European Politics**
- 4334 Regional Politics**
- 4336 Caribbean and Central American Politics**
- 4338 Relations Between the United States and Mexico**
- 4341 Democracy**
- 4342 Contemporary Political Thought**

For Graduate Students Only

All seminars may be repeated for credit when the topic varies.

American Political Processes

- 5310 Seminar in Political Participation (3-0)**
Public political behavior in parties, interest groups, and elections.
- 5311 Seminar in Racial, Ethnic, Gender Politics in America (3-0)**
An analysis of race, ethnicity, class, and gender in American politics, with emphasis on such concepts as multi-culturalism, assimilation, alienation, and separatism.
- 5312 Seminar in Political Leadership (3-0)**
A study of the theoretical and practical foundations of leadership behavior, including the styles and interactions, confrontational as well as collaborative, of persons in various positions of political authority.

- 5313 Seminar in Political Communication (3-0)**
The study of the formation of shared public perceptions through various media and the analysis of their political effects. May be repeated for credit when the topic varies.
- 5314 Seminar in Urban Politics (3-0)**
Politics in the urban environment, with emphasis upon the effects of heterogeneity and pluralism.

Public Law

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

Comparative and International Politics

- 5330 Seminar in International Politics (3-0)**
Examines the political structures and the interactions that characterize the global nation-state political system.
- 5333 Seminar in Comparative Politics (3-0)**
Study of comparative political systems, including comparative political cultures. Emphasis on the methodology of comparative politics.
- 5334 Seminar in the Politics of Developing Countries (3-0)**
Focuses on the politics and economics of developing nations in global context. May be repeated for credit when the topic varies.
- 5335 Seminar in Post-Communist Transition (3-0)**
Focuses on the politics and economics of selected countries undergoing post-communist transition.
- 5336 Seminar in Southwestern Border Politics (3-0)**
United States-Mexico relations as they affect the international frontier, with emphasis upon political leadership, ethnicity, and institutions.
- 5337 Seminar in Latin American Politics (3-0)**
A study of the political systems of Latin America. Offerings of the course may focus upon one country, regions, or all of Latin America.
- 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 department approval.

Political Theory

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

- 5341 Seminar in Modern Political Philosophy (3-0)**
Study of the works of major western political philosophers from the modern period.
- 5342 Seminar in American Political Thought (3-0)**
Study of American political thought with special focus upon the founding.

Public Administration

- 5350 Seminar in Administrative Theory (3-0)**
Basic introduction to the major theories and approaches which form the basis for the practice of public administration. (MGMT 5311 may be substituted, with permission of MPA advisor.)
- 5351 Seminar in Advanced Research Methods in Public Administration (3-0)**
Practical in-the-field application of quantitative and methodological techniques by government agencies, with special emphasis on microcomputers. The seminar usually will be taken during the second semester of graduate study.
- 5352 Seminar in Financial Management and Administration (3-0)**
Analysis of the concepts and theories of public fiscal administration. Emphasis is placed on budgeting, accounting, purchasing, and debt administration. (FIN 5305 may be substituted, with permission of MPA advisor.)
- 5353 Seminar in Human Resources Management (3-0)**
The study of the social, political, and legal dimensions of public personnel management with emphasis on human resources, development, and implementation. (MGMT 5322 may be substituted, with permission of MPA advisor.)
- 5354 Seminar in Administrative Law and Regulation (3-0)**
The legal problems of the administrative process, including the uses of administrative discretion, fact-finding, and hearing procedures, and the methods and scope of judicial review of administrative decisions.
- 5355 Seminar in Comparative Public Administration (3-0)**
A comparative view of government administration in developed and developing countries. Examines both the effects of culture on government bureaucracy and the efforts of governments to promote socioeconomic development. May include emphasis on U.S.-Mexico border administration.
- 5357 Women and Men in Management (3-0)**
Analyzes gender diversity in public and private institutions.
- 5358 Administrative Ethics and Responsibility (3-0)**
The course deals with ethical issues that face public administrators--responsibilities, accountability, discretion, the public interest, professionalism, codes of ethics, and corruption. It focuses on applied ethics and the reasoning process administrators can use to analyze and evaluate ethical dilemmas.
- 5359 Seminar in Regional and Urban Planning (3-0)**
Covers planning topics associated with satisfying area-wide service needs in urban and regional environments. Topics may include land-use regulations, capital facilities siting, and transportation planning.

- 5361 Seminar in Political Economy (3-0)**
Teaches how political and economic theory, tools, and techniques can be used to analyze public policy issues and problems. Substantive topics may vary with instructor.
- 5362 Seminar in Public Sector Accounting (3-0)**
Examination of the public sector and non-profit accounting process including the preparation of annual financial reports, transaction analysis, auditing, and cost analysis for grants and service efforts.
- 5363 Seminar in Intergovernmental Relations (3-0)**
Covers the interrelationships among international, national, state, and/or local governmental institutions in the policy making, executive, and/or administrative processes. The special issue of states and communities situated on international borders is also discussed.
- 5364 Seminar in Public Policy Analysis (3-0)**
The study of the politics of the policy making process. Emphasis is on the actors involved in public policy-making, their interactions, and the outputs of the policy process.
- 5365 Seminar in Policy and Decision Making (3-0)**
The use of quantitative decision tools and formal modeling in legislative, executive, and judicial policymaking and evaluation processes.
- 5366 Internship in Public Administration (0-0-20)**
Practical internship experience with a public or nonprofit sector agency, selected in consultation with the MPA program advisor. The experience consists of at least twenty hours of work per week with the selected agency. The internship will be under close supervision by the agency and the MPA program advisor.
Prerequisite: Department approval.
- 5367 Comprehensive Integration of Public Administration (3-0)**
The course is designed to prepare the student for the final comprehensive examination in public administration. Key management concepts, issues, and value concerns in the subject areas of public administration are reviewed and integrated. This course is taken in the student's final semester in the MPA program. *Prerequisite:* Department approval.

General

- 5300 Seminar in Research Methods in Political Science (3-0)**
Basic introduction to quantitative and methodological techniques in the field for students in both the MA and MPA programs. Required of all graduate Political Science majors. The seminar usually is taken during the first semester of graduate study. (MPA students may substitute ECON 5301 or QMB 5311 with the permission of the MPA advisor.)
- 5380 Selected Problems in Government (3-0)**
Independent study, research, and writing on a topic agreed upon by student and professor.

5398 Thesis (0-0-3)

As part of this course, the student will successfully prepare and defend a prospectus for the MA thesis. The prospectus must be approved by the student's thesis committee, and failure to meet this requirement within two long semesters will preclude continuation of the student in the MA program.

Prerequisite: Instructor approval.

5399 Thesis (0-0-3)

Continuous enrollment required while work on the thesis continues.

Prerequisites: POLS 5398 and instructor approval.

PSYCHOLOGY

112 Psychology Building
(915) 747-5551
psychology@utep.edu

CHAIRPERSON: Judith P. Goggin

GRADUATE FACULTY: Blume, Cohn, Coleman, Crites, Francis, Goggin, Hosch, Lucker, Malpass, Morera, Moss, Wiebe, Wood, Zárate

General Requirements for Graduate Programs in Psychology

Admissions Requirements

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

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

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

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

The documents required are as follows:

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

Departmental Academic Standards

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

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

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

PSYC	3350	Health Psychology
PSYC	4301	Psychological Testing
PSYC	4309	History and Systems of Psychology
PSYC	4311	Advanced Topics in Developmental Psychology
PSYC	4312	Advanced Abnormal Psychology
PSYC	4321	Judgment and Decision Making
PSYC	4324	Psychobiology
PSYC	4341	Motivation and Emotion
PSYC	4343	Seminar in Psychology
PSYC	4345	Seminar in Meta-Analysis

MA Programs

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

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

Ph.D. Program

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

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

Course Requirements

All Ph.D. candidates, regardless of their area of concentration, are required to complete concentration core courses that are designed to provide students with specific knowledge and skills that will prepare them for field placements in applied settings. Students are required to complete 78 semester hours: 21 hours of core courses, 18 hours of concentration courses, 9 hours of research (with at least two faculty members),

6 hours field placement, 6 hours of dissertation, and 18 hours of electives. A research dissertation (PSYC 6320 and PSYC 6321) is required of students. Students must register for PSYC 6320 for the first 3 hours of dissertation work and for PSYC 6321 thereafter until the dissertation is complete.

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

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

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

Concentration Electives (18 hours):

Concentration electives, consistent with the student's interests, should be chosen from the courses listed below and must be approved by the Graduate Advisor. The Graduate Advisor must approve any substitutions.

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

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

Language Requirement

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

Transfer Students with Graduate Credit

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

The student must make a written request for Advanced Standing Credit to the Graduate Program 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.

Maximum Time for Completion of the Ph.D. Degree

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

Written Examinations

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

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

Ph.D. Oral Examinations

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

Field Placements

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

Microfilming of Dissertation

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

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

Publication by microfilm does not preclude subsequent publication of the dissertation, in whole or in part, as a monograph or in a journal. Copyright at the author's expense may be arranged, if desired, by completing a special form available in the Graduate 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.

Psychology (PSYC)

For Undergraduate and Graduate and Students

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

- 4301 Psychological Testing**
- 4309 History and Systems of Psychology**
- 4311 Advanced Topics in Developmental Psychology**
- 4312 Advanced Abnormal Psychology**
- 4317 Advanced Statistics**
- 4321 Judgment and Decision Making**
- 4324 Psychobiology**
- 4341 Motivation and Emotion**
- 4343 Seminar in Psychology**
- 4345 Seminar in Meta-Analysis**

For Graduate Students Only

- 5100 Seminar on Current Topics (1-0)**
Contemporary problems in various research areas will be discussed and recent applied research programs will be examined. Special methodological requirements for field evaluation and other non-experimental research approaches will be emphasized. All psychology doctoral students are required to take this course. *Prerequisite:* Department approval.
- 5301 Research Applications (0-0-3)**
Supervised research in designated laboratories. Students may repeat course for credit. *Prerequisite:* Instructor approval. Psychology Research Course fee required.
- 5306 Attitudes and Attitude Measurement (3-0)**
Considers issues relevant to psychological construct assessment, including attitudes, emotion, and personality.
- 5309 Seminar in Psychopathology (3-0)**
An examination of the research related to problems in etiology, diagnosis, and prognosis of the major disorders.
- 5310 Statistics I: Applied Correlation and Regression Methods (3-0)**
Reviews correlation techniques, simple and multiple regression, 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 Statistics II: Experimental Design (3-0)**
Consideration of problems of analysis and design commonly encountered in psychological research. *Prerequisite:* PSYC 4317, PSYC 5310, or equivalent.
- 5312 Program Evaluation (3-0)**
Examines issues in evaluation research design, implementation, utilization, and ethics. Case studies and class activities provide applied experience.

- 5315 Psychopharmacology (3-0)**
A study of current topics and recent developments in the biochemical basis of psychopathology and related strategies of psychopharmacological intervention.
- 5321 Seminar in Personality Assessment (3-0)**
Introduction to methods and issues in the evaluation of personality and to the projective and objective instruments to assess personality. *Prerequisite:* PSYC 4301 or instructor approval.
- 5322 Theories and Methods of Psychotherapy (3-0)**
An analysis of theory, technique, and research methods used in various current psychotherapies. *Prerequisite:* Instructor approval.
- 5323 Psychometrics (3-0)**
Principles of psychological evaluation, including intellectual, neuropsychological, academic, personality, attitude, and interest measures; reliability and validity; principles, methods, and statistical procedures employed in developing new psychometric instruments, especially with respect to different cultural/ethnic minorities.
- 5325 Special Topics in Health Psychology (3-0)**
Examines relationships among psychological factors, physical health, and subjective well-being. May be repeated for credit when topics vary.
- 5326 Seminar in Industrial/Organizational Psychology (3-0)**
An introductory graduate foundation course covering the application of psychological principles, methods, and knowledge in the workplace. Topics may include individual differences in the workplace, employee selection and training, organizational development, performance measurement and evaluation, employee motivation, leadership, job attitudes, groups and conflict in organizations, and cross-cultural organizational psychology.
- 5330 Special Topics in Organizational/Social Behavior (3-0)**
Theoretical and applied approaches to individual and group behavior. Topics may include organizational and group theory, organizational culture and climate, leadership, jury/group decision making, intra- and intergroup conflict, and cross-cultural issues related to the above processes. May be repeated for credit when topics vary.
- 5331 Cross-Cultural Research Methods (3-0)**
Consideration of the difficulties confronting causal inference in cross-cultural comparisons. The concept of equivalence is examined as it applies to populations, tests and indicators, and controlled manipulations. The role of theory in developing appropriate research strategies is emphasized. A broad range of research methods are examined for their special contributions and difficulties in cross-cultural comparisons.
- 5333 Seminar in Intellectual and Neuropsychological Assessment (3-0)**
Techniques of intellectual and neuropsychological assessment. Administration of major intellectual and neuropsychological instruments and interpretation and reporting of results. Introduction to neuropathological syndromes. *Prerequisite:* PSYC 4301 or instructor approval. Course fee required.

5334 Field Methods in Psychology (3-0)

Design and implementation of field research, including observational methods, experiments and quasi-experimental designs, and program evaluation. Solutions to specific, commonly occurring design and statistical problems are emphasized.

5335 Special Topics in Research Design and Data Analysis (3-0)

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

5337 Special Topics in Industrial/Organizational Psychology (3-0)

Topics may include negotiation and conflict resolution, cross-cultural issues, judgment and decision-making, job attitudes and behaviors, organizational climate and values, motivation, leadership, training, career development, and consumer behavior. May be repeated for credit when topics vary.

5338 Personnel Selection, Placement, Evaluation, and Training (3-0)

Examines principles in the development of selection, placement, performance evaluation, and employee training. Topics may include issues in selection and placement, performance evaluation and evaluation of training programs, methods of determining reliability and validity of selection, evaluation and training procedures, cross-cultural and legal issues. *Prerequisite:* PSYC 5326 or instructor approval.

5342 Special Topics in Psychology and Law (3-0)

Focuses on selected issues and problems where psychology contributes to and has implications for the legal system and human behavior in relation to the legal system. May be repeated for credit when topic varies.

5355 Seminar in General Psychology (3-0)

Advanced study of contemporary problems and issues in selected topics in psychology. May be repeated with different instructors. *Prerequisite:* Department approval.

5360 Clinical Internship (0-0-6)

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

5398 Thesis (0-0-3)

Initial work on the thesis. Psychology Research Course fee required.

5399 Thesis (0-0-3)

Continuous enrollment required while work on the thesis continues. *Prerequisite:* PSYC 5398. Psychology Research Course fee required.

5404 Proseminar I: Sensation/Perception; Cognition; Physiological Psychology (4-0)

Survey of current theories, methods, and research involving sensory and perceptual mechanisms; human cognition and information processing; brain function related to behavior.

5405 Proseminar II: Developmental, Personality, Social, and Differential Psychology (4-0)

Survey of the basic principles, current theories, methodology, and research in developmental, personality, social, and differential psychology. Cross-cultural research and theories appropriate to each field will be emphasized.

For Doctoral Students Only

6305 Field Placement (0-0-3)

Professional experience in an applied setting. The graduate studies committee must approve the location and extent of the activity involved.

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.

SOCIOLOGY AND ANTHROPOLOGY

109 Old Main
(915) 747-5740
soci@utep.edu

INTERIM CHAIRPERSON: David L. Carmichael

PROFESSORS EMERITI: Julius Rivera, Ellwyn Stoddard

GRADUATE FACULTY: Campbell, Carmichael, Curry, Daudistel, Howard, Lee, Morales, Peterson, Rodríguez, Romero, Smithey

The Department offers a Master of Arts degree in Sociology.

Requirements for Admission

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

The units presented should include theory and methods. Official 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. At least 24 of the 30 eligible hours will be in graduate-level courses (that is, only six hours of upper-division undergraduate work will be allowed for graduate credit).
2. Each candidate must take SOCI 5100, 5101, 5102 (Pro-seminar on Current Problems and Topics), SOCI 5312 (Advanced Measurement and Inference), SOCI 5320 (Methodology), SOCI 5325 (Classical Social Theory), and SOCI 5326 (Contemporary Social Theory), plus nine semester hours from the list of courses below.
3. The student 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.

4. The student will be encouraged, but not required, to take 6 hours course work in some discipline other than Sociology as a minor; if the student elects to take a minor in another department or discipline, course work in Sociology will be reduced accordingly.
5. The student will submit a suitably bound thesis which must be approved by the student's committee and placed on file in the Department and two additional bound copies in Graduate Student Services.

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

For Undergraduate and Graduate Students

Anthropology (ANTH)

- 3310 Southwestern Archeology**
- 3358 Ethnographic Methods**
- 3380 Environmental Policy and Applied Anthropology**
- 3647 Archeological Field Studies**
- 4370 Studies in Anthropology**

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)

- 5100 Pro-Seminar on Current Problems and Topics (1-0)**
Contemporary problems and research in the discipline and in our graduate training program are discussed. The emphasis is on acclimating each student to the demands of graduate education. Further emphasis is on the role of the graduate student as teaching assistant.
- 5101 Pro-Seminar on Current Problems and Topics (1-0)**
Contemporary problems and research in the discipline and in our graduate training program are discussed. The emphasis is on developing and articulating research topics. Further emphasis is on fostering an interest in doctoral-level education.
- 5102 Pro-Seminar on Current Problems and Topics (1-0)**
Contemporary problems and research in the discipline and in our graduate training program are discussed. The emphasis is on developing research presentation and discussion skills. Further emphasis is on fostering an understanding of the fit between the program and employment in the public and private sectors.

- 5312 Seminar in Advanced Measurement and Inference (3-0)**
Introduction to techniques of multivariate analysis commonly used in sociology including multiple regression, logistic regression, regression diagnostics, and non-parametric techniques.
- 5320 Seminar in Methodology (3-0)**
The field research process from initial project proposal to the final report including the integration of the planning, execution, and analysis phases.
- 5325 Classical Social Theory (3-0)**
An examination of the pre-1950's social theories and their roots in philosophical traditions. The course has three objectives: first, identifying connections between philosophy and social theory; second, examining how social theory develops into research traditions; and third, acquiring a sense of how classical theory evolved within and articulated these traditions.
- 5326 Contemporary Social Theory (3-0)**
An examination of post-1950's social theorists and their roots in philosophical and social theoretical traditions. The course has four objectives: first, identifying connections between philosophy and social theory; second, examining the linkages between different research traditions; third, developing a sense of how contemporary theory developed within and articulated these traditions; and fourth, examining the implication of contemporary theory for social policy and practice.
- 5330 Social Inequality (3-0)**
An overview of how sociologists understand and theorize about social inequality; emphasis is on workplace, race, and gender inequalities.
- 5340 Seminar in Demography (3-0)**
Causes and consequences of trends in fertility, mortality, and migration.
- 5341 Special Graduate Topics (3-0)**
A course organized to investigate special topics and current issues of significance to sociologists. May be repeated for credit when content varies.
- 5346 Seminar in the Sociology of Law (3-0)**
A broad and thorough grounding in the sociological literature on the role of law in society, law as a social institution, and legal actors as social actors. Equal attention is given to social theory and empirical research. *Prerequisite:* SOCI 5325
- 5348 Seminar in Criminology (3-0)**
Social context of criminal law and criminal justice; theories of crime and treatment programs.
- 5355 U.S.- Mexico Borderlands in Change (3-0)**
The study of social, economic, and technological change in the Borderlands. Transborder networks and nationalistic policies are compared; the border maquiladora industry is studied.
- 5362 Seminar in Health Services Delivery (3-0)**
Health and medical occupations and the organization of care, cure, and prevention systems; social and cultural factors affecting sick roles and community health policies and practices.

5365 Seminar in Sociology of Education (3-0)

Application of sociological theory and research to American education; present educational problems and possible solutions.

5375 Seminar in Southwestern Cultures (3-0)

An anthropological, ethnohistorical, and sociological examination of salient Southwestern cultures: Mexican-Americans, Indian societies, Blacks, Orientals, etc.

5390 Individual Studies (0-0-3)

Prerequisite: Department approval.

5398 Thesis (0-0-3)

Initial work on the thesis.

5399 Thesis (0-0-3)

Continuous enrollment required while work on the thesis continues.

Prerequisite: SOCI 5398.

THEATRE ARTS AND FILM

371 Fox Fine Arts
(915) 747-5146
theatrearts@utep.edu

INTERIM CHAIR: Mimi Gladstein

GRADUATE FACULTY: Eastman, Farah, Fensch, Gilbert, Murray, Ramos, Varela, Yeatman

The Theatre Arts 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. Twelve approved advanced semester hours (3300, 4300) of undergraduate credit in Theatre Arts
3. Submission of official Graduate Record Examination (GRE) scores

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 or a production thesis, 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
- 3353 History of the Theatre III
- 3355 The Musical Theatre
- 3356 Women in Drama
- 3413 Acting II
- 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, criticism, dramatic literature, design, management, and drama education. A course in this group may be taken a second time when the topic is significantly different.

- 5300 **Graduate Projects in Drama (3-0)**
Individual research in Theatre Management.
- 5301 **Graduate Projects in Drama (3-0)**
Individual research in Costume and/or Makeup Design.
- 5302 **Graduate Projects in Drama (3-0)**
Individual research in History and/or Dramatic Criticism.
- 5303 **Graduate Projects in Drama (3-0)**
Individual research in Scene Design and/or Shop Management.
- 5304 **Graduate Projects in Drama (3-0)**
Individual research in Lighting and/or Sound Design.
- 5305 **Graduate Projects in Drama (3-0)**
Individual research in Directing and Rehearsal Methods.
- 5306 **Graduate Projects in Drama (3-0)**
Individual research in the Teaching of Acting.
- 5307 **Graduate Projects in Drama (3-0)**
Individual research in Spanish Language Theatre and Drama.
- 5318 **Methods of Graduate Theatre and Drama Research (3-0)**
Survey of the essential tools of graduate research and creation in theatre and drama--including bibliography, aesthetics, and creative and scholarly procedure--culminating in the preparation of a scholarly paper. Required of all majors.
- 5322 **Seminar in Theatre Technology (3-0)**
Studies of production design and methods of staging in the unfolding pattern of western theatre. Required of all majors.

5323 Seminar in Theatre History (3-0)

The study of the dramatic forms of theatre in selected historical periods. Required of all majors.

5325 Advanced Playwriting (3-0)

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

5327 Seminar in Performance: Acting and Directing (3-0)

Study of the strategies of theatrical presentation: the modes, styles, and techniques of acting and directing in a cultural context. Required of all majors.

5398 Thesis (0-0-3)

Initial work on the thesis.

5399 Thesis (0-0-3)

Continuous enrollment required while work on the thesis continues.
Prerequisite: THEA 5398.

COLLEGE OF SCIENCE

Biological Sciences
Chemistry
Geological Sciences
Mathematical Sciences
Physics

Dr. Thomas E. Brady, Dean
Dr. Larry P. Jones, Associate Dean
Dr. Helmut Knaust, Associate Dean for Entering Students
Dr. Nancy Marcus, Assistant Dean

Bell Hall, Room 100
(915) 747-5536 (ph)
(915) 747-6807 (fax)
science@utep.edu

Degree Programs

Ph.D. Biological Sciences
 Environmental Science and Engineering*
 Geological Sciences
 Materials Science and Engineering*

MS Bioinformatics
 Biological Sciences
 Chemistry
 Geological Sciences
 Geophysics
 Mathematics
 Physics
 Statistics

MAT Master of Arts in Teaching/Mathematics

MSIS Interdisciplinary Studies/Science*

* Interdisciplinary Program

College of Science

The College of Science is the home of the University's first doctoral degree program, the Doctor of Geological Sciences, which was approved in 1974. In 1991, the designation of the degree was changed to Ph.D. in Geological Sciences. The College now offers the Ph.D. in Biological Sciences and also participates in two multidisciplinary Ph.D. programs. The Departments of Chemistry and Physics are participants in a program leading to the Ph.D. degree in Materials Science and Engineering and the Departments of Biological Sciences, Chemistry, Geological Sciences, and Physics are participants in a program leading to the Ph.D. degree in Environmental Science and Engineering. Information about admission to these programs and degree requirements is found in the Interdisciplinary 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 ten graduate degrees at the master's level. These include Master of Science (MS) degrees in Bioinformatics, Biological Sciences, Chemistry, Geological Sciences, Geophysics, Mathematics, Physics, and Statistics. Five-year BS-MS programs are offered in Chemistry and Physics. The Department of Mathematical Sciences offers a Master of Arts in Teaching with a major in Mathematics (MAT). For information regarding admission and degree requirements for these degrees, 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 INTERDISCIPLINARY STUDIES

307 Geology
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doser@geo.utep.edu

PROGRAM DIRECTOR: Diane I. Doser

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.

MASTER OF SCIENCE IN BIOINFORMATICS

226 Biological Sciences Building
 (915) 747-5844
 clieb@utep.edu

PROGRAM DIRECTOR: Carl S. Lieb

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 biological and computer science, especially in the areas of molecular modeling, DNA data base analysis/management, and protein structure. As an academic field, bioinformatics thus combines elements of biological and biochemical science with computer science and information technology 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) from one to three 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, and mathematics/statistics. This foundation is represented by the following UTEP courses and their several underlying prerequisites (or by the equivalent experience at other institutions): BIOL 4313 (Molecular/Cell Biology), CS 2303 (Data Structures), and STAT 2380-1380 (Statistical Methods and its laboratory). Course descriptions and prerequisites of these courses are provided in the UTEP Undergraduate Studies 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. There is no thesis requirement for this degree.

1. Required courses (31 semester hours):

BIOL	5130	Seminar (taken twice)
BIOL	5316	Biosystematics
BIOL	5340	Structure and Function of Macromolecules
BIOL	5351	Introduction to Bioinformatics I

BIOL	5352	Introduction to Bioinformatics II
BIOL	5353	Internship in Biological Sciences
BIOL	5354	Post-Genomic Analysis
CHEM	5195	Seminar (taken twice)
CHEM	5341	Analysis and Modeling of Biological Structures
MIT	5310	Fundamentals of Computers
MIT	5314	Data Base Applications

2. Additional requirements include three of the following electives (9-10 semester hours):

BIOL	5328	Numerical Analysis in Biology
BIOL	5355	Genomic Analysis and Assembly
BIOL	5401	Molecular Biology Techniques
CHEM	5329	Contemporary Topics in Organic Chemistry
CHEM	5339	Contemporary Topics in Biochemistry
CHEM	5342	Physical Biochemistry
CS	5354	Validation Analysis and Interval Computations for Bioinformatics
MATH	5335	Techniques in Optimization
MATH	5336	Analysis of Categorical Data
MIT	5328	Applied Multiprocessing Computing

Course descriptions for these courses may be found in the Biological Sciences, Chemistry, Computer Science (CS and MIT), and Mathematical Sciences departmental listings of this Graduate Studies Catalog and are also listed below.

Biology (BIOL)

- 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. *Prerequisites:* 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.

Chemistry (CHEM)

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.

Computer Science (CS)

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.

Mathematics (MATH)

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 and knowledge of a high-level programming.

5336 Analysis of Categorical Data (3-0)

Exact nonparametric methods of inference using fast numerical algorithms to permute the observed data in all possible ways. *Prerequisite:* Department approval.

BIOLOGICAL SCIENCES

226 Biology Building
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biology@utep.edu

CHAIRPERSON: Eppie D. Rael

GRADUATE FACULTY: Aley, Aguilera, Arenaz, Bain, Baldwin, Brady, Cabeza, Das, Ellzey, Freeman, Goldstein, Harris, Irwin, Jones, Lieb, MacKay, Primm, Rael, Walsh, Webb, Worthington, Zhang

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 in a foreign institution
2. Undergraduate degree in biology or a related field and at least eight semester hours of general 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 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. Submission of official Graduate Record Examination (GRE) scores
4. Personal statement of research and professional interests
5. Three letters of recommendation indicating unqualified endorsement of the applicant for doctoral study
6. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or other English-speaking institution

Requirements for Ph.D. Degree in Biological Sciences

A minimum of 72 semester hours beyond the Bachelor's degree to include:

1. 36 semester hours of course work and seminars
2. 30 semester hours of 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 Numerical Methods in Biology
 - 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
- 3321 Evolutionary Theory
- 3326 Animal Ecology
- 3330 Histology
- 3341 Plants in Southwest Cultures
- 3414 Molecular Cell Biology
- 4198 Special Problems
- 4223 Transmission Electron Microscopy
- 4298 Special Problems
- 4322 Biological Ultrastructure Interpretation
- 4324 Animal Behavior
- 4325 Field Biology
- 4326 Bioarchaeology
- 4390 Biological Practicum
- 4398 Special Problems

Botany (BOT)

- 3330 Comparative Plant Morphology
- 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)

- 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)**
5502 Research in the Biological Sciences (0-0-5)
Emphasizes research, with writing and discussion. Not given as a formal class. May be repeated, but no more than six hours of credit will be counted towards degree. Laboratory fee required.
- 5305 Herpetology (2-3)**
A study of the morphology, taxonomy, and life histories of reptiles and amphibians. Laboratory fee required.
- 5307 Biology of the Pleistocene (3-0)**
A study of the organisms of the Pleistocene.
- 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.
- 5323 Ultrastructure (3-0)**
Current research advances in cellular biology.
- 5324 Mammalogy (2-3)**
Class Mammalia, with emphasis on morphological, physiological, ecological, and behavioral adaptations to past and present environments. Laboratory fee required.
- 5326 Advances in Immunological Concepts (3-0)**
Study of immunological and immunochemical concepts. Emphasis will be placed on recent experimental advances in immunology. *Prerequisite:* MICR 4453 or instructor approval.
- 5327 Advances in Ecological Theory (3-0)**
Study of recent advances in ecological theory with special emphasis on adaptation, population structure and dynamics, behavioral processes, and species interactions.
- 5328 Numerical Analysis in Biology (2-3)**
Study and application of specialized numerical methods in biological sciences. *Prerequisite:* Instructor approval.
- 5329 Physiology of the Bacterial Cell (3-0)**
The study of the biochemical and physiological processes occurring in the bacterial cell. Emphasis will be placed on recent experimental approaches that are in current use in microbial physiology research. *Prerequisite:* Instructor approval.
- 5340 Structure and Function of Macromolecules (3-0)**
Functional biology of cells, with emphasis on the relationship between molecular structure and function.

- 5342 Synthesis and Degradation of Macromolecules (3-0)**
In-depth discussion of the mechanisms and pathways for the synthesis of amino acids, lipids, membranes, and nucleic acids and for the degradation of carbohydrates, lipids, and the salvage pathways. *Prerequisite:* BIOL 5340 or instructor approval.
- 5343 Mechanisms of Cellular Toxicity (3-0)**
Theory and application of toxicology. Focus will be on the absorption, distribution, excretion, and metabolism of xenobiotic and toxic materials and the molecular approaches to the study of toxicology.
- 5344 Molecular Pathogenesis (3-0)**
Cellular and molecular basis of diseases induced or exacerbated by microbes, parasites, pollutants, poor sanitation, and malnutrition.
- 5346 Ecosystem Toxicology (3-0)**
Practical analysis of degraded natural communities of plants and animals, including biotic inventories, detection of bio accumulated toxins, and the use of indicator species.
- 5360 Limnology (3-0)**
Study of the freshwater environment, including chemical parameters and biological populations.
- 5398 Thesis (0-0-3)**
Initial work on the thesis.
- 5399 Thesis (0-0-3)**
Continuous enrollment required while work on thesis continues.
Prerequisite: BIOL 5398.
- 5401 Molecular Biology Techniques (2-6)**
Theory and application of modern molecular and cell biology techniques. Student projects combine theory and practical application in the laboratory. Laboratory fee required.

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 (0-6)

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.

CHEMISTRY

201A Physical Science Building
 (915) 747-5701 (ph)
 (915) 747-5748 (fax)
 chemistry@utep.edu
 www.chemistry.utep.edu

CHAIRPERSON: Jorge Gardea-Torresdey

GRADUATE FACULTY: Becvar, Chianelli, Davis, Dirk, Ellzey, Gardea-Torresdey, Martinez, Pannell, Salvador

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.

- 5329 **Contemporary Topics in Organic Chemistry (3-0)**
Selected topics of current interest in descriptive and theoretical organic chemistry. May be repeated for credit when topics vary.

- 5339 **Contemporary Topics in Biochemistry (3-0)**
Selected topics of current interest in organic or physical aspects of biological chemistry. May be repeated for credit when topics vary.

- 5351 **Advanced Physical Chemistry I (3-0)**
Schroedinger wave mechanics; atomic and molecular quantum states; applications to the treatment of wave functions for atoms and molecules.

- 5352 **Advanced Physical Chemistry II (3-0)**
Classical and statistical thermodynamics; applications to physical and chemical systems.

- 5359 **Contemporary Topics in Physical Chemistry (3-0)**
Selected topics of current interest in experimental and theoretical fields of physical chemistry. May be repeated for credit when topics vary.

- 5361 Advanced Inorganic Chemistry (3-0)**
Ionic, metallic, and covalent bonding; valence bond, molecular orbital, and ligand field theories; structure and properties of coordination compounds, metal carbonyls, and complexes.
- 5369 Contemporary Topics in Inorganic Chemistry (3-0)**
Selected topics in Inorganic Chemistry. May be repeated for credit when topics vary.
- 5398 Thesis (0-0-3)**
Initial work on the thesis.
- 5399 Thesis (0-0-3)**
Continuous enrollment required while work on thesis continues.
Prerequisite: CHEM 5398.

GEOLOGICAL SCIENCES

Geological Sciences 101
(915) 747-5501
mail@geo.utep.edu

CHAIRPERSON: Kate C. Miller

GRADUATE FACULTY: Andronicos, Anthony, Clark, Cornell, Doser, Goodell, Hoffer, Keller, Langford, LeMone, Miller, Pingitore, Schmidt, Schulze-Makuch

The Department of Geological Sciences offers a Doctor of Philosophy (Ph.D.) degree in Geological Sciences and the Master of Science (MS) degree in Geological Sciences and in Geophysics (in collaboration with the Department of Physics).

MS Degree 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 degree plan with the approval of the Graduate Advisor and the Graduate School. All candidates are required to enroll in GEOL 5101 every semester they are in

residence. All candidates are required to pass an oral defense of their thesis investigation in an open meeting. Draft copies of the thesis must be submitted to the thesis committee no less than 7 days prior to the defense. In order to graduate in a given semester, two copies of the final bound thesis must be submitted to the Graduate School by the published deadlines. Two bound copies and one unbound copy must also be submitted to the Graduate Advisor.

MS Degree in Geophysics

Requirements for Admission

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Undergraduate degree in geology or geophysics, with no deficiencies in science courses required for the BS degree in Geophysics at UTEP; prospective MS students whose BS degree was not in the geological sciences should contact the Graduate Advisor to discuss procedures leading to acceptance into the program
3. Submission of official Graduate Record Examination 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 degree plan 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 7 days prior to the defense. In order to graduate in a given semester, two copies of the final bound thesis must be submitted to the Graduate School by the published deadlines. Two bound copies and one unbound copy must also be submitted to the Graduate Advisor.

Time Limits and Catalog Changes

All requirements for an MS in Geological Sciences or Geophysics must be completed within one six-year period. Work more than 6 years old is lost and can be reinstated only by special permission of the Graduate School upon recommendation of the Departmental Committee on Graduate Studies.

General and specific requirements for degrees in the Graduate School may be altered in successive catalogs. Provided the requisite course continues to be offered, the student is bound only by the course requirements of the catalog in force at the time of admission, unless, with the approval of the Graduate School, he or she elects to be bound by the course requirements of a subsequent catalog. This regulation applies to course requirements only.

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 two professors in the Department of Geological Sciences, and at least one scientist or engineer from outside the Department of Geological Sciences--all of whom are members of the graduate faculty and are approved by the Graduate School. The total committee shall consist of at least five individuals.

Examinations

The Graduate Advisor will appoint a Comprehensive Examination Committee to administer the Comprehensive Examination. The Comprehensive Examination will normally be taken after removal of all deficiencies and completion of most of the course work. Any student who fails the Comprehensive Examination twice shall be barred from further consideration for Doctoral Candidacy.

Dissertation

A doctoral dissertation is required. This dissertation must demonstrate the candidate's capacity for originality and independence in recognizing a significant geological problem, in carrying out an effective investigation, and in interpreting and

reporting the results. The subject of the dissertation is to be selected in consultation with the dissertation advisor, and it must be approved by the student's Doctoral Committee and by the Graduate School. The dissertation advisor is to supervise the research work and to consult with other members of the Doctoral Committee on the progress of the work. The candidate is required to defend the dissertation before the faculty of the University in an open meeting under the supervision of his Doctoral Committee.

Draft copies of the dissertation must be submitted to the Doctoral Committee six days before the defense and any suggested corrections must be made. Prior to commencement and by the published deadlines, two copies of the final bound dissertation and the unbound original must be submitted to the Graduate School. Two bound copies must also be submitted to the Graduate Advisor.

Microfilming of Dissertation

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

With the dissertation, the student must also submit to the Graduate School two copies of an abstract, not to exceed two pages in length (double-spaced), which has been approved in final form by the Doctoral Committee. This will be published in *Dissertation Abstracts International*.

Publication by microfilm does not preclude subsequent publication of the dissertation, in whole or in part, as a monograph or in a journal. Copyright at the author's expense may be arranged, if desired, by completing a special form to be secured in the Graduate School. 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 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.
- 5382 Chemical Hydrogeology (3-0)**
A study of the chemistry of ground and surface water. Subjects covered by the course are the chemistry of natural waters, chemical interactions between geological materials and water, groundwater contamination and the movements of contaminants in groundwater. *Prerequisite:* Graduate standing.
- 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.

5386 Engineering Geology (3-0)

Introduction to the application of geologic fundamentals to geotechnical engineering and the analysis of geologic processes using continuum mechanics. Subjects covered include general soil and rock mechanics, slope stability, surface water and flooding, subsidence, earthquakes, volcanoes, shore line processes, expansive soils, and geologic aspects of engineering works (dams, tunnels, buildings, etc.). *Prerequisite:* GEOL 3423, GEOL 3321, or 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 biohermal 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.

Geophysics (GEOP)**5163 Directed Study in Geophysics (0-0-1)****5263 Directed Study in Geophysics (0-0-2)****5363 Directed Study in Geophysics (0-0-3)**

Prerequisites: Graduate standing and instructor approval.

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: Joe A. Guthrie

GRADUATE FACULTY: Argaez, Dogan-Dunlap, Duval, Foged, Gregory, Guthrie, Kaigh, Khamsi, Knaust, Moschopoulos, Nymann, Schwab, Sewell, Sha, Srinivasan, Staniswalis, Valdez-Sanchez, Velazquez, Wojciechowski

The Department of Mathematical Sciences offers the Master of Science (MS) degree in Mathematics or Statistics and the Master of Arts in Teaching (MAT) with a major in Mathematics.

Requirements for Admission

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Undergraduate degree in mathematics
3. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or other English-Speaking institution

Departmental Requirements for MS Degree

For the MS degree, both thesis and non-thesis options are available. The thesis option requires 24 semester hours of course work plus the completion of the six-semester hour thesis. The non-thesis option requires 36 semester hours of course work including MATH 5396. In either case, a maximum of nine semester hours of approved upper-division undergraduate courses are acceptable. Particular courses of study for the MS must be approved by the departmental committee on graduate studies. The passing of a comprehensive examination is required. All MS students must enroll in MATH 5195 each semester in residence.

Specific Requirements for the Master's Degree in Mathematics

Specific course requirements for the MS in Mathematics are MATH 5331, MATH 5351, and MATH 5380.

Specific Requirements for the Master's Degree in Statistics

Specific course requirements for the MS in Statistics are MATH 5380, MATH 5381, MATH 5385, and MATH 5388.

Departmental Requirements for the MAT Degree

Prior to admission, students must have completed the calculus sequence together with 12 semester hours of advanced courses in Mathematics (3300 or 4300-level). The student's GPA for these 12 hours must be at least 3.0. (Students with a bachelor's degree,

who do not satisfy these requirements, must first enroll in the post-baccalaureate program at UTEP.) Since the degree is intended for current and future high school teachers of Mathematics, it is desirable that the student will have obtained a teaching certificate in Mathematics upon completion of the program. (Teaching certification courses are not part of the MAT program; 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 MATH 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**
- 4299-**
- 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.

5311 Applied Mathematics (3-0)

Mathematics 5311 is designed to introduce the student to those areas of mathematics which are useful in engineering and science. Topics are chosen from Differential Equations, Fourier Series, Calculus of Variations, and Theory of Algorithms. The course may be repeated once as content changes.

Prerequisite: Instructor approval.

5321 Principles of Analysis (3-0)

Investigation of convergence, continuity, differentiability, compactness and connectedness, the Riemann-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: The analysis equivalent of MATH 3341 and a working knowledge of a high-level programming language.

5330 Computational Methods of Linear Algebra (3-0)

Numerical methods involved in the computation of solutions of linear systems of equations, eigenvalues, linear least squares solutions; linear programming; error analysis. *Prerequisites:* MATH 3323 and a working knowledge of a high-level programming language.

5331 Real Variables (3-0)

Lebesgue integration, integration with respect to measure, absolute continuity, Fundamental Theorem of Calculus for the Lebesgue integral.

Prerequisite: MATH 5321.

5341 General Topology (3-0)

Topics include: Separation, compactness, connectedness, paracompactness, metric spaces and metrization of topological spaces. *Prerequisite:* MATH 5321.

5343 Numerical Solutions to Partial Differential Equations (3-0)

Introduction to finite difference and finite element methods for the solution of elliptic, parabolic, and hyperbolic partial differential equations. *Prerequisites:* (1) MATH 2326 or MATH 3326; MATH 3323; and MATH 4329, each with a "C" or better or their equivalents and (2) knowledge of a high level programming language.

5351 Complex Variables (3-0)

Complex integration and the calculus of residues. Analytical continuation and expansions of the analytic function. Entire, meromorphic, and periodic functions.

Prerequisite: MATH 5321 or its equivalent as approved by the instructor.

- 5360 Introduction to Research in Mathematics Education (3-0)**
An introduction to current research literature in mathematics education focusing on the relations between theories of cognition and learning and philosophies of mathematics. Topics may include constructivism, Vygotskian theory, genetic epistemology, and technological cognition. The course may be repeated once for credit as content changes. *Prerequisites:* MATH 3300 with a grade of "C" or better and department approval.
- 5365 Technology in the Mathematics Classroom (3-0)**
An introduction to technology used in mathematics education such as graphing calculators, computer algebra systems, course specific software and the use of the Internet, and an exploration of its appropriate and effective use in the mathematics classroom. *Prerequisite:* Department approval.
- 5370 Seminar (3-0)**
Various topics not included in regular courses will be discussed. May be repeated once for credit as the topics vary. *Prerequisite:* Instructor approval.
- 5380 Mathematical Statistics I (3-0)**
The probabilistic foundations of mathematical statistics. Probability spaces, random variables, univariate and multivariate probability distributions, conditional distributions, expectation, generating functions, multivariate transformations, modes of convergence, and limit theorems. *Prerequisite:* STAT 3330 or its equivalent as approved by instructor.
- 5381 Mathematical Statistics II (3-0)**
A continuation of Mathematical Statistics I. Parametric statistical models, sufficiency, exponential families, methods of estimation, comparison of estimators, confidence intervals, hypothesis testing, optimal tests, likelihood ratio tests, large sample theory. *Prerequisite:* MATH 5380.
- 5385 Statistics in Research (3-0)**
An introduction to statistical modeling of a univariate response conditional on a test of explanatory variables. Classical formulation of multiple linear regression and analysis of variance. Some discussion of experimental design from power considerations. Selected topics from generalized linear models, nonparametric regression, and quasi-likelihood estimation. Emphasis is on model building, fitting, validation, and subsequent inferences. Analysis of real data using major statistical software packages. *Prerequisite:* MATH 3323, STAT 4380, or instructor approval.
- 5386 Stochastic Processes (3-0)**
Random walks, discrete time Markov chains, and Poisson Process. Further topics such as continuous time Markov chains, branching processes, renewal theory, and estimation in branching processes. *Prerequisites:* (1) MATH 4341 and (2) STAT 3330 or MATH 5380.
- 5388 Multivariate Data Analysis (3-0)**
Statistical analysis of a multivariate response. Multivariate multiple linear regression, principal components, factor analysis, canonical correlation, and discriminate analysis. Applications with the use of statistical packages will be considered. *Prerequisite:* MATH 5385 or equivalent.

5390 Nonparametric Statistics (3-0)

Distribution-free statistical methods; nonparametric one and two sample tests and analysis of variance; goodness-of-fit tests; nonparametric measures of association; and robust procedures. *Prerequisite:* MATH 5380 or equivalent.

5391 Time Series Analysis (3-0)

Time domain and frequency domain aspects of discrete time stationary processes, correlation functions, power spectra, filtering, linear systems, and arma models for non-stationary series. An introduction to the analysis of multiple time series. Some use of statistical software will be included. *Prerequisite:* MATH 5380.

5392 Statistical Computing (3-0)

A study of stochastic simulation and select numerical methods used in statistical computation. *Prerequisites:* A high-level programming language, linear algebra, and STAT 4380 or equivalent.

5396 Graduate Research (0-0-3)

A written report on an appropriate subject in mathematics or statistics is required. May not be counted towards the 24 hours of course work in the thesis option, but may be substituted for three hours of thesis credit. May not be repeated for credit. *Prerequisite:* Instructor approval.

5398 Thesis (0-0-3)

Initial work on the thesis.

5399 Thesis (0-0-3)

Continuous enrollment required while work on thesis continues. *Prerequisite:* MATH 5398 or department approval.

PHYSICS

210 Physical Science
(915) 747-5715
physics@utep.edu

CHAIRPERSON: Jorge A. López

GRADUATE FACULTY: Cole, Fitzgerald, J.A. Lopez, R.E. Lopez, Ravelo, Smith, Turner

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.
- 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)**
Boundary value problems, polarization and stress tensor. Conservation laws and energy-momentum tensor. Relativistic electrodynamics. Covariant form of field equations. Potentials and gauge invariance. Offered during spring semester. *Prerequisite:* PHYS 4342.
- 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

Degree Programs

Ph.D.	Environmental Science and Engineering Materials Science and Engineering
MAIS	Master of Arts in Interdisciplinary Studies
MBA/MPA	Master of Business Administration and Master of Public Administration
MBA/MSN	Master of Business Administration and Master of Science in Nursing
MFA	Master of Fine Arts in Creative Writing
MIT	Master of Information Technology
MSIS	Master of Science in Interdisciplinary Studies

Interdisciplinary Programs

PH.D. IN ENVIRONMENTAL SCIENCE AND ENGINEERING

Center for Environmental Resource Management
(915) 747-5433
jgardea@utep.edu

PROGRAM DIRECTOR: Jorge Gardea-Torresdey

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

Foundation/Leveling Coursesas needed
ESE Core Course10-12
Environmental Project6
Elective Courses*6
Research21-24
Dissertation6

* May include six hours of ESE 6107 and additional core courses, if approved by the student's Doctoral Advisory Committee.

Students will be required to pass a qualifying examination based upon the material covered in the ESE core courses and any leveling courses they may have taken, before completing 24 hours of course work. A grade of "B" or better in a core course exempts a student from taking a qualifying exam in that subject area.

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 geo hazards, 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 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 materials, structure, properties, synthesis and processing, and performance. Students develop a research focus in a specialized area using one or more of these skills to study some class or classes of materials, including metals, polymers, ceramics, semiconductors, superconductors, composites, and other materials systems.

Students in the program take a common core:

- Advanced Concepts in Materials Sciences and Engineering
- Materials Applications and Engineering
- Microchemical and Microstructural Characterization of Materials
- Contemporary Topics in Materials Science and Engineering
- Research Symposium and Instrumentation and Modeling Short Courses

Requirements for Admission

Admission to the Ph.D. program in materials science and engineering with a BS or MS degree in a related field requires a minimum 3.0 GPA and a minimum TOEFL score of 550 for applicants from countries where English is not the principal language. GRE scores will also be considered for all applicants.

Requirements for Degree

Degree requirements include a 17-hour core course sequence and a minimum of six hours of dissertation. Additional hours of specialization, individual studies, and research are also required to achieve a minimum of 85 hours beyond the BS degree. Materials research with a faculty mentor affords specialization that can serve as the basis for the dissertation. An acceptable dissertation must include a technical paper submitted to a refereed journal by the student as the senior author. A dissertation proposal and oral examination of subject area constitutes a Qualified Examination prior to engaging in dissertation research.

Students entering the program with a BS degree will normally take from 85 to 100 hours of graduate study for the Ph.D. Students entering with an MS degree would normally receive 30 hours of advanced standing toward the Ph.D. for their master's level work. There are no specific (non-English) language proficiency requirements.

Materials Science and Engineering (MASE)

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. *Prerequisite:* MME 5401, MME 5303 or equivalent, or instructor approval.

5344 **Interfacial Phenomena in Materials Systems (3-0)**

Thermodynamics of solid interfaces and interfacial equilibria. Interfacial free energy concepts and measurements. Structure of interfaces: solid surfaces, grain boundaries, phase boundaries, and system interfaces. Properties of interfaces and their role in materials performance. Offered in alternate years. *Prerequisites:* MME 5401, MME 5303, MME 5304, and MME 5305 or equivalent, or instructor approval.

5372 **Advanced Optoelectronic Devices (3-0)**

Theory and application of advanced photonic devices including injection lasers, photodiodes, infra-red detectors, solar cells, and electroluminescent displays. *Prerequisite:* MASE 5371 or equivalent.

5389 **High Speed GaAs Devices (3-0)**

Advanced topics of contemporary interest in high speed GaAs devices. May be repeated for credit when topic varies. *Prerequisite:* Instructor approval.

5390 **Special Topics in the Chemistry of Materials (3-0)**

Synthesis of polymers and advanced materials by condensation, addition, and other types of polymerization. Solution methods of characterization. Solid state properties and their structural basis. May be repeated for credit when topic varies. *Prerequisite:* Instructor approval.

5391 **Special Topics in the Physics of Materials (3-0)**

Molecular and crystal structure of polymers and advanced materials. Brillouin-zones, nature of cohesive energy, thermal behavior, electrical and thermal transport magnetism, super conductivity, and optical properties. May be repeated for credit when topic varies. *Prerequisite:* Instructor approval.

6191 **Individual Studies (0-0-1)**

6291 **Individual Studies (0-0-2)**

6391 **Individual Studies (0-0-3)**

Independent studies in materials science and engineering.

- 6294 Graduate Research Projects (0-0-2)**
6394 Graduate Research Projects (0-0-3)
- 6301 Materials Applications and Engineering (3-0)**
 A blend of applied materials processing and synthesis, examination of selected materials performance, and fundamental issues examining materials analysis and modeling. The fabrication of selected materials will be covered in the context of specific applications, i.e., semiconductors and device applications, artificially structured materials (MBE, CVD, etc.), solidification and rapid solidification technologies, vapor deposition and surface processing, solid-state forming processes, joining, consolidation, materials removal, and electrolytic processing. The performance issues will include atomistic studies, micromechanics of strength and fracture and degradation damage, failure analysis, and life prediction.
- 6302 Contemporary Topics in Materials Science and Engineering: Materials Chemistry (3-0)**
 Selected topics from the contemporary materials chemistry literature presented in a variable format which normally involves a combination of topical lectures and critical review of the literature (including individual and student team critiques involving oral and written presentations). Usually team taught by department faculty.
- 6303 Contemporary Topics in Materials Science and Engineering: Materials Physics (3-0)**
 Selected topics from the contemporary materials physics literature presented in a variable format which normally involves a combination of topical lectures and critical review of the literature (including individual and student team critiques involving oral and written presentations). Usually team taught by department faculty.
- 6304 Contemporary Topics in Materials Science and Engineering: Materials Engineering (3-0)**
 Selected topics from the contemporary materials engineering literature presented in a variable format which normally involves a combination of topical lectures and critical review of the literature (including individual and student team critiques involving oral and written presentations). Usually team taught by department faculty.
- 6390 Contemporary Topics in Materials Science and Engineering (3-0)**
 Selected topics from materials science and engineering. Course may be repeated twice for credit as topic varies.
- 6398 Dissertation (0-0-3)**
 Initial work on the dissertation.
- 6399 Dissertation (0-0-3)**
 Continuous enrollment required while work on the dissertation continues.
Prerequisite: MASE 6398.

6400 Advanced Concepts in Materials Science and Engineering (4-0)

A blend of contemporary solid state physics and chemistry emphasizing structure and properties and including processing (synthesis) and performance, illustrated by various classes of materials: structural, electronic, magnetic, photonic, and superconducting. Fundamental issues and applications will include: crystal structure and crystal chemistry; disorder/order imperfections; phase equilibria, phase diagrams, phase transformation; reaction rates, kinetics, thermodynamics; microstructures in processing and performance; materials design/materials by design.

6402 Microchemical and Microstructural Characterization of Materials (3-0)

The structure and composition of materials can be investigated at a variety of levels utilizing a variety of analytical techniques. It is imperative that the principles and applications of a range of these techniques be presented to students examining classes of materials. Techniques which can allow microscopic and macroscopic characterization should be presented as well as techniques for bulk, surface, and related interfacial characterization. This course will focus on a variety of microscopy and spectrometry techniques-- optical, electron, acoustic, and ion. As many microanalysis areas as possible will be demonstrated by having students visit facilities on the campus which constitute a materials characterization and analysis network. Principal microanalysis areas will include: x-ray diffraction, electron microscopy (scanning and transmission), electron probes, surface and near surface microanalysis, and optical and acoustic microscopy.

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 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 College of Liberal Arts under the Political Science section.

MASTER OF BUSINESS ADMINISTRATION AND MASTER OF SCIENCE IN NURSING: TWO DEGREE OPTION

See information regarding this two degree option under the College of Business Administration and in the College of Health Sciences.

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.cs.utep.edu>

PROGRAM DIRECTORS: David Novick and Godwin John Udo
 CS GRADUATE FACULTY: d'Auriol, Gates, Novick, Roach, Sassenfeld, Teller, Ward
 IDS GRADUATE FACULTY: Gemoets, Hall, 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 Management Admission Test (GMAT) total score of at least 450 and an analytical writing score of 3.0, or 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 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

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	5320	Rapid Application Development
MIT	5322	Hardware Software Computing Environments
MIT	5324	Object-Oriented Analysis & Design
MIT	5326	End-User Computing
MIT	5328	Applied Multiprocessing Computing

Select one from the following:

COMM 5362, ENGL 5311, ENGL 5314, or ENGL 5315

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.

5320 Rapid Application Development (3-0)

This course surveys recent industrial trends for rapid development and maintenance of application software. It focuses on tools for software development, documentation, testing, and maintenance as well as tools and techniques for human interactions and software architecture.

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.
- 5326 End-User Computing (3-0)**
This course presents an overview of the post-data processing environment describing the characteristics of the transitional DP environment and the end-user computing phenomenon. It focuses on the management of end-user computing resources through establishment of critical success factors and assessment criteria. The course will survey end-user computing tools and examine the importance of planning, support, and training for end-user computing. The course will include a project on the end-user perception of topics such as information systems success, user involvement in design, end-user training, and user documentation. *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.
- 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.

MASTER OF SCIENCE IN INTERDISCIPLINARY STUDIES (M.S.I.S.)

See information regarding this degree in the College of Science section.

FACULTY AND STAFF

Faculty
Professional Library Staff
Administrative Staff

FACULTY AND STAFF

Faculty

MELISSA COLGIN ABELN, Associate Professor of Music, 1987

B.M., University of Alabama; M.M., D.M.A., University of Texas at Austin

LONNIE LEE ABERNETHY, Professor Emeritus in the Department of Metallurgical and Materials Engineering, 1963

B.Cer.E., North Carolina State University; M.Sc., Ph.D., Ohio State University

YVONNE ACOSTA, Clinical Assistant Professor of Nursing, 1999

B.S.N., M.S.N., University of Texas at El Paso; J.D., St. Mary's University School of Law

CAROLYN ADAMS, Professor of Nursing, 2001

B.A., Franklin and Marshall College; M.S., Villanova University; M.S.N., University of Delaware; Ed.D., University of San Francisco

RENATO J. AGUILERA, Professor of Biological Sciences, 2002

B.S., M.S., University of Texas at El Paso; Ph.D., University of California, Berkeley

MARY LOUISE ZANDER AHO, Associate Professor Emerita of Elementary and Secondary Education Studies, 1963

M.S.E., University of Florida; M.A., University of Texas at El Paso; Ph.D., Florida State University

PATRICIA ADKINS AINSA, Professor of Teacher Education, 1977

B.A., University of Texas at El Paso; M.S., Eastern New Mexico University; Ph.D., University of Colorado, Boulder

STEPHEN B. ALEY, Assistant Professor of Biological Sciences, 1995

B.S., California Institute of Technology; Ph.D., Rockefeller University

JON AMASTAE, Professor of Languages and Linguistics, 1980

B.A., University of New Mexico; Ph.D., University of Oregon

MARIA ALVAREZ AMAYA, R.N., Professor of Nursing, 1986

B.S.N., University of Texas at El Paso; M.S.N., Texas Woman's University; Ph.D., New Mexico State University

CHARLES H. AMBLER, Professor of History, 1984

B.A., Middlebury College; M.A., Ph.D., Yale University

JAIME P. ANAYA, Clinical Assistant Professor in Cooperative Pharmacy, 2000

B.S., and Pharm.D. University of New Mexico

CHRISTOPHER L. ANDRONICOS, Assistant Professor of Geological Sciences, 1999

B.S., University of New Mexico; Ph.D., Princeton University

ELIZABETH YOUNGBLOOD ANTHONY, Associate Professor of Geological Sciences, 1988

B.A., Carleton College; M.S., Ph.D., University of Arizona

- NANCY ANTRIM**, Assistant Professor of Languages and Linguistics, 1996
B.A., M.A., University of Texas at El Paso; Ph.D., University of Southern California
- HOWARD GEORGE APPLGATE**, Professor Emeritus in the Department of Civil Engineering, 1970
B.S., M.S., Colorado State University; Ph.D., Michigan State University
- PABLO ARENAZ**, Professor of Biological Sciences, 1984
B.S., M.S., 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
- SHELLEY S. ARMITAGE**, Professor of English, 1996
B.A., M.A., Texas Tech University; Ph.D., University of New Mexico
- JOHN CLEVELAND ARNOLD**, Associate Professor Emeritus of Art, 1965
B.A., University of Minnesota; M.F.A., Arizona State University
- ROY M. ARROWOOD, JR.**, Associate Professor in the Department of Metallurgical and Materials Engineering, 1989
B.S., North Carolina State University; M.S., Ph.D., University of California, Davis
- MICHAEL EVAN AUSTIN, P.E.**, Professor Emeritus of Electrical Engineering, 1963
B.S.E.E., M.S.E.E., Ph.D., University of Texas at Austin
- WALTER G. AUSTIN, JR., CPA**, Associate Professor Emeritus of Accounting, 1995
B.B.A., M.B.A., Texas Tech University; Ph.D., University of Texas at Austin
- ALBERTO IAN BAGBY, JR.**, Associate Professor of Languages and Linguistics, 1973
A.B., Baylor University; M.A., University of Missouri; Ph.D., University of Kentucky
- KENNETH KYLE BAILEY**, Professor Emeritus of History, 1960
B.A., M.A., Ph.D., Vanderbilt University
- LISA J. BAIN**, Assistant Professor of Biological Sciences, 2001
B.S., 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
- 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
B.S., New Mexico State University; M.S., Troy State University; Ph.D., University of New Mexico

- STEVEN BARRACCA**, Assistant Professor of Political Science, 1999
B.S., State University of New York; M.A., University of Miami; Ph.D., University of Texas at Austin
- EDUARDO BARRERA**, Associate Professor of Communication, 1992
B.A., Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico;
M.A., Ph.D., University of Texas at Austin
- GUIDO ALAN BARRIENTOS**, Professor Emeritus of Psychology, 1963
B.A., Universidad de San Carlos (Guatemala); M.A., Ph.D., University of Kansas
- HERBERT H. BARTEL, P.E.**, Professor Emeritus of Civil Engineering, 1972
B.S.C.E., Southern Methodist University; M.S.C.E., University of Texas at Austin;
Ph.D., Texas A&M University
- LINDA BASS**, Assistant Professor of Nursing, 1994
B.S.N., M.S.N., University of Texas at El Paso
- CHARLES RICHARD BATH**, Professor Emeritus of Political Science, 1966
B.A., University of Nevada; M.A., Ph.D., Tulane University
- KIM BAUER**, Associate Professor of Art, 1989
B.F.A., Michigan State University; M.F.A., Eastern Michigan University
- KENNETH EPHRIAM BEASLEY, P.E.**, Professor Emeritus of Political Science, 1967
B.A., M.A., Ph.D., University of Kansas
- JAMES EDGAR BECVAR**, Associate Professor of Chemistry, 1978
A.B., College of Wooster; Ph.D., University of Michigan
- THOMAS BEEMAN**, Assistant Professor of Nursing, 1993
B.S.N., Winona State College; M.S.N., Medical College of Georgia; Ph.D., American University, Washington, D.C.
- ELLEN M. BENNET**, Assistant Professor of Speech-Language Pathology, 1997
B.S., University of Texas at Austin; M.A., California State University at Northridge;
Ph.D., University of Colorado.
- STEVEN BEST**, Associate Professor of Philosophy and Humanities, 1993
B.A., University of Illinois; M.A., University of Chicago; Ph.D., University of Texas at Austin
- SANDRA STEWART BEYER**, Associate Professor of Languages and Linguistics, 1972
B.A., Wichita State University; M.A., M.Phil., Ph.D., University of Kansas
- AMITAVA BISWAS**, Lecturer of Speech Language Pathology, 2000
B.S., India Institute of Technology, M.S., Indiana University
- DENNIS J. BIXLER-MARQUEZ**, Professor of Teacher Education and Chicano Studies, 1978
B.A., M.Ed., University of Texas at El Paso; M.A., Ph.D., Stanford University
- SALLY BLAKE**, Associate Professor of Teacher Education, 1994
B.S.E., M.S.E., Arkansas State University; Ph.D., University of Mississippi
- EDWARD LEE BLANSITT, JR.**, Professor of Languages and Linguistics, 1967
B.H., Instituto Tecnológico de México; Ph.D., University of Texas at Austin

- ROBERT TERRELL BLEDSOE**, Professor of English, 1971
B.A., Harvard University; M.A., University of Kent, Canterbury; Ph.D., Princeton University
- MICHAEL HENRY BLUE**, Associate Professor Emeritus of Physics, 1964
B.S., Colorado State University; Ph.D., University of Washington
- ART W. BLUME, IV**, Assistant Professor of Psychology, 2001
B.S., Southwest Missouri State University; M.Div., McCormick/University of Chicago Cluster; M.S., Ph.D., University of Washington
- RICHARD M. BOIS**, Associate Professor of Occupational Therapy and Physical Therapy, 1997
B.A., University of Colorado; B.S.N., St. Louis University; B.S., University of Texas Medical Branch; Ph.D., University of California at Los Angeles
- MAX CARLTON BOLEN**, Professor Emeritus of Physics, 1965
B.S., Wabash College; M.S., Purdue University; Ph.D., Texas A&M University
- SCARLET BOWEN**, Assistant Professor of Women's Studies, 2001
B.A., University of West Florida; M.A., University of Miami; Ph.D., University of Texas at Austin
- THOMAS E. BRADY**, Professor of Biological Sciences, 1997
B.A., Beloit College; M.S., Ph.D., Yale University
- JEFFERY T. BRANNON**, Associate Professor of Economics, 1982
B.A., University of New Mexico; Ph.D., University of Alabama
- GARY P. BRAUN**, Assistant Professor of Accounting, 1994
B.S., University of Nevada, Reno; Ph.D., University of Arizona
- CHRISTINE T. BRENNER**, Assistant Professor of Political Science, 1999
B.A., Allegheny College; M.A., Ph.D., University of Texas at Arlington
- GEORGE BRENZOVICH**, Head Rifle Coach of Intercollegiate Athletics, 1999
B.A., King's College, B.S., Wilken's College, B.S., Boston University
- SAMUEL JOHN BRIENT, JR.**, Professor Emeritus of Physics, 1962
B.S., Ph.D., University of Texas at Austin
- JOHN RICHARD BRISTOL**, Professor Emeritus of Biological Sciences, 1970
B.A., Cornell College; M.A., Ph.D., Kent State University
- ARTURO BRONSON**, Professor in the Department of Metallurgical and Materials Engineering, 1983
B.S.Met.E., M.S., University of Texas at El Paso; Ph.D., Ohio State University
- GARY DONALD BROOKS**, Associate Professor of Educational Leadership and Foundations, 1968
B.M.E., Millikin University; M.S.Ed., Ed.D., Indiana University
- RUFUS E. BRUCE**, Professor Emeritus of Physics, 1966
B.S., Louisiana State University; M.S., Ph.D., Oklahoma State University

QUINCEALEA BRUNK, Associate Professor of Nursing, 1999

B.S.N., Morningside College; M.S.N., University of Missouri at Kansas City;
Ph.D., University of Texas at Austin

SAMUEL BRUNK, Associate Professor of History, 1998

B.A., Washington University; M.A., Ph.D., University of New Mexico

BETH BRUNK-CHAVEZ, Assistant Professor of English, 2002

B.A., New Mexico State University; M.A., University of Texas at El Paso;
Ph.D., University of Texas at Arlington

ROBERT NORTHCUTT BURLINGAME, Professor Emeritus of English, 1954

B.A., M.A., University of New Mexico; Ph.D., Brown University

LOU ELLA BURMEISTER, Professor Emerita of Teacher Education, 1968

B.A., M.A., Ph.D., University of Wisconsin

RON BYBEE, Assistant Professor of Physical Therapy, 1994

B.S., M.S., University of Southern California, Los Angeles; Dip MDT, McKenzie
Institute International, New Zealand

BARTHY BYRD, Associate Professor of Communication, 1984

B.A., M.A., New Mexico State University; Ph.D., University of New Mexico

RAFAEL DE JESUS CABEZA, Assistant Professor of Biological Sciences, 1996

A.B., Harvard University; Ph.D., McGill University

SERGIO D. CABRERA, Associate Professor in the Department of Electrical and
Computer Engineering, 1992

B.S., Massachusetts Institute of Technology; M.S., University of Arizona;
Ph.D., Rice University

HOWARD CAMPBELL, Associate Professor of Anthropology, 1991

B.A., University of Idaho; M.A., Ph.D., University of Wisconsin

ALBERT GEORGE CANARIS, Professor Emeritus of Biological Sciences, 1970

B.S., M.A., Washington State University; Ph.D., Oregon State University

ERZA CAPPELL, Assistant Professor of English, 2002

B.A., Queens College; M.A., New York City College; Ph.D., New York University

HUGH F. CARDON, Professor of Music, 1963

B.M., M.A., University of Texas at El Paso; D.M.A., University of Oregon

MARY CARLSON, Assistant Professor of Physical Therapy, 1999

B.S., Indiana University; M.S., Ph.D., Texas Woman's University

DAVID CARMICHAEL, Associate Professor of Anthropology, 1991

B.A., University of New Mexico; M.A., Ph.D., University of Illinois

MARTHA CASAS, Assistant Professor of Teacher Education, 2001

B.S., M.A., University of Texas at El Paso; Ed.D., Harvard University

PATRICIA. CASTIGLIA, R.N., Professor Emerita of Nursing, 1990

B.S., University of Buffalo; M.S., Ph.D., State University of New York at Buffalo

- DANIEL CHACON**, Assistant Professor of English, 2000
B.A., M.A., California State University; M.F.A., University of Oregon
- VALERIE CHAPMAN**, Assistant Professor of Teacher Education, 2001
B.S., M.Ed., Ed.D., Texas Tech University
- ERNESTO CHÁVEZ**, Assistant Professor of History, 1993
B.A., M.A., Ph.D., University of California, Los Angeles
- RUSSELL R. CHIANELLI**, Professor of Chemistry, 1996
B.S., Ph.D., Polytechnic Institute of Brooklyn
- AHSAN R. CHOUSHURI**, Assistant Professor of Mechanical and Industrial Engineering, 2001
B.S., Bangladesh Institute of Technology, Khulna; M.S., Ph.D., University of Oklahoma
- PETER STANLEY CHRAPLIWY**, Associate Professor Emeritus of Biological Sciences, 1960
B.A., M.A., University of Kansas; Ph.D., University of Illinois
- YI-CHANG CHUI**, Assistant Professor of Civil Engineering, 2002
B.Sc., National Taiwan University; M.S., National Chio-Tung University;
Ph.D., University of Texas at Austin
- CAROL CLARK**, Associate Professor of English, 1993
B.A., Rice University; M.Ed., University of Houston; M.A., California State University, San Bernardino; Ph.D., Texas Christian University
- KENNETH FREDRICH CLARK**, Professor Emeritus of Geological Sciences, 1980
B.S., University of Durham; M.S., Ph.D., University of New Mexico
- KENTON J. CLYMER**, Professor of History, 1970
A.B., Grinnell College; M.A., Ph.D., University of Michigan
- LAWRENCE DAVID COHN**, Associate Professor of Psychology, 1989
B.A., Boston University; Ph.D., Washington University
- PHILIP LAWRENCE COLE**, Assistant Professor of Physics, 1997
B.A., Cornell University; M.S., Ph.D., Purdue University
- EDMUND BENEDICT COLEMAN**, Professor Emeritus of Psychology, 1965
B.S., University of South Carolina; M.A., Ph.D., Johns Hopkins University
- KAREN J. COLEMAN**, Assistant Professor of Psychology, 1997
B.S., Washington State University; M.S., Ph.D., University of Georgia
- MARY LILLIAN COLLINGWOOD**, Associate Professor Emerita of English, 1947
B.A., University of Texas at El Paso; M.A., University of Michigan
- BENNY WESLEY COLLINS**, Associate Professor Emeritus of Kinesiology, 1950
B.A., University of Texas at El Paso; M.S., University of Utah
- DON C. COMBS**, Associate Professor of Educational Psychology and Special Services, 1989
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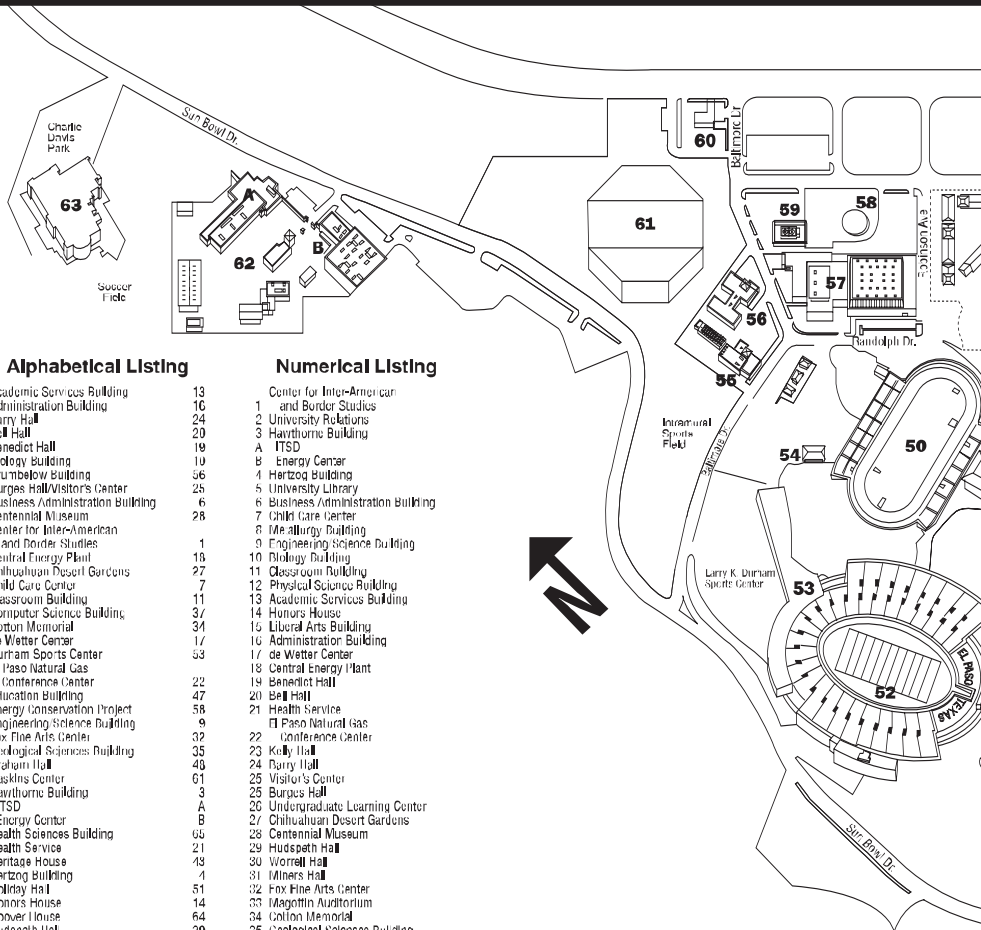
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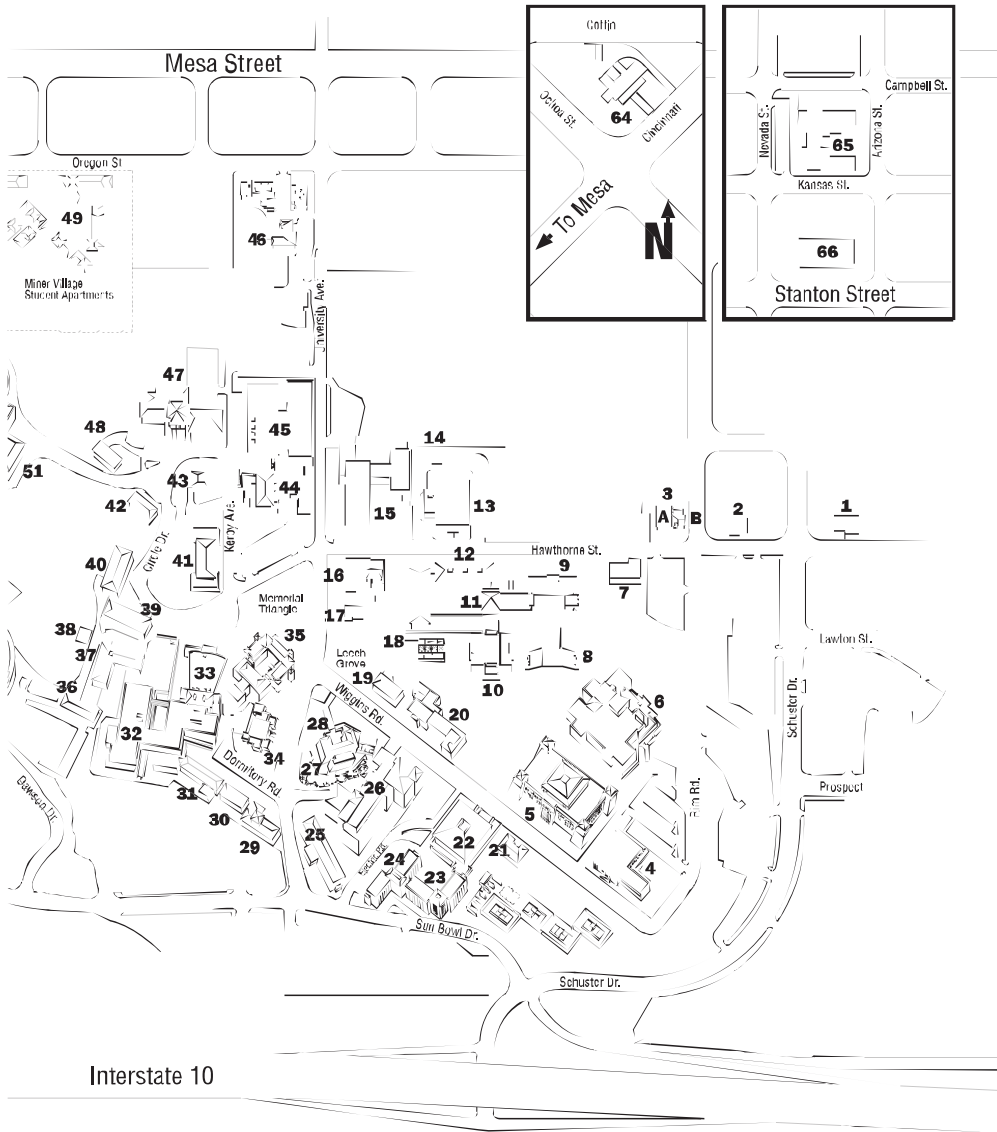
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The University of

CAMPUS MAP



Texas at El Paso