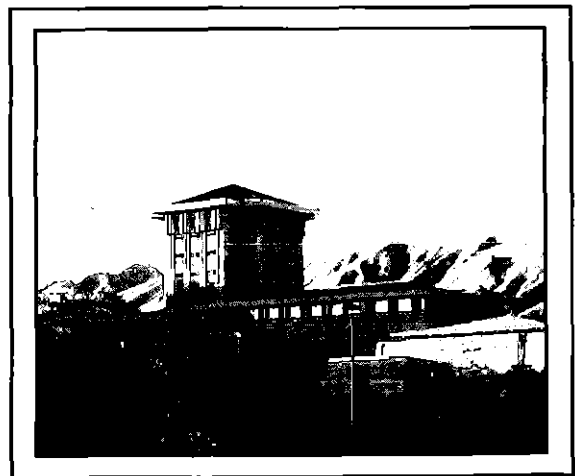


THE UNIVERSITY OF TEXAS AT EL PASO

# UNDERGRADUATE STUDIES

1996-1998



**UTEP**



# The University of Texas at El Paso

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## Undergraduate Studies Catalog 1996-1998

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**Statement of Equal Educational Opportunity**

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

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# General Information



## University History

The University of Texas at El Paso, known as UTEP, is the second oldest academic component of the University of Texas System. It was founded by the Texas Legislature in 1913 as the State School of Mines and Metallurgy, a name that reflected the scope of education offered at the early West Texas school. The first campus, located on land that is now part of the Fort Bliss Army post, was destroyed by fire a few years after the college's inception. The school moved in 1916 to the present campus on the western foothills of the Franklin Mountains, just a stone's throw from the Rio Grande.

In the move to the present 366-acre site, UTEP acquired what has become one of its most distinctive non-academic trademarks - the Bhutanese-style architecture that makes the campus's buildings look more like exotic Oriental castles than stacks of classrooms and offices. The motif, characterized by thick, sloped outer walls topped with elaborate brickwork, was inspired by Kathleen Worrell, the wife of the college's first dean, and designed by noted El Paso architect Henry Trost. Mrs. Worrell, an avid arm-chair traveler, had seen photographs of Bhutanese buildings in the Himalayan Mountains and decided that similar architecture would complement the rugged desert terrain at the college's new site. Architects have continued the theme through nearly 80 years of campus expansion.

After the move to the new campus, the school grew steadily. In 1919, the institution became a branch of the University of Texas System and was renamed the Texas College of Mines and Metallurgy. In 1927, liberal arts courses were added to the curriculum. The first master of arts degree program was established in 1940. By 1949 enrollment approached 2,400, and the institution was renamed Texas Western College. Texas Western College became the University of Texas at El Paso in 1967 and boasted a student population of more than 9,000.

Since then, the size of the student body has nearly doubled, reaching an all-time high of 17,213 in 1992. UTEP has continued to grow both physically and academically to meet the needs of an increasingly industrialized West Texas region. The UTEP campus now consists of 76 buildings, including the 52,000-seat Sun Bowl Stadium, and the 12,222-seat Special Events Center, a modern fine arts complex with galleries and recital halls and a museum of natural and cultural history. A new Undergraduate Learning Center will feature state of the art learning technology.

As UTEP moves into the 21st century, its innovative curriculum and sensitivity to the needs of El Paso's predominantly Hispanic community is earning the University a reputation as a national research center of excellence for the education of minorities and for being a national model for urban higher education.

## VISION

The University of Texas at El Paso (UTEP) commits itself to providing quality higher education to a diverse student population. The University aims 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. UTEP will ensure that all of 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 market-place. UTEP also envisions using its binational location to create and maintain multi-cultural, inter-American educational and research collaborations among students, faculty, institutions and industries, especially in northern Mexico.

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

## 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 multi-cultural characteristics of this region, the University provides its students and faculty with distinctive opportunities for learning, teaching, research, artistic endeavors, cultural experiences, and service.

## GOALS: 1995-1999

### 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 of and opportunities within 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, scholarships, 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.

**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.

## DEGREES AND PROGRAMS

UTEP's six undergraduate Colleges—Business Administration, Education, Engineering, Liberal Arts, Nursing and Health Sciences, and Science—comprise some 34 academic departments and offer more than 60 baccalaureate degrees. The Graduate School offers 60 master's degrees in disciplines from all six Colleges. Doctoral degrees are offered in Computer Engineering, Environmental Science and Engineering, Geological Sciences, Materials Science and Engineering, and Psychology; an Ed.D. degree is offered in Educational Leadership and Administration.

Expanding on 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 1990. Using more than \$20 million in grants from the National Science Foundation and other agencies, UTEP has concentrated in recent years on developing state-of-the-art science laboratories. Its reward was approval from the Texas Higher Education Coordinating Board in 1993 for a doctoral program in materials science and engineering. UTEP also offers the doctoral degree in environmental science and engineering.

UTEP also continues to develop its liberal arts and social sciences offerings in response to the needs of the bilingual and bicultural community in which the university is situated. Recent additions include a master of fine arts degree in creative writing in which students study and write in English, Spanish or both languages, a Ph.D. in Psychology, and an Ed.D. in educational leadership and administration.

## STUDENT BODY

Students who attend UTEP come from a unique mix of social, cultural and economic backgrounds that closely mirrors the population of the El Paso community. Sixty-four percent of UTEP's students are Hispanic and 3 percent are African-American. Nearly 8 percent come from Mexico. Seventy-five percent of UTEP's students work either full-time or part-time while in school, and 62 percent are first-generation college students. Students represent 47 states and 67 countries.

## 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 404-679-4501) 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

**BERNARD RAPOPORT**, Chairman  
**THOMAS O. HICKS**, Vice-Chairman  
**MARTHA E. SMILEY**, Vice-Chairman  
**ARTHUR H. DILLY**, Executive Secretary

## MEMBERS

Terms Expire February 1, 2001:

**LINNET F. DEILY**, Houston  
**DONALD L. EVANS**, Midland  
**TOM LOEFFLER**, San Antonio

Terms Expire February 1, 1999:

**THOMAS O. HICKS**, Dallas  
**LOWELL H. LEBERMANN, JR.**, Austin  
**MARTHA E. SMILEY**, Austin

Terms Expire February 1, 1997:

**ZAN W. HOLMES, JR.**, Dallas  
**BERNARD RAPOPORT**, Waco  
**ELLEN CLARKE TEMPLE**, Lufkin

## OFFICE OF THE CHANCELLOR

**WILLIAM H. CUNNINGHAM**, Chancellor  
**JAMES P. DUNCAN**, Executive Vice-Chancellor for Academic Affairs  
**CHARLES B. MULLINS, M.D.**, Executive Vice-Chancellor for Health Affairs  
**R.D. (DAN) BURCK**, Executive Vice-Chancellor for Business Affairs

# Administrative Officers

**DIANA S. NATALICIO**, *President, 1971*

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

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

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

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

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

**JUAN R. SANDOVAL**, *Vice President for Finance and Administration, 1983*

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

**JOHN R. BRISTOL**, *Dean, The College of Science, 1970*

B.A., Cornell College; M.A., Ph.D., Kent State University

**PATRICIA T. CASTIGLIA, R.N.**, *Dean, The College of Nursing and Health Sciences, 1990*

B.S., University of Buffalo; M.S., Ph.D., State University of New York at Buffalo

**CHARLES J. FEY**, *Dean of Students, 1992*

B.A., M.Ed, Pennsylvania State University; Ed.D., Texas A&M University

**FRANK HOY**, *Dean, The College of Business Administration, 1991*

B.B.A., The University of Texas at El Paso; M.B.A., University of North Texas; Ph.D., Texas A&M University

**POSITION VACANT**, *Dean, The College of Liberal Arts*

**ARTURO PACHECO**, *Dean, The College of Education, 1991*

A.A., San Jose College; B.A., San Jose State University; M.A., San Francisco State University; Ph.D., Stanford University

**SYLVIA H. RODRIGUEZ**, *Dean, Enrollment Services, 1995*

B.A., University of Houston; M.A., Texas Southern University

**JULIE P. SANFORD**, *Associate Vice President for Research and Graduate Studies, 1988*

B.S., M.A., Texas A&I Kingsville University; Ph.D., The University of Texas at Austin

**ANDREW H. P. SWIFT, JR.**, *Interim Dean, The College of Engineering, 1983*

B.S., B.S.M.E., Union College; M.S., Sc.D., Washington University



# CALENDAR

Listed below is the tentative 1996-1998 Calendar for registration activities. For further information on specific dates, refer to each term's Class Schedule, or contact the Office of the Registrar at 747-5550 or 747-5544.

	<b>Fall 1996</b>	<b>Fall 1997</b>	<b>Fall 1998</b>
Application due date for undergraduate non-international students	May 1	May 1	May 1
Admission deadline for undergraduate international students	May 1	May 1	May 1
Telephone Registration (TTR)	June - July	June - July	June - July
Document due date for undergraduate non-international students	July 31	July 31	July 31
Late Registration and schedule adjustment prior to classes	August 19, 20	August 18, 19	Aug. 17, 18
Classes begin	August 21 (Wed)	August 20 (Wed)	Aug 19 (Wed)
Late Registration and schedule adjustment - continued	August 21 - 23, 26 - 28	August 20 - 22, 25 - 27	Aug. 19 - 21, 24 - 26
Last day of class	Dec. 9 (Mon)	Dec. 8 (Mon)	Dec. 7 (Mon)
Last day of Final Examinations	Dec. 17	Dec. 16	Dec. 15
	<b>Spring 1997</b>	<b>Spring 1998</b>	
Application due date for undergraduate non-international students	Oct. 1	Oct. 1	
Admission deadline for undergraduate international students	Oct. 1	Oct. 1	
Telephone Registration (TTR)	Oct.-Nov. '96	Oct.-Nov.'97	
Document due date for undergraduate non-international students	Nov. 30	Nov. 30	
Late Registration and schedule adjustment prior to classes	Jan. 9, 10	Jan. 8, 9	
Classes begin	Jan. 13 (Mon)	Jan 12 (Mon)	
Late Registration and schedule adjustment - continued	Jan. 13 - 17	Jan. 12 - 16	
Last day of class	May 5 (Mon)	May 4 (Mon)	
Last day of Final Examinations	May 13	May 12	
	<b>Summer 1996</b>	<b>Summer 1997</b>	<b>Summer 1998</b>
Application due date for undergraduate non-international students	March 1	March 1	March 1
Admission deadline for undergraduate international students	March 1	March 1	March 1
Telephone Registration (TTR)	March - April	March - April	March- April
Document due date for undergraduate non-international students	April 30	April 30	April 30
Late Registration and schedule adjustment prior to classes	May 30, 31	May 29, 30	May 28, 29
Classes begin	June 3 (Mon)	June 2 (Mon)	June 1 (Mon)
Late Registration and schedule adjustment - continued	June 3, 4	June 2 - 5	June 1 - 4
Last day of class	July 24	July 23	July 22
Last day of Final Examinations	July 26	July 25	July 24

# Endowments, Trusts & Memorial Funds

The University of Texas at El Paso is indebted to the generosity of private citizens for many fine endowments, trusts and memorial funds. These permanent funds, invested under trusteeship of the Regents of The University of Texas System or held by other trustees, provide scholarships, purchase library books, underwrite important research, and in many ways enrich the educational experience. The University makes grateful acknowledgment for the following permanent funds:

## MANUEL ACOSTA MEMORIAL ART SCHOLARSHIP

—Created in 1992 by El Paso Natural Gas Company in memory and honor of local artist, Manuel Acosta. Income from the fund provides an annual scholarship to a student majoring in art.

## ALPHA PHI ALPHA FRATERNITY, INC., THETA DELTA LAMBDA CHAPTER

—Established in 1991 by a gift from the Theta Delta Lambda Chapter. Income from the endowment will be used to provide an annual scholarship to an undergraduate student with financial need who meets the minimum scholarship standards established by the University. The fraternity has requested that preference be given to qualified black male students whenever possible. Alpha Phi Alpha is a social/service fraternity that has been active at The University of Texas at El Paso for more than 20 years, principally serving the needs of blacks on campus.

## ALPHA PHI OMEGA SOCIAL FRATERNITY ENDOWED FUND

—Established in 1989 by Alpha Phi Omega, a social fraternity formed at the "Texas College of Mines and Metallurgy" in 1919 whose members were primarily Engineering and Geology students. Income from the endowment will be used by the College of Engineering and the Department of Geological Sciences for three annual student awards, two of which are made in memory of deceased faculty members of the College of Engineering, Dean Eugene M. Thomas and Dr. Walter R. Roser.

## ALUMNI ASSOCIATION OF UTEP SCHOLARSHIP FUND

—Established in 1986 by the Board of Directors of the Alumni Association of The University of Texas at El Paso, Inc. Income earned will be used to award an annual scholarship under the Presidential Scholarship Program.

## AMERICAN GARMENT FINISHERS ENDOWED EXCELLENCE FUND FOR ENTREPRENEURIAL DEVELOPMENT, ADVANCEMENT, RESEARCH, AND SUPPORT

—This fund was created in 1992 by a gift from Mr. Moshe Azoulay and his company, American Garment Finishers. Income from the endowment will be utilized by the Dean of the College of Business Administration to support activities which stimulate, aid, and encourage entrepreneurial and/or small business development in El Paso.

## AMERICAN SOCIETY FOR QUALITY CONTROL/SECTION 1401 SCHOLARSHIP FUND

—Established in 1991 by a gift from the Rio Grande Section of the American Society for Quality Control, El Paso, Texas. Income earned from the endowment will be used to provide a scholarship to a student attending The University of Texas at El Paso and who is the winner of the Society's El Paso/Rio Grande Section annual essay competition on quality assurance. Should the essay competition cease, the income from the endowment is to be used for a scholarship in Engineering, Business Administration, or Science, for a student whose educational objective is a professional position in the field of total quality assurance.

## ANHEUSER-BUSCH CHARITABLE TRUST SCHOLARSHIP FUND

—Established in 1983 on behalf of the Board of Control of the Anheuser-Busch Charitable Trust under Mr. August A. Busch, III.

THE UNIVERSITY OF TEXAS AT EL PASO

Interest from the fund is to be used for University Endowed Scholarships to any undergraduate student who meets the academic requirements of the Presidential Scholarship Program.

## MARIAN MEAKER APTECKAR ENDOWED SCHOLARSHIP IN MUSIC

—This endowed scholarship was established in 1990 by Leon Apteckar as a tribute to his late wife, Marian. Income from the endowment provides a music scholarship to a junior or senior level student.

## MARIAN MEAKER APTECKAR/SHANNON COLLEEN ROACH JORDAN ENDOWED SCHOLARSHIP FUND

—Established in 1994 by Leon Apteckar in tribute to his late wife, Marian, and nursing graduate, Shannon Colleen Roach Jordan. Income from the endowment provides an annual nursing scholarship to a junior or senior student.

## J. S. ARMIGO-STEINMETZ SCHOLARSHIP FUND

—Established in 1984 by the General Electric Foundation to honor Dr. J. S. Armigo, a UTEP graduate, for being one of six General Electric employees to win the Charles P. Steinmetz Award for Technical Achievement. Income earned from the endowment will be used to provide a scholarship in Metallurgical Engineering for a junior/senior level student.

## DR. THOMAS G. BARNES PHYSICS FUND

—Established in 1986 by alumni and friends of UTEP to honor Thomas G. Barnes, who officially retired in 1981 as Professor Emeritus. His distinguished career includes teaching, counseling, and serving as Director of the Schellenger Foundation for Research. Income earned from the endowment will provide undergraduate and graduate scholarships as well as provide equipment and supplies for the Department of Physics.

## DR. GRACE ANN BEAL PERMANENT MEMORIAL FUND

—Established in memory of Dr. Grace Ann Beal by her sister, Miss Virginia Beal, and friends, with income from the endowment fund providing scholarship aid to pre-medical and nursing students.

## CARL A. BEERS MEMORIAL PRESIDENTIAL SCHOLARSHIP FUND

—Established in 1984 by Carl and Donna Milburn in memory of their great-uncle, long-time El Paso resident and businessman, Mr. Carl A. Beers. Income from this permanent endowment fund will provide a Presidential Scholarship for a worthy and deserving qualified student from the College of Science.

## CHARLES AND BETTY BELDING MEMORIAL SCHOLARSHIP FUND

—Established by Mr. and Mrs. C. D. Belding, prominent members of El Paso's real estate and insurance industry, and later changed to a memorial fund in memory of Charles and Betty Belding by family and friends to provide scholarships without restriction as to field of study.

## CATHERINE CROWELL BELK ART SCHOLARSHIP FUND

—Created in 1994 by the children of Catherine Crowell Belk, in memory of their mother who earned a Master's in Fine Arts in 1994. Income from the endowment will be used to support graduate or undergraduate students in Art with preference given to female students returning to pursue art degrees after a hiatus in their studies.

## ESTHER AND LOUIS BENSON ENDOWED SCHOLARSHIP FUND

—Established in 1995 by Drs. Steven and Susan Benson in honor of Esther and Louis Benson. Income from the fund provides scholarships to senior and/or graduate nursing students in the College of Nursing and Health Sciences who are pursuing careers in a community health-related field.

**DR. ANTON H. BERKMAN ENDOWED FUND**

—Established in 1989 by the contributions of friends and former students of Dr. Berkman, and a challenge grant from National Medical Enterprises, Inc. of Los Angeles, California. This fund will be used in support of the Department of Biological Sciences to encourage excellence in teaching and student research. Dr. Berkman taught at the University from 1927 until 1966. During that time, he also served as Dean of Arts and Sciences, Chairman of Biological Sciences, and, in August 1960, as interim president of Texas Western College.

**JIMMIE VOKES BERNARD ENDOWED SCHOLARSHIP FUND**

—Established in 1993 through the El Paso Speech, Language & Hearing Association by family and friends in honor of Jimmie Vokes Bernard. Income from the endowment provides a scholarship to a full-time graduate student majoring in speech language pathology.

**ELAYNE AND JULIAN BERNAT ENDOWED PRESIDENTIAL SCHOLARSHIP FUNDS**

—Two Presidential Scholarships, the first established in 1991 and the second in 1993, by Elayne and Julian Bernat, longtime friends of the University. Income earned from the permanent endowment will be used to award scholarships to undergraduate or graduate students who are citizens or permanent residents of the United States or Mexico, and meet the requirements of the Presidential Scholarship Program at The University of Texas at El Paso. There is no restriction as to major or field of study.

**JOHN C. BIRKHEAD AND DICK SHINAUT MEMORIAL SCHOLARSHIP IN KINESIOLOGY OR SPORTS STUDIES**

—Established in 1994 by gifts from the El Paso Athletic Hall of Fame, and their families, in memory of John Birkhead and Dick Shinaut. Income from the fund provides a scholarship to a student majoring in Kinesiology or Sports Studies with the intention to teach and/or coach.

**J. B. AND MARGARET BLAUGRUND FOUNDATION LIBRARY FUND**

—Established in 1973 in memory of her parents by Mrs. Alvin J. Marks, the income from this endowment fund is used for acquisition of Judaica and related materials.

**LIL BLUM GOLF SCHOLARSHIP**

—Established in 1990 by Frank Blum, husband of Lil Blum, who was a well-known and greatly admired golfer in the El Paso area. Mrs. Blum helped start the Fort Bliss Women's Golf Association and was elected to the El Paso Golf Hall of Fame in 1988. The scholarship in her memory will be awarded to a female member of the UTEP golf team, selected by the head golf coach.

**JANE WEINERT BLUMBERG LIBRARY ENDOWMENT FUND**

—Established in 1995 by a bequest from the estate of Jane Weinert Blumberg, former member of the UT System Board of Regents and friend of the UTEP Library. Income from her fund provides educational materials for the UT El Paso Library.

**JANE WEINERT BLUMBERG UNIVERSITY ENDOWED SCHOLARSHIP FUND**

—This endowed scholarship fund was established in 1983 to honor Jane Weinert Blumberg. Mrs. Blumberg served on the U.T. System Board of Regents from 1977 to 1983 and assisted this institution in many ways. Income earned from the endowment will be used to provide an undergraduate scholarship under the Presidential Scholarship Program for a student primarily from an El Paso high school, either public or private.

**GERALD LAMAR BOYKIN MEMORIAL ATHLETIC SCHOLARSHIP FUND**

—Established in 1990 by his wife Jeanne, and many friends and admirers. Mr. Boykin, a local businessman, died in 1988 at the age of 54. He was a 1961 graduate of UTEP with a degree in Business Administration, and was very active in supporting the University's athletic programs and fund raising efforts. Interest earned from this endowment will be used to provide an athletic scholarship at the University.

**BRUMBELOW-MOORE MEMORIAL SCHOLARSHIP FUND**

—Established in memory of Mike Brumbelow and Ross Moore, two prominent figures of the University's athletic history, by their families and friends, for a sophomore, junior, or senior student athlete or trainer with an outstanding academic record.

**MICHAEL P. BURNS MEMORIAL SCHOLARSHIP FUND**

—Established in 1979 by an Executive Committee comprised of family, friends and representatives of the Disabled American Veterans, sponsoring organization of the fund, as a memorial to SFC Michael P. Burns (MIA Vietnam), who attended UTEP in 1966-67. Income from the endowment provides scholarships for students in special education, speech therapy, physical therapy or related fields working with handicapped children.

**RUBY V. BURNS ENDOWED FUND FOR MUSIC**

—Established in 1993 by the bequest of Ruby Burns, a reporter and society columnist who wrote for El Paso newspapers. Income from the fund will support the Music Department

**HUGHES BUTTERWORTH, JR. AND FAMILY PRESIDENTIAL LEADERSHIP FUND**

—Established in 1995, part of the income from this endowment will be used, at the discretion of the President of U.T. El Paso, to support activities and programs with emphasis on the promotion of international relations and educational and economic development within the El Paso community.

**ERIC J. BYMARK MEMORIAL FUND**

—Established in memory of Eric J. Bymark, former student and prominent El Paso citizen, by his wife and family, with income from this permanent endowment fund providing resources for the Department of Intercollegiate Athletics.

**CHARLES R. AND DOROTHY S. CARTER CHAIR IN BUSINESS ADMINISTRATION**

—Established in 1985 as a gift from Mrs. Dorothy S. Carter in memory of her husband, a distinguished business leader. The first chair in the College of Business Administration provides income for an outstanding faculty member with superior professional and academic credentials. Mrs. Carter, a member of the U.T. System Chancellor's Council, is now deceased.

**CHARLES R. CARTER MEMORIAL ATHLETIC FUND**

—Established in 1983 by Dorothy S. Carter in memory of her husband, Charles R. Carter, a prominent El Paso businessman and owner of the Carter Petroleum Company. Income earned from the endowment will be used to provide a full scholarship for Athletics. Mrs. Carter, a member of the U.T. System Chancellor's Council, is now deceased.

**ABRAHAM CHAVEZ, JR. PROFESSORSHIP FUND IN MUSIC**

—Established in 1992 by a major gift from The El Paso Symphony Orchestra Association and a matching gift from The University of Texas at El Paso. Income from the endowment will be used to support the individual named to fill the Abraham Chavez, Jr. Professorship in Music at the University.

**THE CHEVROLET SCHOLARSHIP**

—This fund was established in 1994 with gifts from the Chevrolet Motor Division of General Motors Corporation, made over several years, in honor of various UTEP student athletes. Income earned from the endowment is used to provide scholarship support to U.T. El Paso students.

**CIRCLE K-SUNWORLD FOUNDATION SCHOLARSHIP FUND**

—Established in 1982 by the officers and directors of Circle K-Sunworld Foundation under Chairman Fred Hervey, a long-time member of the University's Development Board and primary benefactor. Interest from the fund is to be used for University Endowed Scholarships to undergraduate students who meet the academic requirements.

## 10/GENERAL INFORMATION

### ANNE AND ROLAND W. CLAUDIUS MEMORIAL SCHOLARSHIP FUND

—Established in memory of Roland W. Claudius, a former foreign service officer with the U.S. State Department, and his wife, Anne Claudius, with income from this permanent endowment fund providing scholarships for international students.

### ANDY AND SYD COHEN ENDOWMENT FUND

—Established by the friends of the late Andy and Syd Cohen, brothers, former collegiate and professional athletes, El Paso businessmen, civic leaders and friends of the University, with income from the endowment providing scholarships to student athletes.

### LURLINE H. COLTHARP COLLECTION OF ONOMASTICS

—Established in 1992 by a gift from Professor Emerita Lurline H. Coltharp. Income from the endowment is to be used to purchase library materials for the study of names.

### JOHN G. AND SUE E. COMER MEMORIAL NURSING SCHOLARSHIP FUND

—Established in memory of John G. and Sue Elizabeth Comer, prominent citizens of El Paso and later Houston, with income from this permanent endowment fund providing scholarships for upper-level nursing students.

### DR. C. SHARP COOK PHYSICS PROFESSORSHIP

—Established in 1987 by alumni and friends of UTEP to honor C. Sharp Cook, who officially retired in 1985 as Professor Emeritus. A challenge grant of \$50,000 from Dr. and Mrs. Cook was matched by El Paso Electric Company and members of the President's Associates of UTEP. Income from the endowment will be used by an outstanding faculty member from the Physics Department.

### C. SHARP COOK GRADUATE SCHOLARSHIP FUND

—Established in 1989, this scholarship is a gift to the University from Dr. and Mrs. C. Sharp Cook. Dr. Cook is a Professor Emeritus of Physics. The recipient of this scholarship will be a student working toward a master's or doctor's degree either in Physics or in any interdisciplinary area of graduate study in which the Physics Department participates.

### COORS VETERANS MEMORIAL SCHOLARSHIP FUND

—Established in 1985 by Alan R. Kahn, President, Dickshire Coors Distributing Company through special promotions in the El Paso area. Income earned will provide two or more scholarships under the Coors Veterans Scholarship Program at UTEP.

### ADOLPH COORS COMPANY ENDOWED SCHOLARSHIPS FOR TEACHERS

—Established in 1989 by the Adolph Coors Company, the earnings from this fund will be used to provide academic scholarships for students who have completed 60 hours in preparation for a teaching career, and who declare an intent to teach in areas with predominantly Hispanic populations upon graduation.

### JUAN FELIPE CORDOVA ENDOWED SCHOLARSHIP FUND

—Established in 1995 by Robert and Fernando L. Cordova in memory of Juan Felipe Cordova, income from the endowment will be used to provide one or more annual scholarships to students pursuing a degree in education, with preference given to students from El Paso.

### FRANK B. COTTON ESTATE FUND

—Established in 1937 at the bequest of Frank B. Cotton, a Massachusetts manufacturer and investor, to the Board of Regents for Texas Western College. The Estate's income has provided the University with the Cotton Memorial Building; the Cotton Visiting Professor; financial aid and scholarships to students and faculty; and support for the Library, for organized research and for the Faculty Teaching Improvement Program. The Cotton Fund continues to contribute vitally to the University's overall academic excellence program.

### DR. JOHN K. CREIGHTON HISTORY MEMORIAL FUND

—Established in 1984 by former students, colleagues, friends and the Creighton family in memory of John Kellogg Creighton, former Associate Professor of History at UTEP. Income earned from this endowment will be used to award an annual scholarship to an undergraduate History major. Additional scholarships may be awarded as the fund grows each year.

### FREDERICK JAMES CROUCH MEMORIAL SCHOLARSHIP FUND

—Established in 1988 by Mr. and Mrs. James J. Crouch, in memory of their son, Frederick James Crouch. Income from this endowment will be awarded as a scholarship to an outstanding student from Burges High School, in El Paso, Texas, who has also participated in sports. Frederick Crouch graduated with honors from Burges High in 1974. He died prematurely in 1985. Both Mr. and Mrs. Crouch are graduates of The University of Texas at El Paso.

### JUDGE AND MRS. ROBERT E. CUNNINGHAM FUND

—Created in 1978 by Judge and Mrs. Robert E. Cunningham, prominent El Paso citizens, with income from this permanent endowment fund providing financial assistance for the annual operation and maintenance of Texas Western Press.

### BRUCE DAVIDSON MEMORIAL GRADUATE STUDENT AWARD FUND

—Established in 1985 by students, friends, and family of the late Bruce Davidson, a Graduate student in the Department of Geological Sciences at UTEP.

### DAVIDSON FAMILY CHARITABLE FOUNDATION PRESIDENTIAL ENDOWED SCHOLARSHIP FUND

—Established in 1983 by the Davidson Family Charitable Foundation under Chairman H. W. Davidson of Fort Worth, Texas. Income earned from the fund is to be used for a Presidential Endowed Scholarship for a resident of the State of Texas.

### JOEL D. DAVIS MEMORIAL SCHOLARSHIP FUND

—Established in 1992 by a gift from his mother, Mrs. Virginia D. Elliott. Joel was a student at UTEP and passed away just a few days before his graduation. Income from the endowment will be used to award one annual scholarship to an undergraduate student pursuing a degree leading to a career in the field of special education.

### LOLA B. DAWKINS FUND FOR EXCELLENCE IN BUSINESS TEACHER EDUCATION

—Established in 1986 by alumni, friends, and faculty honoring Dr. Lola B. Dawkins upon her retirement in May 1984. Income earned from the endowment will be used to benefit Business Administration students seeking Business Education certification or to aid current Business Education Teachers in Graduate work.

### BROOKS DAWSON MEMORIAL SCHOLARSHIP FUND

—Established in 1970 by friends of this former student, who was an outstanding football player and student leader, for a student pursuing a degree in the College of Business Administration.

### JAMES D. DeGROAT MEMORIAL LIBRARY FUND

—Established in 1993 by Mary Carolyn DeGroat and other family and friends in memory of James DeGroat, an alumnus of Texas College of Mines. Income from this permanent endowment is used to purchase books and periodicals for the University Library.

### JAMES D. DeGROAT MEMORIAL PRESIDENTIAL SCHOLARSHIP FUND

—Established in 1985 by Mary Carolyn DeGroat in memory of her husband. James D. DeGroat was President of Carter Petroleum Company and a former outstanding athlete at Texas Western College. Income earned from the endowment will be used to award an annual scholarship to qualified athletes under the Presidential Scholarship Program.

**ARTEMIO de la VEGA MEMORIAL SCHOLARSHIP FUND**

—Established in 1983 by Mr. Federico de la Vega, Juárez, Mexico, in memory of his father Artemio de la Vega to provide several endowed scholarships under the Presidential Scholarship Program. Income earned from the endowment fund will be used to provide four-year scholarships for deserving qualified students from Mexico with first preference given to residents of Cd. Juárez.

**DELTA KAPPA GAMMA SOCIETY INTERNATIONAL ETA KAPPA CHAPTER SCHOLARSHIP FUND**

—Established in 1989, this endowment will provide scholarship income for upper-level female students seeking a teaching certificate. The Eta Kappa Chapter of Delta Kappa Gamma, a professional teachers organization, worked for several years to raise the funds to establish the scholarship, primarily by conducting successful ways and means projects.

**PETER AND MARDEE DE WETTER ENDOWED CHAIR FOR CREATIVE WRITING**

—Created in 1991 by El Pasoans, Peter and Mardee Belding de Wetter, this endowed chair benefits the Creative Writing Program in the English Department of the College of Liberal Arts. Income from this fund will enable UTEP to recruit and retain outstanding faculty, and support related professional expenses of the position.

**PATRICK H. DeWITT MEMORIAL PRESIDENTIAL SCHOLARSHIP FUND**

—Established in 1986 in memory of Patrick H. DeWitt, a prominent realtor and partner of DeWitt and Rearick, Inc. Income earned from the endowment will be used to provide a Presidential Scholarship in the College of Business Administration for a qualified student majoring in Real Estate.

**DIAMOND JUBILEE FUND FOR ACADEMIC RESOURCES**

—The Diamond Jubilee Endowed Fund for Academic Resources was established by alumni and friends of UTEP during 1983 in celebration of the University's 70th Anniversary year and continued through 1990. Interest earned from the endowment provides academic resource funds. Resource funds can be used for unrestricted purposes designated by the President, the Presidential Scholarship Program, the Junior Scholars Program, the Honors Program, and the Student Recruitment Program.

**DICKSHIRE COORS ENDOWED LIBRARY FUND**

—Established in 1981 by Richard N. Azar and Cheryl Azar McCown of Dickshire-Coors, Inc. of El Paso to provide a \$25,000 Challenge Grant for the Alumni Fund for Academic Excellence and to buy new books for the Library. During the "Buy-a-Book" year, Dickshire-Coors matched all new gifts and increases made by both alumni and non-alumni donors.

**BERNICE DITTMER LIBRARY FUND**

—Established in 1981 by Mrs. Bernice Dittmer, outstanding alumna and prominent El Paso citizen, with income from this permanent endowment fund providing books for the University Library.

**BERNICE DITTMER PRESIDENTIAL SCHOLARSHIP FUND**

—Established in 1981 by Mrs. Bernice Dittmer, outstanding alumna, with income from the permanent endowment fund providing scholarships for superior local area high school students who attend UTEP.

**EMIL JAY DITTMER MEMORIAL SCHOLARSHIP FUND**

—Established in memory of Emil Jay Dittmer, long-time benefactor of the University, by his wife, Bernice Dittmer, with income from this permanent endowment fund providing Presidential Scholarships for qualified students interested in the fields of arts and humanities.

**JOHN DITTMER ENDOWMENT FUND FOR RELIGIOUS STUDIES**

—Established in 1993 by Mrs. Bernice Dittmer in honor of her son. Income from the fund shall be used to support the Religious Studies program at UTEP.

**SAM A. DONALDSON ENDOWED SCHOLARSHIP FUND**

—Established in 1989 by Sam Donaldson, a 1958 graduate in Communications with a long and distinguished career as a national news reporter and television commentator. Mr. Donaldson was selected the Outstanding Ex-Student of the University in 1976. This endowment in his name will be used to provide an annual award for a student majoring in broadcast journalism at UTEP.

**RICHARD M. AND FRANCES M. DUDLEY MEMORIAL PROFESSORSHIP FUND**

—Established in 1985 through the last Will and Testament of Marion J. Purdy. Richard M. Dudley served as mayor of El Paso and representative in the Texas Legislature. Mayor and Mrs. Dudley resided at 711 Cincinnati Street, the present home occupied by Presidents of UTEP. The endowed Professorship earnings may be assigned to any academic area upon appointment by the UTEP President.

**TOMMYE J. DUNCAN ENDOWED PRESIDENTIAL SCHOLARSHIP**

—Established by a gift from Tommye J. Duncan in 1993. Income from the endowment provides an annual scholarship to a student at UT El Paso seeking a career in occupational therapy or other health-related areas.

**RICHARD E. DUNLAP MEMORIAL FUND**

—Established in 1987 by Mrs. Gisela E. Dunlap in memory of her husband. Mr. and Mrs. Dunlap have been strong supporters of the UTEP History Department for many years. Income earned from the endowment will be used to provide scholarships to worthy and deserving students who are pursuing a Master of Arts degree in History.

**JAMES H. AND MINNIE M. EDMONDS SCHOLARSHIP ENDOWMENT**

—In 1990, the University of Texas at El Paso was selected to be one of the recipients of proceeds from the termination of the James H. and Minnie M. Edmonds Education Foundation of Houston, Texas. Income from the endowment will be used for scholarships and education-related expenses, for undergraduate and graduate students. Financial need will receive highest priority in selection of the recipients.

**HENRY P. AND MARGARET F. EHRLINGER MEMORIAL AWARD IN METALLURGY**

—The Henry P. Ehrlinger Award for the outstanding graduate in metallurgical engineering was originally established by Dr. Ehrlinger in 1959. Since his death in 1976, friends, alumni and colleagues have continued to add to the fund, and in 1990, it became a permanent endowment by a gift from his daughter Ann, and her husband Lester Peterson. Renamed to honor both Dr. and Mrs. Ehrlinger, this memorial award will be used to provide an annual cash award to the person selected as the outstanding undergraduate degree recipient of the Department of Metallurgical Engineering.

**EL PASO ADMINISTRATORS ASSOCIATION ENDOWED SCHOLARSHIP FUND**

—Established in 1984 by the El Paso Administrators Association to provide scholarships for a graduate or undergraduate student in the College of Education. Income earned from the endowment will be used to provide an annual scholarship to a student pursuing a career in education with the intention of becoming an administrator.

**EL PASO ATHLETIC HALL OF FAME FUND**

—Established in 1988 by the El Paso Athletic Hall of Fame, an organization which honors outstanding El Paso athletes and actively promotes UTEP athletics funds. It will provide a scholarship to an undergraduate student athlete at UTEP, in accordance with general scholarship guidelines.

**EL PASO CENTENNIAL MUSEUM FUND**

—Established in 1986 by alumni and friends of the UTEP Centennial Museum to celebrate the 50th Anniversary of the Museum. Income earned from the endowment will be used for operation and acquisition of new materials. The museum sponsors research, teaching and study exhibits.

## 12/GENERAL INFORMATION

### EL PASO CHAPTER - DATA PROCESSING MANAGEMENT ASSOCIATION SCHOLARSHIP FUND

—Established in 1992 by a gift from the El Paso Chapter - Data Processing Management Association, with additional support from the College of Business Administration. One half of the income from the endowment is to be used to award one academic scholarship annually to a graduating senior in the College of Business Administration, with preference given to a student majoring in Computer Information Systems. The remainder of the interest is to be added to the principal of the endowment.

### EL PASO COMMUNITY PROFESSORSHIP IN ACCOUNTING

—Established in 1986 by alumni and friends of the Accounting Department, College of Business Administration, to enhance and continue academic excellence. Income earned from the endowment will support an outstanding faculty member of national reputation.

### EL PASO DOWNTOWN LIONS CLUB MEMORIAL FUND

—Created in 1980 by the El Paso Downtown Lions Club for the benefit of the Department of Intercollegiate Athletics. This permanent endowment fund provides support for the athletic program of the University and is a means of honoring and memorializing the Club and its members.

### EL PASO DOWNTOWN LIONS/JOHN PHELAN ENDOWED ATHLETIC SCHOLARSHIP FUND

—Established in 1993 with a gift from the El Paso Downtown Lions Club in honor of UTEP alumnus John Phelan, a long-time "Lion" and local sportscaster. Income from this endowment provides a scholarship to a full-time student athlete with a 3.0 minimum grade point average.

### EL PASO HISPANIC SCHOLARSHIP ENDOWMENT FUND (EPHSEF)

—Established with funds from Univision Television Group, Inc. of Los Angeles, CA, Paso del Norte Broadcasting Corp. of El Paso, and State National Bank of El Paso. The income from this endowment will be used to provide one or more annual scholarships to graduates of El Paso area high schools.

### ETA KAPPA NU ENDOWED SCHOLARSHIP

—Established in 1991 as a gift from Eta Kappa Nu Honor Society, associated with the Electrical Engineering Department. Income from the endowment will be used to provide a scholarship to a junior or senior student majoring in Electrical Engineering.

### BILLIE W. ETHERIDGE DEBATE SCHOLARSHIP ENDOWMENT

—Established in 1989, to honor Professor Etheridge, who retired from UTEP in 1989 after twenty-two years on the faculty of the Departments of Drama and Speech, Communication, and English. Established by two of her former students, Mr. Charles W. Santaguida and Mr. Robert J. Malone. As a result of her contributions, the University's Forensics program produces outstanding debate teams and individual competitive speakers. The earnings from this endowment will be awarded as scholarships to students, recommended by the debate coach, who meet the University's scholarship requirements.

### MISS FREDERICK LOUISE ETTER MEMORIAL LIBRARY FUND

—Established in 1988 at the bequest of Miss Frederick Louise Etter, who died on August 2, 1987. Income earned from the endowment will be used for technical books and periodicals, serials on technical subjects, special journals and abstracts in any field. Each publication is marked in her memory for "appreciation of education" received.

### MANSOUR AND JAMES FARAH MEMORIAL FUND

—Established by Hana Farah in memory of her husband, Mansour, and her son, James, two prominent figures of El Paso's leading clothing manufacturing firm. Income from this endowment fund provides scholarships for upper-level nursing students.

### FESSINGER-SPRINGER SCIENCE LECTURE FUND

—Created by the late Mr. and Mrs. Moses D. Springer in memory of Mrs. Springer's parents, Rueben and Leona Fessinger, who came to El Paso in 1903 to open the Grand Leader Dry Goods Store, which existed for over 40 years. This fund will be used to bring a nationally recognized lecturer in the field of science to the University each year. The Lectureship is now supported by their son, Dr. Harry Springer, a UTEP alumnus, who is a surgeon in Illinois.

### DR. MICHAEL L. FINERTY SCHOLARSHIP FUND

—Created by Dr. Michael L. Finerty, a 1956 graduate of Texas Western College, in the field of biology. This prominent neurologist from California established the university endowed scholarship in 1987 for outstanding students in the field of pre-medicine or biological sciences at UTEP.

### MARY L. FISK ENDOWED FUND

—Established in 1995 by Mr. Howard Shiplett, friends and family, in memory of long-time friend and El Paso area educator, Mary Fisk who taught for 53 years, the last 24 of which were spent at Bel Air High School in El Paso, TX. Income from the fund supports a student pursuing a degree in math, science or engineering.

### JOSEPHINE CLARDY FOX FOUNDATION

—Established in 1970 by the bequest of a prominent El Paso woman who left her estate to the University upon her death. Mrs. Fox's estate was extensive, including real estate, valuable antiques, paintings, and books, as well as liquid assets. Mrs. Fox established an endowed scholarship fund with a gift of \$20,000 and she created a student loan fund of \$2,500. An additional \$25,000 is awarded annually for scholarships. Her books went to the University Library, and she bequeathed antiques and other valuable items to the Centennial Museum at the University. The remainder of her estate, in accordance with Mrs. Fox's instructions, is an unrestricted endowment named in her honor. During 1978, in recognition of Mrs. Fox's interest in both the University and the Fine Arts, the building housing the Departments of Art, Music and Theatre Arts was renamed the Josephine Clardy Fox Fine Arts Center.

### FREEDOM FORUM ENDOWED HISPANIC SCHOLARSHIP FUND FOR JOURNALISM STUDENTS

—Established in 1994 by the Freedom Forum, through the efforts of trustee Josefina Salas-Porras. The Freedom Forum, formerly known as the Gannett Foundation, provides support for journalism education and professional programs. Income from the fund provides an annual scholarship to a journalism student at UTEP.

### DR. JOE S. GALATZAN MEMORIAL SCHOLARSHIP FUND

—Established in 1984 by Mrs. Sylvia L. Galatzan in memory of her husband, Dr. Joe S. Galatzan, a well known civic leader, who was the team physician for University athletes for many years. Income earned from the endowment fund will be used to provide an annual scholarship under the Presidential Scholarship Program for an outstanding student who has expressed an interest in pre-medical studies under the College of Science.

### RICHARD AND RUTH GERWELS ENDOWED SCHOLARSHIP FOR NURSING

—This fund was created in 1993 by Mr. and Mrs. Richard Gerwels with income from the endowment used to provide one or more scholarships for students in the College of Nursing and Health Sciences.

### KENNETH P. GIFFORD MEMORIAL SCHOLARSHIP FUND

—Established in 1984 by the Kenneth P. Gifford Foundation of El Paso in memory of Kenneth P. Gifford, long-time businessman and bank executive. This scholarship will be awarded under the Presidential Scholarship Program.

### C. H. GLADMAN SCHOLARSHIP FUND

—Established in 1986 by alumni, faculty and friends to honor Professor Emeritus Charles Herman Gladman, who was a member of the Mathematics Department faculty from 1948 until his retirement in 1986. He served as the first Chairman of the Department from 1965 to 1968.

**DAVIS AND BERTHA GREEN PERMANENT ENDOWMENT**

—Established by the generous gift of Davis and Bertha Green, leading El Paso citizens, the income from this endowment provides scholarships for students majoring in the Sciences.

**J. LEIGHTON AND VIRGINIA GREEN ENDOWED SCHOLARSHIP FUND FOR HEALTH-RELATED PROFESSIONALS**

—Established in 1991 by Virginia Peeler Green, widow of J. Leighton Green, M.D. Income will be used to award one or more scholarships to either undergraduate or graduate students pursuing a degree leading to a career in the health professions.

**JUDGE ERNEST GUINN AND MARY VANCE GUINN CRIMINAL JUSTICE SCHOLARSHIP**

—Endowed in memory of United States District Judge Ernest Guinn (1905-1974) and his wife, Attorney Mary Vance Guinn (1916-1976). Judge Guinn spent his entire adult life in the criminal justice system as El Paso's City Attorney, County Attorney and U.S. District Judge. He graduated from the University of Texas, Austin, Law School in 1922 with the highest grade point average ever attained at that time and was awarded The Order of the Coif. Mary Vance Guinn (College of Mines, B.A. 1937) was El Paso's first female attorney, and in 1957 was named the first female outstanding UTEP Ex. This is also in memory of Dick H. (D.H.) Guinn (1942-1975) an El Paso attorney. He was their son.

The scholarship will be awarded to a male or female pursuing a degree and career in Criminal Justice, i.e., Law Enforcement, Prosecution, Courts or Corrections.

**THE FRANK AND WILMA HANLEY PROFESSORSHIP IN BUSINESS ADMINISTRATION**

—Established in 1995 by a remainder trust funded by Mrs. Wilma Hanley. Income from the fund supports a Professorship in Business Administration.

**ELIZABETH GROB HEALTH PROFESSIONALS ENDOWED SCHOLARSHIP FUND**

—Established in 1990 by a gift from the registered nurses of the Ysleta Independent School District of El Paso, Texas, who have provided grants-in-aid to UTEP nursing students for many years. Interest from the endowment will provide one or more scholarships to high school graduates of the Ysleta Independent School District who meet all of the requirements of the University Scholarship Office and who are enrolled in the College of Nursing and Allied Health.

**GEORGE FRED AND MABEL HARDY SCHOLARSHIP FUND**

—Created in 1982 by George Fred and Mabel Hardy, prominent El Paso citizens, with income from this permanent endowment fund providing financial assistance and scholarships for Rainbow Girls who attend UTEP from the Rainbow Girl Assemblies in the El Paso County area. Mabel Hardy died in 1987.

**JULIE DITTMER HART FUND FOR MUSIC**

—Created in 1988 by Mrs. Bernice Dittmer to honor her daughter, Julie Dittmer Hart, upon her graduation in May from the College of Liberal Arts. Income from the endowed fund will provide unrestricted financial resources for the Department of Music.

**DR. WADE HARTRICK FUND**

—The annual income from this permanent endowment provides the College of Business Administration with funds for teaching excellence awards, student scholarships, business books and academic program materials. Established by contributions from alumni, friends and colleagues, this fund appropriately honors Wade James Hartrick, Professor Emeritus of Business, for his assistance to students during his 34 years as a teacher, advisor and administrator.

**ROBERT C. AND MARY LOU HEASLEY ENDOWED EXCELLENCE FUND IN HONOR OF PRESIDENT DIANA NATALICIO**

—Created in 1993 by alumni Robert C. and Mary Lou Heasley in honor of UTEP President, Dr. Diana Natalicio. Income from the

endowment will be used at the discretion of the President to support activities and programs which enable UT El Paso to remain responsive to community needs.

**PERCIVAL HENDERSON PERMANENT ENDOWMENT**

—The income from the bequest of Percival Henderson provides scholarships for students of engineering.

**CHARLES E. HERSHBERGER ENDOWED SCHOLARSHIP**

—This endowed scholarship was created in 1993 from a bequest by Mrs. Nettie Hershberger to memorialize her son, Charles Hershberger. Income is used to provide scholarships to worthy students.

**CARL HERTZOG ENDOWMENT FUND**

—Established in 1986 by alumni, faculty and friends of UTEP in memory of Dr. J. Carl Hertzog, internationally known as "The Printer At The Pass" (1902-1984). Income earned from the endowment will be used to develop the Hertzog Collection in the Special Collections section of the UTEP Library. The Hertzog Collection of printing and design has considerable research value.

**GEORGE HERVEY MEMORIAL SCHOLARSHIP FUND**

—Established in 1987 by Bette D. Hervey in memory of her husband. George Hervey was a prominent El Paso businessman and civic leader who founded the El Paso Association of the National Home Builders. Income earned from the endowment will be used to provide a university endowed scholarship for a qualified student in the College of Business Administration.

**HAZEL HERVEY MEMORIAL ENDOWED FUND**

—Established in 1987 by the late Mrs. Hazel Hervey, prominent El Paso civic leader, with income from this endowed fund providing resources for the History Department and the Department of Biological Sciences. Outstanding speakers on Middle Eastern and Islamic History and special research on migratory bird parasites are supported from this fund on an annual basis.

**DANIEL L. HILL SCHOLARSHIP**

—A perpetual scholarship endowed by the family and friends of the late Daniel L. Hill. The endowed scholarship is awarded annually to a deserving student of accounting.

**DR. JOHN M. HILLS MEMORIAL FUND IN GEOLOGY**

—Established in 1991 by his wife, Mrs. Sally Hills. The endowment also includes gifts from faculty and friends of Dr. Hills. Dr. John M. Hills joined the faculty in the Department of Geological Sciences at UTEP in 1967 and retired as professor Emeritus in 1980. He died in 1988. Income from the endowment is for the unrestricted use of the Department of Geological Sciences.

**LUCY CLAIRE HOARD PERMANENT MEMORIAL FUND**

—This endowment fund was established by Kappa Chapter, Delta Kappa Gamma, in memory of Lucy Claire Hoard and provides scholarship aid to a female student majoring in education.

**MR. AND MRS. O. B. HOCKER LIBRARY MEMORIAL FUND**

—Endowed by the bequest of Mrs. O. B. Hocker of El Paso, who died in 1971. Mrs. Hocker created a trust at the El Paso National Bank (now Texas Commerce Bank) with income to be used by the University to purchase books in her memory and in her husband's memory.

**PHILIP C. HOLT MEMORIAL SCHOLARSHIP FUND**

—Established in 1982 in memory of Philip C. Holt by his wife, family and student friends. Philip C. Holt was an outstanding senior in the College of Engineering, who lost his life in an automobile accident. Interest earned from the endowment fund is to be expended for a scholarship to an undergraduate engineering student of sophomore standing or above.

## 14/GENERAL INFORMATION

### HORWITZ ENDOWMENT FUND

—Established in 1979 by Mr. Abe Horwitz, a prominent member of El Paso's business community, and further endowed by bequest in his estate in tribute to the Hispanic-American people who worked in his family enterprises. Income provides for scholarships and grants-in-aid for low income students.

### HOUSTON ENDOWMENT, INC. PRESIDENTIAL SCHOLARSHIP FUND

—Established in 1983 by the Trustees of the Houston Endowment, Inc., a philanthropy endowed by Mr. and Mrs. Jesse H. Jones of Houston, Texas. Income earned from the endowment fund will be used to provide a four-year scholarship, renewable annually, to an outstanding undergraduate student in accordance with the Presidential Scholarship Program.

### JACK AND DOROTHY HUNT ENDOWMENT FOR ENTERPREURSHIP

—Established in 1994 by the Cimarron Foundation of El Paso, TX in honor of Jack and Dorothy Hunt. Income earned from the endowment will be used at the discretion of the Dean of the College of Business to promote and enhance formal and informal activities which support the development of entrepreneurs.

### VERNON G. AND JOY HUNT ENDOWED SCHOLARSHIP FUND IN GEOLOGY

—Established in 1991 by a gift from Vernon G. and Joy Hunt of Tyler, Texas. Income earned from the fund will be used for an annual scholarship to a graduate student in Geological Sciences who meets the basic scholarship requirements of the University, subject to approval by the Chairman of the Department of Geological Sciences.

### INTERNATIONAL MINING DAYS SCHOLARSHIP

—Established in 1988 by John Shaw and Frank Weidner, Co-Chairmen of International Mining Days Committee from the El Paso Chamber of Commerce. Income will provide a scholarship to a graduate student who intends to enter the Mining/Extractive Metallurgy resource industry.

### MIGUEL IZQUIERDO TEACHING EXCELLENCE AWARD FUND

—This endowment was established in 1992 by a Tribute Committee of family, friends, faculty, and students in memory of Engineering Professor Miguel Izquierdo. Income earned from the endowment provides a teaching excellence award to an outstanding professor of Electrical Engineering or Physics, with the award to alternate annually between the two departments.

### DR. W. TURRENTINE JACKSON HISTORY FUND

—Created in 1988 by Dr. W. Turrentine Jackson, a prominent professor of History at the University of California at Davis, and 1935 graduate who received the Gold Nugget Award for Alumni Leadership in the College of Liberal Arts in 1984. Income provides a graduate level scholarship in history.

### DR. EILEEN M. JACOBI SCHOLARSHIP FUND

—Established in 1986 upon the retirement of Eileen M. Jacobi, Dean, College of Nursing and Allied Health. Contributions from alumni, friends and colleagues honor her 50 years of service to the Nursing Profession.

### C. D. JARVIS TRIBUTE SCHOLARSHIP FUND

—Established in 1987 by El Paso High School alumni and friends of C. D. Jarvis, who retired in 1985 after an outstanding career of 40 years serving as basketball coach and teacher. Income earned from the endowment will be used to provide an annual scholarship for students from El Paso High School who attend UTEP.

### AGNES T. JIROU MEMORIAL LIBRARY FUND

—Established in 1987 at the bequest of Mrs. Agnes T. Jirou, who died May 16, 1985. She was a member of the Chancellor's Council of the U.T. System. Income earned from the endowment will be used to purchase new library books at UTEP.

### BEN L. JIROU SCHOLARSHIP IN SCIENTIFIC RESEARCH

—This endowed scholarship was established in 1969 by Mrs. Ben L. Jirou as a memorial to her husband. The income from the endowment will provide an annual scholarship to a deserving student in the College of Science. Mr. Jirou, an official of the International Boundary and Water Commission, was a resident of El Paso from 1920 until his death in 1967.

### LOUISE E. JOHNSON ENDOWED SCHOLARSHIP FUND

—Established in 1995 by Mr. Alvin T. Johnson in honor of his wife, Louise, a successful corporate owner and administrator. Income from this fund provides a scholarship for a student in any discipline who meets the requirements of the UTEP Scholarship Office.

### THE GLADYS JOHNSTON MEMORIAL FUND

—Established by the will of Miss Gladys Johnston of El Paso, who died in 1971. Miss Johnston bequeathed her estate to the University to create a permanent fund to purchase books and equipment for the Library.

### CHIP JORDAN LITERARY FESTIVAL FUND

—This special fund was created in 1975 in memory of Chip Jordan, son of Mrs. Winifred T. Jordan, formerly of El Paso. The fund was endowed in 1987 as "The Chip Jordan Literary Festival Fund." Income to the English Department of UTEP provides for the sponsorship of an annual festival, summer writers conference, and other programs in the reading and creative literature field.

### A. BRUCE AND DOROTHY B. KECKLEY ENDOWED LIBRARY FUND

—Established in 1991 as a gift from Mr. and Mrs. Jeffrey B. Keckley of El Paso, Texas. Income earned from the endowment will be used to supplement the needs of the Reference Department of the Library.

### HELEN O'SHEA KELEHER MEMORIAL PRESIDENTIAL SCHOLARSHIP FUND

—Endowed by the bequest of Mrs. Helen O'Shea Keleher, a permanent endowment fund provides Presidential Scholarships for Texas resident students who attend UTEP and study in the field of Business, Education, Engineering, Science, or Nursing. Helen O'Shea Keleher was born in Denver, Colorado, and came to El Paso when she was three years old. Her father, John O'Shea, was the conductor of the first train to pull into El Paso's Union Depot when it opened in 1906.

### ROBERT E. KOLLINER MEMORIAL FUND

—Established in 1986 by Border Steel Mills, Inc. in memory of Robert E. Kolliner, former El Paso City Alderman and active Southwestern Sun Carnival member. Kolliner worked for Prudential Life Insurance Company in El Paso for more than 20 years. Income will provide an annual scholarship for track and field athletes at UTEP.

### DR. EDWIN J. KNAPP MEMORIAL FUND

—Established in memory of Dr. Edwin J. Knapp, Professor Emeritus of Physics, who served the University for 38 years. Alumni, friends, and associates created this permanent fund to provide future income to the Departments of Mathematics, Physics and Athletics.

### THE KRUSZEWSKI FAMILY ENDOWED PROFESSORSHIP IN POLITICAL SCIENCE

—Established in 1992 by Zbigniew Anthony and June Kruszewski, an alumna of UTEP. Dr. Kruszewski is a Professor of Political Science. The endowment is memorializing his father Tadeusz and mother Irena Grabowska-Kruszewska, a victim of the Ravensbruck Nazi concentration camp as well as brother Janusz and sister-in-law, Irena. Income from the endowment will support an outstanding faculty member in the Department of Political Science conducting research and teaching in the sub-field of International Relations and Comparative Politics of the Slavic nation-states. This is the first endowed Professorship in the social sciences.



**FELIX LAIDLAW MEMORIAL SCHOLARSHIP FUND**

—Established in 1986 at the bequest of Felix Laidlaw, who died June 8, 1986. This non-alumni bequest provides a university endowed scholarship fund under the UTEP Presidential Scholarship Program. Laidlaw's love for the University and the city of El Paso is shown through his gift.

**LANWARD FOUNDATION ENDOWED SCHOLARSHIP FUND IN HONOR OF NESA AZAR**

—Created in 1992 by a gift from the Lanward Foundation to honor Mrs. Neza Azar, one of the original founders of the foundation. Income from the endowment will be used to award one annual scholarship to an undergraduate student pursuing a degree in either Business, Engineering or Science.

**C. H. LEAVELL-GEORGE MATKIN SCHOLARSHIP FUND**

—Established in 1983 by the Development Board of The University of Texas at El Paso to honor C. H. Leavell and George G. Matkin, two long-time members of the Development Board upon their retirement on August 31, 1983. Income earned from the permanent endowment fund will be used for an undergraduate scholarship to a worthy and deserving student under the Presidential Scholarship Program.

**DR. R. MILTON LEECH ENDOWED FUND FOR DRAMA**

—Established in 1985 by alumni, friends, and associates, this permanent fund pays tribute to Dr. R. Milton Leech for 35 years of outstanding service to this institution as Costumer, Theatre Director, Professor, Department Chairman, Dean of Administration, Vice President for Academic Affairs, and Acting President. Income earned from the endowment fund will be used to provide scholarships for Theatre Arts majors.

**FORREST O. LEWIS ELECTRICAL ENGINEERING ENDOWED FUND**

—Established in 1989 by Mrs. Forrest O. Lewis in honor of her husband's career in electrical engineering. Mr. Lewis, who died in February 1989, was a 1950 graduate of the University, and had a long record of support for the College of Engineering. Income from this endowment in his memory will be used to augment the teaching activities of the Department of Electrical Engineering.

**FORREST O. AND HENRIETTA LEWIS PROFESSORSHIP OF ELECTRICAL ENGINEERING**

—Established in 1995 by Mrs. Henrietta "Penny" Lewis in memory of her husband Forrest, an alumnus of Texas Western College, in appreciation of his instructors and mentors. Income from this fund supports the Professorship in the College of Engineering and will assist new faculty members in establishing their career paths in quality teaching and research excellence.

**LIBRARY EXCELLENCE ENDOWMENT FUND**

—Established in 1985 as a result of \$25,000 contributed by alumni and friends of the University during 1984 in reply to a challenge grant from Burlington Northern Foundation for the celebration of the new Library Building. During the "Campaign for Library Excellence" donors designated their gifts for the purchase of new library books. Interest earned from the endowment fund will be expended for the purchase of books and library materials.

**LIBRARY POOLED ENDOWMENT FUND**

—This fund was created by friends of the University Library to honor or memorialize alumni, faculty, organizations, and friends of the University. By annual contributions to this fund, donors create a lasting tribute to their friends and loved ones because their gifts provide books for the Library, marked by special bookplates carrying the name of the person or group being honored or memorialized. Currently, more than 200 individual funds are part of the Library Pooled Endowment Fund.

**EVELYN LINCOLN SCHOLARSHIP FUND**

—This fund was established through the bequest of Mrs. Evelyn Lincoln Archer, a 1934 graduate, who died in 1972. The fund will provide an annual scholarship for a female student majoring in Theatre Arts or Speech.

**ANNA M. LITTLETON MEMORIAL SCHOLARSHIP FUND**

—Established in 1984 by the late Burton F. Littleton and friends in memory of his wife, with income from this permanent endowment fund providing an undergraduate scholarship under the Presidential Scholarship Program.

**E. RAY LOCKHART LIBRARY MEMORIAL FUND**

—Created in 1971 in memory of Mr. Lockhart, a distinguished alumnus who attended the University from 1929 to 1932. The endowment was created by alumni and friends and will purchase engineering books for the Library.

**ROBERT P. AND MARGARET LOVE LIBRARY FUND**

—This fund was established in 1993 by Robert Love along with family and friends. Income is used to purchase books and periodicals for the University Library.

**BETTY M. MacGUIRE PROFESSORSHIP IN BUSINESS ADMINISTRATION**

—Established in 1985 by Betty M. MacGuire, a 1948 graduate and leading El Paso citizen, to enhance the teaching and research activities of the College of Business Administration and provide salary support for a distinguished Business Professor.

**JOHN T. MacGUIRE PROFESSORSHIP IN MECHANICAL AND INDUSTRIAL ENGINEERING**

—Established in 1985 by John T. MacGuire, a UT Austin graduate and prominent El Paso civic leader, to enhance the teaching activities of a distinguished Professor in Engineering as support for a Doctoral Program.

**YVONNE E. GREEAR AND JULIE GREEAR MacQUEEN MEMORIAL LIBRARY FUND**

—Originally established in 1990 by Julie Greear, friends and family of Julie Greear MacQueen, this fund now honors the memory of Mrs. Greear and her daughter, Julie. Income is used to develop the collections of the UT El Paso Library.

**REVEREND DR. CHARLES C. G. MANKER MEMORIAL MUSIC FUND**

—Established in 1973 by the congregation of the First Unitarian Church of El Paso to honor their late minister, Dr. Manker. The earnings of this endowment fund will be used to provide scholarships in music.

**DEXTER R. MAPEL, JR. AND GRACE MILLER MAPEL MEMORIAL SCHOLARSHIP FUND**

—Established in 1984 in memory of Dexter R. Mapel, Jr. and Grace Miller Mapel by their daughter, sons, and friends to pay tribute to these long-time El Pasoans. Income from this permanent endowment fund will provide undergraduate scholarships for Department of Art students.

**ALVIN J. MARKS MEMORIAL SCHOLARSHIP**

—Established by the Blaugrund Foundation and the family of Alvin J. Marks, El Paso civic leader and businessman. The income from the endowment is used to provide one or more scholarships to deserving students each year.

**GEORGE G. MATKIN SCHOLARSHIP FUND**

—Established in 1981 by George G. Matkin, Chairman Emeritus, State National Bank of El Paso and long-time member of the University Development Board, with income from this permanent endowment fund providing scholarships for superior local area high school students who attend UTEP.

**JAMES MAURICE MEMORIAL ENGINEERING FUND**

—Established in 1985 by the late James Maurice, U.S. Bureau of Mines executive, and a 1940 Metallurgical Engineering graduate, with income used to provide unrestricted funds to improve the quality of the academic programs under the College of Engineering.

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### JAMES M. MAURICE MEMORIAL METALLURGICAL ENGINEERING SCHOLARSHIP FUND

—Established in 1988 upon the death of James M. Maurice, Class of 1940, to provide scholarships to outstanding Metallurgical Engineering students under the Presidential Scholarship Program. Graduate students are also eligible.

### ELLIS MAYFIELD FAMILY PRESIDENTIAL SCHOLARSHIP FUND

—Established in 1984 by Ellis O. Mayfield, prominent El Paso attorney, and his wife, Susan, with income from this permanent endowment fund providing a Presidential Scholarship for superior local area high school students who attend UTEP. Worthy and deserving qualified students must meet the criteria of the Presidential Endowed Scholarship Program.

### ELLIS AND SUSAN MAYFIELD PROFESSORSHIP FUND

—Established in 1986 by Mr. and Mrs. Ellis O. Mayfield as a "Challenge Grant" for the Alumni Fund for Excellence Campaign. Income from the endowment will be used by a faculty member in the College of Business Administration to carry out a dynamic research program or undertake scholarly pursuits to advance the body of knowledge and to ensure outstanding teaching in that college.

### MARTHA M. McDONALD/RAINBO BAKING SCHOLARSHIP

—This scholarship was created in 1973 by Mr. Kenneth McDonald of Hampton, Virginia, in memory of his wife Martha, a 1959 graduate of the University. Rainbo Baking Company of El Paso completed the endowed fund in 1988. Income provides for scholarships to music students.

### DR. WILLIAM McANULTY MEMORIAL FUND

—Established in 1979 by alumni, friends, and associates, this permanent fund pays tribute to the memory of Dr. McAnulty for his 15 years as Chairman and Professor Emeritus of the Geology Department. Income is used for cash grants to graduate students in geological sciences and for equipment and supplies.

### ARLENE SMITH McKINNON ENDOWMENT FOR ART

—Established in 1993 by Dr. Andrew and Valerie Bernat in memory of her mother, Arlene McKinnon. The income supports the exhibition of student art and provides stipends for art students whose works are awarded annually at the Spring juried show held by UTEP's Department of Art. The stipend awards will be used to purchase their works to create a permanent University Student Art Collection available for viewing in public areas on the UTEP campus.

### J. W. MILLER MEMORIAL GEOPHYSICS FUND

—Established in 1980 by R. O. Anderson from the Atlantic Richfield Company Foundation in memory of J. W. Miller, founder and former president of Gus Manufacturing Company. Income will be used for the unrestricted support of research in geophysics and related earth sciences.

### JOHN JUDY MIDDAGH MEMORIAL LIBRARY FUND

—Established in 1992 by his wife, Winifred McVey Middagh, family and friends of the late journalism professor, John Judy Middagh. Income from this memorial fund is used to purchase books for the University Library relating to journalism and history.

### DR. HASKELL M. MONROE, JR. LIBRARY FUND

—Established in 1987 in honor of Dr. Haskell M. Monroe's seven years of service to UTEP by Southwestern Bell Foundation, alumni, students and friends. Income earned from the endowment fund will be used for yearly purchases of books which will be marked in Dr. Monroe's honor, so that future readers will know of his influence and love for the University Library.

### DR. & MRS. HASKELL MONROE PRESIDENTIAL ENDOWED SCHOLARSHIP FUND

—Created in 1984 by the President's Associates of The University of Texas at El Paso in honor of Dr. and Mrs. Haskell Monroe for estab-

lishing the Presidential Scholarship Program at this institution. Income earned from the permanent endowment fund will provide Presidential Scholarships.

### RUBEN MONTIEL, JR. MEMORIAL SCHOLARSHIP FUND

—Established in 1986 by Mrs. M. Lorraine Montiel and friends, in memory of her husband, who died of leukemia on April 9, 1986. Montiel graduated from UTEP in 1980 and received a Master of Science degree in Civil Engineering in 1986. Income will provide an annual scholarship for civil engineers under the UTEP Presidential Scholarship Program.

### R. C. MORGAN SCHOLARSHIP FUND

—One of the pioneers in the national credit union movement is honored by this endowed fund. Established in 1988 upon the retirement of R. C. Morgan from the Government Employees Credit Union of El Paso, income is provided to outstanding students from the El Paso metropolitan area who attend UTEP and major in Business Administration.

### EVERETT F. AND THELMA MORRIS ENDOWED SCHOLARSHIP FUND

—This fund was created in 1995 by Mr. and Mrs. Morris to support a student pursuing a degree in chemistry, biology, physics, mathematics, engineering, or any computer-related field.

### THELMA E. MORRIS ENDOWED GRADUATE SCHOLARSHIP FUND

—Established in 1995 by Mrs. Thelma Morris. This fund supports a student pursuing a graduate degree in chemistry, biology, physics, mathematics or engineering, especially metallurgical and materials engineering.

### FRANK AND POLLY ANN MORROW OUTSTANDING INTERNATIONAL STUDENT AWARD FUND

—Established in 1985 by Frank and Polly Ann Morrow, Chancellor's Council members, with income from this permanent endowment fund providing resources for a cash award and a plaque to the most outstanding international student on a yearly basis. Both Mr. and Mrs. Morrow passed away in 1991.

### WILLIAM JOSEPH MULDOWNEY MEMORIAL ENDOWED LIBRARY FUND

—Established in 1992 by a gift from the estate of William Joseph Muldowney. Mr. Muldowney graduated from the University in 1950 with a degree in Business Administration. He worked as an auditor in El Paso and Austin, TX and California. He had an extensive personal library and enjoyed reading "the classics." Money from the endowment will be used by the University Library for the purchase of Great Books and for Classics.

### MR. AND MRS. MacINTOSH MURCHISON CHAIR (I) IN ENGINEERING

—Established in 1985 by Mrs. Louise B. Murchison to recruit to the faculty an outstanding researcher in the field of Manufacturing Engineering or Materials Science.

### MR. AND MRS. MacINTOSH MURCHISON CHAIR (II) IN ENGINEERING

—Established in 1986 by Mrs. Louise B. Murchison to support an outstanding faculty member whose work will contribute to the economic development and progress of the El Paso region and be involved in the teaching of undergraduate students.

### MR. AND MRS. MacINTOSH MURCHISON CHAIR (III) IN ENGINEERING

—Established in 1987 after the death of Mrs. Louise B. Murchison in November 1986 to support outstanding faculty members whose work will contribute to the economic development and progress of the region.

**MR. AND MRS. MacINTOSH MURCHISON CHAIR (IV) IN ENGINEERING**

—Established in 1987 after the death of Mrs. Louise B. Murchison to provide resources for the development and implementation of the proposed doctoral program in Engineering at UTEP, thereby ensuring the integration of the two principal functions at UTEP, mainly teaching and research.

**MACINTOSH MURCHISON ROGERS ENDOWMENT FUND FOR STUDENT ENHANCEMENT**

—Established in 1994 by family and friends, the income from the endowment is used to support costs associated with the participation of business or engineering students in national and international competition, presentation, or other professional development opportunities.

**RANDOLPH S., JR. AND LUCILLE M. MURRAY ENDOWED FUND FOR STUDENT ENHANCEMENT**

—Established in 1994 by Mr. and Mrs. Randolph S. Murray, Jr., this fund provides direct support to academically worthy students.

**MARSHALL G. MUSTAIN SCHOLARSHIP FUND**

—Established in 1989 by a bequest from the estate of Marshall G. Mustain, this endowed fund will provide scholarships to worthy undergraduate students who are involved in chemical process studies in Civil, Mechanical or Metallurgical Engineering. Mr. Mustain, a principal consultant for Standard Oil Company of California, attended the Texas School of Mines from 1927 to 1929, and was co-captain of the 1929 football team.

**PHOEBE AND REUBEN MUTNICK SCHOLARSHIP FUND**

—Established in 1990 by many contributions from friends, alumni and colleagues. Interest from the Mutnick endowment will be used to provide a scholarship for a keyboard student, either graduate or undergraduate, approved by the Music Department of the University. Mrs. Mutnick retired from the University in 1982, as a teacher of class piano. Both she and Dr. Mutnick, a retired physician, have been actively involved in El Paso's music community for many years, and are supportive friends of the University's Music Department programs.

**W. P. NASH SCHOLARSHIP FUND**

—This endowment was created by W. P. Nash, Chairman and Chief Executive Officer of GeoSurveys, Inc., and a 1958 geology graduate, with income used to provide scholarships for upper-level undergraduate Geology majors.

**LLOYD A. NELSON MEMORIAL PROFESSORSHIP IN GEOLOGY**

—Friends and associates of the late Dr. Lloyd A. Nelson, a distinguished alumnus and a member of the faculty from 1920 to 1964, have established a professorship in his honor.

**GORDON B. OKUM ENDOWED DRAMA SCHOLARSHIP FUND**

—Established in 1991 by a bequest from Gordon B. Okum of El Paso, who died in January of 1990. Income earned from the endowment will be used to award scholarships to undergraduate or graduate students majoring in Drama in the Fine Arts division of the University.

**VERNA O'NEILL AND HELEN LAWRENCE INDIO MOUNTAINS RESEARCH STATION ENDOWMENT FUND**

—Established in 1995 by Dr. Joseph "Jody" and Diane Lawrence in memory of their mothers, Helen Lawrence and Verna O'Neill. Income from the endowment will be used to support educational/research activity for UTEP faculty and students working at the Indio Mountains Research Station site in areas of ecology, eco-toxicology, geology, and archeology.

**UTEP PARTNERS ENDOWED FUND FOR STAFF SCHOLARSHIPS**

—Established in 1995 by UTEP faculty and professional staff, income from this fund provides scholarships to UT El Paso staff members who wish to pursue higher education.

**BULAH L. PATTERSON MEMORIAL PRESIDENTIAL SCHOLARSHIP FUND**

—Established in 1987 with the last Will and Testament of Bulah Liles Patterson, who died in 1986 at the age of 90 and was a former faculty member of UTEP from 1927 to 1967. Income from the endowment fund provides scholarships for students majoring in mathematics, engineering, nursing and allied health who qualify under the Presidential Scholarship Program. Mrs. Patterson taught mathematics to thousands of undergraduate students at Texas College of Mines and Texas Western College prior to her retirement in 1967.

**D. L. AND LUCILLE PILLOW LIBRARY MEMORIAL FUND**

—Established at the bequest of a prominent El Paso woman who left her estate to the University upon her death in 1986. Her husband organized the D. L. Pillow Company, which he operated for 30 years as one of the community's important businesses. D. L. and Lucille Pillow, both civic leaders, shared their love for the University and endowed a Library Fund for the purchase of new books and Library materials.

**GORDON PONDER PERMANENT LIBRARY MEMORIAL FUND**

—This fund was established by Mr. and Mrs. Jack Ponder in memory of their son who died while a student at The University of Texas at El Paso. Income is used to purchase books for the University Library.

**GEORGE B. POWELL NOVA MEMORIAL FUND**

—Established in 1993 by a bequest from Mrs. Anna Martha Doak Powell. Income from the fund supports UTEP's quarterly magazine, NOVA.

**THE PRESIDENT'S ASSOCIATES ENDOWMENT FUND**

—This fund was created by the President's Associates, a group of friends of the University who contribute \$500 or more annually to academic programs. Each year one-half of the unrestricted gifts from members is transferred to the endowment fund. Income from the endowment is used for academic improvements as determined by the President of the University, with approval of the President's Associates Executive Committee.

**PRESIDENTIAL SCHOLARSHIP PROGRAM**

—Alumni, friends and associates established the Presidential Scholarship Program during the 1982 Presidential Scholarship Program year. Interest earned from the endowment is to be expended for one or more academic scholarships under the new Presidential Scholarship Program.

**DR. HOWARD E. QUINN MEMORIAL FUND**

—Established in 1987 by alumni, friends, colleagues, and corporations in memory of Howard E. Quinn for his dedicated service to the University. Income earned from the endowment will be used to promote the Department of Geological Sciences and to encourage additional funding for endowing a professorship.

**DR. HOWARD E. QUINN GEOLOGY LIBRARY MEMORIAL FUND**

—Alumni, friends and associates established this tribute in memory of this long-time chairman of the Geology Department to honor his 40 years of service to the University and its students. Income is used for the purchase of geology books for the Library.

**RAINBO BAKING/ANHEUSER-BUSCH SCHOLARSHIP FUND**

—Established in 1988 by the Anheuser-Busch Companies, Inc. of The Woodlands, Texas, and one of its El Paso, Texas subsidiaries, Rainbo Baking Company. Income earned from this endowment will be used to award an annual undergraduate scholarship with preference given to full-time Hispanic students seeking financial assistance and meeting the requirements for general scholarships.

**ELLA KATE AND WALLACE RALSTON NURSING STUDENTS SCHOLARSHIP FUND**

—Originally established in 1985 as a loan fund for nursing students as the result of a distribution of funds from the Last Will and Testament of Ella Kate Ralston. In 1991 the fund was modified to allow for the awarding of scholarships to nursing students studying at UTEP.

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### VINCENT M. RAVEL COLLECTION OF JUDAICA

—A memorial to a prominent El Paso physician who made many contributions to the Library during his lifetime. After his death in 1969, his widow gave to the University their collection of books on Jewish history, culture, and customs. A permanent fund to finance additional purchases for the collection was established by Dr. Ravel's friends.

### MARY HANNER REDFORD MEMORIAL FUND

—Established in 1981 by Mr. Tyler H. Haynes, Jr. in memory of his aunt, Mary Hanner Redford. Income to be used solely by Texas Western Press for publishing works dealing with the history of the Southwestern United States.

### RHO SIGMA TAU-ROBERT L. SCHUMAKER ENDOWED PROFESSORSHIP IN PHYSICS

—Established in 1990, private gifts to this endowment fund were matched three-for-one by a group of friends, colleagues and former students of Professor Robert Schumaker. The endowment was created to honor Professor Schumaker, who retired in May 1989 with 43 years of faculty service to the University. In addition, he was directly involved in the development of the Schellenger Research Labs, served as director of the University's first Computer Center, and was Director of Admissions. Income from the endowment will be used to recognize and reward a faculty member from the Department of Physics who shall be chosen solely for his or her excellence in teaching.

### JIMMY ROGERS, JR. ENDOWED FOOTBALL SCHOLARSHIP

—Established in 1995 by John Hancock Mutual Life Insurance Company to honor Jimmy Rogers, Jr. for his devoted service to the Sun Carnival Bowl Game and festivities. This fund provides scholarship support for a student or students who play on the UT El Paso Miner football team.

### RINTELEN/EHRLINGER METALLURGICAL ENGINEERING SCHOLARSHIP

—Established by Donald and Ann McGehee, former students, in honor of Dr. Joseph Rintelen and the late Dr. Henry Ehrlinger, professors of Metallurgical Engineering, for an outstanding senior majoring in Metallurgical Engineering.

### RODERICK MEMORIAL SCHOLARSHIP FUND

—Established under the will of Dorrance D. Roderick, long-time benefactor of the University, and prominent El Paso business leader, to provide scholarships for music majors selected by the University and the Musical Director of the El Paso Symphony Orchestra.

### DORRANCE D. RODERICK FOUNDATION PROFESSORSHIP IN ENGLISH

—Established in 1989, by a gift from the Dorrance D. Roderick Foundation and the El Paso Community Foundation. Mr. Roderick was owner of the El Paso Times from 1930 until 1972, and its president and publisher for 46 years. He was a philanthropist and civic leader in El Paso until his death in 1981. This gift establishes the first endowed professorship in the College of Liberal Arts. Income earned from the endowment will be used to support the Professorship in the Department of English.

### THE PATRICK ROMANELL LIBRARY FUND

—Established in 1974 by Dr. Patrick Romanell, an H. Y. Benedict Professor of Philosophy, to be used for purchase of books in the history and philosophy of medicine.

### DR. WALTER R. ROSER MEMORIAL SCHOLARSHIP

—Established in 1987 by alumni, friends, relatives, colleagues, and corporations in memory of Walter R. Roser, who died in 1984 after serving in the Department of Metallurgical Engineering at UTEP for 18 years. Income from the endowment will provide an annual scholarship to an outstanding junior in metallurgical engineering.

### JULIA ANN ROSS MEMORIAL SCHOLARSHIP

—Created by Mrs. Ross, an El Paso school teacher and alumna, who bequeathed a portion of her teacher's retirement fund to establish a permanent scholarship endowment to aid qualified students.

### J. M. ROTH PERMANENT MEMORIAL FUND

—Established by contributions from the friends of the late educator, memorializing this former Chairman of the Departments of Philosophy and Psychology, by providing scholarships to students of Philosophy and Psychology.

### REESE ROWLING ENDOWED FUND FOR GEOLOGY

—Established in 1994 by Mr. Reese Rowling, a 1951 graduate of the Texas Western College. Income from his fund will be used to create a stipend to aid a graduate or undergraduate student in the field of geology.

### EMMA H. SCHELLENGER TRUST

—Established under the will of Mrs. Emma H. Schellenger as a memorial to her husband, Newton C. Schellenger. The income from this trust held by Texas Commerce Bank is used for support of the Schellenger Research Laboratories.

### SCHELLENGER PROFESSORSHIP IN ELECTRICAL RESEARCH

—Established in 1982 from the Schellenger Foundation Trust and the will of Emma H. Schellenger to provide a professorship in electrical research in the Department of Electrical Engineering. Income from the endowment will be used by a faculty member occupying the professorship to stimulate and promote funded research by providing seed money, travel, wages and salaries for support staff.

### DAVID WADDELL SCHILLINGER SCHOLARSHIP

—A memorial to the son of Mr. and Mrs. William C. Schillinger, this scholarship was established in 1970. The endowment will provide funds each year for one or more students. The donors have permitted the University almost full discretion in selecting the recipient, requiring only that highest priority be given to financial need.

### GEORGIE K. SCHWARTZ ENDOWED SCHOLARSHIP IN SOCIAL WORK

—Established in 1991 by a bequest from the estate of Georgie K. Schwartz of El Paso. Income earned from the endowment will be used to award scholarships in Social Work programs.

### MELISSA WEHMANN SEWELL ENDOWED SCHOLARSHIP FUND

—Created in 1995 by her husband, Dr. Granville Sewell, sons Kevin and Christopher, and other family and friends in memory of Melissa Wehmann Sewell. Income from this fund provides a scholarship for an undergraduate engineering or science student.

### MICHAEL J. SHEA MEMORIAL SCHOLARSHIP

—Established in 1975 by the family and friends of Lt. Michael J. Shea, USMC, a 1972 graduate of the University, who lost his life in the final evacuation of Americans and refugees from Saigon, South Vietnam. Income will provide a scholarship for a student majoring in physics or mathematics.

### SHEN-LEE ENDOWMENT FUND

—Established in 1995 by Helen H. Lee and Anne L. Leahey to honor their parents, Ye-Tsen Shen and Chao-Hswan Lee in their lifetime dedication to education. Income from the endowment supports activities promoting understanding of East Asia and provides competitive academic scholarships to both academically outstanding and in-need full time graduate students.

### BILL AND JO SIEDHOFF STAFF SCHOLARSHIP ENDOWMENT

—This fund was created in 1993 by Dr. Diana Natalicio to honor her parents, Bill and Jo Siedhoff. Income from the permanent endowment is used to award staff scholarships at the University of Texas at El Paso.

**PATRICIA HEWITT SILENCE MEMORIAL TRUST**

—This fund was established by the will of Miss Patricia Hewitt Silence of El Paso, who died in 1970. Her heirs created a trust at Texas Commerce Bank, the income of which will be used by the University in the furtherance of music and art, particularly art of the Southwest.

**J. ERNEST AND ELIZABETH ROUSE SIPES ENDOWED SCHOLARSHIP**

—Established in 1992 by J. Ernest and Elizabeth Rouse Sipes. Mrs. Sipes was a professor in the College of Business Administration from 1966 to 1989 and is an alumna of UTEP. Mr. Sipes received his Master's in Civil Engineering from UTEP in 1969. Income from the fund will be used to award one annual scholarship to an undergraduate student who is majoring in either Business or Engineering.

**D. B. SMITH MEMORIAL SCHOLARSHIP**

—Established in 1975 in memory of Mr. David B. Smith, a 1952 graduate of the University, by his family, friends and business associates. The scholarship is awarded to a student majoring in Geology.

**THE JUDITH K. SOLIS MEMORIAL SCHOLARSHIP**

—Established in 1994 by alumni, R. Paul and Patricia Daw Yetter, in memory of former Assistant Dean of Students, Dr. Judith K. Solis. Income from this endowment will support a renewable scholarship for a freshman or upperclassman.

**C.L. SONNICHSEN ENGLISH DEPARTMENT ENDOWED SCHOLARSHIP FUND**

—Established in 1993 by the family and friends of C.L. Sonnichsen, Professor Emeritus of English, income provides scholarships to graduate or undergraduate students studying English or America literature.

**C. L. SONNICHSEN SOUTHWEST PUBLICATIONS FUND**

—The annual income from this endowment provides a unique award to the best writer of non-fiction in Southwestern history, art, or culture as determined by the Texas Western Press Editorial Board. Established by contributions from friends, former students, and colleagues, under the leadership of Lady Margaret Brand, this fund appropriately honors the late Dr. Sonnichsen, Professor Emeritus of English and noted Southwestern author, who introduced thousands of students to the literary heritage of the Southwest.

**HARRY SPITZ MEMORIAL SCHOLARSHIP**

—A permanent fund established in memory of Harry Spitz, prominent businessman and El Paso resident for 52 years, by his widow, Mildred Lefkowitz Spitz, and his daughter Leona Spitz Lakehomer. The scholarship will be awarded to a student majoring in pre-medical studies.

**SOUTHWESTERN BELL TELEPHONE SCHOLARSHIP FUND**

—Established in 1985 by Southwestern Bell Telephone Company and Southwestern Bell Foundation to provide qualified students academic scholarships in accordance with the UTEP Presidential Endowed Scholarship Program.

**WILLIAM L. STALEY STUDENT RESEARCH FUND**

—Established by Dr. E. W. Rheinheimer, a prominent El Paso physician and trustee for the estate of William L. Staley, this fund is used for annual grants to competitively-selected undergraduate students for research in human life sciences, with preference for pre-medical majors, and to provide research support to these selected students.

**LYDIA STARK MEMORIAL SCHOLARSHIP FUND**

—Established in 1970 in memory of a distinguished El Paso civic leader and teacher, with income from this endowment fund providing a scholarship to assist students who plan a career in Speech Therapy.

**STATE NATIONAL BANK OF EL PASO PRESIDENTIAL SCHOLARSHIP FUND**

—Established in 1982 by the State National Bank of El Paso during the Presidential Scholarship year as a challenge grant matching all new and increased gifts from alumni and friends of the University. Income from this permanent endowment fund provides a Presidential Scholarship.

**STATE NATIONAL BANK OF EL PASO UNIVERSITY ENDOWED SCHOLARSHIP FUND**

—Created in 1982 as a part of the Presidential Scholarship Fund "Challenge Grant" to provide a university endowed academic merit scholarship to worthy and deserving students from the El Paso school area.

**J. EDWARD AND HELEN M.C. STERN ENDOWED PROFESSORSHIP IN PSYCHOLOGY**

—Established in 1992 by a gift from Drs. J. Edward and Helen M.C. Stern. Dr. J. Edward Stern is highly respected for his medical practice in El Paso dating back to the late 1940's, in the areas of neurology and psychiatry. In honor of his work, Providence Memorial Hospital has named its Neurodiagnostic and Balance Center after him. He has also been named Medical Director, Emeritus for Neurodiagnostics at Providence Hospital. Dr. Helen M.C. Stern, a clinical psychologist, was retired from William Beaumont Army Medical Center. Income from the endowment will be used to support an individual whose scholarship and/or research focuses on the basic and applied neuropsychiatric sciences and related or associated fields and areas of interest.

**LUCILLE T. STEVENS ESTATE FUND**

—Created in 1945 by the generous bequest of Mrs. Lucille T. Stevens, the estate fund provides income for one of the University's most valuable scholarship awards directed to male students with outstanding academic records. Mrs. Stevens in her last Will and Testament expressed her desire that these scholarship gifts funded by property and numerous assets assist those students who are striving to elevate themselves to become leaders of their country.

**WILLIAM S. STRAIN MEMORIAL GEOLOGY FUND**

—Established in 1974 by alumni and friends, this fund honors the late Professor Emeritus William S. Strain. The income is used by the Department of Geological Sciences to improve its teaching program and to provide undergraduate scholarships in tribute to Dr. Strain's 37 years as an outstanding teacher of the Earth Sciences.

**STUDENT LOAN FUNDS**

—Financial assistance to students in the form of emergency loans is available through loan funds established by friends of the University, both individual and organizational. The major named funds are:

- The Alumni Association of UTEP, Inc. Loan Fund
- Joaquin A. Boadella Memorial Loan Fund
- Antoinette Cardona Loan Fund
- Dr. Marion and Betty Cline Memorial Loan Fund
- College of Nursing and Allied Health Emergency Loan Fund
- El Paso Community Loan Fund
- Foreign Students Loan Fund
- Josephine Clardy Fox Student Loan Fund
- Reynolds-Friedman Memorial Loan Fund
- Bill Goodman Memorial Loan Fund
- Hogg Foundation Loan Fund
- W. W. Lake Loan Fund
- LULAC Council #8 Student Loan Fund
- Frank Meador Memorial Loan Fund
- Nursing Student Loan Fund
- Pilot Club of El Paso International Student Emergency Loan Fund
- Evelyn Porterfield Loan Fund
- Student Association Emergency Loan Fund
- Jennie B. Templeton Memorial Student Loan Fund
- Woman's Auxiliary of UTEP Emergency Loan Fund

**SUNTURIANS ENDOWED SCHOLARSHIP FUND**

—Established in 1984 by the Sunturians of El Paso, a young businessman's organization, as a result of a successful Barbara Mandrell concert held in the Special Events Center of UTEP. Income earned from the permanent endowment fund will be used to provide undergraduate scholarships under the Presidential Scholarship Program.

## 20/GENERAL INFORMATION

### DOUGLAS E. AND BURBY M. SWARTZ ENDOWED STUDENT ENHANCEMENT FUND

—Created in 1994 by Mr. Douglas Swartz in memory of his late wife, Burby, in recognition of her commitment to and love of education. Funds from the fund will be used, at the discretion of the President, to provide support for academically worthy students from El Paso County in need of financial assistance to attend UTEP on a full-time basis.

### THE ANTHONY J. TARQUIN ENDOWED SCHOLARSHIP IN CIVIL ENGINEERING

—Established in 1994 by gifts from Mr. and Mrs. Peter Chen, and matching funds from their respective employers, Parkhill, Smith & Cooper, and Sierra Medical Center in honor of Dr. Anthony Tarquin. Income from the fund is used to award scholarships to engineering students and to advance studies in Engineering.

### DR. ARLEIGH B. TEMPLETON PROFESSORSHIP FUND

—Alumni, friends, foundations, and associates of former University President Dr. A. B. Templeton established a professorship in his honor upon his retirement in 1980. The professorship is used to support the Financial Management and Banking Program in the College of Business Administration.

### TEXAS COMMERCE BANK PROFESSORSHIP IN BUSINESS ADMINISTRATION

—Established in 1991 by a gift from the Texas Commerce Bank, El Paso. Income earned from the endowment will be used to benefit the College of Business Administration, to attract and retain the highest quality academicians possible. It is anticipated that a truly outstanding individual will become the Texas Commerce Bank Professor, and that a search for this position should not exclude present members of the College of Business Administration for consideration. The professor will strive to make the College of Business Administration a premier institution and shall conduct a research program in business or undertake scholarly studies for publication and distribution, and teach in the College of Business Administration.

### TEXAS SESQUICENTENNIAL ENDOWMENT FOR THE CENTENNIAL MUSEUM

—Established in 1989 by the El Paso Committee of the Texas Sesquicentennial, jointly sponsored by the City and County of El Paso, from funds contributed by local citizens to create a local remembrance of the Sesquicentennial celebration. More than fifty years ago, the El Paso Centennial Museum itself was established by the citizens of El Paso in celebration of the Centennial of Texas in 1936. The Sesquicentennial Endowment will provide the Museum with unrestricted resources to improve its overall programs and operations.

### DR. E.A. THORMODSGAARD VOCAL MUSIC FUND

—This fund was established in 1991 by gifts from Mrs. Beulah Herbold, niece of Dr. Thormodsgaard and other family members. Income from the endowment will be used to provide resources for the UTEP Vocal Music Program, at the discretion of the Chairman of the Department of Music and the Director of Vocal Music at the University of Texas at El Paso.

### DR. AND MRS. W.H. TIMMONS PROFESSORSHIP OF BORDERLANDS HISTORY

—Established in 1990 by Dr. W.H. Timmons, Laura Timmons, and friends and former students of "Doc" Timmons, to provide funds for a member of the Department of History in the area of Borderlands Studies who would be appointed to the position for a term; or to bring to campus a visiting scholar in the field as a visiting professor; to bring a scholar to campus for a period to give lectures, teach classes, or conduct research.

### LEE TREVINO ENDOWMENT FUND

—This endowment was created by professional golfer Lee Trevino, with income from the endowment providing a scholarship for a deserving student golfer from the United States or Canada.

### UTEP ALUMNI ASSOCIATION - STUDENT ASSOCIATION ENDOWED SCHOLARSHIP FUND

—Established in 1991 as a cooperative endeavor between the UTEP Alumni Association and the UTEP Student Association. Income from the endowment is to be used to provide an annual scholarship for a junior or senior student who has demonstrated service to the University and El Paso through involvement in student and community activities, and who meets the basic scholarship requirements of The University of Texas at El Paso.

### UTEP PARTNERS STAFF SCHOLARSHIP ENDOWMENT FUND

—Established in 1994 by UTEP faculty and staff donors, led by the President of the University, the income supports scholarships for UTEP staff.

### CAPTAIN JAMES R. VALTR MEMORIAL FUND

—An endowed scholarship established by Robert and the late Ollie Valtr, in memory of their son, a 1968 graduate, who was killed in action in Vietnam, June 16, 1971. A scholarship is awarded to an advanced ROTC student from the Department of Military Science.

### RICHARD E. VAN REET M.D. MEMORIAL SCHOLARSHIP

—Established in 1987 by wife, Dr. Patricia Strickbine-Van Reet, son, Alan R. Van Reet, and parents Mr. and Mrs. Leo M. Van Reet in memory of Richard E. Van Reet, a 1973 UTEP graduate. Income earned from the endowment will be used to provide an annual scholarship in the College of Science for students classified as pre-medical or doing research in the sciences.

### MILTON T. AND BERTHA L. WARDEN UTEP BASKETBALL ENDOWMENT FUND

—Established in 1995 by a bequest from the Estate of Bertha Warden, income earned from this fund provides support to the basketball program at UT El Paso.

### ESTHER W. WASHINGTON SCHOLARSHIP IN NURSING

—Created in 1993 by Robert L. Washington, an alumnus of the University of Texas at El Paso, in memory of his mother, Esther. Income from the fund supports a student in the field of nursing.

### WECHTER FUND FOR BUSINESS ADMINISTRATION

—Created in 1987 by Mr. and Mrs. Aaron Wechter of El Paso for the College of Business Administration to improve the overall academic programs. Wechter is a 1949 graduate of UTEP and a prominent businessman in the development and construction of apartment and commercial buildings.

### WEST EL PASO MEMORIAL DISABLED VETERANS SCHOLARSHIP

—Established in 1994 by the West El Paso Chapter 66 of the Disabled American Veterans Inc., income earned is used to provide scholarships, preferably for members and family of members of the Disabled Veterans Inc.

### THE JOHN AND VIDA WHITE ENDOWMENT FUND

—Created in 1982 by John S. White, former Registrar and Director of Admissions at Texas Western College, 1948-54, and his wife, Vida L. White, an El Paso school teacher and alumna, to establish a permanent endowment fund to create an awards program for the English Department (Creative Writing) on travel-related subjects and the Geography Department award on related composition, with additional academic merit scholarships to senior-level students in each of these respective areas.

### KATHERINE H. WHITE MEMORIAL LIBRARY AND SCHOLARSHIP FUND

—Established by U.S. Congressman Richard C. White of El Paso in memory of his wife, the late Katherine Hope Huffman White, who was an active, popular and respected social and civic leader, and an alumna of the University. The income from this fund is used to purchase books for the Library and provide scholarship assistance.

SISTER ALOYSIUS WILLIAMS LECTURESHIP FUND

—Established in 1986 upon the retirement of Sister Aloysius Williams, former Director of Hotel Dieu School of Nursing and Director of Continuing Nursing Education, College of Nursing and Allied Health, UTEP. Contributions from alumni, friends and colleagues honor her many years of service.

B. MARSHALL WILLIS LIBRARY MEMORIAL

—This permanent endowment was created in 1968 by friends of B. Marshall Willis, a distinguished alumnus, El Paso businessman and civic leader. Income from the endowment will purchase books in his memory each year in perpetuity.

ABRAHAM WINTERS-B'NAI B'RITH WOMEN SCHOLARSHIP

—Awarded annually, through a trust fund in memory of her husband, by Mrs. Judith Winters in conjunction with the B'nai B'rith women, to a deserving student.

JUDITH AND ABRAHAM WINTERS - B'NAI B'RITH WOMEN SCHOLARSHIP ENDOWMENT

—Established in 1992 with a gift from the B'nai B'rith Women, El Paso Chapter 540 and combined with the funds in the Abraham Winters Memorial Scholarship at UTEP and the Judith Winters Scholarship.

JUDITH WINTERS SCHOLARSHIP

—This endowed scholarship was established by the generous gift of Mrs. Judith Winters of El Paso and is awarded annually to a qualified and deserving female student.

VERA WISE MEMORIAL SCHOLARSHIP FUND

—Established in 1989 in memory of Vera Wise, who joined the University faculty in 1939 and served as the first chairman of the Art Department. In addition to teaching, she devoted much of her time to the members of the Chi Omega sorority, many of whom took an active role in establishing this endowment. Interest earned from the fund will be used to provide one or more annual scholarships to upper-level students in the Department of Art who have exhibited outstanding talent.

WOMAN'S AUXILIARY OF THE UNIVERSITY OF TEXAS AT EL PASO ENDOWMENT MEMORIAL SCHOLARSHIP FUND

—Established in 1992 with a gift from the Woman's Auxiliary of UTEP, this fund in memory of past members of the Auxiliary will be used to award scholarships to deserving students at UTEP who meet the minimum academic guidelines established by the Scholarship Office.

WOMAN'S AUXILIARY OF UTEP ATHLETIC SCHOLARSHIP FUND

—Established in 1985 by members of the Woman's Auxiliary of UTEP. Income earned is to be used to provide athletic scholarships in accordance with the National Collegiate Athletic Association rules and regulations.

WOMAN'S AUXILIARY OF UTEP ENDOWED SCHOLARSHIP FUND

—Established in 1985 by the Woman's Auxiliary of UTEP. Income earned is to be used to provide annual scholarships to qualified students in accordance with the Presidential Endowed Scholarship Program.

WOMAN'S AUXILIARY OF UTEP LIBRARY ENDOWMENT

—This perpetual fund for the purchase of library books was established in 1969 by the Woman's Auxiliary of the University. The Auxiliary contributes each year to the growth of the fund.

MR. AND MRS. WILLIAM HENRY WOOLDRIDGE LIBRARY FUND

—Established in 1971 by Mr. and Mrs. Emil Jay Dittmer in honor of Mr. and Mrs. W. Henry Wooldridge of El Paso. The income from this endowment is used annually to purchase numerous books for the University Library in their honor.

YSLETA VOLUNTEER FIRE DEPARTMENT SCHOLARSHIP FUND

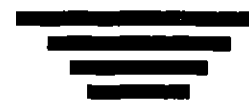
—Maintained for many years by the trustees of this organization and transferred to the University in 1970. The University will continue the trustees' policy of awarding one or more annual scholarships to graduates of Ysleta High School.







# Admission



# Admission to the University

## General Information

The University of Texas at El Paso is pleased to offer admission to any individual who meets the University's admission requirements. The University offers a comprehensive array of programs in both liberal arts and professional areas, from the baccalaureate to the doctoral level. The UTEP community--students, faculty, staff, alumni, and friends--invites interested individuals to review the programs described in this catalog.

The **Office of Recruitment** assists prospective students with enrollment at the University by informing them of the admission procedures, financial aid and scholarship resources, and by providing general University information. New students and their parents desiring pre-enrollment counseling, information, or a campus tour are asked to contact:

The University of Texas at El Paso  
Office of Undergraduate Recruitment  
El Paso, TX 79968-0504  
(915) 747-5890

The **Admissions Office** is responsible for determining an applicant's eligibility for admission according to standards set by Texas law, the Board of Regents of The University of Texas System, and the UTEP faculty. For further information about admission to the University or about the evaluation of transfer credit, contact:

The University of Texas at El Paso  
Admissions Office  
104 Academic Services Building  
El Paso, TX 79968-0510

(915) 747-5576 (Freshmen)  
(915) 747-5583 (Transfers)  
(915) 747-5777 (Nursing and Allied Health)

Admission applications are available at either of the above offices and in the counseling offices of most El Paso area high schools.

## UNDERGRADUATE ADMISSION REQUIREMENTS

### Admission Dates and Fees

Applications for admission are due by the following dates:

Semester	Application Due Date	Document Due Date
FALL	May 1	July 31
SPRING	October 1	November 30
SUMMER	March 1	April 30

Late applications will be considered after the Application Due Date if the student

1. is not an international student,
2. submits all documents required to make the admission decision prior to the Document Due Date, and
3. submits a non-refundable \$15 late application fee.

An admission file that becomes complete after the Document Due Date will be considered for admission to the next semester.

### International Student Admission Dates and Fees

1. Applications from international students must be accompanied by a non-refundable \$65 check or money order (U.S. dollars) made payable to The University of Texas at El Paso.
2. All international student admission documents must be received before the international deadline date:

Semester	International Deadline Date
FALL	May 1
SPRING	October 1
SUMMER	March 1

An admission file that becomes complete after the International Deadline Date will be considered for admission to the next semester.

## Admission Policies and Procedures

The admission requirements that must be met and the admission documents that must be submitted are determined by an individual's academic preparation. The file of an applicant whose academic background does not fall into one of the categories below will be carefully reviewed by the Admissions Office, and the applicant will be notified of the appropriate documents required.

Admission to the University does not assure admission into any of the professional colleges (Business Administration, Education, Engineering, or Nursing and Health Sciences) or into any program with additional admission requirements.

All admission documents must be submitted directly to the Admissions Office. Official transcripts should be sent directly from the schools involved, and official test scores should be sent directly from the appropriate testing agency. All transcripts in languages other than English or Spanish must be accompanied by a certified English translation.

All documents submitted to the University for admission purposes become part of the official files of the University and cannot be released or returned to the student or another institution.

## HIGH SCHOOL PREPARATION

The University strongly encourages students to take high school courses that will give them the academic preparation necessary to pursue a baccalaureate degree. The high school curriculum listed below constitutes the current minimum recommended preparation for university level work.

SUBJECT	CREDITS
English	4
Mathematics (Algebra I & II and Geometry) (plus 1 year of Precalculus, Trigonometry, Analytic Geometry, or Elementary Analysis for Science and Engineering majors)	3 - 4
Natural Science (Physical Science, Biology I & II, Chemistry I & II, Physics I & II, or Science 3 & 4)	3
Social Studies (1 year each of U.S. History, World History, and World Geography, 1/2 year each of Economics and U.S. Government)	4
Foreign Language 3 years of the same language	3
Health	0.5
Fine Arts	1
P.E.	1.5
Computer Science	1

Using one year of high school study to equal one credit, the recommended list requires 21 or 22 credits. For students who have graduated from U.S. high schools within the past five years, the course work listed above will be required for admission to the University beginning with the summer session of 2004. For admission beginning the summer of 2000, students must have completed 16-1/2 of the credits above, including 4 in English. Students in science and engineering need an additional credit, preferably in mathematics. Students admitted for the summer session of 2002 must have completed 18-1/2 of the credits above, including 4 in English. Students in science and engineering need an additional credit, preferably in mathematics.

## FRESHMAN AND TRANSFER ADMISSION

The following sections on freshman and transfer admission requirements apply to citizens and permanent residents of the United States. International students should refer to the section on **INTERNATIONAL STUDENT ADMISSION** for their admission requirements.

### FRESHMAN ADMISSION (Applicants with No Previous College or University Work)

Refer to the section below that best describes your academic background to determine the admission requirements that must be met and the admission documents that must be submitted.

#### APPLICANTS WHO GRADUATED FROM U.S. HIGH SCHOOLS WITHIN THE PAST 5 YEARS

Documents required: Application, official SAT or ACT scores; final, official high school transcript indicating adequate high school preparation, rank, and graduation date.

The University welcomes applications from individuals who are graduates of accredited high schools or their equivalents and who have the academic preparation necessary to pursue a baccalaureate degree. Admission to the University is based on high school academic preparation, final high school rank, and Scholastic Assessment Test (SAT) or American College Test (ACT) scores. For early notification of acceptance, an applicant should have verification of test scores, expected date of graduation, and a transcript sent directly from the high school to the Admissions Office. After graduation, a final, official transcript must be submitted.

In addition to the high school preparation described, applicants must either be in the upper half of their high school graduating class or must score a minimum of 920 on the SAT or a 20 composite on the ACT.

The University's Early Admission Program allows students who are enrolled in their last semester of high school and who meet the requirements for regular freshman admission to enroll concurrently in University courses for which they have the appropriate background. Students interested in early admission must submit a letter of recommendation from their high school counselor or principal. Continued high school enrollment and high school graduation are conditions of the Early Admission Program. Contact the Admissions Office for additional information.

### START Program

Residents of Texas who meet the high school preparation described above but who meet neither the rank nor test score requirement are given an opportunity to attend the University provisionally through the Freshman START Program. START students must attend Orientation, must be advised by the Academic Advising Center, must select their classes from a list of prescribed University courses, must take a free, non-credit Tutorial Learning course, and initially register as START majors in the College of Liberal Arts.

During the first semester at UTEP, a START student must complete at least 9 semester hours with grades of "Credit" or "C" or higher in each course selected from at least two of the following areas: English; Mathematics; Natural Science; Foreign Language; or Liberal Arts (Anthropology, Communication, History, Political Science, Psychology, Reading Education, or Sociology). A cumulative grade point average of 2.0 ("C") or higher must also be maintained. Once these requirements have been met, the student becomes fully admitted to the University and may change majors.

If the student does not earn "C's" or "Credit" in the appropriate 9 hours with a minimum overall 2.0 GPA during the first semester but has at least a 1.5 overall GPA, an additional START semester will be allowed to clear the conditions of admission by meeting the requirements described above.

Students who do not satisfy the conditions of their provisional admission have two options if they wish to re-enroll at UTEP:

1. apply for readmission and reinstatement by the Dean of Liberal Arts after at least 2 calendar years have elapsed since the end of the last period of attendance, or

2. apply for readmission after attending another college or university where a minimum of 12 semester hours with grades of "C" or better in each course were earned while a minimum cumulative 2.0 GPA was maintained

Under extenuating circumstances, an ineligible provisional student may petition for reinstatement through the Academic Advising Center.

#### APPLICANTS WHO GRADUATED FROM NON-U.S. HIGH SCHOOLS WITHIN THE PAST 5 YEARS

Documents required: Application; complete, official high school transcript; official SAT, ACT, TOEFL, or PAA scores (as applicable).

Applicants who graduated from high school outside the United States must demonstrate an adequate proficiency in English that will enable them to pursue university level work successfully.

The SAT or ACT must be taken by applicants whose post-elementary education was in English. An SAT total of 920 or higher, with a minimum of 400 on the Verbal is required. Students taking the ACT must score 20 or higher on the Composite, with a minimum of 21 on the English section.

The TOEFL (Test of English as a Foreign Language) must be taken by applicants whose post-elementary education was not in English; a score of 500 is required.

The PAA (Prueba de Aptitud Academica) should be taken by applicants whose post-elementary education was in Spanish and who are not proficient enough in English to take the TOEFL; a total score of 1,000 is required. Applicants admitted on the basis of PAA scores enroll as Inter-American Science and Humanities Program majors in the College of Liberal Arts. Students admitted into this bilingual program are limited to regular university courses taught in Spanish and to ESOL (English for Speakers of Other Languages) courses. Once ESOL 5110 has been completed with a grade of "C" or better, the student may request a change of major.

After being admitted to the University, students whose post-elementary education was not in English must take the SLEP examination given by the UTEP Department of Testing and Student Assessment to determine appropriate English language placement.

#### APPLICANTS WHO GRADUATED FROM HIGH SCHOOL 5 OR MORE YEARS AGO

Documents required: Application; final, official high school transcript; TOEFL or PAA (if applicable).

The academic preparation described under HIGH SCHOOL PREPARATION is recommended. TOEFL scores of 500 or higher or PAA scores of 1,000 or higher may be required of applicants whose education was in a language other than English. Students who lack adequate preparation will be considered for admission on an individual basis. After being admitted to the University, students whose post-elementary education was not in English must take the SLEP examination given by the Student Assessment and Testing Office to determine appropriate English language placement.

#### APPLICANTS WHO DID NOT GRADUATE FROM HIGH SCHOOL

Documents required: Application; official GED scores (English or Spanish); SAT, ACT, or PAA scores (as applicable).

Applicants who did not finish high school are eligible for admission if they have an average standard score of 45 or higher on the Test of General Educational Development (GED). A minimum SAT score of 920 or a minimum ACT score of 20 is required of applicants whose high school class would have graduated within the past 5 years and who pass the English version of the GED. Residents of Texas who meet the GED requirement but do not meet the SAT or ACT requirement will be considered for provisional admission into the START Program. All applicants passing the Spanish version of the GED must submit scores of 1,000 or higher on the PAA (Prueba de Aptitud Academica). Applicants who meet the Spanish GED and PAA requirements are admitted into the bilingual Inter-American Science and Humanities Program.

**TRANSFER ADMISSION (Applicants with Previous College or University Work)**

The University welcomes the applications of qualified individuals who have attended accredited colleges and universities throughout the United States and the world. Transfer applicants must indicate all previous institutions attended on the admissions application and must submit a complete, official transcript from EACH school attended, regardless of the amount of work completed or the intent to have the credit transferred. Credit earned at institutions not declared on the admissions application cannot be used toward a degree at UTEP. Failure to provide complete information will be considered grounds for denial of admission, denial of transfer credit, cancellation of registration, or appropriate disciplinary action.

The University honors suspension periods imposed by other colleges and universities. An applicant who is ineligible to return to any school previously attended because of suspension or dismissal or whose official records will not be released is not eligible for admission to UTEP until readmission to the previous institutions has been approved or until the official documents have been released.

Information regarding the transferability of credit can be found in the ACADEMIC REGULATIONS section of this catalog under "Transfer Credit". Student who have questions concerning UTEP's evaluation of transfer credit should refer to the "Resolution of Transfer Disputes" in that same section.

**TRANSFER REQUIREMENTS**

Documents Required: Application, complete, official transcript from EACH college or university attended.

Applicants who have completed 12 semester hours with grades of "C" or better with an overall 2.0 ("C") grade point average are eligible for admission to the University.

Applicants who graduated from high school within the past 5 years and who do not meet the transfer hour and grade point average requirement must meet the high school preparation, rank, and test score requirements for regular freshman admission described above.

Applicants who graduated from high school 5 or more years ago and who do not meet the transfer hour and grade point average requirement will be reviewed on an individual basis.

**INTERNATIONAL STUDENT ADMISSION**

The University welcomes the applications of qualified international students (non-residents of the United States). Applicants must present evidence of academic ability that indicates, to the complete satisfaction of University officials, that there is high probability for successful completion of the desired academic program. The high school preparation or its equivalent that would qualify the applicant for admission to recognized universities in the home country must be completed. Complete, official transcripts showing classes taken and grades earned in all secondary schools, colleges, and universities must be provided, and the scholastic average in the subject areas appropriate to the desired field of study should be equivalent to at least a 3.0 on a 4.0 scale.

The University must receive complete, official, or school-certified transcripts of high school and university work sent directly from each institution involved. If the original documents are in the student's possession, copies certified by the school, college, university, or consulate may initially be submitted and the originals presented to the Admissions Office when the student arrives on campus. All transcripts in languages other than English or Spanish must be accompanied by certified translations.

A transfer applicant attending another institution on a student visa (I-20) will be considered for admission to UTEP if the requirements for transfer admission have been met and if the applicant has completed a minimum of 12 semester hours or its equivalent each long semester while in the United States. Failure to maintain this student status will result in denial of admission to UTEP.

Financial assistance for international students is extremely limited.

Each student must furnish a statement of financial support from parents or sponsors stating that they are able to finance the student's education while in this country; this must be done before the student can be admitted. Further questions concerning finances should be sent to the Office of International Programs, UTEP, El Paso, TX 79968-0619.

The admission credentials of all international students will be evaluated on the basis of the admission requirements described below. International students who have attended other colleges or universities should also refer to the "TRANSFER ADMISSION" section for additional information about transferring to the University.

**FRESHMAN ADMISSION: Applicants with No Previous College or University Work**

**GRADUATES OF NON-U.S. HIGH SCHOOLS**

Documents required: Application, accompanied by \$65 admission evaluation fee; satisfactory SAT, ACT, PAA or TOEFL scores; complete, official high school transcript; acceptable statement of financial support; immunization record.

A graduate of a non-U.S. high school whose academic credentials would grant admission to recognized universities in the home country will be considered for admission to the University. The academic average in areas related to the desired field of study should be equivalent to a 3.0 on a 4.0 scale.

**GRADUATES OF ACCREDITED U.S. HIGH SCHOOLS**

Documents required: Application, accompanied by \$65 admission evaluation fee; satisfactory SAT or ACT scores; complete, official high school transcript; acceptable statement of financial support; immunization record.

International students who graduate from accredited U.S. high schools will be considered for admission to the University. The SAT or ACT must be taken.

**TRANSFER ADMISSION (Applicants with Previous College or University Work)**

Documents required: Application, accompanied by \$65 admission evaluation fee; satisfactory SAT/ACT, TOEFL, or PAA scores; complete, official high school transcript; complete, official transcripts from EACH college or university attended; acceptable statement of financial support; immunization record.

An applicant from an accredited or nationally recognized college or university who has a minimum overall grade point average of at least 2.0 and who is eligible to return to all previous institutions attended will be considered for admission to the University.

**INTERNATIONAL FRESHMAN AND TRANSFER TEST SCORE REQUIREMENTS**

All international students who have not earned a baccalaureate degree from a college or university in the United States must submit entrance examination scores. The SAT or ACT must be taken by applicants whose post-elementary education was in English. An SAT total of 920 or higher, with a minimum of 400 on the Verbal is required. Students taking the ACT must score a minimum of 20 on the Composite with a minimum of 21 on the English section. The TOEFL may be submitted by applicants whose post-elementary education was in English but for whom the SAT or ACT is unavailable in the home country.

The TOEFL (Test of English as a Foreign Language) must be taken by applicants whose post-elementary education was not in English; a score of 500 is required.

The PAA (Prueba de Aptitud Academica) should be taken by applicants whose primary language is Spanish and who are not proficient enough in English to pass the TOEFL; a total score of 1,000 is required. Applicants accepted with PAA scores are admitted into the bilingual Inter-American Science and Humanities Program in the

College of Liberal Arts. Students admitted into the program are limited to regular University courses taught in Spanish and to ESOL (English for Speakers of Other Languages) courses. Once ESOL 5110 has been completed with a grade of "C" or better, the student may request a change of major.

After being admitted to the University, students whose admission was based on the TOEFL or PAA must take a placement examination through the Student Assessment and Testing Office to determine proper English course placement.

Students whose academic background is unusual or is not described above should contact the Admissions Office to determine which test is most appropriate.

## READMISSION

Documents Required: Application; complete, official college transcripts from all institutions attended since last UTEP enrollment.

Former UTEP students who last attended the University prior to January 1, 1984, must submit an application for readmission. Ineligible START students and Junior Scholars who have graduated from high school who wish to continue at UTEP as regular students should contact the Admissions Office to have their admission files reviewed and reactivated. Students who have attended other colleges or universities since last attending UTEP must submit official transcripts of that work so it can be evaluated and added to the UTEP academic record.

## JUNIOR SCHOLARS PROGRAM

The Junior Scholars Program is a cooperative effort between The University of Texas at El Paso and El Paso area public and private schools that allows qualified students to enroll in regular university courses while attending high school. Hours earned in this way will count as university credit and may also be approved to apply toward high school graduation requirements. Persons interested in this program should contact:

The University of Texas at El Paso  
Junior Scholars Program  
Honors House  
El Paso, TX 79968-0607  
(915) 747-5858

## FLEXIBLE ADMISSION PROGRAM

The Flexible Admission Program is designed for first-time, non-traditional students who have had little exposure to a university environment and who do not intend to pursue a degree at the time of their admission. Flex students may take selected basic undergraduate courses to achieve personal educational objectives or to complete courses in a particular field for professional reasons.

To qualify for the Flex Program, an individual must be at least 23 years of age, be a citizen or permanent resident of the United States, and have had no previous college or university experience. Individuals admitted under this option are subject to the same tuition, fees and regulations as degree-seeking students. A student who changes from Flex to degree-seeking status is required to meet all the requirements for regular admission to the university. Should an individual seek this change, a maximum of 30 semester hours accumulated as a Flex student can be counted toward an undergraduate degree. Individuals who have completed 30 semester hours will need approval from the director of admissions to enroll in, or to continue to enroll under, the provisions of the Flex Program. The late application fee does not apply to Flex applicants, and applicants should note that admission into a non-degree program like Flex will preclude their participation in federally funded financial aid programs.

## GRADUATES OF NON-ACCREDITED SCHOOLS

Individuals who graduated from a non-accredited high school or who attended a non-accredited college or university may be considered for admission to the university on a conditional basis if they meet the requirements for regular freshman or transfer admission. Students who graduated from a non-accredited high school must score a minimum total of 920 on the SAT or 20 on the ACT. Conditions may be placed on the student's enrollment as determined by the director of admissions.

## INDIVIDUAL APPROVAL

Documents required: Application; academic documents available; letter of petition.

Students whose individual circumstances are highly unusual with respect to their admission credentials may submit a written request to the director of admissions petitioning admission on an individual basis.

## ACADEMIC FRESH START PROGRAM

(Texas Education Code, 51.931)

An applicant for undergraduate admission who is a Texas resident may seek to enter the university under the Academic Fresh Start Program. After the applicant informs the Admissions Office in writing of this intention, the university will not consider in the admission decision any academic course work or grades earned 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll. An applicant who chooses to apply under the Academic Fresh Start Program may not receive any course credit for courses taken 10 or more years prior to enrollment.

The courses excluded for Academic Fresh Start purposes may not be counted toward a degree, may not be counted in the cumulative GPA calculation, may not be used to remove any existing high school deficiencies, and may not be used to meet prerequisite requirements.

Students with three or more semester credit hours or the equivalent awarded prior to fall semester, 1989, are exempt from the Texas Academic Skills Program regardless of any election pursuant to the "academic fresh start" statute.

The Academic Fresh Start Program Acknowledgement must be returned to the Admissions Office before the Document Due Date of the semester for which the student is applying.

## TEXAS ACADEMIC SKILLS PROGRAM (TASP)

For additional information about the TASP, refer to the Academic Regulations section in this catalog.

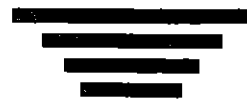
## HEALTH INSURANCE FOR ALL INTERNATIONAL STUDENTS

All international students, excluding Mexican citizens, must be covered by medical insurance. A Health Insurance Fee will be assessed automatically and will appear on the fee statement. Comparable alternate insurance policies may be substituted under certain exceptions by showing proof of insurance coverage to cover the semester enrolled at the time of fee payment. For additional information, contact the Office of International Programs, (915) 747-5664.





# Financial Information



# Financial Aid

The Office of Financial Aid at The University of Texas at El Paso assists qualified students to meet the costs of a college education. No person is excluded from participating on the basis of race, color, national origin, religion, sex, age, veteran status, or disability.

The office welcomes inquiries by mail or telephone but recommends that applicants visit the office personally so that availability and conditions of programs can be fully explained. Appropriate forms are available from counselors' offices at El Paso area high schools, and

The University of Texas at El Paso  
Office of Financial Aid  
202 Union West Bldg.  
El Paso, TX 79968-0629  
(915) 747-5204

## Financial Aid Policy

The amount and type of financial assistance provided will be by means of educational loans, grants, and college work-study in keeping with existing laws and regulations governing financial aid programs. Priority is given to undergraduate students with documented need, who meet academic eligibility criteria, who are enrolled on a full-time basis (12 hours or more), and whose applications are received by the deadline of March 15.

Financial aid awards are based on financial need and academic merit and are operated within existing federal, state and local regulations and policies. The difference between the cost of attending the university (student budget), the student's/family resources (family and/or student contribution), and estimated financial assistance (includes all non-Title IV Scholarships, grants, loans or other assistance not received under Title IV, including Veterans Educational Benefits) determines financial need. For a detailed breakdown of direct and indirect educational costs, contact the above office for written material.

All financial aid applicants are required to submit an Application for Federal Student Aid to determine their financial need for the aid period.

## The Application Process

March 15 is the deadline for each school year. All forms and other required documents are due, COMPLETELY PROCESSED, and on file with this office by the deadline. Be aware that computer processing of forms may be in excess of four weeks. Late applications will be considered only on the basis of available funds.

Information obtained from the need analysis is used to determine the student's financial need and the types of awards for which the student qualifies. Awards made through this office fall into two categories: (1) gift aid, which includes grants and (2) self-help funds which include the College Work Study Program, and long term educational loans. The amount offered as a financial aid award plus the student's resources and those of the parents, if the student is dependent on parents for support, cannot exceed the student's budget.

Once documented need is established, the Financial Aid Office will make every effort to meet this need. The financial aid award will be packaged from a variety of sources and will be based on the financial need and program eligibility of the student and the available funds. In some instances, due to fund limitation, program eligibility requirements, etc., the total award may be less than the documented need.

Transfer students and/or students applying for financial assistance for the spring semester, upon submission of all financial aid documents, will be considered for assistance based on the availability of funds.

For non-need emergency loan fund programs, see Tuition and Fees Emergency Loans, elsewhere in this section.

## Satisfactory Academic Progress Criteria

Federal regulations mandate minimum standards of "satisfactory progress" for students receiving financial assistance. This requirement applies to a student's entire academic history whether financial aid was received or not; and to all types of aid: grants, loans, and workstudy. The standards for determining progress at The University of Texas at El Paso are composed of three separate measurements: grade point average, measurable progress, and accumulated hours.

- I. **GRADE POINT AVERAGE:** (GPA) is the quantitative measurement used for academic work at this university. For financial aid purposes, a student must maintain at least a 2.0 as an undergraduate or 3.0 as a graduate.
- II. **MEASURABLE PROGRESS:** Is the registration in and completion of a minimum number of hours each academic year at this university. An academic year is defined as two long semesters plus the summer session. The Office of Student Financial Aid determines hours you must complete by the end of each academic year based on the enrollment status confirmed on this university's official census date of each long semester. To determine the hours you must complete at UTEP, match the number of hours you are enrolled for with the chart below:

Hours enrolled 1st Long Semester	+	6-8	9-11	12 or more
	6-8	12	15	18
	9-11	15	18	21
	12 or more	18	21	24

Students who repeat courses to improve their GPA should be cautioned that in some cases, previously earned hours remain on their record but are NOT counted towards total hours earned and therefore could affect their measurable progress. In addition, the following are NOT considered credit hours completed:

F-Failure      N-No Grade      P/F-Pass/Fail      I-Incomplete  
P-In Progress\*      W-Withdrawal      U-Unsatisfactory

\* Graduate students working on their Thesis should be aware that P grades usually assigned while completing their Thesis do not provide any credit hours completed at the end of each semester and therefore will affect measurable progress.

- III. **ACCUMULATED HOURS:** Students receiving aid at The University of Texas at El Paso are allowed 150 completed or 180 attempted undergraduate hours to complete a baccalaureate degree, master's candidates are allowed 48 completed or 72 attempted and doctoral candidates 60 completed or 90 attempted graduate hours. Transfer, as well as all UTEP hours are used in determining accumulated hours. Students are responsible for determining what courses they should enroll for in order to comply with their requirement. Students reaching the hour limits and not receiving a degree, may be considered for an extension if they have extenuating circumstances that prevented him/her from the completion of their degree.

### SPECIAL CONSIDERATION:

- 1) Non-degree seeking - a student must be enrolled in a degree granting program. Students enrolled in a program required by a state for teacher certification or recertification at the elementary or secondary level may apply for a Stafford Loan.
- 2) Second degree seeking - A student who is enrolled in a program which leads to a second undergraduate or graduate degree is only eligible to apply for a Stafford Loan and subject to satisfactory progress requirements I and II.
- 3) Transfer Students - Students who begin their academic career at another school, then transfer to U.T. El Paso, must have their transcript evaluated by this institution's Evaluation Office. For



these students financial aid eligibility is identical to that of U.T. El Paso students with comparable credit hours and all accepted transfer hours will be added to UTEP hours whether or not they are used in the students current degree plan.

- 4) Option II/Academic Fresh Start - Students who take one of these options, should be cautioned that semesters for which they received financial aid will still affect their measurable progress.

**APPEAL PROCESS:** An appeal process is available to any student who has been determined to be ineligible for continued aid which may have had extenuating circumstances that prevented them from making satisfactory progress. Students should make an appointment to see a financial aid counselor in order to determine if they have grounds for an appeal. If there are grounds for an appeal, completed forms along with a copy of a current transcript, a degree plan for students who have completed sixty hours or more, and the student's own written explanation of the circumstances which brought about the ineligibility are to be submitted to this office. All items are to be forwarded to the Financial Aid Internal Review (FAIR) Committee. The committee meets monthly and makes its recommendations to the Director of the Office of Student Financial Aid who will make the final decision. Any student anticipating the necessity of making an appeal should be prepared to pay his or her own fees. Results are available and distributed within a week of the committee meeting.

## Types of Financial Assistance

The following summaries of financial aid programs are provided for information only. Complete details of the programs are available through the Office of Student Financial Aid.

### GRANTS

#### Pell Grant

The Federal Pell Grant Program is a federal student aid program designed to assist students in pursuing their first undergraduate degree. The purpose of the Federal Pell Grant is to provide eligible students with a foundation of aid to help pay the cost of attending school. Students who have applied for the Federal Pell Grant will receive a "Student Aid Report" (SAR) within six weeks after submitting the application. The SAR should be forwarded to The University of Texas at El Paso Student Financial Aid Office so that the calculation of the Federal Pell Grant award can be made. Undergraduate students must apply each year for the Federal Pell Grant. Students must maintain satisfactory progress in order to remain eligible for the program.

#### Supplemental Educational Opportunity Grant (SEOG)

The Federal SEOG is available for students who are enrolled and in good academic standing, making satisfactory academic progress, and demonstrating exceptional financial need. Priority will be given to students enrolling full-time and observing the application submission deadlines.

#### Texas Public Education-State Student Incentive Grant (TPE-SSIG)

This is a state-matched grant to be awarded based on financial need. Applicants may be graduate or undergraduate students and must be enrolled part-time or more. It is necessary to file a separate application for this grant.

#### Texas Public Education Grant (TPEG)

This grant provides financial assistance to undergraduate and graduate students with financial need enrolled at least half-time.

### STUDENT EMPLOYMENT (FEDERAL COLLEGE WORK-STUDY PROGRAM)

The Federal College Work-Study Program provides jobs for students who have documented financial need and who wish to earn part of their educational expenses while going to school. Jobs cannot exceed fifteen hours per week at both on-campus and off-

campus worksites and range from clerical worker to research assistant. The student will be paid at the prevailing minimum wage rate, as prescribed by federal law. Graduate and undergraduate students demonstrating financial need are eligible for participation in this program as long as they are enrolled on a full time basis.

### LOANS

The Office of Student Financial Aid offers assistance to students through various long-term loan programs. All recipients of a long-term loan are required to attend a Pre-Loan Counseling Session at the Office of Student Financial Aid prior to receipt of loan funds. Loan repayment begins at the end of a grace period or after the student ceases being at least a half-time student. If payment is not made after the grace period, the student's loan is in default. The lending agency can then take necessary action to obtain payment to include use of a collection agency or court action. If this type of action is taken, the individual is required to repay the entire loan plus costs of collection. Specific descriptions of the various loan programs are listed below.

#### Federal Perkins Loan (formerly known as the National Direct Student Loan)

This loan requires evidence of financial need for eligibility. The interest is 5% and does not accrue while the student is enrolled at least half-time. There are provisions for partial cancellation and deferral for designated public service.

#### Federal Robert T. Stafford Student Loan (formerly known as the Guaranteed Student Loan)

This loan requires evidence of financial need for eligibility. This program is offered through participating lending institutions. Under this plan, the student is responsible for locating a bank or lending institution that participates in the Federal Family Education Loan Program. Although the Financial Aid Office is involved in certifying the student's enrollment and recommending action, the lending institution makes the final decision. This program is available for both undergraduate and graduate students.

#### Federal Unsubsidized Stafford Student Loan

This loan does not require evidence of financial need for eligibility. In addition, the student is responsible for payment of the interest on the loan while in school.

#### Long-term Loan Repayment Information

The long-term educational loans available through the Office of Student Financial Aid have many repayment benefits of which the prospective borrower should be aware. All of these loans defer payment while the borrower is enrolled in a course of study at least half-time. Loans may not be released and remaining loan amounts will be canceled if the borrower drops below half-time. Repayment is made on a monthly basis, over a period not exceeding ten (10) years. Please refer to the most current Financial Aid brochure for repayment information.

#### Emergency Loans

Student emergency loan funds are maintained to assist students who are temporarily in need of funds for books or other expenses. All regularly enrolled students who do not have an outstanding emergency loan are eligible. Loans must be repaid during the semester in which the loan is obtained. Interest charged on these loans is 10% per loan and there is a \$100 limit.

#### Tuition and Fees Emergency Loans

These loans are available to students who need assistance in meeting the costs of tuition and fees. They are available to resident, non-resident, and international students, and documentation of need as described elsewhere in this section is not required for these loans. A special application form is available from the Office of Student Financial Aid, and applicants will be considered on a first-come, first-served basis.

**Hazlewood Act**

Persons who have resided in Texas for at least twelve months prior to the date of registration, and who were citizens of Texas at the time of entry into military service, and who served in the Armed Forces or in certain of the auxiliary services in World War II (except those who were discharged because of being over the age of 38 or because of a personal request), the Korean War, and for more than 180 days during the Cold War, and were honorably discharged therefrom, and who are not eligible to receive benefits provided for veterans by the United States government, are exempt from the payment of tuition and certain required fees, but not from the payment of deposits. To obtain this exemption, the veteran must apply on the form prescribed by and obtained from the Office of Financial Aid. A certified copy of the veteran's service record (Form DD-214) must be submitted with the application. Students must also complete a Free Application for Federal Student Aid (FAFSA) to determine Pell eligibility and obtain student loan history. Students who have defaulted on a Federal Student Loan or have attempted 150 credit hours under the act are not eligible for this program. The benefits may also be extended to the children of members of the armed forces who are missing in action or whose death is documented by the armed services as being directly caused by illness or injury connected with services in the armed forces, and to orphans of members of the Texas National Guard who were killed while on active duty since January 1, 1946. For more information, contact the Office of Financial Aid.

## Undergraduate Scholarships

The University of Texas at El Paso has an excellent scholarship program designed to attract and retain bright scholars to the university. These competitive scholarships are awarded for academic merit and are intended to recognize students for their outstanding academic accomplishments and future potential. The awards are made possible through the generosity of business firms, civic organizations, professional groups, individuals and university endowed funds. Please see the section entitled "Endowments, Trusts and Memorial Funds" in the General Information section of this catalog.

Scholarship awards are given primarily to entering freshmen and are usually renewable for four years (eight long semesters), when the renewal requirements are met. Some scholarships also require documented financial need. Only a few awards are available for international students. Non-resident students awarded a university competitive academic scholarship of at least \$1000 are eligible for resident tuition rates. Scholastically successful high school, transfer, and currently enrolled students are encouraged to apply by the deadline dates of November 1 or March 1 for the following academic year.

The university awards several types of scholarships. They are as follows:

### PRESIDENTIAL PROGRAM SCHOLARSHIPS

The Presidential Scholarship Program includes the university's most prestigious awards. Most of these awards are reserved for incoming freshmen with outstanding academic credentials. Since 1980 the Presidential Program scholarships have attracted many exceptional students to UTEP.

#### I. Presidential Excellence Scholarship

- A. \$8,000 awards over a four-year period (\$2,000 per year)
- B. Initial Eligibility: Recipients of the Presidential Excellence Scholarships will be selected by the Scholarship Committee from the pool of students eligible for the \$1,500 Presidential Scholarship (see II). In addition to meeting the criteria for the Presidential Scholarship, students selected for the Presidential Excellence award must also demonstrate evidence of exceptional leadership abilities and achievements.
- C. Renewal Requirements: see Presidential Scholarships (II)

#### II. Presidential Scholarships

- A. \$6,000 awards over a four-year period (\$1,500 per year)
- B. Initial Eligibility—Applicants must meet two of three requirements:
  1. High school GPA of 96
  2. Top 3% of high school graduating class
  3. 1180+ SAT or 27+ ACT test scores
 Three letters of recommendation and a personal statement of leadership in high school and/or community activities are required.
- C. Renewal Requirements: To renew the scholarship, the recipient must maintain a 3.25 GPA the first year and a 3.5 GPA each year thereafter (or a cumulative 3.5 GPA), and acquire 30 credit hours during the fall and spring semesters.

#### III. Academic Achievement Scholarships

- A. \$4,000 awards over a four-year period (\$1,000 per year)
- B. Initial Eligibility—Applicants must meet two of three requirements:
  1. High school GPA of 93
  2. Top 5% of high school graduating class
  3. 1100+ SAT or 25+ ACT test scores
- C. Renewal Requirements: To renew the scholarship, the recipient must maintain a 3.0 GPA the first year, and a 3.2 GPA each year thereafter (or a cumulative 3.2 GPA), and acquire 30 credit hours during the fall and spring semesters.

#### IV. University Endowed, Guaranteed or Other \$750 Scholarships

- A. \$3,000 awards over a four-year period (\$750 per year)
- B. Initial Eligibility—Applicants must meet two of three requirements:
  1. High school GPA of 90
  2. Top 10% of high school graduating class
  3. 1010+ SAT or 22+ ACT test scores
- C. Renewal Requirements: To renew the scholarship, the recipient must maintain a 3.0 GPA and acquire 30 credit hours during the fall and spring semesters.

### GENERAL SCHOLARSHIPS

Many of the General Scholarships have specific requirements such as upper class standing, financial need, Texas residency, and/or a specific college major.

#### I. University General Scholarships

- A. \$200 to \$2,000 annually. Some awards are renewable for up to four years.
- B. Initial eligibility for these awards varies, the minimum requirements being either a 90 high school average or 3.0 college GPA (on a 4.0 scale).
- C. Requirements for renewing General Scholarships vary with the amount and type of award, a 3.0 GPA being the minimum requirement. Although some General Scholarships require that recipients complete 30 credit hours in 9 months, most require recipients to complete 30 hours in 12 months (fall, spring and summer semesters).

#### II. National Merit Award

A National Merit Finalist will automatically receive a \$250 award, in addition to any scholarship received, if enrolled at UTEP as an entering freshman. The award will be renewable for four years, upon maintaining the requirements specified under General Scholarships. Simply provide the Scholarship Office with a copy of your National Merit Finalist notification.

### Scholarship Application Procedures

1. Secure an Undergraduate Scholarship Application from the Office of Financial Aid and Scholarships and return the completed application to the same office. Students need to submit the University Scholarship Application to be consid-

ered for all academic scholarships offered by the university. An application should be submitted by the deadlines of November 1 or March 1 for the following academic year.

- High school students must submit a copy of an official high school transcript including the following: cumulative grade point average, current rank in class and SAT or ACT scores. College students need to submit copies of all college transcripts. A 90 high school GPA or 3.0 college GPA is the minimum required for consideration.

For undergraduate scholarship applications, contact the Office of Financial Aid and Scholarships, UTEP, El Paso, Texas 79968.

Applications for Admission and Financial Aid are separate from the scholarship application. Procedures for these are described in the preceding pages.

## RESEARCH STIPENDS/SCHOLARSHIPS

There are several opportunities for undergraduate students to participate in research grant programs at UTEP. These usually provide a monthly stipend, and in some cases, a scholarship in addition to the monthly payment. Each of these programs must be applied for separately. Information should be obtained from the department in which you wish to do research.

## SERVICE AWARDS

Students interested in athletic, music, drama, or forensic service awards should contact the appropriate university department chairperson.

# Tuition and Fees

The charges shown in these schedules must be paid by all students registering for credit. The amounts include the following:

### Tuition

TEXAS RESIDENTS – \$32 per semester hour with a minimum assessment of \$120 for up to 3 semester hours.

TEXAS RESIDENT GRADUATE TUITION – Business, Engineering and Nursing – \$60.00 per semester hour with a minimum assessment of \$120.00 for up to 2 semester hours.

NON-RESIDENT/INTERNATIONAL TUITION – \$246.00 per semester hour effective through the 1996-1997 academic year. 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 – Business, Engineering and Nursing \$266.00 per semester hour.

CONCURRENT ENROLLMENT – Section 54.062 of the Texas Education Code provides for the following tuition procedure.

- The student shall pay the full tuition charge to the first institution at which he or she is registered.
- Generally, only the hourly rate is paid at the second institution. However, if the minimum amount is less at the first institution, then the student must pay the difference of the two minimums to the second institution but not less than the hourly rate. General fees, student service fees, union fees and optional fees are billed by each institution at its regularly authorized rate.

### Mandatory fees

GENERAL FEE – \$18.50 per semester hour.

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

STUDENT GENERAL PROPERTY DEPOSIT – \$10.00 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 EDUCATION FEE – \$1.00 per student for each regular semester.

STUDENT UNION FEE – \$15.00 per long semester and \$7.50 for summer session. The Student Union Fee is compulsory. The Union Fee entitles the student free use of facilities, which includes meeting rooms and lounge areas. The purpose of this fee is for the maintenance and operation of the Union Building.

RECREATIONAL FACILITY FEE – \$12.00 per student for each regular semester.

TECHNOLOGY FEE – \$50.00 per student for each regular semester.

REGISTRATION FEE – \$5.00 per student for each regular semester.

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

## TUITION AND MANDATORY FEES

(excluding Student General Property Deposit):\*\*

Semester Hours	Resident UG/Grad Educ, LA & Sci	Non-Res UG/Grad Educ, LA & Sci	Graduate Resident In Bus, Engr, NHS MASE & ESE	Graduate Non-Res In Bus, Engr, NHS MASE & ESE
1	\$ 234.00	\$ 360.00	\$ 234.00	\$ 380.00
2	265.00	637.00	265.00	677.00
3	296.00	914.00	356.00	974.00
4	335.00	1191.00	447.00	1271.00
5	398.00	1468.00	538.00	1568.00
6	461.00	1745.00	629.00	1865.00
7	524.00	2022.00	720.00	2162.00
8	587.00	2299.00	811.00	2459.00
9	650.00	2576.00	902.00	2756.00
10	713.00	2853.00	993.00	3053.00
11	776.00	3130.00	1084.00	3350.00
12	839.00	3407.00	1175.00	3647.00
13	899.50	3671.50	1253.50	3931.50
14	940.00	3936.00	1332.00	4216.00
15	990.50	4200.50	1410.50	4500.50
16	1041.00	4465.00	1489.00	4785.00
17	1091.50	4729.50	1567.50	5069.50
18	1142.00	4994.00	1646.00	5354.00
19	1192.50	5258.50	1724.50	5638.50
20	1243.00	5523.00	1803.00	5923.00
21	1293.50	5787.50	1881.50	6207.50

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

### LABORATORY FEES:

	FEE
ARTE 3522, 3317	\$ 15.00
ARTF 3101, 3103	\$ 10.00
ARTF 3102, 3104	\$ 4.00
ARTF 3315	\$ 20.00

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ARTG	3206, 3216, 3316, 3326, 3336, 3406, 3416, 3426, 3550	\$ 20.00
ASTR	1107, 1108	\$ 5.00
BIOL	1103, 1107, 1498, 2498, 3426, 3505, 3518, 3520, 3524	\$ 8.00
BIOL	1104	\$ 6.00
BIOL	1211, 1213	\$ 15.00
BIOL	1217, 1319, 2423, 3498, 3502, 4314, 5502	\$ 30.00
BIOL	3330	\$ 10.00
BOT	4210	\$ 12.00
BOT	4337	\$ 8.00
CE	1336, 1453	\$ 30.00
CE	3105, 3313, 3488, 4390, 4456	\$ 8.00
CE	4448, 4509, 4539	\$ 20.00
CE	4537	\$ 28.00
CERM	3204, 3214, 3304, 3314, 3324, 3404, 3414, 3424	\$ 15.00
CERM	3550	\$ 18.00
CHEM	1105, 1106	\$ 10.00
CHEM	1261, 1310, 1324, 1325, 2321, 2322, 2412	\$ 18.00
CHEM	1465	\$ 8.00
CHEM	1351, 1352, 4108	\$ 12.00
CHEM	4107	\$ 15.00
CHEM	1476, 3476	\$ 5.00
CLSC	1401, 1406, 2311, 3401, 3402	\$ 30.00
CLSC	3306, 3308	\$ 15.00
COMM	3242, 3317, 3342	\$ 10.00
COMM	3271, 3311, 3313, 3411	\$ 5.00
COMM	3243, 3333	\$ 7.00
COMM	3331	\$ 15.00
DRAW	3208, 3318	\$ 8.00
DRAW	3218	\$ 20.00
DRAW	3308	\$ 15.00
EE	1412, 1442, 1478, 3472	\$ 20.00
EE	2412	\$ 25.00
EE	1205, 1251, 2310, 2411, 4377	\$ 5.00
GEOG	1106	\$ 15.00
GEOL	1101, 1102, 1455, 1457, 3103, 3104, 3321, 3325, 3462	\$ 15.00
GEOL	4458	\$ 8.00
GEOL	4323	\$ 5.00
GEOL	2316, 3213, 3305, 3315, 3355, 3380, 3543, 3544, 3563, 3567, 3575, 3576, 3578, 3580, 4320, 4505	\$ 20.00
GEOL	3214	\$ 25.00
GEOP	3432, 3434, 3551	\$ 20.00
GEOP	3557	\$ 10.00
IE	3216, 3484	\$ 6.00
IE	3236	\$ 12.00
IE	3377	\$ 5.00
KIN	3413	\$ 5.00
MECH	1411	\$ 25.00
MECH	3443	\$ 15.00
MECH	3305, 4354	\$ 5.00
MECH	4451	\$ 20.00
MICR	1328, 1452	\$ 8.00
MICR	1456, 4349	\$ 15.00
MICR	4240, 4343, 4453	\$ 30.00
MICR	4345	\$ 24.00
MME	4404, 4405	\$ 10.00

MME	4307, 4413, 4501	\$ 25.00
MS	1113, 1116	\$ 20.00
MTLS	3203, 3213, 3303, 3313, 3323, 3403, 3413, 3423, 3550	\$ 30.00
NURS	7302, 7303, 7370, 7410	\$ 30.00
NURS	6305	\$ 4.00
NURS	3302, 7371, 7471	\$ 5.00
NURS	7472	\$ 15.00
NURS	6306, 7411	\$ 10.00
PHYS	1120, 1121, 2343, 4103, 4104	\$ 5.00
PHYS	3471	\$ 15.00
PNTG	3201, 3231, 3301, 3331, 3341, 3401, 3431, 3441, 3550	\$ 12.00
PRNT	3205, 3225, 3305, 3325, 3335, 3550	\$ 30.00
PRNT	3405, 3425, 3435	\$ 22.00
PSCI	3203, 3304	\$ 15.00
PSYC	1301	\$ 8.00
SCI	4101, 4102	\$ 8.00
SCI	9101	\$ 10.00
SCUL	3202, 3232, 3302, 3332, 3342, 3402, 3432, 3442, 3502, 3550	\$ 30.00
ZOOL	4364	\$ 16.00
ZOOL	1455, 1457, 4476, 4478	\$ 8.00
ZOOL	1481	\$ 30.00
ZOOL	4206	\$ 12.00
ZOOL	4366	\$ 18.00

**SUPPLEMENTAL TUITION AND COACHING FEES**

	FEE
ART 3593	\$ 10.00
ARTE 3599	\$ 10.00
ARTG 3550	\$ 10.00
CERM 3404, 3414, 3424, 3550	\$ 10.00
DRAW 3410, 3420, 3430, 3502, 3550	\$ 10.00
MTLS 3403, 3413, 3423, 3550	\$ 10.00
MUSA 2181, 2191, 2391, 2581	\$ 35.00
MUSA 3181, 3191, 3391, 3581, 3591, 4191, 4391	\$ 50.00
PNTG 3431, 3441, 3550	\$ 10.00
PRNT 3405, 3425, 3435, 3550	\$ 10.00
SCUL 3402, 3432, 3442, 3502, 3550	\$ 10.00

**INCIDENTAL FEES**

ART HISTORY MATERIALS	FEE
ART 3100	\$ 5.00
ARTH 3105, 3106, 3310, 3319, 3329, 3339, 3409, 3419, 3429, 3439, 3519, 3529	\$ 5.00

**ATHLETIC TRAINING FEE:**

	FEE
KIN 3409, 3415	\$ 30.00

**COURSE FEES**

	FEE
ART 3110	\$ 10.00
ARTE 3447, 3511	\$ 15.00
CHEM 1476, 3476	\$ 7.00
CLSC 4406	\$ 15.00
COMM 3290, 3459	\$ 15.00
COMM 3435	\$ 10.00
EE 1205, 1251, 2310, 2411, 4377	\$ 15.00
EE 3269	\$ 8.00
ESOL 2101	\$ 2.00

ESOL	3105, 3106, 3109, 3111, 3112, 3201, 3202, 3203, 5110, 8110	\$ 5.00
FREN	3201, 3202, 4101, 4102	\$ 5.00
GEOL	3579	\$ 20.00
GERM	3201, 3202, 4101, 4102	\$ 5.00
GREK	4105, 4106	\$ 5.00
HSCI	3203	\$ 10.00
HSCI	3401, 3411	\$ 5.00
IE	3377	\$ 7.00
KIN	3434	\$ 20.00
KIN	3561, 3571, 3572, 3574	\$ 25.00
LATN	3201, 3202, 4101, 4102	\$ 5.00
LING	4203, 4204	\$ 2.00
MECH	3305	\$ 20.00
MECH	4354	\$ 7.00
NURS	3302, 7371	\$ 25.00
NURS	7471	\$ 10.00
PORT	3201, 3202	\$ 5.00
PSYC	3533	\$ 25.00
RUSS	3201, 3202, 4101, 4102	\$ 5.00
SOWK	3370	\$ 10.00
SOWK	4480	\$ 4.00
SPAN	3201, 3202, 3203, 3204, 4101, 4102	\$ 5.00
SPED	3430	\$ 15.00
SPLP	3440, 3569, 3573, 6441	\$ 20.00
THEA	3113, 3221, 3342	\$ 10.00
THEA	3222, 3290, 3490	\$ 25.00
THEA	3341	\$ 23.00
THEA	3390	\$ 15.00

**EQUIPMENT FEES:****FEE**

ASTR	1107, 1108	\$ 5.00
GEOP	2558	\$ 15.00
HSCI	3209	\$ 5.00
KIN	3413	\$ 9.00
MUSA	1143, 1144, 1146, 2171, 2172, 2179, 2271, 2272, 3275, 3276, 3371	\$ 5.00
NURS	3503	\$ 25.00
PHYS	1120, 1121, 2343, 4103, 4104	\$ 5.00

**FIELD TRIPS FEE****FEE**

GEOL	4323	\$ 20.00
GEOL	6465	\$ 400.00

**PHYSICAL EDUCATION COURSE FEES:****FEE**

KIN	2301, 2302, 2303, 2304, 2305, 2306, 2307, 2309, 2310, 2311, 3318, 3419	\$ 8.00
KIN	2422, 3412, 3413, 3421	\$ 9.00
PE	1101, 1104, 1110, 1116, 1122, 1125, 1149, 1151, 1152, 1157, 1161, 1170, 1173, 1186, 1188	\$ 8.00
PE	1107, 1143, 1164, 1176, 1178, 1179, 1180, 1182, 1184, 1191, 1194, 1195, 1196	\$ 12.00
PE	1128, 1129	\$ 14.00

**PSYCHOLOGY RESEARCH COURSE FEE:****FEE**

PSYC	3598, 3599, 3620, 3621	\$ 30.00
PSYC	3452, 3501	\$ 20.00
PSYC	6501	\$ 40.00

**INCIDENTAL FEES:**

**ADD/DROP FEE** – A fee of \$5.00 is assessed per transaction each time a student makes a change in the initial registration.

**AUDIT FEE** – A fee of \$5.00 per course will be assessed to a student who is currently enrolled at the University for auditing a course. For a person who is not enrolled at the University a fee of \$25.00 per course will be assessed.

**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)

**CATALOG FEE** – A fee of \$1.00 will be assessed to students that 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 the 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 \$60.00 will be assessed to defray costs of microfilming and mailing graduate dissertations.

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

**EQUIPMENT FEES** – A fee of \$5.00 - \$25.00 per course will be assessed to defray cost of providing equipment for academic courses which 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.

**FIELD TRIP FEE** – To defray transportation and related costs associated with field trips. (See above)

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

**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 as defined elsewhere in this section are not exempt from payment of this fee.

**GRADUATION FEE** – A fee of \$15.00 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.

**HANDBOOK FOR THE SOCIAL WORK PROGRAM** – A \$2.00 fee will be assessed to students in Social Work for a handbook required by the Council of Social Work Education.

**HEALTH INSURANCE FEE** – A mandatory insurance for international students holding nonimmigrant visas and living in the United States. The amount assessed will match the University of Texas System Student Insurance Plan premium.

**IN ABSENTIA FEE** – A fee of \$25.00 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 to register for the sole purpose of receiving the degree.

### 36/FINANCIAL INFORMATION

**INSTALLMENT TUITION HANDLING FEE** – A fee of \$12.00 per academic term will be assessed to cover costs related to providing 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 that 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. A fee assessed to international students to defray the costs of operating the International Student Services' Office and supporting the programs that are unique to international students.

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

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

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

Overdue Charges	
Regular Checkouts	\$0.25/day (\$25.00 max)
Reserve Items	\$2.00 Overnight \$0.50/hour (\$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

**NEW STUDENT ORIENTATION FEE** – A \$17.50 to \$35.00 fee will be assessed to all students that participate in the University's orientation program that is offered to all incoming Freshmen and new transfer students. The varying amount allows an option to students for a shortened orientation.

**NEW STUDENT ORIENTATION LATE FEE** – A \$5.00 fee will be assessed each student registering after the deadline.

**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)

**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 \$15.00 will be assessed to students that issue payment to the University with a check that is returned to the University for insufficient funds.

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

**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 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 and a \$150.00 deposit will be assessed to students applying for Student Family housing. A Student Housing Deposit will be forfeited under any of the following conditions.

- A Housing Deposit which remains without call for refund for a period of four (4) years from the date of last attendance at the University;
- 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
- Failure of a student to abide by the Terms and Conditions of Occupancy and/or the University and Student Family Housing Regulations or Residence Hall Regulations resulting in the University terminating a Student Family Housing Agreement or Residence Hall Agreement.

**STUDENT IDENTIFICATION CARD REPLACEMENT FEE** – A fee of \$10.00 per card will be assessed students for reissuing a Student I.D. Card due to loss or destruction. Free I.D. Cards are issued to Freshman students and transfer students. Cards five (5) years or older are replaced free.

**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.

## PARKING FEE

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

### CLASSES OF PERMITS AND ANNUAL FEES

#### Perimeter Parking Lots

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

Class A-P	\$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 A-E	\$10.00	All Students
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#### Other Class Permits

Class H	\$ -0-	No charge if vehicle is in compliance with <i>Vernon's Annotated Texas Civil Statutes</i> , Articles 6675a-5-e, and 6675a-5e and 5.e.1 for disabled persons.
	\$20.00	If issued to disabled person not in compliance with above
	\$12.00	If purchased during the Spring Semester
	\$ 6.00	If purchased during the Summer Session

Class M	\$10.00	All Student motorcycles
	\$ 6.50	If purchased during the Spring Semester
	\$ 4.00	If purchased during the Summer Session

Class D	\$ -0-	No charge for residents of University Residence Halls
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Class V	\$ -0-	No charge for residents of UTEP Village
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Class R	\$ 1.00	A non-refundable \$1.00 fee per person, per semester shall be collected, separate from the regular parking decal fee. A minimum of three (3), maximum of five (5) students per group are required in order to participate in the Share-a-ride program.
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Replacement Decal	\$ 1.00	
Temporary	\$ 5.00	One month only as approved

## Methods of Payment

Master Card, Visa and Discover will be accepted for payment of tuition and fees. The University offers the following two payment methods during long semesters only.

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

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

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

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

- Student General Property Deposit
- Optional Incidental Fees (such as Late registration, Add/Drop, Installment Tuition Handling Fees, etc.)
- 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 may begin registration for a subsequent semester.
2. A payment plan selected at the time of registration will be binding and will be applied in any subsequent add/drop activities; however, pre-payment of outstanding balances will be accepted.

The University shall assess the Installment Tuition Handling Fee of \$12.00 for those students choosing payment Method 2; this charge is payable at the time of registration. An Installment Tuition Delinquency Fee of \$15.00 will be assessed at the end of the sixth and eleventh week of classes if the payment due for that period is not paid in full.

3. The Bursar's Office of the University will send bills during the fourth and ninth week, as appropriate, to students paying tuition and fees under Method 2.
4. The courses for which a student is enrolled on the official census date-12th class day in a long semester-will be the basis for the student's tuition and fees assessment. Except for students who officially withdraw up to the end of the refund period as indicated in the *Class Schedule*, no reduction in amounts due will be made after this date; further, the student is obligated to pay the assessed amounts whether or not class attendance is subsequently interrupted or terminated.
5. A student who fails to provide full payment of tuition and fees, including any late fees assessed, to the University when the payments are due is subject to one or more of the following:
  - a. Bar against registration at the institution;
  - b. Withholding of grades, degree and official transcript; and
  - c. All penalties and actions authorized by law.

## Refund of Tuition and Fees

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

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

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

**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. Please note, if the student charges were paid by Title IV funds, a portion or all of the refund will be returned to these programs.

## Housing Expenses

Residence Hall room rates are as follows:

### Room Only

ONE SEMESTER CONTRACT — 4½ months (110 days)	
Double Room	\$1,055
Suite (double occupancy)	1,205
Private Room (when available)	1,355
Private Suite (when available)	1,505
LONG SESSION CONTRACT—9 months (220 days)	
Double Room	1,850
Suite (double occupancy)	2,150
Private Room (when available)	2,450
Private Suite (when available)	2,750

\* A \$75 per semester rate reduction will be offered to students who pay the entire semester charge for a long session in advance as opposed to the normal three (3) payments per semester plan.

### Meal Plans

Optional meal plans are available throughout the long session and summer session by the University Food Services.

### Student Family Apartments

Monthly rent (includes utilities) \$ 350

All housing rates are subject to change by action of the Board of Regents, The University of Texas System. Further information about the UTEP student housing facilities, as well as application forms, can be obtained from:

University Housing System  
 Kelly Hall #105  
 University of Texas at El Paso  
 El Paso, TX 79968-0534

# Residency Regulations For Tuition Purposes

The *Texas Education Code* authorizes the Texas Higher Education Coordinating Board to promulgate regulations governing residency status for tuition purposes in public institutions of higher education. These regulations are subject to change, and portions of the current regulations are reprinted below as a convenience to the student. The complete *Rules and Regulations: Residence Status* booklet prepared by the Texas Higher Education Coordinating Board can be reviewed in the Admissions Office.

A student entering UTEP for the first time or after an absence of more than one year should carefully review these residency regulations to make sure the correct tuition is paid.

## INTRODUCTION

Under State statutes and Coordinating Board rules and regulations interpreting those statutes, a prospective student will be classified as a resident, non-resident, or international student. A person who has lived in the state under circumstances specified in these rules will be eligible for classification as a resident. A citizen, national or permanent resident of the United States who does not meet resident criteria will be classified as a non-resident. An alien who is not a permanent resident of the United States and who has not been permitted by Congress to adopt the United States as his or her domicile while in this country will be classified as an international student.

An individual classified as a non-resident or international student may qualify to pay resident tuition rates and other charges while continuing to be classified as a non-resident or international student under certain exceptions specified in these rules.

## MINORS AND DEPENDENTS

**STATUTE: SECTION 54.052(c)** An individual who is 18 years of age or under or is a dependent and who is living away from his family and whose family resides in another state or has not resided in Texas for the 12-month period immediately preceding the date of registration shall be classified as a non-resident student.

**STATUTE: SECTION 54.052(d)** An individual who is 18 years of age or under or is a dependent and whose family has not resided in Texas for the 12-month period immediately preceding the date of registration shall be classified as a non-resident student, regardless of whether he has become the legal ward of residents of Texas or has been adopted by residents of Texas while he is attending an educational institution in Texas, or within a 12-month period before his attendance, or under circumstances indicating that the guardianship or adoption was for the purpose of obtaining status as a resident student.

**STATUTE: SECTION 54.055** An individual who is 18 years of age or under or is a dependent and whose parents were formerly residents of Texas is entitled to pay the resident tuition fee following the parents' change of legal residence to another state, as long as the individual remains continuously enrolled in a regular session in a state-supported institution of higher education.

**RESIDENCE OF A MINOR OR A DEPENDENT.** The residence of a minor or dependent is usually that of the parent with whom the individual resides.

**RESIDENCE OF A DEPENDENT 18 YEARS OF AGE OR OLDER.** The residence of a dependent 18 or older is that of the parent who claims the individual as a dependent for federal income tax purposes both for the year for which the individual is enrolling and for the preceding tax year.

**DIVORCE OF PARENTS.** Upon divorce of parents, residency of a dependent is based on the residence of the parent who has custody at the time of enrollment or has claimed the dependent for federal income tax purposes both at the time of enrollment and for the tax year preceding enrollment. For dependents 18 or older, residency is determined by the residence of the parent who



claims the student for federal income tax purposes both at the time of enrollment and for the tax year preceding enrollment.

**CUSTODY BY COURT ORDER.** If the custody of the minor has been granted by court order (e.g.: divorce decree, child custody action, guardianship or adoption proceedings) to some person other than the parent, the residence of that person shall control; provided, however, that such grant of custody was not ordered during or within a year prior to the minor's enrollment in a public institution of higher education and was granted under circumstances indicating that such guardianship was not for the purpose of obtaining status as a resident student.

If the minor is not residing with either parent, and there is no court-appointed guardian, the residence of the parent with whom the minor last resided shall be presumed to control. If, however, the minor resided with and has been dependent upon a grandparent for more than a year prior to enrollment in an institution of higher education, the residence of that natural guardian will be regarded as the minor's residence. The residence of a person other than a parent or a natural or legal guardian who may furnish funds for payment of tuition, fees, or living expenses will in no way affect the residence classification of a minor.

### INDIVIDUALS OVER 18

**STATUTE: SECTION 54.052(e)** An individual who is 18 years of age or over who has come from outside Texas and who is gainfully employed in Texas for a 12-month period immediately preceding registration in an educational institution shall be classified as a resident student as long as he continues to maintain a legal residence in Texas.

**STATUTE: SECTION 54.052(f)** An individual who is 18 years of age or over who resides out of the state or who has come from outside Texas and who registers in an educational institution before having resided in Texas for a 12-month period shall be classified as a non-resident student.

**STATUTE: SECTION 54.052(g)** An individual who would have been classified as a resident for the first 5 of the 6 years immediately preceding registration, but who resided in another state for all or part of the year immediately preceding registration, shall be classified as a resident student.

**STATUTE: SECTION 54.054** A non-resident student classification is presumed to be correct as long as the residence of the individual in the state is primarily for the purpose of attending an educational institution. After residing in Texas for at least 12 months, a non-resident student may be reclassified as a resident student as provided in the rules and regulations adopted by the Texas Higher Education Coordinating Board. Any individual reclassified as a resident student is entitled to pay the tuition fee for a resident of Texas at any subsequent registration as long as he continues to maintain his legal residence in Texas.

**ESTABLISHMENT OF RESIDENCE.** Independent individuals 18 years of age or over who move into the state and who are gainfully employed within the state for a period of 12 months prior to enrolling in a public institution of higher education are entitled to classification as residents. If such 12 months residence, however, can be shown not to have been for the purpose of establishing legal residence in the state but to have been for some other purpose, the individuals are not entitled to be classified as residents. Students enrolling in an institution of higher education prior to having resided in the state for 12 months immediately preceding time of enrollment will be classified as non-residents for tuition purposes.

Persons classified as non-residents upon first enrollment in a public institution of higher education are presumed to be non-residents for the period during which they continue as students until they submit the Residence Questionnaire and it is approved in writing by the director of admissions. If such non-resident students withdraw from school and reside in the state while gainfully employed for a period of 12 months, upon re-entry into an institution of higher education they will be entitled to be reclassified as residents for tuition purposes. Accumulations of summer and other vacation periods do not satisfy this requirement.

Reclassification to resident status after residing in the state for 12 months cannot be based solely upon the student's or the student's spouse's employment, registration to vote, registration of a motor vehicle and payment of personal property taxes thereon, or the securing of a Texas driver's license. The presumption of "non-resident" is not a conclusive presumption, however, and other facts may be considered to determine if the presumption has been overcome. Material to this determination are business or personal facts or actions unequivocally indicative of a fixed intention to reside permanently in the state. Such facts may include, but are not limited to, the length of residence and full-time employment prior to enrolling in the institution, the fact of full-time employment and the nature of such employment while a student, purchase of a homestead with substantial down payment, or dependency upon a parent or guardian who has resided in Texas for at least 12 months immediately preceding the student's enrollment. All of these facts are weighed in the light of the fact that a student's residence while in school is primarily for the purpose of education and not to establish residence, and that decisions of an individual as to residence are generally made after the completion of an education and not before.

**LOSS OF RESIDENCE.** Persons who have been attending Texas public institutions of higher education as residents and who move out of state will be classified as non-residents immediately upon leaving the state, unless their move is temporary (generally less than 5 years) and residence has not been established elsewhere. Conclusive evidence must be provided by the individuals supporting their present intent to return to the state. Among other things, a certificate from the employer that the move outside the state is temporary and that a definite future date has been determined for return to Texas may qualify as proof of the temporary nature of the time spent out of the state. Internship programs as part of the academic curriculum that require the student to return to school may qualify as proof of the temporary nature of the time spent out of state.

**RE-ESTABLISHMENT OF RESIDENCE.** Persons who resided in Texas for at least 5 years prior to moving from the state and who have returned to the state for residence purposes before having resided out of the state for a year, will be classified as residents. The parent(s) of dependents must return to the state to live in order for the minor or the dependent to be considered a resident.

### RECLASSIFICATION

**APPLICATION FOR RECLASSIFICATION.** Students classified as non-residents shall be considered to retain that status until they make written application for reclassification. This is done by filling out the residence questionnaire which is available in the Admissions Office. Students are notified in writing concerning official reclassification as a Texas resident.

**RECLASSIFICATION AS A NON-RESIDENT.** Persons who have been classified as residents of Texas shall be reclassified as non-resident students whenever they shall 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 shall be reclassified as non-residents and shall be required to pay the difference between the resident and non-resident fees for those semesters in which they were so erroneously classified.

**RECLASSIFICATION AS A RESIDENT.** If students have been erroneously classified as non-resident students and subsequently prove to the satisfaction of the director of admissions that they should have been classified as resident students, they shall be reclassified as residents of Texas and may be entitled to a refund of the difference between the resident and non-resident fees for the semesters in which they were so erroneously classified. Normally the refunds 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 to the Admissions Office prior to the official census date of the term for which the change is sought.

## 40/FINANCIAL INFORMATION

To prevent any delay in enrollment, students are encouraged to submit all forms at least two weeks prior to registration. Consult the Schedule of Classes for specific information concerning the submission of non-resident tuition exemption forms.

### MARRIED STUDENTS

**STATUTE:** SECTION 54.056 A student who is a resident of Texas who marries a non-resident is entitled to pay the resident tuition fee as long as the student does not adopt the legal residence of the spouse in another state.

Marriage of a Texas resident to a non-resident does not jeopardize the former's right to pay the resident tuition rate unless the resident has taken steps to claim the residence of his or her spouse. A non-resident who marries a resident must establish his or her own residency by meeting the standard requirements.

### INTERNATIONAL STUDENTS

**STATUTE:** SECTION 54.057(a) An alien who is living in this country under a visa permitting permanent residence or who has filed with the proper federal immigration authorities a declaration of intention to become a citizen has the same privilege for qualifying for resident status for fee purposes under this Act as has a citizen of the United States.

**ELIGIBLE ALIENS:** (1) holders of A-1, A-2, G-1, G-2, G-3, G-4, K, or OP-1 visas; and (2) individuals classified by the INS as Refugees, Asylees, Parolees, Conditional Permanent Residents (holding I-551 cards which have not expired), and Temporary Residents (holding I-688 cards which have not expired).

**STATUTE:** SECTION 54.057(b) A non-immigrant alien who resides in this state in accordance with the Agreement between the Parties to the North Atlantic Treaty (NATO) Regarding the Status of Their Forces (4 U.S.T. 1792) and the spouse or children of such an alien are residents for tuition purposes under this code.

**12 MONTH RESIDENCE.** Only a permanent resident may file with the federal immigration authorities a declaration of intention to become a citizen. Generally, individuals who enter the state under a visa which does not allow the establishment of a domicile and who obtain permanent resident status while in Texas must wait a minimum of 12 months from the date of issue to request resident status for tuition purposes. However, in cases where a protracted amount of time (more than 12 months) lapses between the date of application for permanent residence and the granting of permanent residence status, the institution may consider the lapsed time a part of the individual's required 12 months in the state if the individual has otherwise met the requirements for establishing residency.

## EXCEPTIONS

### ECONOMIC DEVELOPMENT AND DIVERSIFICATION EMPLOYEES

An individual who has come from outside Texas and registered in an educational institution before having resided in Texas for a 12-month period immediately preceding the date of registration and her/his dependents are entitled to pay the tuition fee and other fees required of Texas residents if the individual has located in Texas as an employee of a business or organization that became established in this state as part of the program of state economic development and diversification authorized by the constitution and laws of this state and if the individual files with the Texas institution of higher education at which he registers a letter of intent to establish residency in Texas. The only companies whose employees qualify under this provision are those identified by the Texas Higher Education Coordinating Board as being eligible. Check with the Admissions Office.

### BLIND, DEAF STUDENTS

**STATUTE:** SECTION 54.205, *Texas Education Code*, (S.B. 183) A person who is a "blind disabled" individual and who is eligible for the rehabilitation services of the Texas Commission for the Blind, and a "deaf person" whose sense of hearing is non-functioning, after all necessary medical treatment, surgery and use of hearing aids, for understanding normal conversation and who is eligible for the services of the Division of Vocational Rehabilitation of the Texas Education Agency, is exempt from tuition fees including all dues,

fees, and enrollment charges whatsoever for which exemptions may be lawfully made, including fees for correspondence courses, general property deposit fees, and student services fees, but does not include fees or charge for lodging, board, or clothing.

A deaf or blind person who is a resident is entitled to an exemption from the payment of tuition fees at any institution of higher education utilizing public funds, if he presents:

- (a) certification by the appropriate state vocational rehabilitation agency that he is a "blind person" or a "deaf person"; and is a client of the agency, which certification shall be deemed conclusive;
  - (1) a high school diploma or its equivalent;
  - (2) proof of good moral character, which may be evidenced by a letter of recommendation from the principal of the high school attended by the deaf or blind individual or, if the high school no longer exists or if the principal cannot be located, a letter of recommendation from the individual's clergyman, a public official, or some other responsible person who knows the deaf or blind individual and is willing to attest to his good moral character; and
  - (3) proof that he meets all other entrance requirements of the institution.

### FOSTER OR RESIDENTIAL CARE PERSONS

**STATUTE:** 54.211, *Texas Education Code*, (H.B. 1356) A student is exempt from the payment of tuition and fees authorized in this chapter if the student:

- (a) was 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 student's 18th birthday; and
- (b) enrolls in an institution of higher education as an undergraduate student not later than the third anniversary of the date the student was discharged from the foster or other residential care.

### MILITARY PERSONNEL, VETERANS, AND COMMISSIONED OFFICERS OF THE PUBLIC HEALTH SERVICE

**STATUTE:** SECTION 54.058(a) Military personnel are classified as provided by this section.

**STATUTE:** SECTION 54.058(b) A person who is an officer, enlisted person, selectee, or draftee of the Army, Army Reserve, Army National Guard, Air National Guard, Air Force, Air Force Reserve, Navy, Navy Reserve, Marine Corps, Marine Corps Reserve, Coast Guard, or Coast Guard Reserve of the United States, who is assigned to duty in Texas and the spouse and children of such an officer, enlisted person, selectee, or draftee are entitled to register in a state institution of higher education by paying the tuition fee and other fees or charges required of Texas residents, without regard to the length of time the officer, enlisted person, selectee, or draftee has been assigned to duty or resided in the state. However, out-of-state Army National Guard or Air National Guard members attending training with Texas Army or Air National Guard units under National Guard Bureau regulations may not be exempted from non-resident tuition by virtue of that training status nor may out-of-state Army, Air Force, Navy, Marine Corps, or Coast Guard Reserves training with units in Texas under similar regulations be exempted from non-resident tuition by virtue of such training status. It is the intent of the legislature that those members of the Army or Air National Guard or other reserve forces mentioned above be exempted from the non-resident tuition fee and other fees and charges only when they become members of Texas units of the military organizations mentioned above.

**STATUTE:** SECTION 54.058(c) As long as they reside continuously in Texas, the spouse and children of a member of the Armed Forces of the United States who has been assigned to duty elsewhere immediately following assignment to duty in Texas are entitled to pay the tuition fees and other fees or charges provided for Texas residents.

**STATUTE:** SECTION 54.058(f) The spouse and children of a member of the Armed Forces of the United States who dies or is killed are entitled to pay the resident tuition fee if the wife and children become residents of Texas within 60 days of the date of death.

**STATUTE: SECTION 54.058(g)** If a member of the Armed Forces of the United States is stationed outside Texas and his spouse and children establish residence in Texas by residing in Texas and by filing with the Texas institution of higher education at which they plan to register a letter of intent to establish residence in Texas, the institution of higher education shall permit the spouse and children to pay the tuition, fees, and other charges provided for Texas residents without regard to length of time that they have resided within the State.

**LEGAL RESIDENCE--GENERAL RULE.** Persons in military service and commissioned Public Health Service Officers are presumed to maintain during their entire period of active service the same legal residence which was in effect at the time of entering the service. Persons stationed in a state by the military or Public Health Service are presumed not to establish a legal residence in the state because their presence is not voluntary but under military or Public Health Service orders.

**CHANGE OF PERMANENT ADDRESS WHILE IN THE SERVICE.** It is possible for members of the military service or Public Health Service to abandon the domicile of original entry into the service and to select another, but to show establishment of a new domicile during the term of active service, there must be clear and unequivocal proof of such intent. An extended period of service alone is not sufficient. The purchase of residential property is not conclusive evidence unless coupled with other facts indicating an intent to put down roots in the community and to reside there after termination of service in the military or Public Health Service. Evidence which will be considered in determining this requisite intent includes, but is not limited to, a substantial investment in a residence and the claiming of a homestead exemption thereon, registration to vote, and voting in local elections, registration of an automobile in Texas and payment of personal property taxes thereon, obtaining a Texas driver's license, maintaining checking accounts, savings accounts, and safety deposit boxes in Texas banks, existence of wills or other legal documents indicating residence in Texas, change of permanent address with the military or Public Health Service and designation of Texas as the place of legal residence for income tax purposes on military or Public Health Service personnel records, business transactions or activities not normally engaged in by military or Public Health Service personnel, and membership in professional or other state organizations. Purchase of property during terminal years of military or Public Health Service preceding retirement generally is given greater weight than a similar purchase made prior to such terminal period. Additionally, a terminal duty assignment in Texas in which an individual has engaged in personal, business and/or professional activities indicative of their intent to remain in the state will be given more consideration than most other evidence presented.

**ELIGIBILITY FOR WAIVER OF NON-RESIDENT TUITION.** To be entitled to pay resident tuition, military and Public Health Service personnel shall submit, prior to the time of each enrollment, a statement from their commanding officer or personnel officer certifying that they are then assigned to duty in Texas and that same will be in effect at the time of such enrollment in a public institution of higher education.

**RESIDENCE CLASSIFICATION UPON SEPARATION FROM MILITARY OR PUBLIC HEALTH SERVICE. GENERAL RULE:** Persons who enroll in an institution of higher education following separation from military service must be classified as non-resident students unless they were legal residents of Texas at the time of entry into military service and have not relinquished that residence; they can prove that during military service they have, in fact, established bona fide, legal residence in Texas at least 12 months prior to enrollment; or they have resided in Texas other than as students for 12 months prior to enrollment and subsequent to discharge from service. This provision also applies to commissioned Public Health Service officers and their dependents. **RECLASSIFICATION:**

The non-resident classification is a presumption, however, that can be overcome pursuant to the guidelines and standards for establishing Texas residence (see INDIVIDUALS OVER 18).

**STUDENTS ENROLLED IN ROTC PROGRAMS.** A non-resident student who is a member of an ROTC unit will be required to pay non-resident tuition rates until such time as the student has signed a contract which cannot be terminated by the student and which obligates the student to serve a period of active military duty.

**OTHER FEDERAL EMPLOYEES.** The privilege of paying resident tuition rates described in this section is restricted to persons in the military service and commissioned officers of the Public Health Service and is not extended to other federal employees or civilian employees of the military.

#### **TEACHERS, PROFESSORS, AND THEIR DEPENDENTS**

Teachers and professors employed at least half-time on a regular monthly salary basis (not as hourly employees) by any Texas public institution of higher education, may pay the same tuition as a resident of Texas for themselves, their spouses, and their dependent children, regardless of the length of residence in the state if the effective date of employment is on or prior to the official census date of the relevant term(s). To be entitled to pay the resident tuition, such employees must submit to the Admissions Office, **prior to the time of each enrollment**, a statement certifying employment from the director of personnel of the institution of higher education by which he or she is employed. This provision applies to eligible teachers and professors and their dependents no matter which Texas public institution of higher education they may attend.

#### **TEACHING OR RESEARCH ASSISTANTS**

Teaching or research assistants employed at least half-time for an academic term by any public institution of higher education in a degree program-related position, with an effective date of employment on or before the official census date of the relevant term(s), may apply to pay the same tuition while attending the employing institution as a resident of Texas for themselves, their spouses, and their dependent children, regardless of the length of residence in the state. The institution which employs the students shall determine whether or not the students' jobs relate to their degree programs. To be entitled to pay the resident tuition, eligible students must submit to the undergraduate Admissions Office, **prior to the time of each enrollment**, a verification form from the employing department certifying such employment.

#### **SCHOLARSHIP RECIPIENTS**

To qualify for exemption from paying non-resident tuition, a student must be awarded a competitive academic scholarship in the amount of \$1,000 or more for the academic year, the summer session or both by an official scholarship committee or committees of the public institution of higher education they are attending.

### **SPECIAL PROGRAMS**

#### **ACADEMIC COMMON MARKET**

UTEP is a participating member of the Academic Common Market, a cooperative tuition-reduction agreement among fourteen Southern Regional Education Board states. If the public institutions in your home state do not offer a degree program in your chosen field of study, it may be possible to arrange a waiver of non-resident tuition to attend UTEP (or any other cooperating public institution of higher education in an Academic Common Market state) for that program. Likewise, Texas residents may be eligible for resident-rate tuition for member-state schools for degree programs not available in Texas public institutions. A listing of member states and eligible degree programs are available in the Office of Graduate Student Services.

#### **CITIZENS OF MEXICO**

A citizen of Mexico who registers for instruction offered by a general academic teaching institution in a county bordering Mexico is eligible to pay tuition equal to that charged Texas residents provided the student demonstrates a financial need after the resources of the student have been considered.

**RESIDENT TUITION RATES FOR STUDENTS RESIDING IN COUNTIES OF NEW MEXICO ADJACENT TO TEXAS**

The UT System has authorized UTEP to establish resident tuition rates for students residing in counties in New Mexico that are adjacent to Texas.

New Mexico State University, located in Dona Ana County which is adjacent to El Paso County, allows Texas residents to pay resident tuition rates for up to six semester credit hours.

UTEP has implemented a tuition policy for residents of counties in New Mexico that are adjacent to Texas that mirrors the policies at New Mexico State University. With current limitation, the New Mexico students at UTEP will pay tuition at Texas resident rates for up to six semester credit hours. Should the student enroll in more than six credit hours, the student is no longer eligible for the resident tuition rate. If New Mexico State University were to increase the number of hours for which Texas residents could pay the New Mexico resident tuition rate, UTEP would adjust its policy accordingly.

New Mexico students interested in applying for this resident tuition rate must contact the UTEP Admissions Office.

**RESPONSIBILITIES**

**STUDENTS**

**OATH OF RESIDENCY**

STATUTE: SECTION 54.0521(a) Before an individual may register at an institution of higher education paying tuition at the rate provided for residents, the individual must affirm under oath to the appropriate official at the institution that the individual is entitled to be classified as a resident for purposes of tuition.

STATUTE: SECTION 54.0521(b) If the institution later determines that the individual was not entitled to be classified as a resident at the time of the individual's registration, the individual shall, not later than 30 days after the date the individual is notified of the determination, pay to the institution the amount the individual should have paid as a non-resident.

STATUTE: SECTION 54.0521(c) If the individual fails to make a timely payment as required by this section, the individual is not entitled to receive a transcript or to receive credit for courses taken during the time the individual was falsely registered as a resident student.

**OATH OF RESIDENCY.** When completing the oath of residency portion of the application for admission, the student is responsible for registering under the proper residence classification and for providing documentation as required by the public institution of higher education. 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 for official determination by the director of admissions. Students classified as Texas residents must affirm the correctness of that classification as a part of the admissions procedure. If the student's classification as a resident becomes inappropriate for any reason, it is the responsibility of the student to notify the Admissions Office. Failure to notify the institution constitutes a violation of the oath of residency and will result in disciplinary action.

**INSTITUTIONS**

**OATH OF RESIDENCY.** Each public institution is responsible for incorporating an oath of residency into its student application for admission. Further, each institution must file and maintain copies of substantiating documentation which will certify that the student classified as a resident has legal right to such classification as of the official census date of the semester or term.

**AFFIRMATION OF RESIDENCE FOR RETURNING STUDENTS.** When independent students classified as residents have been out of school for 12 months or more, an institution may continue the students' classification as residents upon receipt of affirmations from the students that they have not changed their state of residence since their last enrollment at that institution, provided the institution has documentation of residence status on file. When dependent students classified as residents have been out of school for 12 months or more, an institution may continue the students' classification as residents upon receipt of affirmations from the students that their parents or legal guardians have not changed their state of residence since the student's last enrollment at that institution, provided the institution has documentation of residence status on file.

**REVIEW OF ENROLLMENT AND/OR REGISTRATION FORMS.** Each public institution of higher education is responsible for reviewing enrollment and/or registration applications for errors, inconsistencies or misclassifications of residency status. Institutions should obtain written documentation to resolve any problems noted during the review of forms.

**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.



# Policies and Procedures



# Academic Regulations

Current regulations are applicable to every student enrolled, regardless of the date of admission. Interpretations or explanations contrary to the regulations herein set forth shall not be binding upon the University.

## STUDENT RESPONSIBILITY

Students are responsible for being aware of

1. the current academic regulations and calendar of the University;
2. the general and specific degree requirements in the major field;
3. those policies which apply to registration;
4. their academic status, including eligibility to re-enroll in the University. If an ineligible student enrolls, he or she will be dropped.

General academic regulations are contained in this section of the University catalog. Degree requirements and those specific to a given major field can be found in the pertinent College and departmental sections. Registration policies, procedures and schedules can be found in this section and in each term's *Class Schedule*. Clarification and assistance can be obtained from the academic deans, department chairpersons, and official departmental academic advisors.

Students are bound by the academic regulations in effect at the time of each registration, including those recent changes which appear in each term's *Class Schedule*.

## CREDIT BY EXAMINATION

The University recognizes academic achievement acquired through means other than performance in organized classes. All students are given the opportunity to receive credit by examination, and there are five ways in which course credit may be earned. These include (1) the College Entrance Examination Board's College Level Examination Program (CLEP) Subject and General Examinations, (2) CEEB Advanced Placement Examinations, (3) SAT II Subject Tests, (4) selected DANTES Subject Tests (consult Admissions Office), and (5) Departmental Examinations prepared, administered, and scored by UTEP faculty members who teach the related course. Official CLEP, advanced placement, and subject score reports must be sent directly to the Admissions Office from the testing agency. Departmental test results and recommendations must be sent directly to the Records Office. Credit earned by examination is recorded on the official UTEP academic record after the student's first semester of enrollment at the University.

### Credit by Examination Policies

1. Credit earned by examination will be awarded only to enrolled and formerly enrolled UTEP students who meet credit by examination eligibility requirements.
2. Credit by examination may be earned for any subject listed below unless the student (a) has earned credit for a higher level course in that subject area, or (b) has enrolled in the course and received a grade other than "W".
3. Credit earned by examination satisfies degree requirements in the same way as credit earned by instruction. There is no limit to the amount of credit that may be earned by examination, and credit by examination can be used to meet prerequisites for higher level courses.
4. Students must submit original test scores to the University to apply for credit by examination. However, if a student has received credit by examination at another institution and has completed more advanced work in that subject area with a grade of "C" or higher, credit will be allowed on the basis of the other institution's transcript and official scores are not required.
5. Credit earned by examination does not fulfill the UTEP degree requirement for completion of 30 semester hours in residence.

6. Credit earned by examination is recorded as a grade of "CR" and is not included in the grade point average calculation.

7. Texas statutes require that a student graduating from a state institution complete at least 3 semester hours of credit in American History and 3 semester hours of credit in American Government by classroom instruction. Therefore, only 3 semester hours in each of these areas can be earned by examination.

### CREDIT AVAILABLE BY EXAMINATION

AP	= CEEB Advanced Placement Examination
CLEP-G	= College Level Examination Program (General Examination)
CLEP-S	= College Level Examination Program (Subject Examination)
DEPT	= UTEP Departmental Examination
SAT-S	= SAT II Subject Test

### UTEP Courses for Which Credit May Be Earned

	<u>Test Used</u>	<u>Minimum Score</u>
<b>Biology</b>		
BIOL 3105	SAT-S Biology	510
BIOL 3105, 3 hrs. elective	AP Biology	3
BIOL 3105, 3 hrs. elective	CLEP-S General Biology	46
<b>Business Administration</b>		
ACCT 3201, 3202	CLEP-S Introductory Accounting	52
BLAW 3 hrs. elec	CLEP-S Introductory Business Law	57
ECON 3203	CLEP-S Introductory Macroeconomics	55
ECON 3204	CLEP-S Introductory Microeconomics	54
MKT 3300	CLEP-S Introductory Marketing	53
MGMT 3300	CLEP-S Introduction to Management	54
<b>Chemistry</b>		
CHEM 3105	SAT-S Chemistry	550
CHEM 3105	CLEP-S General Chemistry	47
CHEM 3105	DEPT General Chemistry	C
CHEM 3106	DEPT General Chemistry	C
CHEM 3105, 3106	AP Chemistry	3
<b>Computer Science</b>		
CS 4101	AP Computer Science	3
<b>Education</b>		
EDPC 3 hrs. elec	CLEP-S Introduction to Educational Psychology	47
<b>English</b>		
ENGL 3111	SAT-S Writing	550
+ ENGL 3111/3112	CLEP-S College Composition (credit depends upon satisfactory essay)	50
ENGL 3111, 3112	AP Literature and Composition or Language and Composition	3
ENGL 3 hrs. elec	SAT-S Literature	550
ENGL 3 hrs. elec	CLEP-G English Composition	443
ENGL 6 hrs. elec	CLEP-G English Composition	524
<b>French</b>		
FREN 4101, 4102, 3201, 3202	AP French Language	3
FREN 4101, 4102, 3201, 3202,	AP French Language	4
FREN 4101, 4102, 3201, 3202, 3357, 3355	AP French Language	5
FREN 4101, 4102, 3201, 3202	AP French Literature	3
FREN 4101, 4102, 3201, 3202	AP French Literature	4
FREN 4101, 4102, 3201, 3202, 3301, 3357	AP French Literature	5
FREN 4101, 4102	SAT-S French & French with Listening	550
FREN 4101, 4102	CLEP-S College French	50
*FREN (varies)	DEPT College French	49

<b>German</b>			
GERM 4101, 4102, 3201, 3202	AP	German Language	3
GERM 4101, 4102, 3201, 3202, 3357	AP	German Language	4
GERM 4101, 4102, 3201, 3202, 3357, 3355	AP	German Language	5
GERM 4101, 4102	CLEP-S	College German	50
*GERM (varies)	DEPT	College German	92
GERM 4101, 4102	SAT-S	German & German with Listening	550

<b>History</b>			
HIST 3101	CLEP-S	American History I	45
HIST 3102	CLEP-S	American History II	45
HIST 3102	AP	American History	3
HIST 3201	CLEP-S	Western Civilization I	46
HIST 3202	CLEP-S	Western Civilization II	47
HIST 3202	AP	European History	3

<b>Humanities</b>			
HUMN 3 hrs. elective	CLEP-G	Humanities	421
HUMN 6 hrs. elective	CLEP-G	Humanities	475

<b>Latin</b>			
LATN 4101, 4102	AP	Latin	3
LATN 4101	SAT-S	Latin	550

<b>Mathematics</b>			
MATH 4109	SAT-S	Mathematics Level IC	550
MATH 4110	SAT-S	Mathematics Level IIC	550
MATH 4111	AP	Mathematics: Calculus AB	3
MATH 4111	CLEP-S	Calculus with Elementary Functions	47
MATH 4111, 3212	AP	Mathematics: Calculus BC	3
MATH 3 hrs. elective	CLEP-G	Mathematics	421
MATH 6 hrs. elective	CLEP-G	Mathematics	475

<b>Natural Science</b>			
GSCI 3 hrs. elective	CLEP-G	Natural Sciences	421
GSCI 6 hrs. elective	CLEP-G	Natural Sciences	475

<b>Nutrition</b>			
HSCI 3202	DEPT	Nutrition	70%

<b>Physics</b>			
PHYS 4103, 4104	SAT-S	Physics	550
PHYS 4210	AP	Physics C--Mechanics	3
PHYS 4211	AP	Physics C--Electricity and Magnetism	3
PHYS 4210, 4211	AP	Physics	3

<b>Political Science</b>			
POLS 3210	CLEP-S	American Government	47
POLS 3210	AP	Government & Politics	4

<b>Psychology</b>			
PSYC 3101	CLEP-S	General Psychology	47
PSYC 3210	CLEP-S	Human Growth and Development	45
PSYC 3101	AP	Psychology	3

<b>Social Sciences</b>			
SOSC 3 enb	SAT-S	American History & Social Studies	550
SOSC 3 enb	SAT-S	World History	550
SOSC 3 enb	CLEP-G	Social Sciences	421
SOSC 6 enb	CLEP-G	Social Sciences	475

<b>Sociology</b>			
SOCI 3101	CLEP-S	Introductory Sociology	47

<b>Spanish</b>			
SPAN 4101, 4102, 3201, 3202	AP	Spanish Language	3
SPAN 4101, 4102, 3201, 3202, 3355	AP	Spanish Language	4
SPAN 4101, 4102, 3201, 3202, 3355, 3357	AP	Spanish Language	5

SPAN 4101, 4102, 3201, 3202	AP	Spanish Literature	3
SPAN 4101, 4102, 3201, 3202, 3357	AP	Spanish Literature	4
SPAN 4101, 4102, 3201, 3202, 3357, 3300	AP	Spanish Literature	5
SPAN 4101, 4102	CLEP-S	College Spanish	50
SPAN 4101, 4102	SAT-S	Spanish & Spanish with Listening	550
*SPAN (Varies)	DEPT	College Spanish	

+ Students requesting to take the CLEP College Composition examination at UTEP must score a minimum of 50 on the Test of Standard Written English (TSWE) or a minimum of 27 on the English portion of the Enhanced American College Test (ACT-E) before taking the CLEP

\* Departmental Examination must be taken. If the course into which the student is placed is completed with "C" or better, credit is given for the prerequisite course(s).

### PLACEMENT EXAMINATIONS

All new freshmen must satisfy placement testing requirements in reading, writing and mathematics. The reading, writing and mathematics placement tests are university examinations that are required of all new freshmen prior to their first semester of enrollment. The English portion of the ACT may be used to satisfy the writing placement requirement. Transfer students who have college level credit in English or Mathematics may be exempted from the placement testing requirement. Transfer students should contact the Admissions Office to determine appropriate placement.

Test used for Admission	Required Placement Test			
	Writing	Reading	MATH	SLEP
ACT	NO	YES	YES	NO
SAT (Before March 1, 1994)	NO	YES	YES	NO
SAT (Since March 1, 1994)	YES	YES	YES	NO
PAA or TOEFL	NO	NO	YES	YES
NONE	YES	YES	YES	NO

Placement examinations are used to determine the appropriate placement level in classes. Credit is not awarded for these examinations. Placement tests are not a substitute for the TASP test; both tests are required. Placement examinations are available in the following areas: Spanish, French, and English for Speakers of Other Languages. In addition to:

TEST	TEST SCORE	COURSE PLACED INTO
Computer Information Systems	50	CIS 3200
TSWE	1-29	ENGL 3010
ACT-English	1-14	
TSWE	30-31	ENGL 3110 & TLC 0007
TSWE	32-39	ENGL 3110
ACT English	15-20	
SAT II - Writing	200-390	ENGL 3010
SAT II - Writing	400-460	ENGL 3110
SAT II - Writing	470-540	ENGL 3111 or 6111
SAT II - Writing	550-800	ENGL 3112
TSWE	40-60 +	ENGL 3111
ACT-English	21-36	
MATH	1-18	MATH 3010 + LAB
MATH	19-27	MATH 3011
MATH	28-42	MATH 3120 or 4109
READING	1-14	RED 3010
READING	15-16	TLC 0003
READING	17-22	Exempt
SPEECH	70%	Exempt from COMM 3101

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The Secondary Level English Proficiency (SLEP) placement examination is required of all students whose secondary education was not in English and who took the TOEFL or PAA for admissions purposes. Students enrolling in the ESOL Program are expected to complete the appropriate course sequence. Students may retest only if they have not enrolled in an ESOL course during the 12 months following the test date, or with approval of the ESOL coordinator if they provide proof that they have attended ESOL classes at another institution. For further information concerning the placement examinations or information about time and place of the exams, contact the Student Assessment and Testing Office, Education Building, Room 210, or call (915) 747-5009.

All decisions regarding specific tests for credit or placement, cut-off scores, and eligibility to take examinations are made by the appropriate academic department with the concurrence of the academic dean. Changes made in the regulations, tests, and cut-off scores become effective at the end of the semester in which the change is approved.

### TRANSFER CREDIT

The Admissions Office evaluates transfer work for newly admitted and former undergraduate students who have attended other institutions and earned academic credit that may be transferable to UTEP. Evaluations for new students are prepared and mailed to the students after they have been admitted to the University.

In general, grades of "C" or better earned in academic courses at fully accredited colleges and universities are evaluated on the same basis as if the work had been completed at UTEP. Whenever possible, equivalent course numbers are given; if there are no equivalents, elective credit is given. Lower division elective credit is designated as "ENB" (enbloc); upper division elective credit is designated as "ADV" (advanced).

Only courses with grades of A, B, C, D, "Credit" or "Pass" are evaluated, and quarter hours are converted to semester hours by multiplying the quarter hours by two-thirds. Students transfer credit hours to the University; a transfer grade point average is not computed, and transfer grades are not calculated into the UTEP grade point average.

A maximum of 66 semester hours, limited to freshman and sophomore level work, is transferable from two-year institutions. Transfer credit for engineering courses is granted only for work completed at ABET-accredited institutions. The applicability of all courses to the degree plan, including those with grades of "D", is determined by the student's academic dean. Each student should have the academic dean's office prepare a degree plan by the time 60 semester hours have been earned.

Students who have attended military service schools or who have taken CEEB-Advanced Placement, SAT II - Subject, CLEP, or DANTES Subject Examinations should have the appropriate agency send original transcripts or test results to the Admissions Office for credit consideration. If military transcripts are not available, official copies of certificates of completion should be submitted.

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

### TRANSFER CURRICULA

#### RESOLUTION OF TRANSFER DISPUTES FOR LOWER DIVISION COURSES

The Texas Higher Education Coordinating Board has issued guidelines for the resolution of transfer disputes between Texas colleges and universities. These guidelines are designed to facilitate the transfer of lower division courses and to clarify for students their rights and responsibilities as potential transfer students. The transfer curricula shall be as prescribed by the current issue of the Coordinating Board's guide to transfer curricula and transfer of credit.

The following procedures (as outlined in the *Texas Higher Education Coordinating Board Rule Chapter 5, Subchapter S,*

Section 5.393) shall be followed by public institutions of higher education in the resolution of transfer disputes involving lower division courses:

If a public institution of higher education does not accept course credit earned by a student at another institution of higher education, that institution shall give written notice to the student and the other institution that the transfer of the course credit is denied.

The two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with the Coordinating Board rules and/or guidelines.

If the transfer dispute is not resolved to the satisfaction of the student or the institution at which the credit was earned within 45 days after the date the student received written notice of the denial, the institution whose credit is denied shall notify the Commissioner of Higher Education or the Commissioner's designee who shall make the final determination about a dispute concerning the transfer of course credit and give written notice of the determination to the student and institutions.

Questions concerning the evaluation of transfer credit should be referred to the Admissions Office.

UTEP students who have difficulty having UTEP credit accepted at other Texas public institutions should contact the director of admissions at UTEP for initiation of the transfer dispute resolution process.

### TEXAS COMMON COURSE NUMBERING SYSTEM

The University of Texas at El Paso participates in the Texas Common Course Numbering System, which was developed to facilitate the transfer of general academic courses among Texas colleges and universities. Common courses are those freshman and sophomore level courses taught throughout Texas which correspond with the general description of courses or category of courses included in the *Community College General Academic Course Guide Manual*. A UTEP course determined to be equivalent to a course listed in the *Guide* has the common course number listed next to the UTEP course title in the individual college sections of this catalog. Students interested in transferring can refer to the common course number in each college or university catalog to determine course transferability among institutions.

### TEXAS ACADEMIC SKILLS PROGRAM (TASP)

The TASP test is designed to determine whether students possess the basic skills in reading, writing, and mathematics, necessary for university courses. In accordance with *Texas Education Code*, Section 51.306, all students in the following categories who enter public institutions of higher education and have not earned at least three university-credit hours before Fall 1989 must take the TASP test: (1) all full-time and part-freshmen enrolled in a certificate program or degree program; (2) any other student, including transfers from private or out-of-state institutions, prior to the accumulation of nine or more college-level semester credit hours or the equivalent in a Texas public institution of higher education; and (3) all students interested in teacher education. The law exempts the following categories of students:

- those who have earned at least three university-credit hours before Fall 1989.
- those who have a composite score on the TAAS, ACT, or SAT at or above the level set by the Texas Higher Education Coordinating Board (beginning fall semester 1995: TAAS - 1780 writing, Texas Learning Index (TLI) 86 math and TLI 89 reading; SAT taken April, 1995 and thereafter - 1180 composite and 550 math and 550 verbal, SAT taken prior to April, 1995 - 1090 composite and 530 math and 470 verbal; ACT - 26 composite and 22 math and 22 english). For exemption purposes, a TAAS score is valid for three years and a SAT or ACT score is valid for five years. Tests may be retaken but scores meeting or exceeding the standards must be achieved on a single test administration.
- those in certificate programs of less than 1 year.



— those who enroll on a temporary basis and are also enrolled in a private or independent institution of higher education or an out-of-state institution of higher education or have graduated from an institution of higher education when the appropriate documentation is submitted.

Students with three or more semester credit hours or the equivalent awarded prior to fall semester, 1989, are exempt from the Texas Academic Skills Program regardless of any election pursuant to the "academic fresh start" statute, Section 51.929, *Texas Education Code*. An institution may also exempt a person 55 years of age or over who is not seeking a degree or certificate.

A student whose performance on the TASP is below the standard set by the Coordinating Board for a tested skill area must participate in an advising and remediation program and unless excepted pursuant to law or regulation, may not enroll in upper division courses completion of which would give the student sixty or more college credit hours until the student meets or exceeds the minimum standards set in all test sections.

All sections of the TASP must be passed prior to completion and award of a certificate or degree.

**SUMMARY OF ENROLLMENT REQUIREMENTS BASED ON TASP:**

1. Students who earned at least 3 semester hours of college credit prior to Fall 1989 are TASP exempt unless they are seeking admission into a teacher education program. Students interested in teacher education must pass all parts of the TASP test before being allowed to take upper division teacher education courses.
2. Blind students must take the TASP test, but only if the test is administered with proper accommodations and deaf students will take the Stanford Achievement Test as nationally normed on the hearing-impaired population by Gallaudet University.
3. Deadlines for taking the TASP test:
  - a. Incoming freshmen must take the placement tests in reading, writing, and mathematics before their first semester of enrollment and must take the TASP test prior to completion of 9 semester hours of college level work.
  - b. Transfer students from Texas public colleges or universities who have earned a total of 9 or more semester hours of college level work before enrolling at UTEP must submit official TASP scores to the Admissions Office before being allowed to register.
  - c. Transfer students from Texas public colleges or universities who have earned fewer than 9 semester hours of college level work before enrolling at UTEP will be allowed to register. However, the TASP test must be taken before completion of 9 hours of college level work, including work transferred from previous Texas public colleges or universities.
  - d. Transfer students from private or out-of-state schools who have no previous Texas public college hours will be allowed to enroll and must take the TASP test before completion of 9 semester hours of college level work at UTEP. Students in this category who have accumulated 60 or more hours will be allowed to take up to 9 semester hours at UTEP, including junior and senior level courses, before they must take and pass all portions of the TASP.
4. Failure to take the TASP test before the deadlines noted above will preclude enrollment in collegiate level courses. Students who register will be disenrolled if TASP scores are not received by the University.
5. All sections of the TASP must be passed prior to completion and award of a certificate or degree.

TASP regulations may change on a yearly basis. Consult the *Class Schedule* or the Academic Advising Center each term for current TASP requirements.

Additional TASP information, including the rules adopted by the Texas Higher Education Coordinating Board, and information about special provisions relating to certain disabilities, is available in the Academic Advising Center, Academic Services Building, Second Floor, or call (915) 747-5290.

**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 semester hour value of the course. The second number indicates the level: 0 = precollege or remedial, 1 = freshman, 2 = sophomore, 3 = junior, 4 = senior, 5 or 6 = graduate. The last two numbers identify the course within its particular department.

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

**Upper Division (Advanced) Courses** are designated by 3 or 4 as the second 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.

**CLASSIFICATION OF STUDENTS**

- Freshman ..... Fewer than 30 semester hours of credit
- Sophomore ..... 30-59 semester hours of credit
- Junior ..... 60-89 semester hours of credit
- Senior ..... 90 or more semester hours of credit

**UNDERGRADUATE COURSE LOAD**

Maximum credit load per long term is 21 hours and an appropriately shorter load per summer term. Written permission of academic dean must be secured to take more than maximum load; students must have a GPA above 2.0 to seek permission.

Full-time students are those who are registered for 12 or more semester hours in a fall or spring semester or for 9 or more semester hours in a summer term. All other undergraduate students are classified as part-time.

For enrollment verification purposes the following categories will be followed:

- Fall and Spring:
  - full-time = 12 or more hours per semester
  - 3/4 time = 9 - 11 hours per semester
  - 1/2 time = 6 - 8 hours per semester
  - less than 1/2 time = 5 or fewer hours per semester
- Summer:
  - full-time = 9 or more hours
  - 3/4 time = 7 - 8 hours
  - 1/2 time = 6 hours
  - less than 1/2 time = 5 or few hours

Students who are not Eligible to Enroll without conditions such as those who are on Academic Probation or Academic Suspension/Dismissal, or who have been readmitted or reinstated from such conditions, or who are in provisional admission status, will have course load conditions imposed by their advisor or dean. See the section entitled *Standards of Academic Performance*.

**GRADES AND GRADE POINTS**

Grade	Meaning	Grade Points per semester hour
A	Excellent	4
B	Good	3
C	Average	2
D	Below Average but Passing	1
F	Failure	0

The above grades are included in the grade point average (GPA), which is calculated as follows: (1) multiply the semester hours of credit in each course by the number shown above for the grade received in that course; (2) divide the total grade points earned by the sum of the semester hours attempted in courses in which one of the above grades was earned.

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The following grades are not included in grade point average calculations:

Grade	Meaning
I	Incomplete
S	Satisfactory, in a Pass/Fail course
U	Unsatisfactory, in a Pass/Fail course
P	In Progress
W	Withdrawal
CR	Transfer credit or credit by examination
N	A temporary administrative grading notation often meaning not reported by the faculty or some other administrative problem

### STANDARDS OF ACADEMIC PERFORMANCE

Undergraduate students are expected to maintain a cumulative grade point average (GPA) of at least 2.0, a "C" average, for all work attempted at UTEP, and at least a GPA of 2.0 for all course work required in the major field of study. These are University-wide minimum requirements for the conferral of any bachelor's degree, but higher minimum standards of performance are required in some programs.

When final grades for each term are posted to the student academic record, both term GPA (for the semester or session just ended) and cumulative GPA (for all work attempted at UTEP) are included. In addition, designations appropriate to the student's past academic performance and eligibility to continue at the University are included. The resulting *academic standings*, and the designations appropriate to each, are indicated below.

- **ELIGIBLE TO RE-ENROLL** is the standard designation for a student whose cumulative GPA is 2.0 or higher.
- **ELIGIBLE TO RE-ENROLL/ACADEMIC PROBATION** is the standing designation for a student not under Academic Suspension, Extended Academic Suspension or Dismissal, whose cumulative GPA is below 2.0 at the end of any semester or full summer session. The student will remain in this status until a 2.0 cumulative GPA is achieved and probation is removed, or until a total of 15 semester hours has been attempted while on probation.
- **NOT ELIGIBLE TO RE-ENROLL/ACADEMIC PROBATION FOR ONE SEMESTER** is the standing designation for a student who has attempted 15 semester hours while on academic probation and has not achieved a 2.0 cumulative GPA. A student thus suspended **MAY NOT** re-enroll at the University until one long semester or full summer session has elapsed, following which, if the student wishes to re-enroll, he/she must negotiate a Petition for Reinstatement with the academic dean. If the petition is approved, the student will be permitted to re-enroll under academic probation, plus any special conditions which may be imposed by the academic dean.
- **NOT ELIGIBLE TO RE-ENROLL/EXTENDED ACADEMIC SUSPENSION FOR ONE YEAR** is the standing designation for a student who, following academic suspension and reinstatement, attempts 15 semester hours but fails to achieve a cumulative GPA of 2.0. A student thus suspended **MAY NOT** enroll at the University until one full calendar year has elapsed, following which, if the student wishes to re-enroll, he/she must negotiate a Petition for Reinstatement with the academic dean of the previous major or, if the student is selecting a new major, the dean of the intended new major. If reinstated, the student will be permitted to re-enroll under academic probation, plus any special conditions of the Petition for Reinstatement.
- **NOT ELIGIBLE TO RE-ENROLL/ACADEMIC DISMISSAL FOR TWO YEARS** is the standing designation for a student who, following a second academic suspension, attempts 15 semester hours but fails to achieve a cumulative GPA of 2.0. A student thus suspended **MAY NOT** enroll at the University until two full calendar years have elapsed, following which, if the student wishes to re-enroll, he/she must negotiate a Petition for Reinstatement with the academic dean of the previous major or, if the student is selecting a new major, the dean of the intended new major. If reinstated, the student will be permitted to re-enroll under academic probation, plus any special conditions of the Petition for Reinstatement.

— **PROVISIONAL** is the standing designation for a student who has been provisionally admitted to the University (see Admission section of this catalog). Once provisional status has been removed, the student is subject to the Standards of Academic Performance described above.

All students reinstated after suspension must obtain their Dean's permission to re-enroll until that student's academic status returns to **ELIGIBLE TO RE-ENROLL** (as defined above).

Any student who attempts to circumvent the foregoing policies and procedures is subject to disciplinary action.

Any appeal from the regulations governing academic performance shall be directed to the dean of the college in which the student is a major, who is empowered to grant relief in unusual cases if the circumstances warrant such action.

### COLLEGE/MAJOR ACADEMIC STANDING

Selected colleges or majors may also require students to maintain a 2.0 GPA for courses taken within the college or within the major. A student whose college/major GPA falls below a 2.0 after completing a specified minimum number of hours of the designated course work in the college/major will be placed on probation within the college/major. This minimum shall be nine hours unless specified differently on the degree requirements for the college/major.

If the student's college/major GPA remains below a 2.0 after completing nine additional hours of coursework in the college/major [or the designated college/major probationary period (see individual degree requirements to determine the applicable probationary period)], the student will be placed on suspension from the college/major for a minimum of one semester. A student who is on suspension from a college/major may continue to enroll in the University if the student changes majors and meets the GPA requirements of the new college/major. A change to a new major in the same college will require permission from the dean. A student who wishes to re-enroll in the same major after a suspension must make a Petition for Reinstatement to the College/Major to the student's academic dean. If the petition is approved, the student will be permitted to re-enroll under academic probation, plus any special conditions which may be imposed by the academic dean. It is recommended that students who are suspended from the college/major receive career counseling through the University Counseling Service.

Students who have been suspended for a period of one semester and have been allowed to re-enroll in that college/major must attain a GPA of 2.0 in the college/major after the completion of nine additional hours of coursework in the college/major [or the designated college/major probationary period (see individual degree requirements to determine the applicable probationary period)]; failure to do so will result in suspension from the college/major for a minimum of one year. A student who is allowed to re-enroll after this suspension and does not achieve a 2.0 GPA in the college/major [or the designated college/major probationary period (see individual degree requirements to determine the applicable probationary period)] will be dismissed from the college/major. A change of major will be required if the student wishes to continue to enroll in the University.

Any appeal from the regulations governing academic performance shall be directed to the dean of the college in which the student is a major, who is empowered to grant relief in unusual cases if the circumstances warrant such action.

This policy is in addition to the policies concerning academic standing within the University. Any penalties concerning eligibility to re-enroll arising from the University's academic standing policy shall take precedence over any provisions within this policy.

### REINSTATEMENT OF STUDENTS AFTER EXTENDED ABSENCE

At the time of reinstatement to the University after an absence of at least two academic years, a student has the option of:

1. continuing with the academic record and GPA as they stand, and completing all remaining requirements for graduation; or

2. beginning anew, with no courses attempted earlier at UTEP counted toward the degree, nor counted in the cumulative GPA calculations. This option may be elected only once.

If option (1) is chosen, the GPA will be computed according to rules in force at the time of re-entry. If option (2) is chosen, notation will be made in the student's record indicating that portion of the record which is to be involved in computing requirements for graduation. In either case, all courses taken and grades earned will remain on the official academic record. Pursuit of the degree under either option does not exempt the student from the provisions of the "seven-year rule" (see Catalog Requirements below).

If the student was not eligible to re-enroll at the end of the last period of enrollment at the University, negotiation of a Petition for Reinstatement with the academic dean of either the previous or intended major is required at the time of reinstatement. The petition will specify which of the two options has been chosen.

#### **ACADEMIC FRESH START PROGRAM** (*Texas Education Code, 51.931*)

An applicant for admission who is a Texas resident may seek to enter the University under the Academic Fresh Start Program. The University will not consider in the admission decision any academic course work or grades earned 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll. For further information about the Academic Fresh Start Program, refer to the Admissions section of this catalog.

## **REGISTRATION**

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

## **LATE REGISTRATION**

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. A new student will have the late registration fee waived as long as registration is made prior to the start of all classes. Late registrants are subject to the same regulations and course requirements as students who enroll on time. Each class missed because of late registration will be counted as an absence, and class or laboratory work missed will be counted as zero unless the instructor grants permission to make up the work.

## **AUDIT REGISTRATION**

Courses may be audited under the following provisions:

1. 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.
2. 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.
3. 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, but they may not enjoy other student privileges such as ID's, tickets to events and the health service.
4. 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 sixth day of class during the summer session. Students should report to the Record's counter to obtain an Audit Registration Form.

5. This form must then be signed by the instructor teaching the course and the department chair. Bring the completed form to the Cashier, located in the Academic Services Building, for payment. Leave the "paid" audit registration form with Cashier. The audit registration form will be filed with the Records Office. A copy of the audit form, stamped "paid", will be forwarded to the instructor.

6. Audit Fees:

- a. \$5.00 per course for students concurrently enrolled at UTEP for other courses.
- b. \$25.00 per course for students not concurrently enrolled at UTEP for other courses.
- c. 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 semester 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*. All student-initiated changes in registration require payment of an Add/Drop Fee.

**Course Drops.** 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 paragraphs on "Withdrawal from the University."

Classes dropped prior to the official census date of any term will be deleted from the student's semester record. Course drops filed by the student after this period but prior to the final deadline (end of the 6th week of a long session or end of the 3rd week during a summer session), will result in a grade notation of *W*.

After the student drop deadline, students may be dropped from class only with approval of the instructor, who will initiate the drop transaction and assign the grade of *W* or *F*. Instructors are not obligated to drop students (see "Faculty-Initiated Course Drops" below).

## **FACULTY-INITIATED COURSE DROPS**

At the discretion of the instructor, a student may be dropped from a course because of excessive absences or lack of effort. In all faculty-initiated course drops, the instructor determines whether the student is to receive a grade of *W* or *F*.

Students whose behavior in the classroom disrupts the teaching-learning process may be dropped upon the recommendation of the instructor, subject to the approval of the dean of students.

## **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, however, 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* or *F*.

**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 inform their class instructor, and the students will be permitted to make up both assignments and examinations in consultation with their instructors.

**Absence for Religious Holy Days:** 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

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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.

"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*.

**Absence from Examinations:** A student absent from a test during the semester is graded zero unless another policy is set by the instructor.

### 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*.

### MIDTERM GRADES FOR ALL FRESHMEN

In mid-semester, all freshmen will receive midterm grades. This midterm grade report is designed to give students an early indication of how they are doing during the freshman semesters. Midterm grades are not recorded on students' academic records, nor computed in the cumulative grade point averages and academic standings.

### DEAD DAY

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

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

### FINAL EXAMINATIONS

Exemption from final examinations may not be given. Final examinations are scheduled to be two hours, forty-five minutes in length and take place during the final examination period. It is the policy of the University not to administer a second final examination in a course.

### COURSES TAKEN ON A PASS/FAIL BASIS

Some courses are graded only on a Pass/Fail basis (grade of S or U). Such courses are identified in the *Class Schedule*. These courses may be presented in fulfillment of degree requirements if so specified on the student's degree plan.

In addition, an undergraduate student whose cumulative grade point average is 2.0 or higher may take courses on a Pass/Fail basis with the following conditions:

1. A maximum of four courses attempted on a Pass/Fail basis may be used in fulfillment of degree requirements, as free electives only.
2. Such courses may not be reserved for graduate credit.
3. Not more than two such courses may be taken in a long semester or one in a summer term.

4. Courses taken on a Pass/Fail basis may not be counted toward the minimum residency requirements.
5. To obtain credit for the course, the student must meet the minimum standard and do all assigned work required for the grade of A, B, C, or D.
6. No course graded Pass/Fail may be presented in fulfillment of any degree requirement in the College of Engineering.
7. Business majors may not take any course offered by the College of Business Administration on a Pass/Fail basis.

To enroll on a Pass/Fail basis in courses that are not normally graded Pass/Fail, a student must:

1. Obtain a Pass/Fail form and approved signature from the academic dean of his/her college.
2. Submit the approved form to the Records Office prior to the census date of the semester. Check the *Class Schedule* for the date.

Election of the Pass/Fail option is irrevocable after census date. Pass/Fail courses are not included in the calculation of grade point average. There is no assurance that Pass/Fail courses will be accepted as transfer credit by another institution.

### INCOMPLETE OR IN PROGRESS WORK

Assignment of the grade *I* is made only in exceptional circumstances and requires the instructor to file with the academic dean an outline of the work to be completed and the time span (no longer than one calendar year) allowable for completion. In no case may repetition of the course be assigned as work to be completed. If the work has not been done at the end of the specified time, the *I* will be changed to an *F*. A student may not enroll in a course in which he/she has an unresolved grade of *I*.

The grade of P (in progress) is limited to specific courses in which re-enrollment is required. This includes all thesis courses (3598-3599, 3620-3621), graduate internships, and certain undergraduate courses.

### REPETITION OF COURSES

Students may repeat courses at UTEP under either of the following conditions:

1. *Repetition without GPA recalculation:* all grades earned remain on the record AND in the GPA calculations.
2. *Repetition with GPA recalculation:* all grades earned remain on the record BUT the previously-earned grade is not included in the GPA calculation. The academic record will be annotated with the symbol (R) next to the earlier grade.

Courses completed at UTEP may be repeated for credit only at this institution, except by permission of a student's academic dean. A college may require that a student obtain permission before repeating a course at UTEP without recalculation. Freshman-level courses repeated for the first time at UTEP AUTOMATICALLY entail GPA recalculation if a grade of A, B, C, D, or F is earned when the course is repeated.

With the exception of freshman-level courses repeated for the first time, repetition of courses at UTEP with GPA recalculation is normally not possible; exceptions require approval of the dean of the college in which the student is majoring. Approval is certified when the college submits a "COURSE REPEAT WITH GRADE REPLACEMENT APPROVAL" form, on behalf of the student, to the Records Office.

Any GPA recalculation, as well as annotation of the academic record with the symbol (R), will be done following receipt of final grades for the semester during which a course eligible for GPA recalculation is repeated.

Grade replacement of GPA calculation will not be made after graduation.

NOTE: UTEP students are cautioned that under no circumstances may a course taken at this institution and repeated at another college or university be eligible for GPA recalculation, even if the student is involved in first-time repetition of a freshman-level course. Courses transferred to UTEP are not calculated in a student's GPA.

## LIMITS ON UNDERGRADUATE COURSE ENROLLMENTS

In most instances a student may enroll in an undergraduate class a maximum of three times, **EXCEPT WITH THE PERMISSION OF THE STUDENT'S ACADEMIC DEAN**. A student may enroll more than three times in a variable-topic, studio, performance, workshop or other course that is identified as "may be repeated for credit." This includes enrollments that result in a grade of 'W', 'F', 'D', or 'P'. It does not apply to courses taken prior to a student's re-enrolling under "Option 2" or Reinstatement After Extended Absence, or Academic Fresh Start. Individual colleges may have more restrictive policies.

A student may not enroll in a course in which a grade of C or higher has been previously earned (except for a variable-topic, studio, performance, workshop or other course that is identified as "may be repeated for credit"). Moreover, a student may not enroll in a course in which he or she has an unresolved grade of I.

## GRADE CHANGES

A student must submit in writing to his/her academic dean, for which the course of instruction is under, their request for a grade change before the end of one year after the semester in which the course in question was taken; however, a graduating student must request a grade change within three months after the last day of final examinations of the last semester enrolled.

## DEAN'S LIST

At the close of each fall and spring semester, the Office of the Registrar publishes a Dean's List of all full-time undergraduate students who have completed at least 12 collegiate hours and have earned a semester grade point average of 3.5 or higher in collegiate hours.

A separate Dean's List is prepared for each undergraduate college, and for public distribution, as appropriate. This honor will be noted on the student's academic record and grade report.

## RESERVATION OF WORK BY UNDERGRADUATES FOR GRADUATE CREDIT:

Ordinarily, undergraduates are barred from graduate courses. A student who has a baccalaureate degree is not eligible to reserve courses for graduate credit. It is possible for undergraduate seniors to register in graduate courses in their last semester under the following conditions:

1. The undergraduate must lack not more than 12 semester hours (or 6 semester hours in summer session) of work to complete all requirements for the first baccalaureate degree and must have a grade point average of at least 3.0 in junior and senior 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 registration for all work must not exceed 15 semester hours (or 9 hours in a summer session).
4. All enrollment in graduate courses must be approved prior to registration by the graduate advisor of the department, the undergraduate dean, and the Director of Graduate Student Services.
5. This option is limited to one term.

An undergraduate cannot count credit for graduate courses toward the baccalaureate degree. It will be reserved for credit toward a graduate degree. A form for reserving courses is available in the Office of Graduate Student Services. Approval to reserve work for graduate credit neither constitutes nor implies admission to any graduate program.

# General Requirements for Undergraduate Degrees

## DEGREE PLAN

Students are advised to obtain and follow the degree plan for their major upon their first enrollment at the University. The student is required to indicate a major and file a degree plan of the major with the academic dean upon completion of 60 semester hours.

## CHANGE OF MAJOR

A student who wishes to change majors must obtain permission of the dean of the college of the new major.

## CATALOG REQUIREMENTS

**General Academic Regulations:** General academic regulations may be changed at any time. All students, regardless of when originally enrolled, are required to abide by current academic regulations.

**Specific Course and Degree Requirements:** In order to be graduated, a student must fulfill the specific course and degree requirements of the catalog in effect at the time of his/her enrollment or of any subsequent catalog in effect during his/her enrollment, provided that the requisite courses outlined in the selected catalog are still being offered. No catalog more than seven years old may be used to determine the course requirements for a degree. The seven year period begins with the year the catalog was issued, regardless of the student's first semester of enrollment. Students entering the University for the first time during the summer session will be subject to the requirements of the catalog for the next Fall term, or of a later catalog.

## COMPLETION OF FRESHMAN-LEVEL COURSES

All freshman-level courses which are required by specific course number shall be completed before the student has completed 90 semester hours toward his/her degree. Otherwise, no credit will be granted toward fulfilling the minimum credit hour requirements for the degree even though the courses must be completed.

## RESIDENCE

Work counting toward the degree must be completed in residence at the University as follows:

1. a total of at least 25% of the semester hours (a minimum of 30 semester hours)
2. twenty-four of the last 30 semester hours
3. twelve semester hours of advanced courses in the major subject must have been completed not more than three years previous to the date of graduation.

## One-Hour Courses

No more than six one-hour courses may be counted toward completion of the minimum total hours required for a degree (unless degree requirements specify otherwise), except with specific approval of the academic dean.

## GRADUATION

Degrees are conferred at the end of each long semester (December, May) and each summer session (August). 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. The student must apply for graduation and pay the appropriate fee in order to be considered a candidate. The application

process begins with the academic dean and should be initiated during the next-to-last semester or session and completed no later than the published deadline in the *Class Schedule*. The paid graduation application form will be collected by the Cashier's Office for processing by the Records Office.

## GRADE POINT AVERAGE REQUIRED FOR GRADUATION

A minimum grade point average of 2.0 must be achieved in all course work at The University of Texas at El Paso and in all transfer work counted toward the degree. The UTEP cumulative grade point average consists of all grades earned at this institution regardless of their applicability toward a degree. Transfer credits may be counted toward meeting degree requirements, but transfer grades and grade points do not enter into UTEP grade point average calculations. A minimum grade point average of 2.0 is required in the major. This is intended as a University-wide *minimum* and does not prevent a college from requiring a higher GPA in specific majors or programs, provided appropriate approvals have been obtained.

## MAJOR EXAMINATIONS

At the discretion of the department concerned, a comprehensive examination may be required in the major subject under the following conditions:

1. four hours written, or three hours written and one hour oral
2. the department fixes the time and place, and supervises the examination
3. in case of failure, the student may take another examination on a date determined by the department.

## SECOND BACHELOR'S DEGREE

A second baccalaureate degree will not be conferred until the candidate has completed at least 24 semester hours at The University of Texas at El Paso, in addition to those counted toward the baccalaureate degree requiring the higher number of semester hours of credit. These additional hours must include at least 6 advanced hours in the major subject of the second degree, and at least 6 hours must have been earned after completion of requirements for the first bachelor's degree. A student working toward a second bachelor's degree will register as an undergraduate student. Two bachelor's degrees may not be awarded to any candidate at the same commencement.

## 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 in the required areas.

For further information contact the dean's office.

# Academic Honors

The University of Texas at El Paso offers three opportunities for students to achieve special recognition for academic performance based on their cumulative GPA at the time of graduation. Graduation with any of these honors adds a special distinction to academic records and diplomas and may enhance the prospects for graduating seniors to enter graduate and professional schools or the job market. To be eligible for these programs, candidates must be among the most able and intellectually curious of students and must meet minimum GPA requirements. Each form of honors is described more fully below.

## ACADEMIC HONORS AT GRADUATION

Honors will be awarded upon graduation in the following categories for each baccalaureate degree:

1. HIGHEST HONORS will be awarded to students who attain a minimum UTEP grade point average of 3.90. A transfer student must have completed at least 85% of the academic work applied to the degree at The University of Texas at El Paso to be eligible for Highest Honors.
2. HIGH HONORS will be awarded to students who attain a minimum UTEP grade point average of 3.80, but who do not qualify for Highest Honors. A transfer student must have completed 75% of the academic work applied to the degree at The University of Texas at El Paso to be eligible for High Honors.
3. HONORS will be awarded to students who attain a minimum UTEP grade point average of 3.50, but who do not qualify for High or Highest Honors. A transfer student must have completed 50% of the academic work applied to the degree at The University of Texas at El Paso to be eligible for Honors.

Requirements for honors for a second degree include the above requirements with the additional stipulation that the student complete sixty (60) hours beyond the original baccalaureate requirements.

In computing the minimum grade point average for academic honors at graduation, only grades earned at UTEP will be included.

## UNIVERSITY HONORS PROGRAM

Students participating in the University Honors Program enroll in special Honors courses, which may be experimental, team-taught, or interdisciplinary, and that are limited in size to permit more discussion and interaction between the instructor and students. Honors courses emphasize development of communicative skills and critical thinking. Program members may also earn Honors credit by contracting in non-Honors courses. Another option is the Honors Senior Project, bearing 6 hours of credit, in which students carry out directed research and present their findings, usually in the form of a thesis.

The program offers a number of special features and benefits to its students: the Honors Lounge, Honors Council, and *Honors Journal*, as well as opportunities to serve as tutors, to study in Honors semesters at other campuses, and to interact with students from Honors programs at universities around the country.

Students accepted into the Honors Program generally must rank in the upper 15% of their high school graduating class or achieve a superior score on either the SAT or ACT. A 3.3 GPA is the criterion for admitting students already enrolled at the University and for students transferring to UTEP from another college or university. See the University Honors Program section of this Catalog for specific details of program options.

Students wishing more information are invited to contact the Honors Director, Honors House, located behind the Academic Services Building, (915) 747-5858.

## DEPARTMENTAL HONORS PROGRAM

Students wishing to earn departmental Honors will complete a senior thesis, senior project, or other special requirement, depending on the department. A departmental faculty member will direct the project or thesis. The director, along with a departmental honors committee, will judge the student's work, and outside referees may be consulted if deemed appropriate. Students may include departmental honors credits with university honors credits, upon consultation with the University Honors Program Director, in order to earn Honors at both levels. The following offer Departmental Honors: Political Science, Psychology, History, Chemistry, Biological Sciences, Geological Sciences, and Physics.

## STUDY ABROAD PROGRAMS

### NATIONAL STUDENT EXCHANGE PROGRAM (Texas Education Code, 51.929)

UTEP is a member of the National Student Exchange (NSE) Program which is a consortium of more than 100 state supported colleges and universities. The program offers students the opportunity to broaden their academic and cultural awareness in different geographic settings across the United States and its territories. Students

are able to enroll at a host university for up to one academic year and pay in-state tuition rates.

To qualify a student must be full-time at the time of the application and the semester prior to the exchange, have a cumulative grade point average (GPA) of 2.5, and be a sophomore or junior at the time of the exchange. For more information contact the NSE Coordinator at the Honors House at (915) 747-5858.

### THE TEXAS LONDON SEMESTER

As a member of the Texas Consortium for Study Abroad, UTEP is able to offer qualified UTEP students the possibility of studying for a semester at Richmond College, London. Richmond College is a fully accredited American liberal arts college located in the heart of the city. The college, with an enrollment of 1000 students from Britain, America and a number of other countries, offers a wide range of courses on the undergraduate and graduate levels. If you are interested in the London Semester, contact Dr. Frederick Kluck at (915) 747-7025. Students who qualify for the program are encouraged to apply for a Study Abroad Scholarship. Scholarship application forms are available at the International Student Services Office, Union West, Room 211.

### UNIVERSITÉ DE VERSAILLES - ST. QUENTIN

The exchange program between UTEP and the Université de Versailles - St. Quentin allows students to register at UTEP but do the course work at the French University. For more details, contact Dr. Ellery Schaik at (915) 747-6802, or Dr. Joan Manley at (915) 747-7037.

# Student Life Policies and Procedures

## General Regulations

### Authority

Detailed policies and procedures affecting student life are printed in the *Handbook of Operating Procedures* (HOP) - student section and are available electronically via the MUSIC system. 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. Copies of the *Student Handbook* may be obtained from the Student Activities Office and the Dean of Students' Office. The *Rules and Regulations* of the Board of Regents of The University of Texas System are also available in these offices. 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, and on reserve at the Library.

### 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, 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, may result in sanctions ranging from disciplinary probation, to failing grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others.

### 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 which 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.

### Policy on Disruptive Acts

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

### 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 HOP, Section 2-501. This handbook is available for review in the Office of the Dean of Students.

### Policy on Hazing

Under the law, individuals or organizations engaging in hazing could be subject to fines and charged with a criminal offense.

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 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. The fact that a person consented to or acquiesced in a hazing activity is *not* a defense to prosecution for hazing under this law.

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 to the Dean of Students; and immunizes a person from participation in any judicial proceeding resulting from that report.

This law does not affect or in any way limit the right of the University to enforce its own rules against hazing. 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.

The law defines hazing as any intentional, knowing, or reckless act, occurring on or off the campus of an educational institution, by

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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:

- A. Any type of physical brutality, such as whipping, beating, striking, branding, electronic shocking, placing of a harmful substance on the body, or similar activity;
- B. 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;
- C. 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;
- D. 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;
- E. Any activity that induces, causes, or requires the student to perform a duty or task which involves a violation of the Penal Code.

### 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 Result

Penalties which may be imposed by the Dean of Students 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, or revocation of degree and withdrawal of diploma, 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.

### 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

No student may refuse to pay or fail to pay a debt owed to the University. In the event of non-payment of debts owed to the University one or more of the following may be taken by the University:

- a. bar against registration,
- b. withholding of the student's grades and official transcripts,
- c. withholding of a degree to which the student might otherwise be entitled
- d. other penalties and actions authorized by law.

### Bad Checks

A student who gives the University a check, draft or order which is not subsequently honored and the fault is not that of the bank, and

who does not pay the University the amount due within five 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 bad check, draft or order, 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 five class days after receiving written notice.

### Immunization Requirement

In order to protect the health of the University community, all students are required to submit proof of immunization, or to be immunized, for Tetanus-Diphtheria, Measles, Mumps, and Rubella. Persons born after 1957 are encouraged to have an MMR booster to dispel any uncertainty about immunity to more than one of these diseases. In addition, international students must demonstrate clearance from Tuberculosis.

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 for whom these immunizations are not required are strongly urged to obtain them for their own protection.

- **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:** Certain exemptions are allowed from the immunization requirement; students should contact the Admissions Office or the University Health Service for information.

Students enrolled at UT El Paso will assume the full cost of the HBV. All other immunization listed above are free of charge.

Students may obtain information regarding the consequences of out dated immunizations for certain diseases; the age groups most vulnerable to these vaccine preventable diseases; and local providers of immunizations services from the University Health Service.

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

The University Health Service 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 Health Service provides the required immunizations free of charge, 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.

### Policy on AIDS, HIV, and Hepatitis B Infection

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. In furtherance of 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 University Health Service. 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 University Health Service.

### Student Right-to-Know and Campus Security Act

In compliance with the Student Right-to-Know and Campus Security Act (the Act) 20 U.S.C. Sections 1092(a), (e) and (f), as amended, 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 will make timely reports to the campus community on crimes considered to be a threat to students and employees and reported to campus police or local police agencies.

Every September, UTEP will publish and distribute an annual report of campus security policies and crime statistics to all current students and employees; provide copies of the report to applicants for enrollment or employment upon request; and submit a copy of the report to the Secretary of Education upon request. The annual campus crime statistics report will reference crimes which occur on property owned or controlled by UTEP and may be supplemented by listing crimes which occur off of the campus in buildings or on property owned or controlled by student organizations that are registered by the institution when such statistics are available from local police departments.

UTEP will publish 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 will annually calculate and disclose 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 will provide certain information on graduation rates specified by the Act to the prospective student and to the student's parents, guidance counselor and coach.

## 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. A challenge to a grade may be pursued only on the basis of: malice, bias, arbitrary or capricious grade determination, or impermissible discrimination. In no event shall a challenge be pursued on the basis of the standards employed in setting grades, so long as those standards are employed impartially.

The student should first attempt to resolve the question through consultation with the faculty member who assigned the grade. The student should then attempt to resolve the question through consultation with the administrator(s) to whom the faculty member reports.

Having failed to resolve the matter after consultation with both the faculty member and her/his supervisors, the student may consult with and/or file a challenge with the Chairperson of the Student Welfare and Grievance Committee. Contact the Dean of Students for specific information.

### 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 Officer. 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 Officer, Administration Building, Room 200, or at (915) 747-5662.

# Student Educational Records

## FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

The *Family Educational Rights and Privacy Act* (FERPA), 20 U.S.C. S1232g, and the *Texas Open Records Act*, *Texas Government Code* S552.001 *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 which is included in the *University Handbook of Operating Procedures* (HOP), the *Undergraduate Studies Catalog*, and the *Graduate Studies Catalog*. The 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 follows:

- (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;
- (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;

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- (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 a 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 such records are needed by administrators, faculty, or staff in furtherance of the educational or business purposes of the student or University.

A record of requests for disclosure and such disclosure of personally identifiable information from student education records shall be maintained for each student by the Admissions Office, Office of Graduate Student Services, Office of the Registrar, office of the student's academic dean, and the office of the student's departmental major, 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 which shall include:

- (1) name, 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 and awards received
- (9) date of graduation
- (10) physical factors (height and weight) of athletes
- (11) class schedule

A student may withhold Directory Information by notifying the Records Office in writing during the first 12 days of class of a fall or spring semester, or the first 6 class days of a summer semester. A student who wishes to withhold such information should complete a Restriction of Release of Directory Information form with the Records Office. Request for non-disclosure will be honored thereafter by the institution until such time when the student directs the Records Office to remove the restriction. The University may disclose directory information concerning a student who is no longer in attendance.

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, enrollment verifications for off-campus parties, and access to personal records on the campus-wide Kiosk system.

A student who elects to withhold Directory Information may not receive this same information on the telephone. A student wishing to obtain this information must come to the Records Office.

### ACCESS TO FILE

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.

Documentation submitted in support of an application for admission is part of the student's official file and cannot be returned or forwarded to a third party.

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:

- A. Academic Records
  - Admissions Office: Director
  - Office of Graduate Student Services: Director
  - Office of the Registrar: Registrar
  - College, Division, Department and Faculty Offices
- B. Student Affairs Records
  - University Counseling Services: Director
  - Student Activities Center: Director
  - Student Services: Dean of Students
- C. Financial Records
  - Business Office: Vice President for Finance and Administration
  - Financial Aid Office: Director of Financial Aid

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 RECORD

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 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 the 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 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.

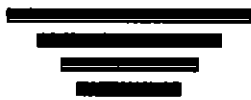
**COPIES**

*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 Open Records 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.





# Facilities and Student Services



# Academic And Research Facilities

The **University Library**, housed in an elegant and comfortable six-story building with seating capacity for 2,300 users, is open on a daily basis, 98 hours a week. It houses over one million books and government publications, as well as over one million microforms. Subscriptions are maintained to 2,412 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 (LUIS). This catalog allows users to conduct searches by author, title, subject and key word. It is accessible from terminals on all floors of the library, campus offices and home. In addition, the Library LAN (Local Area Network) provides access to over 30 databases in all major areas of study at the university. These data bases 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 provide instruction and assistance in locating and using traditional hardcopy as well as the electronic resources of the Library. Librarians are also available to provide assistance with specialized collections in departments such as Government Documents, which receives half of all materials published by the Federal Government; and Special collections, which houses rare books as well as the following thematic collections: Art, Printing, Military History, Western Fiction, Chicano Studies, Border Studies and Oral History. The Library's manuscript and archival materials are also located in the Special collections Department.

The Access Services Department provides automated check-out services, makes reserve materials available and provides inter-library loan services. The CPM (Current Periodicals and Microforms) Department houses journals and newspapers that are less than two years old, newspapers and microform collections.

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

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

The **Information and Telecommunication Services Department (ITSD)** offers UTEP students a vast assortment of computer-related facilities and services. ITSD maintains two student computer labs on campus, the Library Technology Center (LTC) and Bell Hall Technology Center (BHTC). Both of these locations provide students with access to PC and Macintosh computers, a variety of popular software titles, printing facilities and high-resolution scanners. A library of audio/visual materials and the necessary viewing equipment are also available. Frequent training sessions and a capable staff bring expert assistance directly to the students.

ITSD has vastly expanded the University's Internet capabilities. A new mail server has brought user-friendly, easy-access electronic mail to the entire campus. Netscape, Gopher, FTP, and other Internet clients offer users complete access to a wide variety of Internet resources. All of these systems are available to UTEP students at both of ITSD's computer lab locations. Users needing assistance may call the HELP Desk at x4357 (747-5257 from off-campus), or may explore the available offerings at ITSD's World Wide WEB sites (<http://www.utep.edu/~ittd>).

ITSD also maintains an IBM ES9000 mainframe computer system, and a host of UNIX and Novell file and compute servers. With all of these services and facilities, linked together with an FDDI high-speed data networking backbone, ITSD is preparing the University community for the arrival of the 21st century.

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

The **Materials Research Center of Excellence (MRCE)** is supported by the National Science Foundation under its Minority Research Centers of Excellence program. Faculty and students in the MRCE conduct research on the synthesis and processing of materials including advanced, optical, and semiconducting materials. A major goal of MRCE is to increase the access of minorities and women to careers in science and engineering by providing outstanding research opportunities to undergraduate and graduate students.

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

Through manufacturing related research, outreach, and education, the **Institute for Manufacturing and Materials Management (IM<sup>3</sup>)**, brings University-based research and technology to the plant floors of manufacturers in El Paso, Ciudad Juárez, and Las Cruces. IM<sup>3</sup>'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, IM<sup>3</sup> helps manufacturers convert from defense-related to civilian production and utilize technology originally created for the defense industry.

By providing information and technical assistance to private and public sector entities, UTEP's **Texas Center for Border Economic and Enterprise Development**, part of a consortium that also includes centers at Texas A&M University International and the University of Texas Pan-American, enhances the competitive position of the Texas-Mexico border region in the emerging global economy while integrating the region into the state's economy. UTEP's Center focuses on demographic and economic analysis, community education, information services, international trade assistance, project coordination, surveys, and data acquisition. It houses BorderBase, an innovative, on-line computer network that is the definitive source for U.S. -Mexico border information.

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

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

Established in 1992 through a five-year, \$4.5 million grant from the National Institutes of Health, the **Border Biomedical Research Center (BBRC)** supports biomedical and biostatistical research focusing on the U.S.-Mexico border region. The Center includes a Cell Biology Unit, consisting of three core research facilities (the Biochemistry and Molecular Biology Core Facility, the Cell Culture Core Facility, and the Analytical Cytology Core Facility) housed in the

Biology Building and the Biostatistics Unit housed near the Department of Mathematical Sciences. A local area network connects all members of both units electronically.

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

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

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

The **Center for Organizational Research** (COR) focuses on the use of human capital resources, resources that are critical to the effectiveness of any organization. COR provides research and practical experience in applied psychology, human resources management, and organizational development to graduate students. It also provides human resources and organizational development consulting services to the University and the El Paso region.

The **Centers for Entrepreneurial Development, Advancement, Research and Support** (CEDARS), in the College of Business Administration, offers small business management classes to UTEP Business Administration students and sponsors a business plan writing laboratory that is open to the larger University community. It also provides outreach to small businesses in the El Paso area through its Small Business Management Program, which gives UTEP students an opportunity to assist small businesses in their planning processes.

UTEP students have opportunities to work and learn in **computer and research laboratories** in colleges and departments across campus. In UTEP's instructional labs, students conduct scientific experiments, study modern languages using state-of-the-art audio visual equipment, conduct computer-networked discussions of the Western Cultural Heritage with their classmates and professors, work with sophisticated computer programming languages, and perform other tasks of relevance to their disciplines. Many students also have an opportunity to work in state-of-the-art research laboratories, including materials labs equipped with such instruments as an electron microprobe and an analytical transmission electron microscope, computer-integrated manufacturing and design labs, soil mechanics and failure analysis labs, and geophysics and seismic labs.

## STUDENT SERVICES

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

### PERSONAL LIVING

**Student On-Campus Housing** is provided in the University's high-rise co-educational residence halls. All rooms are air-conditioned and equipped with a telephone, sink, desk, bed, and overhead storage. Laundry rooms, a fitness room, sundeck, music room, TV lounges,

kitchen and storage rooms are available in the residence halls. Optional living environments include 24-hour quiet floors. Suites and private rooms may be selected, if available. Cable TV is available, if approved. The residence halls are conveniently located on campus adjacent to the Library, the Student Health Center, the Commons Dining Hall, and some recreational facilities.

The student family apartment complex consists of 60 units, each with two bedrooms, living room, kitchenette and full bathroom. All apartments are unfurnished except for a stove and refrigerator. Reservations are handled on a first-come, first-served basis, though full-time students are given priority.

Applications for admission to The University of Texas at El Paso and application for the residence halls or the student family apartments are separate transactions. A housing application will be mailed upon request when a student applies for admission to the University, or an application may be obtained from:

University Housing System  
Kelly Hall #105  
The University of Texas at El Paso  
El Paso, TX 79968  
(915) 747-5352

**Food Services.** A myriad of dining establishments can be found throughout the campus. The Union offers a full-service cafeteria along with delicious Italian cuisine from **Giuseppe's Pizzeria** and freshly made sandwiches from **Subs & Spuds**. The Faculty & Staff dining room and a sundries store are also found in the Union. The Miner Café, located at **The Commons**, is the primary dining facility for resident students as well as the University community at large. For *banquets, meetings, and private parties*, **University Catering** can provide fine dining services. For a coffee or quick snack between classes, **Snack Stop** kiosks are located at many of the colleges.

**The University Bookstore**, located on the first floor Union East, is responsible for having available for the student, required academic textbooks and supplies. 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, magazines, paperbacks, sundries, and convenience snacks. Other services include year round book buybacks, special book and software orders, commencement invitations, graduation rings, specialty plaques, computer hardware orders, and check cashing.

### HEALTH AND FITNESS

**The Student Health Center** offers confidential health care services and activities to all university students. The staff includes three physicians, a nurse practitioner, registered nurses, a medical technologist and a pharmacist. Most services are provided without charge, but there are minimal fees for laboratory tests and pharmacy services. Referrals outside the 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, or the Health Center at (915) 747-5139.

Services of the Student Health Center include health promotion with emphasis on physical fitness, women's health issues and cholesterol-nutrition monitoring. 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.

The 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 free of charge. In addition, the Health Center offers Tuberculosis screening free of charge.

A form on which the required immunizations can be documented is available from the Admissions Office or the University 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.

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Major 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 Health Center's professional staff.

The Health Center is located at 2001 Wiggins, directly across from the University Library. Hours of service are Monday through Friday from 7:30 a.m. to 4:30 p.m. The Center is closed on Friday between noon and 1:00 p.m. For additional information, please call the Center at (915) 747-5624.

**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.

The Intramural Sports Program includes approximately 40 activities for men and women. There are team sports such as flag football, volleyball, basketball, and indoor soccer, as well as individual and dual sports such as tennis, handball, racquetball, golf, and volleyball. 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, or at the Union Recreational Center.

Drop-in Recreation involves leisure time use of recreational facilities for basketball, volleyball, indoor racquetball, outdoor racquetball, and tennis. Sports equipment is also available for checkouts. Reservations for UTEP's playing fields must be made by registered student organizations in Memorial Gym Room 103. Racquetball reservations must be made on a daily basis Monday through Friday between the hours of 8:00 a.m. and 3:00 p.m. with a playing time between 3:00 p.m. and 9:00 p.m. Validated UTEP ID must be carried at all times.

Recreational extramural/team sports are open to all students. Many teams compete against other schools, while others exist for instruction and recreation. Current clubs include fencing, men's soccer, women's soccer, rugby, wrestling and waterpolo.

The Department maintains an Outdoor Equipment Center which offers skiing, camping, backpacking, and water sports equipment for minimal rental fees. For further information, please call 747-5103 or come by Memorial Gym Room 103.

### PERSONAL SUPPORT

**University Counseling Services** provides a variety of psychological support programs to the campus. The core of these programs is the individual, couple and group counseling offered to currently enrolled UTEP students.

Career counseling is available to assist students with questions relating to choice of academic major and future career goals. Career information is also available to both UTEP students and individuals from the community using the DISCOVER computer program.

Personal counseling is available for a limited number of sessions to help students overcome personal problems that are interfering with their academic progress. Counseling for persons experiencing problems with alcohol or drugs can also be arranged through this office. Psychological testing and psychiatric consultation are available to students as an adjunct to individual counseling. If it is determined that a student requires services that are beyond the scope of the University Counseling Service, the counselor can then assist the individual to find appropriate services in the community.

Professional staff members also make presentations to small groups and give seminars and classes on topics of interest to the campus community such as stress management, career choice and assertiveness. UCS psychologists and counselors are available for consultation with students, faculty and staff regarding student problems and the needs of individual students.

The University Counseling Services office is located in the Union, 104 West, and is open weekdays from 8:00 a.m. to 5:00 p.m.

**The Women's Resource Center** is designed to provide services especially focused on the changing needs of women students today as they balance their various roles. It provides a one-stop information center about resources on campus and in the community and, when appropriate, serves as an advocate for students in order to help assure fair treatment and student representation.

The Center sponsors workshops, films and other programs about questions of interest related to women, sometimes in cooperation with other departments or programs on campus. Also available are a film and audio library and a conference room for individual study or small meetings. Small emergency loans with a 10% flat interest rate are offered. The services of the Women's Resource Center are available to all currently enrolled students or individuals contemplating enrolling at the University.

**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 academic year Fridays and summer hours are 7:15 a.m. to 6:00 p.m. Children aged six months to 12 years are accepted, depending on availability of space. 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.

### ACADEMIC SERVICES

**The Academic Advising Center**, located in the Academic Services Building, assists students in making decisions about their academic careers. The faculty and staff in the Center are fully informed about the various academic programs and student services available on campus. The role of the Center is to advise students in the Pre-Science, General Studies, and START programs, in addition to those students who are affected by TASP. Faculty and student peer advisors at the Center assist students with course selection, with decisions concerning majors and minors, and with the resolution of any academic problems that might arise. Students with difficulties that cannot be addressed by an academic advisor are referred to the office on campus that can help with the problem.

**The Academic Development Center**, located on the second floor of the Education Building, was instituted in 1989 as a part of UTEP's implementation of the Texas Academic Skills Program. The Center offers diagnostic testing in reading, writing, and mathematics to determine students' readiness for college-level coursework. For students who are either unprepared to pass the Texas Academic Skills Program test or, regardless of TASP status, are unprepared for college-level courses, the Center offers developmental courses in reading, writing, and mathematics. Students placed into these courses are required to complete them successfully before taking other courses in the same subject. The courses are offered on a pass/fail basis.

The Academic Development Center's instructional staff and peer tutors work with nearly 3,000 students each year. Four computer laboratories equipped with 30 PS/2s each are available for use by students in diagnostic testing, coursework, and individual tutoring and study.

**Disabled Student Services** attempts to enable the disabled members of the student body, both permanently and temporarily disabled, to have an equal opportunity to pursue their education. Assistance is provided by arranging for note takers, sign language interpreters, and readers, as well as loaning of audio recording equipment and other specialized equipment. The office also serves as a liaison to faculty, arranging, for example, to have classes moved from inaccessible to accessible locations.

**The Inter-American Science and Humanities Program (Programa Inter-Americano de Ciencias y Humanidades)**, a component of the Office of International Programs, is an initial entry program for students from Spanish-speaking countries who wish to attend an American university but whose English is less than adequate to do so. The IASHP coordinates many first level courses taught in Spanish which the student may take while receiving instruction designed to rapidly enhance English language skills. The Program also provides academic advising for all students entering the University under its auspices.

**Office of International Programs** serves as a source of information and assistance for international students and scholars at UTEP and for U.S. students considering work, study or travel abroad. The



office provides international students with financial, immigration, cross-cultural and personal advice and assistance. International scholars on short-term teaching or research programs also receive assistance with immigration matters. For U.S. students, the office provides counseling on Study Abroad opportunities, and offers the Study Abroad Scholarship.

**The Office of the Registrar** is responsible for the maintenance of student records, all registration transactions, and the distribution of grade mailers. This office also processes enrollment certifications, transcript requests, graduation applications and diplomas, and student identification cards as well as publishing the *Class Schedule* and the undergraduate and graduate catalogs; in addition to scheduling all academic and non-academic activities into instructional classrooms and buildings.

**New Student Orientation** provides the initial information needed to acquaint students with the programs and services that enhance personal and academic growth. Every entering student is strongly urged to participate in this critical program. Parents, spouses, family and friends are also welcome to attend. Provisional students are required to attend Orientation in partial fulfillment of their provisional admission requirements.

**The Department of Student Assessment and Testing** 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. Additionally, the department conducts research and evaluation activities aimed at identifying and measuring the effects of the university experience on our students.

**The Tutoring and Learning Center** helps students improve general competency and performance in their academic subjects through a variety of non-credit programs, including TASP preparation, that are free to students enrolled at the University. The office is located in the UTEP Library, 3rd Floor. For further details refer to the Academic Support section in this catalog.

**Veterans Affairs** is a part of the Office of the Registrar and serves the needs of students who are veterans or dependents of veterans. The office is responsible for creating and maintaining records which are used in support of certification of a student's status to the Veterans Administration.

Applicants for admission who are entitled to receive veterans benefits during University enrollment are encouraged to contact the Veterans Affairs office as early as possible in the process, to obtain information on current regulations and to initiate appropriate paperwork.

Graduate students must be admitted into a program in order to receive Veterans benefits.

## CAREER AND PROFESSIONAL DEVELOPMENT SERVICES

**Career Services**, also known as **The Career Connection**, provides assistance to students in finding permanent 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. Materials of interest to women, minorities, and disabled students are included. Many publications on current job trends and careers are available. The computerized career guidance program GIS is also located in CIRCUS (The Union 114 West, 747-5640).

Career Services also provides career counseling and advises 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.

JOBTRAK, a database listing of nation-wide positions available in business and industry for all majors, is housed in Career Services, as is the Resume Review Drop-In Clinic, to which students can bring resumes for review and assistance on a drop-in basis.

For permanent employment, companies from all over the United States 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 a Professional Employment Orientation, seniors and alumni can participate in on-campus interviewing for the purpose of finding permanent employment in their chosen field. 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 bulletin board outside the office. After filling out the proper application, students are referred to the board to check on jobs and obtain a referral from the secretary. 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. Students who are in the program usually attend school for a semester and then serve on a work assignment for a semester, alternating the school and work phase until graduation. Summers are considered a semester for CO-OP purposes. A parallel program, school part of the day and work part of the day, is available.

Internships in both technical and non-technical positions are offered. The 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.

**The Division of Professional and Continuing Education** serves three purposes:

1. To offer non-credit short courses and programs to answer community needs for education or training outside the regular channels of instruction. Although college credit is not granted for such work, certificates are issued from the University upon completion. Continuing Education Units are awarded for courses meeting specific requirements.
2. To coordinate and administer conferences, seminars, symposia, special educational programs, etc., initiated by academic units, faculty and other organizations primarily for non-university personnel and agencies. Activities may result in the award of academic credit or Continuing Education Units for programs meeting specified requirements.
3. To conduct intensive professional continuing education for executives, professionals, and their staff members through a variety of workshops, seminars, conferences, and short courses. These are designed to provide updating and new skills development and may be directed toward individual growth, organizational effectiveness, or licensing/certification needs.

Sessions vary in length and are taught by instructors selected for their expertise in subject area, related work experience, and demonstrated ability to have successfully conducted similar sessions. They may be college or university faculty members, practitioners from the community, or nationally and internationally recognized talent.

Many of the programs are available in Spanish, and most may be customized for a particular group. In-house presentations can be designed to meet special needs or situations, and may be held at the Division or on-site.

**The English Language Institute** is a program of the Division of Professional and Continuing Education. It serves the following purpose: To offer intensive English courses and programs designed to meet the needs of non-English speakers to pass the TOEFL, gain academic experience in higher education and utilize English for professional and personal purposes. Certificates are issued upon satisfactory completion.

The Division is committed to lifelong learning. It serves to link the community to the educational resources needed to grow or keep current and updated.

## EXTRACURRICULAR ACTIVITIES

Discover what it means to be involved in the **Student Activities Center!** The Student Activities Center is a non-stop clearing house of information and resources for UTEP students involved, or wanting to become involved, in university activities. The Student Activities Center is where students go if they are wanting to get INVOLVED in leadership activities, community service, wellness programs or events, or student organizations; including fraternities, sororities, special interest clubs, honor societies, and professional and service organizations.

With the assistance of student leaders, the Student Activities Center coordinates UTEP's comprehensive **Leadership Development** program and **University-wide Wellness** program. Whether it is the unique Summer Leadership Camp, the inspiring Emerging Leaders program, the Hispanic Leadership Academy, the Women's Leadership Institute, the prestigious Advanced Leaders program, or a host of wellness programs and events, becoming actively involved in campus events and activities is one of the most important steps a student can take toward a rewarding college experience.

The **UTEP Wellness Program** offers services that are designated to reflect an overall wellness approach, including issues of social, physical, emotional, spiritual, intellectual and environmental well-being. A team of Student Wellness Advocates focus on the education of the community. These advocates are available to give presentations in the classroom, to organizations, or to any group requesting their services. Presentation topics cover a wide variety of issues, including AIDS, alcohol and drug issues, stress, and peer pressure.

The **Resource Library**, consisting of reading materials, audio and visual aids, contains information on student development, team-building, management, leadership, parliamentary procedure, student affairs graduate education programs, stress, alcohol and drugs, and dozens of other related topics. These are available for individual use at anytime.

As a student you can also get involved in community service. There are several unique programs available to you through the leadership program (interns) or as a student just wanting to serve your community. Make the time and explore Paydirt Pals (big/little program), Rio Grande Habitat, Praxis, Humane Society, Small Business Association, Service for Senior Citizens, and many more.

The Student Activities 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. Redefine what it means to be a "UTEP student" by becoming MORE INVOLVED and "discovering" leadership, wellness, and many more opportunities in the Student Activities Center. The Student Activities Center and Wellness Program is located in the Union East Building, Room 203, or call (915) 747-5670.

Through active involvement in **Student Organizations**, students benefit themselves as well as UTEP. After graduation from UTEP, employers will ask you several questions during employment interviews. Often you are asked to talk about your involvement in extracurricular activities. Make sure that you are able to answer the interviewer's questions. Get Involved!!

There are many different organizations at UTEP, each with different objectives. Take a moment to look at the different choices that are open to you. If you have a special interest that isn't already a focus of a student organization, you have the opportunity to create a new student organization. If you are interested in any of these organizations, do not hesitate to go by the Student Activities Center at 203 East Union or call 747-5670. You will be given the name, address and phone number of the organization's contact person. Also look for information booths of the different organizations during Student Orientation or throughout the semester. You can join a student organization at any time during the year: simply attend a meeting or call the Student Activities Center.

**Social Fraternities and Sororities** - The Greek organizations, as they are often called, offer their members the opportunity to participate in different social and community service events. Membership in social fraternities and sororities is by invitation after formal rush in the fall and spring semesters. During Rush Week prospective members have the opportunity to get acquainted with all of the different fraternities and sororities on campus.

**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 allow 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 you make contacts with people in your 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 **Union Programs Office** sponsors activities including the University film series, fine arts exhibits, comedy and variety acts, performing arts presentations, local, national and international speakers, and traditional campus-wide programs such as Homecoming and Spring Alive. These programs are generally offered free or for a minimal charge to students. Program selections are made by a committee composed of students. Students interested in serving this committee can apply at the Union Programs Office, Room 302, Union East, or call at 747-5481.

The **Student Association** is the official voice of the student body in the University decision making process. SA acts as the students' representative before the local, state and national governments on issues that affect the student population. Since its inception, SA has served to communicate student needs, desires, and demands to UTEP administrators, the Board of Regents, and the Texas Legislature. SA also serves to maintain a pleasant and exciting environment for student life. The range of activities of SA, 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 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 which is responsible for the daily operations of the organization. The Legislative Branch consists of one Senator for each 100 students enrolled and is vested with all SA legislative powers, SA senate meetings are open to all students. Both the Executive and Legislative Branch 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 Student 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 pilot 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 Student Publications Board composed of UTEP faculty, staff and students. The Board works jointly with student editors and staff members. The Student Publication program at UTEP is anchored under the management supervision of the Chairperson, Department of Communication.

**The UTEP Department of Intercollegiate Athletics**—UTEP is an NCAA Division I school and is a member of the Western Athletic Conference. Sponsored sports are men's football, basketball, cross country, indoor track, outdoor track, golf and tennis and women's basketball, golf, tennis, rifle, volleyball, cross country, indoor track, outdoor track, and soccer; women's swimming will be added in 1998. Football is played in the 52,000-seat Sun Bowl Stadium, which is located on campus and nestled in the southern tip of the Rocky Mountains, and men's and women's basketball play in the 12,222-seat Special Events Center. Teams nationally ranked in recent years include men's basketball, golf, 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 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 LIFE

**Drama, music, the visual arts**—all are available to UTEP students as participants and as audiences. Students may act in, work behind the scenes on, and attend plays produced in the University Playhouse and the Studio Theatre, located in the Fox Fine Arts Center, and in the Union Dinner Theatre. Selections include theatre classics, musicals, contemporary plays, children's theatre, bilingual theatre, and original playscripts, often written by UTEP students or faculty.

Music activities include over 100 student, faculty and guest artist recitals and concerts per year, most of which are free to the public. Students may join such groups as the University Symphony and Opera, the Ballet El Paso, the University Wind and Percussion Ensembles, Jazz Lab Bands, the University Jazz Singers, choirs and chamber groups.

Students of the visual arts have access to over 30 studios and equipment for sculpture, ceramics, printmaking, metalwork and graphic design. The work of students, faculty and outstanding regional and national artists is exhibited in two galleries in the Fox Fine Arts Building, as well as in the Union Gallery.

**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, baskets and fossil elephant remains. Basic museum intern and special project classes are offered to UTEP students. Temporary exhibits, lectures, gallery talks, youth classes, workshops for adults who work with youth, and volunteer activities are part of the museum's education program. Members of the Friends of the Museum Organization receive a 10% discount in the museum's shop, which features books and gifts concerning natural and cultural history. The Museum is free and open to the public during exhibit hours on Tuesday through Saturday, 10 a.m.-5 p.m., except on National and University holidays.

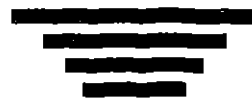
**KTEP Public Radio**—KTEP 88.5 FM Public Radio provides news, information, and music 19 hours per day for the University as well as Juárez, El Paso, and Southern New Mexico. UTEP students can work at the station either as interns or volunteers. KTEP is equipped with the latest in digital broadcast technology. KTEP began broadcasting in 1950 and was the first FM station in El Paso and one of the first in the Southwest. A monthly program guide is available by calling (915) 747-5152.

**Texas Western Press** is the 45 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 eight to ten titles published each year also include art and photographic books and Native American studies. The annual books in print catalog features all hardback and paperback books and the popular Southwestern Studies Series, now publishing No. 102, produced by the Press. The Press also sponsors the annual C.L. Sonnichsen Book Award competition. The award-winning books are sold nationally and internationally through chain bookstores, independent book-sellers and the University Bookstore. Texas Western Press is located in the Hertzog Building, on the corner of Rim and Wiggins Road.





# Academic Support



# Academic Support

The Tutoring and Learning Center  
300 Library  
747-5366

DIRECTOR: Gladys R. Shaw

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

The center offers the following:

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

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

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

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

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

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

## Tutoring Learning Center (TLC)

### 0001 College Reading and Study Skills

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** for all beginning students; returning adults; students wanting to study more efficiently; probationary students; and students experiencing motivational, organizational, time management, and/or learning difficulty. (Eight weeks of class instruction plus six hours of lab.)

### 0002 Extended START TASP Lab

Provides extended START students instruction in study skills and preparation for a specific section of the TASP. *Prerequisite:* Departmental Approval. (Sixteen hours of instruction over six weeks.)

### 0003 College Reading and Critical Thinking

Emphasizes the active reading skills necessary for the TASP and college reading assignments. No prerequisites. Open to all UTEP students; required of students scoring 15-16 on the Placement Assessment. **Recommended** for all students experiencing difficulty in completing and comprehending reading assignments. (Eight weeks of instruction and six hours of lab.)

### 0004 TASP MATH Preparation

Provides practice, specific instruction and test-taking strategies for the math portion of the TASP. No prerequisites; open to all UTEP students. (Eight weeks of instruction.)

### 0005 TASP Writing Preparation

Provides practice, specific instruction and test-taking strategies for the writing portion of the TASP. No prerequisites; open to all UTEP students. (Eight weeks of instruction.)

### 0006 TASP Reading Preparation

Provides practice, specific instruction and test-taking strategies for the reading portion of the TASP. No prerequisites; open to all UTEP students. (Eight weeks of instruction.)

### 0007 TASP Composition Lab

Prepares students for the "issue style" of writing called for on the TASP and other styles commonly demanded in college courses such as informative, persuasive, narrative, and data-based or research-oriented writing. *Prerequisite:* Departmental approval. Open to all UTEP students. **Required** of students in English 3110 who score 30-31 on the TSWE.

### 0011 Bilingual College Reading and Study Skills

Same as TLC 0001 but **for ESOL students only**. *Prerequisite:* Departmental approval.

### 0013 Bilingual College Reading and Thinking

Same as TLC 0003 but **for ESOL students only**. *Prerequisite:* Departmental approval.

### 0017 Bilingual TASP Composition Lab

Same as TLC 0007 but **for ESOL students only**. *Prerequisite:* Departmental approval.

### 0021 SSSP Study Skills

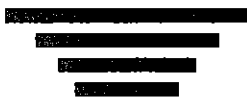
For students in the **Student Support Services Program** only. *Prerequisite:* Departmental approval.

### 0023 SSSP College Reading and Critical Thinking

For students in the **Student Support Services Program** only. *Prerequisite:* Departmental approval.



# University Honors Program



# University Honors Program

Honors House  
Hawthorne Street  
(Behind the Academic Services Building)  
747-5858

Director: Lillian F. Mayberry, Ph.D.

The University Honors Program offers students a richer, more intense and challenging academic experience, as well as closer, more personalized contact with faculty and fellow students. Enrollment in Honors classes is limited to 20. Students must apply to participate in the Program. To be eligible, entering freshmen must have graduated in the top 15% of their high school class or have obtained a superior score on the SAT or ACT. A cumulative 3.3 grade point average is the criterion for admitting current or transfer students. Members must earn Honors credits in a minimum of one course per year and maintain a specified GPA to remain active in the Program.

The program offers two options:

**UNIVERSITY HONORS DEGREE**—Candidates will earn Honors in specified areas (listed below) and will complete either 6 hours of upper-division Honors courses or a 6-hour Honors Senior Project in their major. Recipients of the University Honors Degree must complete the following course requirements:

- ENGL 3111-3112. At least 3 hours of English must be taken for Honors credit. Entering freshmen who place beyond ENGL 3112 will take an Honors sophomore or upper-division course.
- HIST 3101-3102. At least 3 hours of History must be taken for Honors credit.
- POLS 3210-3211. At least 3 hours of Political Science must be taken for Honors credit.

8 hours of courses given by the departments of Biological Sciences, Chemistry, Geological Sciences, or Physics. At least 3 hours of science must be taken for Honors credit.

Complete 6 hours of upper-division work for Honors credit. Three of these hours may be satisfied through approved independent study.

**OR**

Complete a 6-hour Honors Senior Project (HON 3495-3496).

Additional Honors credits as required to bring the total to 30 hours; the hours may be earned by enrolling in Honors sections or by contracting for Honors credit in non-Honors courses.

With approval of a student's departmental advisor and the University Honors Program Director, a maximum of 6 of these 30 hours may be taken on a Pass/Fail basis. Credits obtained on this basis may be used only for elective credit if approved by the student's academic department. Courses taken on a Pass/Fail basis are disregarded in determining the grade point average, thereby encouraging Honors students to enroll in a course for which they might otherwise feel inadequately prepared.

Completion of the above requirements with a cumulative GPA of 3.3 or higher at the time of graduation entitles the student to receive the University Honors Degree. The notation "University Honors Degree" will be added to the permanent academic record and the diploma, and all Honors courses completed will be designated with (H). In several departments, completion of the Honors Senior Project may also qualify the student for Departmental Honors recognition: Political Science, Psychology, History, Chemistry, Biological Sciences, Geological Sciences, and Physics.

**UNIVERSITY HONORS CERTIFICATE**—Students who wish to pursue a less comprehensive Honors curriculum may elect to obtain the University Honors Certificate by completing 18 hours of Honors course work. At least 6 hours must be upper-division, and 3 of these may be by approved independent study. A maximum of 3 Honors hours may be taken on a Pass/Fail basis, with the same restrictions described for such courses in the University Honors Degree option. Upon graduation with a cumulative GPA of 3.3 or higher, the notation "University Honors Certificate" will appear on the permanent academic record and on the diploma, and all Honors courses completed will be designated with (H) on the transcript.

## HONORS (HON)

### 3300 Honors Colloquium (3-0)

Examination of a special topic or interdisciplinary area. May be repeated once for undergraduate credit as subject varies. Course approved for undergraduate or graduate credit.

### 3495-3496 Honors Senior Thesis

Students will conduct research under the direction of a faculty member in their major department and report the findings in thesis form. During the first semester (HON 3495), a prospectus prepared by the student describing the proposed thesis will be filed with the Honors office. The completed thesis will be defended orally (HON 3496).

## HONORS CONTRACT CREDIT

Honors Program members enrolled in non-honors sections of a course may arrange for special additional work under the supervision of the instructor. If the contract work is completed and evaluated as Honors quality by the instructor, Honors credit for the class will be awarded. Detailed guidelines and contracts are available at the Honors House.

## HONORS TRANSFER CREDIT

If an Honors course is completed elsewhere in an institution accredited by the Association for Colleges and Schools and transfers as the equivalent of a course offered at UTEP, the Honors course will be counted towards hours needed to earn the Honors Degree or Certificate. If the Honors course completed elsewhere transferred to UTEP as enblock (ENB), then the course must be evaluated on an individual basis by the Honors Director in consultation with the Honors Advisory Committee and a decision made based on course content. A minimum of 50% of the credits required for the Honors Degree or Certificate must be completed at UTEP.





# University Core Curriculum

# University Core Curriculum

All undergraduates of the University of Texas at El Paso are required to complete the core curriculum before receiving a baccalaureate degree. For degree plans that terminate with a post-baccalaureate degree without offering the baccalaureate degree, undergraduates are required to complete the core curriculum before receiving credit for graduate-level courses.

The core curriculum consists of from 48 to 55 semester hours of course work in eleven components. For seven components, specific courses are required; the remaining seven component requirements may be satisfied by electing from a "menu" of approved courses. The components, the required number of semester-hour credits, and the type of component are summarized below:

Component	Hours	Type
I. ENGLISH COMPOSITION	6	specific
II. HISTORY	6	specific
III. POLITICAL SCIENCE	6	specific
IV. NATURAL SCIENCE	6-9	menu
V. MATHEMATICS/STATISTICS	6-8	menu
VI. FINE ARTS	3-4	menu
VII. HUMANITIES	3	menu
VIII. CULTURAL DIVERSITY	3	menu
IX. ECONOMICS	3	menu
X. TECHNOLOGY AND SOCIETY	3	specific
XI. ADDITIONAL COURSE WORK	3-4	menu
<b>TOTAL</b>	<b>48-55</b>	

The core curriculum requirement does not preclude counting core courses towards other degree requirements, as specified by the student's College. Students are advised to consult particular degree requirements for their major before selecting courses to meet core curriculum requirements.

## REQUIREMENTS

- I. **ENGLISH COMPOSITION:** 6 hours  
**REQUIREMENT:**
    - A. For students whose secondary education was in English:  
**ENGL 3111** Expository English Composition or  
**ENGL 6111** Written and Oral Communication  
**ENGL 3112** Research and Critical Writing or  
**ENGL 3113** Writing about Literature
    - B. For students whose secondary education was not in English:  
**ESOL 2110** Reading English as a Secondary Language and  
**ESOL 3111** Expository English Composition for Speakers of ESL and  
**ESOL 3112** Research and Critical Writing for Speakers of ESL
  - II. **HISTORY:** 6 hours  
**REQUIREMENT:**
    - HIST 3101** History of the United States to 1865
    - HIST 3102** History of the United States since 1865
  - III. **POLITICAL SCIENCE:** 6 hours  
**REQUIREMENT:**
    - POLS 3210** Introduction to Politics
    - POLS 3211** American Government and Politics
  - IV. **NATURAL SCIENCE:** 6 - 9 hours  
**REQUIREMENT:**

Complete one of the following sequences:

    1. **ANTH 3101-1101** Introduction to Physical Anthropology & Laboratory  
and one of the following:
      - a. **ANTH 3303** Ecological Anthropology
      - b. **ANTH 3304** Biological Anthropology
2. **ASTR 3107-3108** Elementary Astronomy  
and one of the following:
    - a. **ASTR 1107** Astronomy Laboratory I
    - b. **ASTR 1108** Astronomy Laboratory II
  3. **BIOL 3103-1103** Introductory Biology & Laboratory and  
**BIOL 3104-1104** Human Biology & Laboratory
  4. **BIOL 3105-1107** General Biology & Laboratory  
and one of the following:
    - a. **BIOL 3211-1211** Human Anatomy/Physiology I & Laboratory
    - b. **BOT 4210** General Botany
    - c. **MICR 4240** General Microbiology
    - d. **ZOOL 4206** General Zoology
  5. **CHEM 4107-4108** Introductory Chemistry
  6. **CHEM 3105-1105** General Chemistry (first semester) & Laboratory  
and one of the following:
    - a. **CHEM 3106-1106** General Chemistry (second semester) & Laboratory
    - b. **CHEM 4108** Introductory Chemistry (second semester)
  7. **GEOG 3106-1106** Physical Geography & Laboratory  
and one of the following:
    - a. **GEOG 3306** Weather and Climate
    - b. **GEOG 3407** Geography of Arid Lands
  8. **GEOL 3103-3104** Principles of Earth Science
  9. **GEOL 3101-1101** Introduction to Physical Geology & Laboratory and  
**GEOL 3102-1102** Introduction to Historical Geology & Laboratory
  10. **PHYS 4103-4104** General Physics
  11. **PHYS 4210** Mechanics and Thermal Physics and  
**PHYS 1120** Physics Laboratory I and  
**PHYS 4211** Fields and Waves
  12. **SCI 4101** Explanatory Power of Science and  
**SCI 4102** Science in the Modern World
  13. **PSCI 3203** Physical Science I and  
**PSCI 3304** Physical Science II
- V. **MATHEMATICS / STATISTICS:** 6 - 8 hours  
**REQUIREMENT:**  
Complete one of the following sequences:
1. **MATH 4110** Precalculus II and  
**MATH 4111** Calculus I
  2. **MATH 4110** Precalculus II and  
**STAT 3280** Statistical Methods I
  3. **MATH 3120** Mathematics for Social Sciences I  
(MATH 4109 OR MATH 4110 may be substituted for MATH 3120.)  
and one of the following:  
**MATH 3201** Mathematics for Social Sciences II  
**STAT 3180** Basics of Descriptive and Inferential Statistics  
**PSYC 3103** Statistical Methods  
**QMB 3201** Fundamentals of Business Statistics  
**SOCI 3212** Measurement and Inference in Social Research
- VI. **FINE ARTS:** 3 - 4 hours  
**REQUIREMENT:**  
Complete one of the following:
1. **ART 3100** Art Appreciation (non-majors)
  2. **ART 3110** Introduction to Art (non-majors)
  3. **ARTH 3105** Art History of the Modern World I
  4. **ARTH 3106** Art History of the Modern World II
  5. **ARTH 3310** History of Latin-American Art
  6. **ENGL 3361** Introduction to Creative Writing: Forms and Techniques
  7. **MUSL 3124** Music in Western Societies
  8. **MUSL 2121-2122** Introduction to Music Literature
  9. two of the following courses:
    - a. **MUSL 2319** Music in the Middle Ages and Renaissance
    - b. **MUSL 2320** Music in the Baroque Period
    - c. **MUSL 2321** Music in the Viennese Classical Period
    - d. **MUSL 2322** Music in the Romantic Period

10. **MUSL 3126** The Music of Mexico
11. **MUSL 3127** Jazz to Rock
12. **MUSL 3111** Fundamentals
13. **PHIL 3308** Aesthetics: Philosophy of Art
14. **SPAN 3361** Introduction to Creative Writing in Spanish
15. **THEA 3113** Introduction to Theater
16. **THEA 3290** Introduction to the Art of the Motion Picture

VII. **HUMANITIES:** 3 hours**REQUIREMENT:**

One course selected from the following:

1. **ENGL 3211** English Literature
2. **ENGL 3212** English Literature
3. **ENGL 3213** Introduction to Fiction
4. **ENGL 3214** Introduction to Drama
5. **ENGL 3215** World Literature in Ancient, Medieval, and Early Renaissance Times
6. **ENGL 3216** World Literature from the Late Renaissance to the Present
7. **ENGL 3218** Introduction to Poetry
8. **ENGL 3301** Literary Studies
9. **ENGL 3311** American Literature to 1860
10. **ENGL 3312** American Literature since 1860
11. **ENGL 3320** Shakespeare's Major Plays
12. **ENGL 3321** Representative Shakespearean Works
13. **FREN 3301** French Literature
14. **FREN 3303** French Literature
15. **FREN 3320** French Civilization
16. **FREN 3350** French Literature in Translation
17. **HIST 3201** World History to 1648
18. **HIST 3202** World History since 1648
19. **HUMN 3301** Eastern Mediterranean Culture from ca. 2500 BC to ca. 200 AD
20. **HUMN 3302** Western Mediterranean Culture from ca. 200 AD to ca. 1650
21. **LATN 3301** Advanced Latin
22. **PHIL 3103** Introduction to Philosophy: Men, Movements and Ideas in Western Philosophy
23. **PHIL 3314** Ancient Philosophy: The Origins of Western Thought
24. **PHIL 3315** Medieval Philosophy: The Scholastic Synthesis
25. **PHIL 3317** Modern Philosophy: The Age of Reason and Doubt
26. **PHIL 3451** Great Philosophers
27. **POLS 3340** Western Political Heritage I
28. **POLS 3341** Western Political Heritage II
29. **RUSS 3301** Nineteenth Century Russian Literature
30. **RUSS 3320** Russian Civilization
31. **RUSS 3350** Russian Literature in Translation
32. **SPAN 3301** Spanish Literature before 1700
33. **SPAN 3302** Spanish American Literature to Modernism
34. **SPAN 3303** Spanish Literature since 1700
35. **SPAN 3304** Spanish American Literature since Modernism
36. **SPAN 3350** Masterpieces of Hispanic Literature in Translation

VIII. **CULTURAL DIVERSITY:** 3 hours**REQUIREMENT:**

One course selected from the following:

1. **ANTH/SOCI 3258** Chicanos in the Southwest
2. **ANTH/SOCI 3259** Chicanos and American Society
3. **ANTH/SOCI 3306** Cultural Diversity
4. **ANTH/SOCI 3319** Indigenous Cultures of Latin America
5. **ANTH 3320** Indigenous Cultures of North America
6. **ANTH/SOCI 3361** Contemporary Mexican Culture
7. **CHIC 3201** Chicano Studies Survey and Analysis
8. **CHIC 3301** La Chicana
9. **CHIC 3339** Youth at Risk in the U.S.: Cultural Factors
10. **COMM 3353** Intercultural Communication
11. **ENGL 3310** Chicano Literature
12. **ENGL 3315** African American Literature

13. **ENGL 3360** Women in Literature
14. **ENGL 3374** Folklore of the Mexican American
15. **HIST 3309** Mexican American History
16. **HIST 3323** American Indian History
17. **HIST 3328** History of Hispanic Peoples in the United States
18. **HIST 3330** East Asia
19. **HIST 3331** The History of Religion in the East
20. **HIST 3336** Pre-Modern Africa
21. **HIST 3337** Modern Africa
22. **HIST 3340** The Middle East and Islam
23. **HIST 3346** Central America and the Caribbean
24. **HIST 3349** History of Mexico to 1900
25. **HIST 3391** History of Women
26. **LING/ANTH 3357** Sociolinguistics
27. **MUSL 3324** Introduction to Ethnomusicology
28. **NURS 3319** Cultural Perspectives on Health Care
29. **PHIL 3213** Chicanos and American Thought
30. **PHIL 3312** Latin American Thought
31. **PHIL 3340** Oriental Philosophy
32. **POLS 3314** Ethnicity and Race in American Politics
33. **POLS 3336** Third World Politics
34. **POLS 3412** Chicanos in American Politics
35. **POLS 3414** Women, Power and Politics
36. **POLS 3415** Latinos in the American Political System
37. **POLS 3437** The Politics of Mexico
38. **SOCI 3327** Majority/Minority Relations in the United States
39. **SOWK 3326** Social Work in the Mexican-American Communities
40. **THEA 3335** Chicano Theatre and Drama
41. **THEA 3356** Women in Drama
42. **WS 3200** Introduction to Women's Studies

IX. **ECONOMICS:** 3 hours**REQUIREMENT:**

One course selected from the following:

1. **ECON 3101** Basic Issues in Economics
2. **ECON 3203** Principles of Economics
3. **ECON 3204** Principles of Economics
4. **ECON 3366** Economics of Latin America
5. **ECON 3468** Economy of Mexico
6. **GEOL 3359** Mineral Resources and Economics
7. **IE 3326** Engineering Economy

X. **TECHNOLOGY AND SOCIETY:** 3 hours**REQUIREMENT:****ITS 3350** Interdisciplinary Technology and SocietyXI. **ADDITIONAL COURSE WORK:** 3-4 hours**REQUIREMENT:**

An additional minimum of three hours selected from one of the following components:

1. **Natural Science**
2. **Mathematics/Statistics**
3. **Fine Arts**
4. **Humanities**
5. **Cultural Diversity**
6. **Economics**

**Interdisciplinary Technology and Society (ITS)****3350 Interdisciplinary Technology and Society (3-0)**

This course emphasizes problem solving in which small groups of students, with a variety of backgrounds, are assigned to research, analyze, discuss, and arrive at possible solutions for a broad range of topics. These topics may include, but would not be limited to: nuclear/radioactive material issues; hazardous waste and problems of its disposal; pollution and its effect on the environment, economy, and society; space explorations; impact of technology on health care; genetic engineering and gene replacement; and information gathering and exchange. *Prerequisite:* Completion of the natural science, mathematics/statistics, and humanities components of the Core Curriculum.






# College of Business Administration

Accounting  
Economics and Finance  
Information and Decision Sciences  
Marketing and Management

Dr. Frank Hoy, Dean  
Dr. James Holcomb, Associate Dean  
Dr. Lee Schmidt, Associate Dean

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



# COLLEGE OF BUSINESS ADMINISTRATION

## Introduction and General Information

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

- Broad-based programs which give students the background for entry into, and advancement in, professional and managerial positions, and for life-long 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, community, and academia.

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

The College also meets an important secondary responsibility as a partner in the U.S.-Mexican community of the region. Many individuals engaged in business enroll in selected courses in order to gain specific skills or to broaden their knowledge. In addition, the faculty of the College of Business Administration participates in the Division of Professional and Continuing Education, which offers a wide variety of non-credit programs including programs for the business practitioner. CEDARS (Centers for Entrepreneurial Development Advancement, Research and Support), through the activities of The Family 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 services. Their work, as well as that of their students, is supported by the superb facilities of the College of Business Administration. The College of Business provides a Computer Application Learning Center (CALC) laboratory that is the focal point of computer, audiovisual, and multimedia-based learning, including three micro-computer laboratories.

The undergraduate program in the College leads to the Bachelor of Business Administration (BBA) degree. Graduate programs lead to the Master of Science degree in Economics, the Master of Accountancy (MAcc) and the Master of Business Administration (MBA). The BBA, the MBA, the MAcc and the BBA in Accounting are accredited by AACSB—the American Assembly of Collegiate Schools of Business.

Information on graduate programs may be obtained from the Graduate Studies Catalog. In addition, a Bachelor of Arts in Economics is offered through the College of Liberal Arts. Business minors, including general business, accounting, economics, management, marketing, and computer information systems, are also available to students in Liberal Arts.

## Bachelor of Business Administration

The College of Business Administration, with departments of Accounting, Economics and Finance, Information and Decision Sciences, and Marketing and Management offers a BBA degree with the following major options: Accounting; Computer Information Systems; Economics; Finance, with concentrations available in General Finance and Commercial Banking; Management, with concentrations available in General Management, Human Resource Management, and Production Management; and Marketing.

### POLICIES CONCERNING ADMISSION TO AND COMPLETION OF BBA DEGREE PROGRAMS

1. Students entering the College of Business Administration will be designated as Pre-Business majors until they have completed the requirements for admission to a major option program offered by the College. In order to declare as a Pre-Business major, the student must file a degree plan in the Office of the Dean.
2. Admission to a major option program is limited to those students who meet the following requirements:
  - a. Completion of the Non-Business Foundation Requirements and the Business Foundation Requirements as described in the "Undergraduate Course of Study" for the Bachelor of Business Administration.
  - b. Completion of the following courses (or their equivalent) with a minimum grade of "C": ACCT 3201, 3202; ECON 3203, 3204; ENGL 3112; MATH 3201; QMB 3201.
  - c. An overall grade point average of 2.0 or greater in all hours attempted.
3. Upon completion of requirements in item 2, the student will be admitted to one of the major option programs offered by the College of Business Administration. Upon admission, the major code will be changed from Pre-Business to the major option code for the program.
4. Enrollment in the upper-division level courses offered by the College of Business Administration is restricted to those students who have been admitted to one of the BBA major option programs. Permission for concurrent enrollment in lower-division courses in item 2-a and upper-division business courses is granted only **ONCE** and written permission by the Advisor is required. Upper-division business courses taken by a Pre-Business major without written permission of the Advisor will be counted as business electives only, and other approved upper-level business courses will be designated to complete the degree requirements.
5. A freshman-level course may be repeated once and the latter grade substituted for a previous grade in the student's grade point average (GPA) calculation. Grades and attempted hours for other repeated courses will be used in computing the grade point average.
6. Only those transfer credits with grade of "C" or better will be accepted for credit toward the BBA degree. Courses taken at two-year institutions or as a requirement for a two-year degree are accepted by the College of Business Administration as transfer credits for lower-division courses only, provided they received an "ENB" designation from the Admission Office. Courses taken at four-year accredited institutions and designated as lower-division courses may be accepted as upper-division credits, if the course is taught at the upper-division level at UTEP and has received additional validation from the Office of the Dean.
 

The applicability of transfer credits to the degree plan is determined by the Office of the Dean.
7. To complete the degree, a student must comply with the following: Complete the required course of study as outlined

below. Follow University academic regulations as stated elsewhere in this catalog. Earn a 2.0 grade point average in all courses attempted within the College of Business Administration. Note: Accounting majors must also earn a 2.0 or better GPA average in ACCT 3321 and accounting courses listed in the Accounting Option Requirement.

8. A graduating senior must file an application for the degree with the Office of the Dean before the semester of graduation. Students are responsible for setting an appointment to clear for graduation during announced times.
9. Students working toward the BBA degree may not enroll on a pass/fail basis in any course taught in the College of Business Administration.
10. Six of the last 30 hours needed to complete the BBA degree may be taken at another university; however, the student must receive written approval from the Office of the Dean before enrolling at the other institution. MGMT 3400, Strategic Management, may not be transferred from another institution.
11. MGMT 3400, Strategic Management, may be taken only during the semester or summer term in which the degree is to be conferred. Approval of the Undergraduate Advisor is required for enrollment in this course.
12. Non-BBA students wishing to take upper-division business courses must be advised in the College of Business, Room 102. Students wishing to take upper-division courses must have junior standing (60 credit hours) and a 2.0 cumulative GPA and must have completed the stated prerequisites for the course.
13. Students must complete 50 percent or more of their College of Business Administration credit hours at UT El Paso.
14. Students may pursue more than one major option by completing all requirements, including Major Option Requirements, for all major options selected.

## UNDERGRADUATE COURSE OF STUDY

The course of study for the Bachelor of Business Administration degree includes four sets of academic requirements:

Non-Business Foundation Requirements	- 52- 54 semester hours
Business Foundation Requirements	- 15 semester hours
Business Core Requirements	- 36 semester hours
Major Option Requirements	- 30 semester hours
<b>Total:</b>	<b>132-135</b>

### Non-Business Foundation Requirements (51-54 semester hours)

- 6 - ENGL 3111\*\* and 3112\* (or ESOL 3111, 2110, and 3112)
- 3 - ENGL 3355
- 3 - COMM 3101\*\* or 3102
- 6 - MATH 3120 and 3201\*
- 6 - POLS 3210 and 3211
- 6 - HIST 3101 and 3102
- 6-9 - Natural Sciences. Lab required.  
See Core Curriculum Natural Science menu for approved courses.
- 3 - Fine Arts.  
See Core Curriculum Fine Arts menu for approved courses.
- 3 - Humanities.  
See Core Curriculum Humanities menu for approved courses.
- 3 - Cultural Diversity.  
See Core Curriculum Cultural Diversity menu for approved courses.
- 3 - PSYC 3101 or SOCI 3101
- 3 - ITS 3350

\* Must be completed with a grade of "C" or better.

\*\* English 6111 may be counted for ENGL 3111 and COMM 3101.

### Business Foundation Requirements\* (15 semester hours)

- 6 - ACCT 3201 and 3202
- 6 - ECON 3203 and 3204
- 3 - QMB 3201

\* Must be completed with a grade of "C" or better.

### Business Core Requirements (36 semester hours)

- 3 - ACCT 3314 or 3321 or 3323 (specified by major option)\*
- 3 - BLAW 3301
- 3 - ECON 3302, 3303, or 3320 (Accounting, Economics, and Finance options require 3320)
- 3 - FIN 3310
- 3 - CIS 3345 (CIS option requires 3335)
- 3 - POM 3321
- 3 - QMB 3301
- 3 - BUSN 3304
- 3 - MGMT 3303
- 3 - MGMT 3400 (Taken in last semester)
- 3 - MKT 3300
- 3 - INTL 3xxx elective. See College of Business Administration International Business menu for approved courses.\*\*

\* Accounting option requires ACCT 3321. ACCT 3314 and ACCT 3323 cannot both be taken for credit in any option. ACCT 3314 cannot be counted by accounting majors toward fulfillment of any part of the accounting option degree requirements.

\*\* The course taken to fulfill the international business requirement cannot be counted toward an elective or required course in the major option requirement.

### Major Option Requirements (30 semester hours)

#### ACCOUNTING OPTION

- 15 - ACCT 3320, 3322, 3323, 3327, and 3404
- 3 - Elective from ACCT 3401, 3402, 3405, 3421, 3423, 3425, or 3428
- 3 - Elective from CIS 3350, 3430, 3465, 3470, or 3498
- 6 - Upper-division non-business electives
- 3 - Upper-division business elective

#### COMPUTER INFORMATION SYSTEMS OPTION

- 15 - CIS 3350, 3355, 3430, 3465, and 3470
- 6 - Electives from CIS 3365, 3420, 3405, and 3499
- 6 - Upper-division non-business electives
- 3 - Upper-division business elective

#### ECONOMICS OPTION

- 6 - ECON 3302 and ECON 3303
- 12 - Electives from upper-division ECON courses
- 9 - Upper-division non-business electives
- 3 - Upper-division business elective

#### FINANCE OPTION

- General Finance Concentration
  - 6 - FIN 3315 and FIN 3410
  - 9 - Electives from upper-division FIN courses
  - 3 - Elective from upper-division ACCT courses
  - 9 - Upper-division non-business electives
  - 3 - Upper-division business elective
- Commercial Banking Concentration
  - 9 - FIN 3411, 3412, and 3418
  - 3 - Elective from FIN 3315, 3410, 3325, or 3425
  - 6 - Electives from upper-division ACCT courses
  - 9 - Upper-division non-business electives
  - 3 - Upper-division business elective

#### MANAGEMENT OPTION

- General Management Concentration
  - 12 - MGMT 3304, 3311, 3315, and 3425
  - 3 - Elective from upper-division MGMT courses
  - 9 - Upper-division non-business electives
  - 6 - Upper-division business electives
- Human Resource Management Concentration
  - 18 - MGMT 3311, 3315, 3404, 3410, 3415, and 3437
  - 9 - Upper-division non-business electives
  - 3 - Upper-division business elective
- Production Management Concentration
  - 9 - MGMT 3304, 3311, and 3315
  - 9 - POM 3331, 3333, and 3336
  - 9 - Upper-division non-business electives
  - 3 - Upper-division business elective

**MARKETING OPTION**

- 9 - MKT 3302, 3401, and 3495
- 3 - Elective from MKT 3305 or 3425
- 6 - Electives from upper-division MKT courses
- 9 - Upper-division non-business electives
- 3 - Upper-division business elective

**International Business Menu**

- ACCT 3425 International Accounting
- BLAW 3425 International Business Law
- ECON 3425 International Economics
- ECON 3366 Economics of Latin America
- ECON 3367 Economic Development
- ECON 3468 Economy of Mexico
- FIN 3425 International Finance
- MGMT 3425 International Management
- MKT 3425 International Marketing

**Concurrent Award of the BBA in Accounting and the Master of Accountancy (The combined BBA/MAcc plan)**

The combined BBA/MAcc plan is a 150-hour course of study which leads to concurrent award of the Bachelor of Business Administration (BBA) degree in Accounting and the Master of Accountancy (MAcc). The plan requires completion of 117 semester hours of undergraduate study and 33 semester hours of graduate study.

**REQUIREMENTS FOR ADMISSION TO THE COMBINED BBA/MAcc 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 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 this plan.

1. Requirements related to undergraduate course work:
  - a. Completion of the Non-Business Foundation and Business Foundation Requirements with an average of 3.0 or better in ENGL 3112, MATH 3201, ACCT 3201, ACCT 3202, ECON 3203, ECON 3204, and QMB 3201.
  - b. Completion of nine hours of non-accounting Business Core Courses
  - c. Completion of ACCT 3321 with a grade of "B" or better and an additional nine hours of accounting courses including ACCT 3322 and two of the following: ACCT 3320, ACCT 3323, or ACCT 3327.
  - d. Achievement of a minimum GPA of 2.7 in all junior and senior level accounting courses taken prior to admission.
2. Requirements for unconditional admission to the Master of Accountancy program:
  - a. General competency in quantitative skills.
  - b. A satisfactory score on the Graduate Management Admissions Test (GMAT) of at least 450, and three out of five ("acceptable") or better on the analytical writing portion.
  - c. The GMAT score plus 200 times the grade point average on all undergraduate and graduate work previously completed must equal 1050 or more; or the GMAT score plus 200 times the upper division and graduate level GPA must equal 1100 or more.
  - d. A grade point average of at least 2.7 on all undergraduate and graduate level work already completed.
  - e. Foreign students require a minimum TOEFL score of 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 BBA/MAcc PLAN**

The course of study for the combined BBA/MAcc plan includes academic requirements both at the undergraduate and graduate level. The requirements are summarized below:

**Undergraduate (117-120 semester hours)**

- Non-Business Foundation Requirements - 54-57 semester hours
- Business Foundation Requirements - 15 semester hours
- Business Core Requirements - 24 semester hours
- Accounting Major Option Requirements - 18 semester hours
- Electives - 6 semester hours

**Graduate (33 semester hours)**

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

**Total:** 150-153

**Undergraduate**

**1. Non-Business Foundation Requirements (54-57 semester hours)**

- 6 - ENGL 3111 and 3112
- 3 - COMM 3101 or 3102
- 6 - MATH 3120 and 3201
- 6 - POLS 3210 and 3211
- 6 - HIST 3101 and 3102
- 6-9 - Natural Science (See menu)
- 3 - PSYC 3101 or SOCI 3102
- 3 - Humanities (See menu)
- 3 - Fine Arts (See menu)
- 3 - Cultural Diversity (See menu)
- 3 - ITS 3350
- 3 - ENGL 3355
- 3 - ENGL 3359

**2. Business Foundation Requirements (15 semester hours)**

- 6 - ACCT 3201 and 3202
- 6 - ECON 3203 and 3204
- 3 - QMB 3201

**3. Business Core Requirements (24 semester hours)**

- 3 - ACCT 3321
- 3 - QMB 3301
- 3 - CIS 3345
- 3 - MKT 3300
- 3 - FIN 3310
- 3 - ECON 3320
- 3 - MGMT 3303
- 3 - POM 3321

**4. Accounting Major Option Requirements (18 semester hours)**

- 15 - ACCT 3320, 3322, 3323, 3327, 3404
- 3 - Approved accounting elective

**5. Electives (6 semester hours)**

- 6 - Upper-division non-accounting electives

**Graduate**

**1. Business Core Requirements (9 semester hours)**

- 3 - BLAW 3506
- 3 - Approved business elective in international topics
- 3 - MGMT 3525 (Taken last semester)

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

- a. Tax Option
  - 18 - ACCT 3428\*, 3522, 3597, and nine hours of (ACCT 3520, 3521, 3525, 3526)
- b. Financial Accounting/Auditing Option
  - 18 - ACCT 3401\*, 3423\*, 3510, 3523, 3524, 3597
- c. Managerial Accounting Option
  - 18 - ACCT 3421\*, 3512, 3524, 3591, 3597, and three hours of approved graduate accounting elective



\* Should be taken after being admitted to Graduate School. If already taken prior to admittance to Graduate School, three hours of 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 3597 (*Professional Report in Accounting*) must be written in the area of concentration of the option chosen.

Up to nine hours of specified undergraduate courses allowed for graduate credit may substitute for graduate hours in the graduate portion of the BBA/MAcc program. Of these nine undergraduate hours, no more than six hours may be in Accounting. Those undergraduate accounting courses required as part of the Graduate Accounting Major Option Requirements are counted in these limitations.

## Minors in Business and Economics

Students who are not majoring in Business may obtain minors in Business and Economics in four areas: General Business, Accounting, Economics, and Management. Students should check with their major advisors for further details.

**General Business Minor** - CIS 3200 and 15 hours from BLAW 3301, ACCT 3309 or 3201, MKT 3300, MGMT 3303, FIN 3310, and ECON 3320 or CIS 3345. Students electing this minor field must complete ECON 3204 (fulfills Social Studies requirement) and MATH 3120, 3201, or STAT 3280 (fulfills Mathematics/Statistics requirement).

**Accounting Minor** - ACCT 3201 and 3202, CIS 3200, and nine hours from ACCT 3321, 3322, 3323, 3327, 3401, 3405, and 3428. Students electing this minor field must complete ECON 3204 (fulfills Social Studies requirement) and MATH 3120, 3201, or STAT 3280 (fulfills Mathematics/Statistics requirement).

**Economics Minor** - ECON 3203 and 3204, ECON 3302 or 3303, and nine hours from ECON 3300 or 3400 level courses. Students electing this minor field must complete MATH 3120, 3201, or STAT 3280 (fulfills Mathematics/Statistics requirement).

**Management Minor** - CIS 3200, ACCT 3201, and 12 hours from BLAW 3301, MGMT 3303, 3311, 3320, POM 3321, and MGMT 3425. Students electing this minor field must complete ECON 3204 (fulfills Social Studies requirement) and MATH 3120, 3201, or STAT 3280 (fulfills Mathematics/Statistics requirement).

## MAJOR IN ECONOMICS IN LIBERAL ARTS

Students may obtain a BA degree with a major in Economics from the College of Liberal Arts. See the Department of Economics for details. Students pursuing the BA in Economics may not minor in Business.

# Accounting

260 Business Administration  
 (915) 747-5192

CHAIRPERSON: Gary J. Mann  
 ASSOCIATE PROFESSOR EMERITUS: Walter G. Austin, Jr.  
 PROFESSOR: Schmidt  
 ASSOCIATE PROFESSORS: Mann, Omundson, Putnam, Zlatkovich  
 ASSISTANT PROFESSORS: Bhattacharya, Braun, Eason, Hoffmans, Leahey, Mayne, Zimmermann  
 LECTURERS: Otero, Stevens

## Accounting (ACCT)

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 Bachelor of Business Administration degree which prepares graduates for: entry into professional and managerial positions as accountants in public, private, and governmental and other not-for-profit organizations; lifelong learning; and success. The Department is AACSB accredited.

For Undergraduates

### 1498 Independent Study In Accounting (1-0)

Prerequisite: ACCT 3322

### 2498 Independent Study In Accounting (2-0)

Prerequisite: ACCT 3322.

### 1499 Current Concepts In Accounting (1-0)

Topics to be announced. The course may be repeated for credit when the topic varies. Prerequisite: ACCT 3322.

### 2499 Current Concepts in Accounting (2-0)

Topic to be announced. The course may be repeated for credit when the topic varies. Prerequisite: ACCT 3322.

### 3201 Principles of Accounting I (3-0)

(Common Course Number ACCT 2301)

A study of financial accounting concepts and procedures from the initial recording of an economic transaction to the preparation of financial statements for an entity. Prerequisite: "C" or better in MATH 4109, or MATH 4110, or MATH 3120.

### 3202 Principles of Accounting II (3-0)

(Common Course Number ACCT 2302)

A continuation of Principles of Accounting I and study of cost accounting and managerial uses of accounting information. Prerequisite: "C" or better in ACCT 3201.

### 3309 Survey of Accounting Principles, Techniques and Concepts (3-0)

A non-technical approach to accounting with emphasis on the use and interpretation of financial statements, and the uses of accounting information for management. May not be counted toward BBA and the combined BBA/MAcc degree requirements. ACCT 3201 and ACCT 3309, or ACCT 3202 and ACCT 3309, may not both be counted toward any degree requirements.

### 3314 Management Accounting (3-0)

A study of product costing systems, planning and control systems, and the use of accounting data in management decision making. May not be counted toward BBA in Accounting degree requirements. ACCT 3314 and ACCT 3323 may not both be counted toward any degree requirements. Prerequisite: ACCT 3202.

### 3320 Accounting Systems (3-0)

Analysis of fundamental accounting systems. Emphasis on internal control and accounting transaction cycles, relationship of system and organization objectives, policies, procedures, and plans. Prerequisites: ACCT 3321 and CIS 3345.

### 3321 Intermediate Accounting I (3-0)

A study of financial accounting principles, concepts, and objectives. An in-depth examination of elements of financial statements. Preparation of financial reports in accordance with generally accepted accounting principles. Prerequisite: "C" or better in ACCT 3202.

### 3322 Intermediate Accounting II (3-0)

A continuation of Intermediate Accounting I. An in-depth study of financial accounting concepts, elements of financial statements, and preparation of financial reports. Prerequisite: "C" or better in ACCT 3321.

### 3323 Cost Accounting (3-0)

A study of theory and procedures of product costing in job order and process cost systems, overhead allocation issues, and determination of standard costs, budgetary controls, variance analysis,

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and cost-volume-profit analysis for management decision making. Application of the managerial accounting framework to service organizations. *Prerequisite:* "C" or better in ACCT 3202.

### 3327 Federal Income Tax - Individuals (3-0)

A comprehensive explanation of the Internal Revenue Code and Regulations pertaining to individuals and the preparation of individual tax returns. *Prerequisite:* ACCT 3202 or departmental approval.

### 3404 Auditing Principles and Procedures (3-0)

A study of the professional auditor's opinion formulation process, professional standards and ethics, audit procedures, and other engagements requiring reports by CPAs. *Prerequisites:* ACCT 3320, ACCT 3322, and QMB 3301.

### 3496 Internship (0-0-3)

A practicum in accounting under the supervision of accounting practitioners. *Prerequisite:* Junior or senior standing, and departmental approval.

### 3498 Independent Study in Accounting (0-0-3)

*Prerequisites:* ACCT 3322, instructor's approval, and departmental approval.

For Undergraduates and Graduates

### 3401 Advanced Accounting I (3-0)

A study of special problems of partnership accounting, business combinations, consolidated financial statements, accounting for foreign operations, and other timely topics as appropriate. *Prerequisite:* ACCT 3322.

### 3402 Advanced Accounting II (3-0)

A study of current and proposed generally accepted accounting principles not otherwise covered. An examination of contemporary accounting issues of corporations, regulatory bodies, investors, and creditors not covered in other financial accounting courses. *Prerequisite:* ACCT 3322.

### 3405 Not-for-Profit Accounting (3-0)

An examination of the accounting and reporting procedures of governmental and other not-for-profit organizations, including state and local governments, universities, hospitals, and others. *Prerequisite:* ACCT 3322.

### 3421 Advanced Cost Accounting (3-0)

Advanced studies in cost management systems, capacity utilization, performance measurement, capital budgeting, transfer pricing, quantitative techniques, and other selected topics as appropriate. *Prerequisite:* ACCT 3323.

### 3423 Issues in Auditing (3-0)

An intensive study of technical and professional aspects of auditing including an in-depth examination of statements of auditing standards and their applications. *Prerequisite:* ACCT 3404.

### 3425 International Accounting (3-0)

A study of comparative international accounting systems, accounting practices, and problems of multi-national enterprises, and the institutions and environments that affect them. *Prerequisite:* ACCT 3321.

### 3428 Federal Income Tax - Partnerships and Corporations (3-0)

A study of the Internal Revenue Code and Regulations pertaining to partnerships and corporations, federal taxation of international-related transactions, gift and estate taxes, and federal income taxation of fiduciaries; including preparation of related tax returns. *Prerequisite:* ACCT 3327.

## Business Law (BLAW)

For Undergraduates

### 3301 Legal Environment of Business (3-0)

A study of the legal and ethical environment of business to provide a legal foundation for careers in business or government. BLAW 3301 or BLAW 3506, but not both, may be counted toward degrees awarded in the College of Business Administration.

### 3498 Independent Study in Business Law (0-0-3)

*Prerequisite:* Instructor's approval and departmental approval.

For Undergraduates and Graduates

### 3425 International Business Law (3-0)

Legal environments in which international business operates; litigation and arbitration of international disputes; transfer of capital and technology regulations; impact of antitrust and taxation laws on international business transactions; legal structure and powers of overseas business organizations; patent, trademarks, and copyright aspects of international business transactions. *Prerequisite:* BLAW 3301, or instructor's approval and departmental approval.

### 3491 Law for Accountants (3-0)

A study of the Uniform Commercial Code as related to accountants and the study of legal principles of agency, partnerships, and corporations, including security regulations. *Prerequisites:* BLAW 3301 or its equivalent and ACCT 3322.

## Economics and Finance

236 Business Administration  
(915) 747-5245

CHAIRPERSON: Timothy P. Roth

PROFESSOR EMERITUS: Paul D. Zook

PROFESSORS: Herbst, James, Roth, Sprinkle

ASSOCIATE PROFESSORS: Brannon, Holcomb, Johnson, Schauer, Wm. D. Smith, Tollen

ASSISTANT PROFESSORS: Traichal

SENIOR LECTURER: Herendeen

## ECONOMICS

**BA DEGREE** - Specific requirements for the economics major are: Economics 3203, 3204, 3302, 3303, 3320, and twelve additional hours of economics; Mathematics 3201; and a statistics course offered by either the College of Business Administration or the Department of Mathematical Sciences. Students majoring in Economics and minoring in Business may not take free electives in the College of Business Administration.

*General Prerequisite:* A 2.0 cumulative GPA and Junior standing for all 3300 or 3400 level courses.

## Economics (ECON)

For Undergraduates

### 3101 Basic Issues in Economics (3-0)

(Common Course Number ECON 1301)

The course is designed to expose non-business majors to a broad range of economic issues and policies. The course will emphasize current trends in economic thought and selected topics of current interest. May not be taken for credit toward any degree plan in the College of Business Administration.

### 3203 Principles of Economics (3-0)

(Common Course Number ECON 2301)

A survey of the basic principles of economics designed to give a broad understanding of the economy; primary attention is given to aggregate problems and issues considered of particular importance to the nation. *Prerequisite:* MATH 3120 or MATH 4109 with a grade of "C" or better.

### 3204 Principles of Economics (3-0)

(Common Course Number ECON 2302)

A survey of basic principles of economics designed to provide an analytical understanding of markets, prices, and production. *Prerequisite:* MATH 3120 or MATH 4109 with a grade of "C" or better.

**3302 Intermediate Macroeconomic Theory (3-0)**

A study of national income accounting and theory; emphasis is placed on the classification and analysis of conventional spending sectors and their effect on income and employment; a critical survey of policy applications that affect the level of income and employment. *Prerequisites:* ECON 3203 and MATH 3120 or MATH 4110 or MATH 4109.

**3303 Intermediate Microeconomic Theory (3-0)**

A study of cost, demand, and price theory; the concepts, assumptions, and policy implications of aspects of particular equilibrium and general equilibrium theory; a critical survey of various concepts of the scope, methods, and approaches to economics. *Prerequisite:* ECON 3204.

**3320 Money and Banking (3-0)**

A description of the history and present characteristics of the money and banking structure of the United States. Special emphasis is placed on monetary policy as it affects the level of economic activity. *Prerequisite:* ECON 3203.

**3351 Industrial Organization and Government Policy (3-0)**

A study of the impact of government policy on the economy, emphasizing effects of governmental regulation on manufacturing and service industries, public utilities, and other segments of the economy. *Prerequisite:* ECON 3204.

**3366 Economics of Latin America (3-0)**

Considers economic theory and current problems of monetary and fiscal policy, regional economic integration, land reform, export patterns, and industrialization. The emphasis is institutional rather than analytical.

**3367 Economic Development (3-0)**

A course concerned with problems of economic growth in the less developed countries. Consideration is given to patterns and problems of human and material resource utilization, capital formation, investment criteria, inflation and the development of innovative techniques. Emphasis is placed on the application of analytical concepts to the problems of economic development.

**3372 Mathematical Economics (3-0)**

Basic concepts and operations of mathematical logic and their application to economic analysis. *Prerequisites:* ECON 3203 and 3204.

**3373 Introduction to Econometrics (3-0)**

An introductory course designed to acquaint the student with the basic concepts employed in model building, different types of economic models, problems and techniques of quantifying models, and the use of such models for public and business policy. *Prerequisites:* ECON 3203 and 3204.

**3380 History of Economic Thought (3-0)**

A study of the development of principal economic doctrines and schools of economic thought. *Prerequisites:* ECON 3203 and 3204.

**3425 International Economics (3-0)**

Principal theories of international trade: foreign exchange markets, international capital flows, barriers to trade, international economic institutions, and the economics of regional trade integration. *Prerequisites:* ECON 3203 and 3204.

**3498 Independent Study in Economics (0-0-3)**

*Prerequisite:* Departmental approval.

For Undergraduates and Graduates

**3430 Public Sector Economics (3-0)**

Financial administration by agencies of local, state, and federal government; principles of taxation; sales, property, income, and inheritance taxes; analysis of government expenditures and the public credit. *Prerequisites:* ECON 3203 and ECON 3204.

**3440 Economics of Labor (3-0)**

A study of the basic principles, historical background, and characteristics of labor markets; theories of wages, wage structures, collective bargaining, and the role of government in labor problems. *Prerequisite:* ECON 3204.

**3468 Economy of Mexico (3-0)**

A survey of the growth and change of the Mexican economy. Emphasis is placed on the description and analysis of recent and current economic policy.

**Finance (FIN)**

For Undergraduates

**3310 Business Finance (3-0)**

An introduction to the concepts of finance as applied in a business environment. Topics typically covered include financial environment, time value of money, valuation, capital budgeting, capital structure, and working capital management. *Prerequisite:* ACCT 3201 with "C" or better and (MATH 3120 with "C" or better or MATH 4109 with "C" or better or MATH 4110 with "C" or better).

**3315 Investments (3-0)**

Introduction to the analysis of investment media, means of purchasing and selling securities, and personal investment decision-making. Emphasis is given to determinants of growth, safety, and income and to problems involved in achieving objectives. *Prerequisite:* FIN 3310.

**3325 Money and Capital Markets (3-0)**

Analysis of the instruments and institutions of the money and capital markets and emphasis on the roles of these markets in the economy. *Prerequisite:* ECON 3320.

**3350 Personal Financial Planning (3-0)**

A study of modern financial management from the personal point of view. Budgeting, uses of savings, consumer credit, forms of insurance, and estate planning are among the topics discussed. Will count as free elective for BBA degree.

**3410 Managerial Finance (3-0)**

The development and utilization of financial plans, policies, and practices in business enterprises. Particular emphasis is given to illustrative problems and cases. *Prerequisite:* FIN 3310.

**3415 Investment Management and Security Markets (3-0)**

A study of investment management policies for individuals and institutions and the operation of organized security exchanges and the over-the-counter market. *Prerequisite:* FIN 3315.

**3416 Speculative 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, and normal and inverted markets are examined, along with theoretical considerations. *Prerequisite:* FIN 3310.

**3420 Monetary Theory (3-0)**

An analysis and critique of current monetary theories and their development from classical roots. Emphasis is placed on the relationship between the theories and their policy implications. *Prerequisite:* ECON 3320.

**3425 International Finance (3-0)**

A study of international monetary problems, financing of the flow of goods and services among nations, and balance of payments considerations. *Prerequisite:* ECON 3320.

**3496 Internship in Finance (0-0-3)**

Exposure to the application of financial management and/or investment topics in a business environment. *Prerequisites:* FIN 3310, three additional hours of Finance, departmental approval, and a 3.0 cumulative GPA.

**3498 Independent Study in Finance (0-0-3)**

*Prerequisite:* Departmental approval.

For Undergraduates and Graduates

**3411 Commercial Bank Management (3-0)**

The theory and practice of bank asset and liability management in the context of a liquidity-profitability conflict. *Prerequisites:* FIN 3310 and ECON 3320.

**3412 Current Issues In Banking (3-0)**

An analysis of current problems in commercial banking from the points of view of the banks, their regulators, and the public. *Prerequisite:* FIN 3411 or departmental approval.

**3418 Financial Statement Analysis (3-0)**

An inquiry into the techniques of analysis of financial statements as an aid to extraction and evaluation of information for interpretation and decision-making by lenders, investors, and others. *Prerequisite:* FIN 3310.

**3428 Central Banking (3-0)**

A study of the history, economic functions, operating techniques, and policies of central banks. Emphasis is given to concurrent problems of monetary policy and control. *Prerequisite:* ECON 3320.

# Information and Decision Sciences

205 Business Administration  
(915) 747-5496

CHAIRPERSON: Reza Torkzadeh

PROFESSOR EMERITUS: Edward Y. George

PROFESSORS: Mahmood, Torkzadeh

ASSOCIATE PROFESSORS: Dowlatshahi, Gemoets, Kirs, Martin

ASSISTANT PROFESSORS: Bowman, Koufteros, Pflughoeft, Starner

LECTURERS: Duke, Gaytan, McCrae, Tahiliani, Vaughn

## Computer Information Systems (CIS)

For Undergraduates

**3102 Introduction to Computers in Business and Organizations (3-0)**

For the student who has little or no familiarity with computers, this course serves as an introduction to the essential elements of both computer hardware and software as used in business and other organizations. Elementary programming skills using the BASIC language will be introduced. Will not count for credit for the BBA degree.

**3200 Business Computer Applications (3-0)**

An introduction to microcomputer database and spreadsheet applications using an IBM compatible microcomputer and popular software. Coverage includes use of the commands that control the software and will develop accounting, inventory, statistical, personnel, "what-if" simulations, and other applications. *Prerequisite:* CIS 3102 or equivalent or placement by departmental examination.

**3215 RPG Programming (3-0)**

RPG, Report Program Generator, is a widely used computer language, particularly among mid-sized systems for creating and formatting business reports. As a non-procedural language, it permits the programmer to give the specifications for a problem and lets the software generate the program. *Prerequisite:* CIS 3102 or equivalent.

**3235 Introduction to Business Applications Programming (3-0)**

This course introduces the student to programming in the most widely used computer language, COBOL. Emphasis will be on good programming practice, following structured program design, development, testing, implementation, and documentation of business problems. *Prerequisite:* CIS 3102 or equivalent.

**3335 Advanced Business Application Programming (3-0)**

All advanced features of COBOL programming language are examined including analysis of sequential, indexed, relative, and direct access file processing systems. Also covered are sort and merge techniques, table processing, utilities, report writer features, core dump analysis, and ABEND debugging. Emphasis is placed on writing structured programs using available structured programming tools and techniques. *Prerequisite:* CIS 3235 or equivalent.

**3345 Management Information Systems (3-0)**

An introduction to the fundamentals of management information systems: their dimensions, structures, and requirements. Coverage will include the design, development, implementation, and management of information systems. *Prerequisites:* CIS 3200 and FIN 3310.

**3350 Business System Analysis and Design (3-0)**

A study of the systems analyst in a business environment. Coverage of the tools, techniques, and procedures used to conduct an analysis of the business system including prototyping, CASE, and 4GL. This course will emphasize the implementation phase of systems analysis projects. *Prerequisites:* CIS 3235 or (CIS 3345 and ACCT 3320).

**3355 Business Data Structure (3-0)**

Techniques and management of computer files on secondary storage devices, including linked lists, trees, queues, and other physical data structures. Logical data structures for databases are examined. *Prerequisite:* CIS 3335.

**3420 Object Oriented Programming Environment (3-0)**

A study of the conceptual foundation of advanced operating systems designed for use in a business environment and the impact of such systems on programming practices. The study will be facilitated through the use of one or more structured programming languages. *Prerequisite:* CIS 3235.

**3430 Expert Systems and Decision Support Systems (3-0)**

A study of artificial intelligence, expert systems, and decision support systems concepts and technologies applied to cover development, implementation, and management of expert systems and decision support systems for business organizations. Tools such as languages, shells, and hardware for utilizing artificial intelligence in designing expert systems and decision support systems are covered. *Prerequisites:* CIS 3235 or (CIS 3345 and ACCT 3320).

**3470 Business Data Communications (3-0)**

An introduction to network components, transmission links, link control, protocols, network typologies, error detection and correct methods, network management and security, and local area networks. *Prerequisites:* CIS 3335 or (CIS 3345 and ACCT 3320).

**3496 Internship in Computer Information Systems (0-0-3)**

To be arranged with the prior approval of the instructor and the department chairperson.

**3498 Independent Study In Computer Information Systems (0-0-3)**

The student studies a topic as a semester-long project. The project may be independent library research or a work-related task. The student must have the topic approved by the department chair and have a schedule to report progress with the instructor before work commences. *Prerequisites:* CIS 3335 or (CIS 3345 and ACCT 3320).

**3499 Current Topics In Computer Information Systems (3-0)**

The topic(s) taught any semester change and may include Office Automation, Teleprocessing and Local Area Networking (LAN), and Information Systems Planning. *Prerequisite:* CIS 3335.

For Undergraduates and Graduates

**3405 Advanced Business Systems Development (3-0)**

The application of concepts acquired in systems analysis and design. Students will analyze the needs of an organization and design an information system for that organization. Particular emphasis will be placed on the need for auditing and control of that system. Coverage will include dealing with problems of installation and security. *Prerequisite:* CIS 3350.

**3465 Data Base Management (3-0)**

Normalized data base tables are designed, created, and manipulated using an SQL based relational data base management system (DBMS). Common data base utilities are used and prototyping is practiced. Emphasis is placed on the problems and issues of managing in a data base environment. *Prerequisites:* CIS 3355 or (CIS 3345 and ACCT 3320).

**Production Operations Management (POM)**

For Undergraduates

**3321 Production/Operations Management (3-0)**

Production management and its relationship to marketing, finance, and accounting functions are described. Forecasting demand, aggregate planning, inventory planning and control, and scheduling provide the basis for linking strategic plans to the production plan. Other topics discussed include: quality control, product and process design, facility location and layout, productivity improvement, and project management. *Prerequisite:* QMB 3201.

**3331 Service Operations Management (3-0)**

Methods of process analysis in service organizations, methods improvement procedures, and work measurement techniques are developed to provide the basis for analyses of processes, layouts, and job design in an organization. *Prerequisite:* POM 3321.

**3335 Project Management (3-0)**

Various aspects of project management from conception and planning to project control and termination are discussed. Topics include: Project scheduling, precedence diagramming, PERT, CPM, budgeting, and project management information systems. Organizational and conceptual issues such as project team development and management structure will be addressed. *Prerequisites:* POM 3321 and QMB 3301.

**3336 Purchasing and Materials Management (3-0)**

Objectives, principles, and methods in managing the flow and inventory of materials. Special attention to problems encountered in receiving, storing, and disbursing. A major effort is devoted to computer packages designed for inventory control. *Prerequisite:* POM 3321.

**3339 Quality Planning and Control (3-0)**

A study of the most effective methods for improving product and process quality in manufacturing and service operations. The course covers the following topics: statistical control charts, quality auditing, Japanese QC tools, process capability, loss functions, statistical tolerances, and experimental design. Statistical computer software will be used. *Prerequisite:* POM 3321.

**3390 Internship In Production/Operations Management (0-0-3)**

Practical experience in service operations/manufacturing enterprises is emphasized. The student will be required to write a paper in a relevant topic agreed upon with the supervising faculty. This course requires approval of the instructor and department chairperson. *Prerequisites:* POM 3321 and an advanced elective course in POM.

**3498 Independent Study in Production/Operations Management (0-0-3)**

The student studies a topic as a semester-long project. *Prerequisites:* POM 3321 and departmental approval.

**3499 Current Topics in Production Operations Management (3-0)**

Topics to be announced. This course may be repeated for credit as topics are changed. *Prerequisite:* POM 3321.

For Undergraduates and Graduates

**3333 Production Planning and Control (3-0)**

Material planning and control systems utilizing material requirements planning (MRP) techniques. Production planning, master production scheduling, MRP, capacity requirements planning and shop for control techniques are examined from both conceptual and practical standpoint. *Prerequisite:* POM 3321 and QMB 3301.

**Quantitative Methods in Business (QMB)**

For Undergraduates

**3201 Fundamentals of Business Statistics (3-0)**

Introduction to statistical techniques as applied to business data. Included are descriptive statistics, measures of central tendency and variation, probability distributions, sampling theory, hypothesis testing, and regression and correlation analysis. A major effort is devoted to computerized solution techniques to provide managerial information. *Prerequisite:* MATH 3120 or MATH 4109 or MATH 4110.

**3301 Quantitative Methods In Business (3-0)**

Introduction to quantitative methods applied to business decision making. These methods include linear, integer, and goal programming, network analysis, and transportation LP. A major effort is devoted to computerized solution techniques to provide managerial information. *Prerequisite:* QMB 3201.

# Marketing and Management

230 Business Administration  
(915)747-5185

CHAIRPERSON: Gary L. Sullivan

PROFESSORS EMERITI: Lola B. Dawkins, Wade J. Hartrick

ASSOCIATE PROFESSOR EMERITIS: Glenn Palmore

PROFESSORS: Foster, Hoy, Michie, Sullivan

ASSOCIATE PROFESSORS: Ibarreche, Trevino

ASSISTANT PROFESSORS: Azevedo, Barnes, Hadjimarcou, Stevens

LECTURER: Frederickson

**Business (BUSN)**

For Undergraduates

**3304 Global Business Environment (3-0)**

An examination of the issues confronting business enterprises in the global economy. Topics will include understanding cultural and ethical issues; the influence of social, political, and economic systems; and the impact of environmental and technological issues in the perspective of a global business environment.

**Management (MGMT)**

For Undergraduates

**3303 Introduction to Management and Organizational Behavior (3-0)**

An introduction to the management functions of planning, organizing, leading, and controlling. Emphasis will be given to organizational behavior concepts, international business, ethical issues, and quality management perspectives.

**3304 Advanced Organizational Development (3-0)**

The concepts, values, underlying assumptions, and intervention techniques that are common in the practice of organizational development and change are presented. *Prerequisite:* MGMT 3303.

**3306 Entrepreneurship (3-0)**

Entrepreneurship is designed to provide an understanding of the entrepreneur and the entrepreneurial process. Emphasis is on new venture planning and establishment of new firms as opposed to dealing with problems of an established business. The distinctive focus is enterprise creation. *Prerequisites:* MGMT 3303 and FIN 3310.

**3311 Introduction to Human Resource Management (3-0)**

This course emphasizes how to effectively utilize and manage human resources in a rapidly changing environment. Emphasis is on such topics as strategic human resource planning, staffing, performance appraisal, and compensation. Emphasis will also be placed on understanding the legal ramifications of human resource management decisions. *Prerequisite:* MGMT 3303.

**3315 Employee and Labor Relations (3-0)**

Study of labor law, trends in the labor movement, union structure, organizing, and collective bargaining processes. Preparation for and handling of negotiations. Grievance and discipline handling in both union and non-union organizations. Arbitration, decertification, and managing in a non-union environment. *Prerequisite:* MGMT 3311.

**3320 Small Business Management (3-0)**

Focuses on the analysis, operation, and management of small business. Provides practical experience working with small business and entrepreneurial opportunities in the community. Investigates marketing production and administrative functions to develop overall managerial awareness and analytical skills in small business problem-solving. *Prerequisites:* ENGL 3355, MGMT 3303, and ACCT 3201.

**3400 Strategic Management (3-0)**

Integration of accounting, business law, finance, human resources, production management, and marketing to solve management problems. *Prerequisite:* Graduating Seniors only, overall GPA of 2.0 or better, business GPA of 2.0 or better, and for Accounting majors, a 2.0 or better GPA in all hours attempted in the following courses: ACCT 3321 and accounting courses listed in the Accounting Option Requirement.

**3496 Internship in Management (0-0-3)**

A course designed to give a business major practical work experience. *Prerequisite:* MGMT 3303, three hours of MGMT courses beyond 3301, and departmental approval.

**3498 Independent Study in Management (0-0-3)**

Individualized instruction in a particular issue in management. The nature and scope of the study is arranged with a faculty member. *Prerequisites:* MGMT 3303 and departmental approval.

**3499 Current Topics in Management (3-0)**

Topics to be announced. This course may be repeated for credit as topics are changed. *Prerequisite:* MGMT 3303 and departmental approval.

For Undergraduates and Graduates

**3404 Human Resource Training and Development (3-0)**

The course is an intensive study of the procedures utilized by organizations to facilitate the learning process to assure that these efforts result in the achievement of organizational goals and objectives. Emphasis is given to such topics as learning theory, training and development methods, evaluation, and administration. Experiential exercises are utilized to facilitate the application of theory to organizational practices. *Prerequisite:* MGMT 3311 or MGMT 3515.

**3406 Franchising (3-0)**

Franchising investigates the advantages and potential risks that must be considered before making an investment in a franchise business. There is particular emphasis on the discovery and evaluation of the franchisor and the feasibility of entrepreneurs converting an existing business into a franchise chain or creating and selling new business concepts. *Prerequisites:* MGMT 3303 and FIN 3310.

**3410 Employment Law and Dispute Resolution (3-0)**

Consideration of the full impact of federal and state employment and labor laws on employer-employee relations. Specific subject matter includes job discrimination, minimum wage and overtime, lawful terminations, job safety and health regulations, employment of aliens, workmen's compensation, and substance abuse in the work place. Recognition and management of problem situations will be covered. *Prerequisites:* MGMT 3311 or MGMT 3515.

**3415 Human Resource Staffing and Planning (3-0)**

A study of the staffing process in organizations. Primary emphasis on job analysis and the use of human resource information systems in the planning, recruitment, selection, and appraisal activities. *Prerequisite:* MGMT 3311 or MGMT 3515.

**3425 International Management (3-0)**

A study of the differences in managerial processes in organizations having international operations with an emphasis on traditional managerial activities. It is a cross-cultural approach to the study of management using the United States as a point of reference. *Prerequisite:* MGMT 3303.

**3437 Compensation and Employee Benefits (3-0)**

This course examines the goals of the organization in the employment of human resources and its use of reward systems in the motivation of goal-oriented behavior. Topics included are job evaluation systems, merit pay, and employee benefits. Legal aspects of pay administration such as wage and hour laws and ERISA will be covered. *Prerequisite:* MGMT 3311 or MGMT 3515.

**Marketing (MKT)**

For Undergraduates

**3300 Principles of Marketing (3-0)**

A description and analysis of the ways in which goods move to points of consumption. Topics studied include functions, institutions, the marketing environment, markets, and government regulation. *Prerequisites:* ACCT 3201 and junior standing.

**3302 Buyer Behavior (3-0)**

This course emphasizes the psychological and sociological aspects of both industrial and consumer buyer behavior. Topics range from basic motivation and learning theory to group dynamics with applications to the formulation of marketing strategy. *Prerequisite:* MKT 3300.

**3305 Selling and Sales Management (3-0)**

Presents the techniques of effective personal selling; the function and duties of the sales representative; and the task of sales management in staffing, training, and motivating the sales force. *Prerequisites:* MKT 3300 and (MKT 3302 or MGMT 3304).

**3310 Principles of Retailing (3-0)**

Analysis of retail store management including personnel requirements and career opportunities with emphasis on modern methods in buying, receiving, pricing, merchandise and financial control, sales promotion, and customer service. *Prerequisites:* MKT 3300 and FIN 3310 and (MKT 3302 or MGMT 3304).

**3320 Advertising and Sales Promotion (3-0)**

The planning, execution, and evaluation of advertising and sales promotion activities to stimulate customer demand. *Prerequisites:* MKT 3300 and (MKT 3302 or MGMT 3304).

**3401 Marketing Research (3-0)**

Scientific methods of analysis and statistical techniques are employed in solving marketing problems. Emphasis on collection of information from internal and external sources; analysis, interpretation, and presentation of research findings. *Prerequisites:* MKT 3300, MKT 3302, and QMB 3301.

**3495 Strategic Marketing Management (3-0)**

An integrating course in marketing, systematically oriented with emphasis on the marketing mix, and special attention to market analysis, marketing information, and sales forecasting. *Prerequisites:* MKT 3401 and FIN 3310.

**3496 Marketing Internship (0-0-3)**

Designed to provide practical work experience in marketing. To be taken during the senior year with permission of the internship advisor and the department chairperson. *Prerequisites:* MKT 3300 and MKT 3302 and departmental approval.

**3498 Independent Study in Marketing (0-0-3)**

Individualized instruction in a particular issue in marketing. The nature and scope of the study is arranged with a faculty person. *Prerequisites:* MKT 3300 and departmental approval.

**3499 Current Topics in Marketing (3-0)**

Topics to be announced. This course may be repeated for credit as topics are changed. *Prerequisites:* MKT 3300 and departmental approval.

For Undergraduates and Graduates

**3425 International Marketing (3-0)**

Emphasis is given international marketing from the viewpoint of the marketing manager who must recognize differences in market arrangement and in legal, cultural, and economic factors in different countries. Areas covered include planning and organizing for international operations, interrelationships with other functions, product strategy, pricing promotion, channels, and financial aspects of international marketing. *Prerequisite:* MKT 3300 and FIN 3310 and (MKT 3302 or MGMT 3304) or graduate standing.

**3456 Logistics and Supply Chain Management (3-0)**

An introductory review and discussion of business activities that center on the movement and storage of inventories and the dynamic forces affecting logistics decisions. This course critically evaluates the physical and information flows that occur within the logistics and supply chain system. It is intended to provide an understanding of how business decisions influence logistical flow and the ways in which choices made by logistics managers affect overall corporate performance by reducing total cost and improving customer satisfaction levels. *Prerequisites:* POM 3336.

**3490 Industrial Marketing (3-0)**

This course distinguishes organizational markets from consumer markets. Emphasis is placed upon the characteristic features of industrial and institutional demands that set the environment within which the industrial marketer must cope. *Prerequisites:* MKT 3300 and (MKT 3302 or MGMT 3304) or graduate standing.

**3491 Service Marketing (3-0)**

This course integrates concepts from other marketing courses to adapt them to services marketing. The focus is on the unique properties of services. A distinctive approach to services marketing strategy development and execution is examined. *Prerequisites:* MKT 3300 or graduate standing.

**3492 Product and Price Management (3-0)**

A managerial approach to the issues of product innovation, development, commercialization, and abandonment. Specific emphasis is given to the product life cycle, product portfolio analysis, and price administration and determination. *Prerequisites:* MKT 3300 and MKT 3302 or graduate standing.

**Real Estate (REST)**

For Undergraduates

**3300 Real Estate Principles (3-0)**

A survey course, designed to introduce the basic concepts of real estate law, appraisal, finance, investment, and brokerage.








# College of Education

Educational Leadership and Foundations  
Educational Psychology and Special Services  
Teacher Education

Dr. Arturo Pacheco, Dean  
Dr. Josefina Tinajero, Assistant Dean  
Dr. Thomas Wood, Assistant Dean

Education Bldg., Room 414  
Phone: (915) 747-5572  
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# College of Education

## Introduction

The mission of the College of Education is to prepare effective teachers, counselors, diagnosticians, and school administrators, who successfully address the problems of schools and other youth serving agencies, especially in communities with a significant Hispanic population. In order to support this mission, the faculty of the College strives to demonstrate by example the quality of teaching expected of its graduates, engages in research and scholarly activities, and provides educational services to the schools and community.

At the undergraduate level, the College offers programs aimed at providing qualified students an opportunity to attain the knowledge, values, and skills needed to enter the teaching profession and to receive an initial Texas teaching certificate. At the graduate level, the College offers Master's degrees in the areas of instruction, school supervision, educational administration, school counseling, agency counseling, educational diagnostician, and special education. In addition to these graduate degree programs, the College offers graduate level courses leading to advanced Texas certification in administration, supervision, counseling, and various teaching specialties. (For information about graduate programs in Education, please see the University's Graduate Studies Catalog.)

The College maintains close ties with the practicing teaching profession through the local Center for Professional Development and Technology (CPDT). Teacher preparation programs of the University are collaboratively governed by a board made up of university faculty and representatives from the local school districts, the Educational Regional Service Center, and El Paso Collaborative for Academic Excellence. The educator preparation programs are approved by the Texas Higher Education Coordinating Board and are accredited by the Texas Education Agency (TEA). Candidates who successfully complete a certification program are recommended to receive an education license in the State of Texas.

Professional certification programs in the College of Education are offered in early childhood, bilingual education; reading education; elementary, secondary, and all-level education; counseling; special education; educational diagnostician; and educational administration.

Students wishing to explore teaching as a career option enroll in TED 1201, *Orientation to Education*. In this course, information concerning the teaching profession is presented, and students have an opportunity to discuss career issues with Education faculty and public school practitioners. The Education Advising Office is located in Education 412. Staffed with faculty advisors, this office provides information about undergraduate degrees, certification, and transfer work.

The College administrative offices are located on the fourth floor of the Education Building. Program and faculty offices are located on the fifth through eighth floors.

## Undergraduate Degree and Teaching Certificates

### Elementary Education

The College offers a Bachelor of Interdisciplinary Studies (BIS) degree, which may be taken by students who wish to teach at the elementary or middle school level and who may wish to qualify for Texas teacher certification at those levels. Students working on the Bachelor of Interdisciplinary Studies degree must have their degree plan filed in the College of Education. These students are advised by College of Education faculty and request degree and certification course substitutions through that faculty.

### Secondary Education and All Levels Education

Students interested in becoming secondary or all-levels Art, Music, and Physical Education teachers complete a Bachelor of Arts, a Bachelor of Science, a Bachelor of Music, or a Bachelor of Science in Kinesiology and Sports Studies with a minor in secondary or all-levels teaching, depending on the teaching area of their interest. Program of studies information appears in the appropriate section of

this Catalog under the Colleges of Liberal Arts, Nursing and Health Sciences, and Science. Information on the secondary or all-levels teaching minors is available in the Education Advising Office, Education 412.

Students working on a degree outside the College of Education and wishing to become certified in Texas as secondary or all-levels teachers have their degree and certification plan filed under the appropriate college in which they are pursuing their major. These students also must have a copy of their degree and certification plan filed in the College of Education Certification Office, Education 412. They are advised by the faculty of the college of their major and request course substitutions through the office of their college dean. Substitutions pertinent to the secondary or all-levels teaching certification minor are under the purview of the Dean of Education, who acts as the local Certification Officer for the Texas Education Agency.

### Transfer Students Seeking Degrees in Education

Undergraduate transfer students seeking a Bachelor's degree in Interdisciplinary Studies (BIS) must submit original copies of their transcripts to the Office of Admission and Evaluation (Academic Services Building) for evaluation, as well as an application for admission, prior to consulting with an advisor in the College of Education. No academic advising is done for transfer students until a written evaluation of previous academic work is prepared by the Office of Admission and Evaluation.

## Certification for Candidates who Have Completed a Bachelor's Degree

### Alternative Certification

An Alternative Certification program conducted in partnership with local public schools is available to a limited number of candidates who have completed a bachelor's degree with a 2.50 overall GPA, have passed all three portions of the TASP, and wish to teach Bilingual Education, Elementary Self-Contained, Special Education, or Secondary with specialization in ESL, Biology, Chemistry, Earth Sciences, English, French, German, Government, History, Journalism, Life-Earth Science, Mathematics, Physical Science, Physics, Reading, Science Composite, Spanish, Speech, and Theatre Arts. In this program candidates teach full-time in an elementary, middle, or secondary public school, while employed by a public school district, and complete summer and evening course work toward certification. Although the College is approved to offer alternative certification programs in the areas listed, the availability of positions for these fields depend on the staffing needs of the local public schools. For more information, contact the Alternative Certification Office, Education 801.

### Field-Based Teacher Certification

The College of Education offers a field-based teacher certification program for candidates who have already completed a bachelor's degree and wish to become elementary, secondary, or all-levels teachers. The program requires field work in partner schools. This is a non-degree plan administered by the Certification Office in cooperation with the department in which the candidate's teaching specialty resides. Unlike Alternative Certification, this program does not provide concurrent employment in a public school.

In order to be admitted to the program, candidates must have:

- 1) A bachelor's degree with a 2.50 overall GPA.
- 2) Apply for admission to post-baccalaureate course work at the Graduate School.
- 3) Attend an orientation workshop offered by the Certification Office and have a certification plan prepared.
- 4) Pass all portions of the TASP.
- 5) Submit biographical information and three letters of professional recommendation.

In order to finish the program and to be recommended for certification, candidates must complete the course of studies and field-based blocks specified in the certification plan and pass the appropriate State exit certification tests (ExCET).

### Additional Certification Levels, Fields and Endorsements

Texas certified teachers who wish to add another level of certification and/or a new field of specialization, or endorsement, must submit a copy of their State certificate(s) to the Certification Office and have a new plan prepared at the Education Advising Office, Education 412. Teachers already certified may add any level of certification or field of specialization available to elementary, middle school, secondary, and all-levels UTEP students. There are also endorsements offered in Bilingual Education, English as a Second Language (ESOL), Early Childhood, and Information Processing Technology I. The State provides certified teachers with an opportunity to add new certification levels and specialization fields by challenging the ExCET tests in those areas (H.B. 2185). For more information on H.B. 2185 contact the Advising Office, Education 412.

### Out-of-State Teachers

Teachers with a valid out-of-state teaching certificate who are seeking Texas certification must contact the Texas Education Agency (TEA) directly in order to have their credentials evaluated. Teachers with expired out-of-state teaching certificates must either contact the state in which they were certified in order to upgrade their license before contacting TEA, or follow the procedure established for candidates who have a bachelor's degree and desire initial Texas certification.

### Admission to Teacher Education

Undergraduate students who wish to become elementary, middle school, secondary, or all-levels teachers in Texas should have an unofficial degree and certification plan prepared as soon as possible. This plan will become official once the student has fulfilled all the requirements for admission to teacher education. A copy of the plan must be filed in the Certification Office of the College of Education, Education 412. To be admitted to teacher education students must fulfill the following criteria:

1. English 3111 and 3112 and Communication 3101 with grades of "C" or better in each course.
2. Mathematics 3120 or higher level math.
3. The Texas Academic Skills Program (TASP) test with passing scores on each of the test areas. To register, contact the Testing and Student Assessment Center, Education 210.
4. Completion of 60 semester hours of college work, with a cumulative grade point average (GPA) of 2.25 or better.
5. An unofficial degree and/or certification plan filed with the Certification Office.
6. Teacher Education (TED) 1201 Orientation to Education.
7. Biographical information and three letters of professional recommendation, at least one of which will be a professional reference from a high school or college teacher, filed in the Certification Office.

*(Note: To receive initial Texas teacher certification, students must be free of felony convictions.)*

Until admitted to teacher education, students indicating intent to become teachers will be classified as Pre-education students. Pre-education students are not allowed to enroll in Reading Education or Professional Education courses.

According to University policy, students must remain in good standing to progress toward the completion of a degree program (see the appropriate catalog section under Academic Standards). In addition, irrespective of other factors, students may be prohibited from enrolling in Professional Education courses if, once due process has been provided, their suitability for the teaching profession is found to be unacceptable.

### Field-Based Teacher Preparation

Teacher preparation students are expected to spend a significant amount of time in specially selected schools (partner schools) while they take their professional development courses. Admission to

teacher education is required to participate in the field-based teacher preparation program.

For elementary and middle school candidates the professional development courses are clustered in two blocks. Block I consists of four courses and requires half-day attendance to university classes and partner school field experiences on a daily basis, Monday through Friday. Students may choose between morning or afternoon blocks for Block I and Block II. The scheduled block time is divided between time at the University and time at the partner schools. Block II takes the place of traditional student teaching and requires all day attendance for 15 weeks to the assigned partner school.

For secondary candidates the professional development courses are clustered in two blocks. Block I consists of four courses and requires half-day attendance to university classes and partner school field experiences on a daily basis, Monday through Friday. Students may choose between morning or afternoon blocks. The scheduled block time is divided between time at the University and time at the partner schools. Block II takes the place of traditional student teaching and requires all day attendance for 15 weeks to the assigned partner school.

For information on the field-based component of the all-levels art, music, and kinesiology programs, check with the appropriate department advisors.

The last block in the field-based program is student teaching. An application must be on file and approved in order to enroll in student teaching. The deadlines for applications are May 1 for the Fall term and October 1 for the Spring term. Student teaching is not available in the Summer session. Applications received after the deadline will be considered only if school assignments and supervisors are available. Admission requirements for student teaching are:

- Admission to teacher education.
- Completion of three-fourths of the courses in the Specialization Area with a GPA of 2.50 or better.
- Completion of the required field experiences.
- Completion of the following courses with a GPA of 2.50 or better:
 

Elementary:	EDPC 3300; ELED 3302, 3310, 3311; RED 3340
Secondary:	EDPC 3300; SCED 3311, 3317; and appropriate methods course.
All Levels Art:	EDPC 3300; SCED 3317; ELED 3302/SCED 3311; ARTE 3447
All Levels Music:	EDPC 3300; SCED 3317; MUSE 3336, 3433
All Levels PE:	EDPC 3300; SCED 3317; KIN 3419, 3421

The maximum University course load while student teaching is 15 semester hours, which includes six semester hours of student teaching course work.

### Application for Graduation and/or Certification

Students must apply for graduation during the first month of the semester in which they intend to complete all degree requirements. Graduation fee required.

Students who are seeking certification must register for and pass the appropriate State certification exit examinations (ExCET). Students apply for certification once they complete all the requirements, including the appropriate ExCET tests. A fee is required for the Texas certification.

In order to be recommended for degree and/or certification a student must:

- Complete the courses listed in the degree and/or certification plan with an overall GPA of at least 2.0.
- Have a 2.50 GPA or better in the teaching field and in Professional Education.

*(Note: To receive initial Texas teacher certification, students must be free of felony convictions.)*

## ELEMENTARY AND MIDDLE SCHOOL TEACHER PREPARATION PROGRAM

Students who wish to become elementary and middle school teachers and receive initial Texas teacher certification complete a Bachelor of Interdisciplinary Studies (BIS) offered in the College of Education. The BIS requires the same general education core, cultural foundations concentration, science concentration, and professional studies component of all students. It varies only in the area of specialization within the degree/certificate. There are 17 areas of specialization from which to choose. A description of the BIS follows:

### Bachelor of Interdisciplinary Studies:

#### General Education Core (61-62 semester hours)

- 12 English: ENGL 3111\*, 3112\*, 3305, 3454
- 3 Communication: COMM 3101\*
- 6 History: HIST 3101, 3102
- 6 Government: POLS 3210, 3211
- 9 Mathematics: MATH 3120\*\*, 3203 and three hours from STAT 3180\*\*\*, PSYC 3103, QMB 3201, SOCI 3212
- 3 Computer Science: EDT 3371
- 6 Physical Science: PSCI 3203, 3304
- 4 Spanish: SPAN 4102 or higher level Spanish course (three hours minimum). Bilingual Education students complete SPAN 3201 or 3203.
- 3 Fine Arts: three hours from ART 3100, 3110; MUSL 3124, 2121, 2122, 3126, 3127; MUST 3111; THEA 3113, 3290
- 6 Humanities: six hours from HUMN 3301, 3302, 3303; HIST 3201, 3202; PHIL 3103, 3314, 3315, 3317, 3451
- Cultural Diversity: (See Socio-Cultural Concentration)
- Economics: (See Socio-Cultural Concentration)
- 3 Technology and Society: ITS 3350
- 1 Orientation: TED 1201

\*Grade of C or better.

\*\* Students with Life-Earth Science and Physical Science specializations take MATH 4109.

\*\*\* Students with Math specialization take STAT 3280.

#### Interdisciplinary Major (Minimum of 49 semester hours)

- 18-24 **Teaching Specialization** Choose one area from: Bilingual Education, Early Childhood, Reading, Special Education; English, French, German, Spanish; History, Social Science; Mathematics, Life-Earth Science, Physical Science; Health, Kinesiology-Sports; Art, Theatre Arts. See list of courses for each teaching specialization below.
- 12 **Socio-Cultural Concentration:** SOSC 3330 and CHIC 3339; three hours from ECON 3101, 3203, 3204; and three hours from GEOG 3106, 3110; CHIC 3201, 3301; SOCI 3258; ANTH 3259; HIST 3309, 3328; POLS 3412; SPAN 3320; ENGL/ANTH 3374; LING 3357
- 13 **Science Concentration:** BIOL 3103, 1103; GEOL 3103, 3104; and HSCI 3203 or 3406
- 6 **Reading Concentration:** RED 3340, 3441. (Students specializing in Reading choose six hours from English, Communication, Linguistics, or Theatre Arts.)

#### Professional Education (requires admission to teacher education).

- 18 semester hours:  
EDPC 3300, ELED 3302, 3310, 3311 and one of the following:  
BED 6491, ECED 6491, ELED 6491, SPED 6491 depending on the specialization area.

**Total:** 128-135 hours

(In order to receive the BIS degree students must complete a minimum of 128 credit hours, and have a 2.0 cumulative GPA, and a 2.50 GPA in both the specialization area and Professional Education.)

#### List of Teaching Specialization Courses (18-24 semester hours)

- 24 **Bilingual Education:** SPAN 3202 or 3204; SPAN 3309, BED 3427, 3440, 3441, 3442, 3444, and 3443 or LING 3308
- 24 **Early Childhood Education:** ECED 3333, 3340, 3453, 3456, 3458, 3459; KIN 3318; and three hours from ARTE 3317, MUSE 3334, THEA 3350
- 24 **Special Education:** SPED 3310, 3325, 3330, 3340, 3345, 3430, 3440, and 3465 or KIN 3414
- 18 **Reading:** BED 3427; ECED 3340; RED 3340, 3441, 3446, or 3447 plus three hours from RED 3443, 3444, or 3445
- 18 **English:** ENGL 3311, 3312, and 3303 or 3365, six hours from ENGL 3213, 3214, 3218; and three hours from an English 3300 or 3400 level course or THEA 3350
- 18 **French:** FREN 3201, 3202, 3305, and 3355 plus six upper division hours in French
- 18 **German:** GERM 3201, and 3202, plus twelve upper division hours in German
- 18 **Spanish:** SPAN 3201 and 3202 or 3203 and 3204, 3309, and 3355 or 3356, plus six additional upper division hours in Spanish
- 18 **History:** HIST 3201, 3202, 3317, and 3309 or 3328, plus six upper division hours in History
- 18 **Social Science:** GEOG 3110; HIST 3202, 3309 or 3328, 3317, an additional three upper division hours in History, plus three hours from POLS 3320 or SOCI 3101
- 18 **Health:** HSCI 3101, 3301, 3303, 3406, and six hours (three upper division) from HSCI 3202, 3209, 3305, 3403
- 18 **Kinesiology-Sports:** KIN 3318, 3232, 2302, 2304 and six hours from 2301, 2303, 2305, 2306, 2307, 2309, 2310, 2311
- 18 **Mathematics:** MATH 4110, 4111 or 3200, and six hours from 3300, 3303, or 3304; STAT 1282; and MTED 3330
- 18 **Life-Earth Science:** BIOL 3104 and 1104; four hours from BOT 4210 or ZOOL 4206; SIED 3330; and seven upper division hours from Geology
- 19 **Physical Science:** CHEM 4107, 4108; PHYS 4103, 4104; and SIED 3330
- 18 **Art:** ART 3100; ARTF 3101, 3102; ARTE 3317; ARTT 3337, 3427 or 3437
- 18 **Theatre Arts:** THEA 3113, 4213, and 3350, plus nine hours (six upper-division) from 3221, 3222, 3325, 3352

## SECONDARY SCHOOL TEACHER PREPARATION PROGRAMS

Students who wish to become secondary school teachers and receive initial Texas teacher certification complete a bachelor's degree outside the College of Education. These students major in the subject area they desire to teach and complete a minor in secondary education. For example, a student who wishes to teach English would seek a Bachelor of Arts degree in the College of Liberal Arts with a major in English and American Literature and a minor in secondary teaching or a student who wishes to teach Health completes a Bachelor of Science in Health Sciences with a minor in secondary teaching.

Secondary school teaching certificates in Texas allow students to teach their discipline in Middle School and High School (i.e., grades 6-12). Presently, all Texas secondary certificates attainable through UTEP programs require a minimum of 12 semester hours in a second area, or support field. Therefore, all students seeking secondary teacher certification will have to accumulate 12 semester hours in a second area of specialization which is taught in the public schools. This may be done by counting some courses from the general requirements area and carefully arranging the selection of electives, or by taking additional courses beyond the minimum requirements of the degree. This certification requirement is to be met by all secondary candidates regardless of their degree or major.

Students desiring to become secondary school teachers must have a degree and certification plan filed in their appropriate college, and a copy of the plan filed in the Certification Office of the College of Education, Education 412. The plan identifies the courses required in the teaching minor and any additional subject courses required for certification which may not be required for a non-teaching degree. The Certification Office verifies that students have passed the State mandated test of basic skills (TASP) and have completed all the requirements to be admitted to teacher education. Students will not be allowed to enroll in Reading or Professional Education courses until they have been admitted to teacher education.

The application process for admission to teacher education may be initiated as soon as the student completes 60 hours and a copy of the student's degree and certification plan is submitted to the Certification Office, Education 412. (See Admission to Teacher Education above.)

#### List of Approved Secondary Specialization Fields

The University is approved by the Texas Education Agency to offer the following fields for secondary certification (students should consult an advisor in their area of specialty for the selection of fields and scheduling of courses):

English  
 English-Language Arts  
 Communication  
 Theatre Arts

French  
 German  
 Spanish

History  
 Social Studies Composite  
 Political Science  
 Psychology  
 Sociology

Mathematics

Biology  
 Chemistry  
 Earth Science  
 Life-Earth Science  
 Physical Science  
 Physics

Health

#### All-levels Teacher Preparation Programs

Students who wish to be certified in Texas to teach all-levels (grades 1-12) Art or Music complete a bachelor's degree in the College of Liberal Arts and a minor in education. Students who wish to become all-levels Physical Education teachers complete a bachelor's degree in the College of Nursing and Health Sciences and minor in education.

Candidates for all-levels teaching certification must have a degree and certification plan filed in their college, and a copy of the plan filed in the Certification Office in the College of Education. For more detailed information see the advisors designated to prepare all-levels degree plans in the departments of Art, Music, and Kinesiology.

#### Methods Courses for the Secondary and All-levels Education Minor

The following methods courses are part of the secondary and all-levels education minor and appear listed under the academic departments in which the students major:

ENGL 3455 Teaching Composition and Literature in Secondary Schools

LING 3401 Methods of Foreign Language Instruction

FREN 3401 Methods of Foreign Language Instruction

GERM 3401 Methods of Foreign Language Instruction

SPAN 3401 Methods of Foreign Language Instruction

HSCI 3401 Teaching Health in Secondary School

ARTE 3447 Methods of Teaching Art

MUSE 3336 Teaching of Music in Elementary Schools

MUSE 3433 Teaching of Music in Junior and Senior High Schools

KIN 3419 Methods and Materials in Elementary Schools

KIN 3421 Methods and Materials in Secondary Schools

#### ENDORSEMENTS

Endorsements are teaching sub-specializations of additional college work that may be added to a valid Texas certificate. Endorsements may be pursued simultaneously with undergraduate work or later in post-baccalaureate study. The following endorsement programs are available through the College of Education.

##### Bilingual Education Endorsement

This endorsement may be added to any valid provisional elementary teacher certificate, provisional special education certificate, or provisional vocational certificate which requires a college degree.

Requirements for the endorsement are:

- Oral proficiency in the language of the target population, as measured by the Texas Oral Proficiency Test (TOPT).
- BED 3440, 3441, 3442, and 3443.
- One year of successful classroom teaching experience on a permit in an approved bilingual education program, as verified by the employing school district.

##### English as a Second Language (ESL) Endorsement

This endorsement may be added to any valid provisional certificate, provisional special education certificate, or provisional vocational certificate which requires a college degree.

Requirements for the endorsement are:

- BED 3427, 3443; LING 3310, 3448.
- One year of successful classroom teaching experience on a permit in an approved ESL or bilingual education program as verified by the employing school district.

##### Early Childhood Endorsement

This endorsement may be added to any valid provisional elementary or all-levels certificate or provisional vocational home economics certificate which requires a college degree.

Requirements for the endorsement are:

- ECED 3333, 3340, 3453, and three hours from ECED 3456, 3458, 3459; BED 3427; KIN 3318.
- Plus: three semester hours of kindergarten student teaching, or one year of successful pre-Kindergarten or Kindergarten teaching experience in a school approved by the Texas Education Agency.

##### Information Processing Technology I Endorsement

This endorsement may be added to any valid provisional Texas teacher certificate, special education certificate, or vocational education certificate which requires a college degree.

Requirements for the endorsement are:

- EDT 3371, 3372, and 3473.

# Educational Leadership and Foundations

501 Education Building  
(915) 747-5300

Chairperson: John B. Peper

PROFESSORS: Heger, Pacheco, Peper

ASSOCIATE PROFESSORS: Brooks, Sanford, Stockebrand

ASSISTANT PROFESSOR: Nash, Rippberger

## Educational Research and Statistics (EDRS)

For Undergraduate Credit Only

### 3410 Classroom Applications of Computer Technology (3-0)

Identifies effective application of computer hardware and software to elementary and secondary classroom tasks; develops knowledge and skills related to Computer Assisted Instruction (CAI) and Computer Managed Instruction (CMI); prepares classroom teachers to evaluate software for instructional use, computer laboratory required. *Prerequisite:* EDT 3371 or instructor's approval.

# Educational Psychology and Special Services

701 Education Building  
(915) 747-5221

Chairperson: John Daresh

PROFESSORS: Hernandez, Wood

ASSOCIATE PROFESSORS: Combs, Gonzalez, Ingalls, Lloyd

ASSISTANT PROFESSOR: Hammonds

## Educational Psychology and Counseling (EDPC)

For Undergraduate Credit Only

### 3300 Developmental Variations (3-0-2)

This course covers typical development (cognitive-language, physical-motor, and social-personality) from birth through young adulthood as well as variations of typical development and accommodations made within the education system to include federal, state, local, and school-based decisions in instruction, curriculum, and law. Field experience required.

### 3450 Workshop In Educational Psychology and Counseling (3-0)

Studies in a designated area. May be repeated for credit when topic varies. *Prerequisite:* Departmental approval.

## Special Education (SPED)

For Undergraduate Credit Only

### 3310 Introduction to Special Education (3-0)

Survey of the various exceptionalities, litigation, and laws pertaining to the handicapped and definitions and characteristics of the various handicapping conditions. Emphasis on the way behavior, learning problems, and physical disorders affect learning. Field experience required.

### 3325 The Learning Disabled Student (3-0)

This course is designed to acquaint students with cognitive and social-emotional characteristics common to learning disabled stu-

dents, and to explore factors which influence the performance of these students in various settings. Includes definitions, characteristics, and causes for learning disabilities. *Prerequisite or corequisite:* SPED 3310.

### 3330 Students with Emotional Disturbance (3-0)

Study of school programs for emotionally disturbed youth. Overview of contemporary theories and approaches to educating students with behavior disorders, emotional disturbance, or autism. *Prerequisite or corequisite:* SPED 3310.

### 3340 Students with Severe and Profound Disabilities (3-0)

Focuses on characteristics, history, and educational implications for students with severe or profound disabilities. Includes various models of integration, transition, and community based instruction. Specific field experience is required. *Prerequisite or corequisite:* SPED 3310.

### 3345 Language and Reading for Special Learners (3-0)

Designed to provide special education teachers with an understanding of concepts and procedures for encouraging language development, and for teaching reading and other major content areas to students with disabilities. Specific field experience is required. *Prerequisite:* SPED 3310.

### 1450 Workshop In Special Education (1-0)

Area of study will be designated. May be repeated for credit when topic varies.

### 3430 Diagnosis and Placement (3-0)

Referral, assessment, placement, and program processes for persons with exceptionalities, including both formal and informal techniques, and implications for the use of this assessment information. *Prerequisite:* SPED 3310. Course Fee required.

### 3440 Transitional Education for Special Learners (3-0)

Terms and concepts of vocational education and programming in habilitation for students with moderate to severe intellectual difficulties. Will include information on sheltered and non-sheltered employment for the handicapped. *Prerequisite:* SPED 3310.

### 3450 Workshop In Special Education (3-0)

Area of study will be designated. May be repeated for credit when topic varies. *Prerequisite:* Departmental approval.

### 3465 Organization and Management In Special Education (3-0)

Includes general principles in the organization of all types and levels of special education and inclusive classrooms as well as theories regarding the behavioral and social needs of students in those classrooms. Specific field experience is required. Senior standing suggested. *Prerequisites:* SPED 3310 and departmental approval.

### 3491 Student Teaching In Special Education/Elementary (1-0-15)

Minimum of five weeks all-day student teaching in special education and elementary classroom plus five hours of seminar. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses plus RED 3340.

### 3493 Internship In Special Education I (3-0-30)

One semester of teaching in the classroom. Observation by the university instructor of the candidate's classroom teaching and seminars designed to relate the classroom instructional situation to corresponding instructional theory. *Prerequisites:* Twelve hours of Professional Studies and departmental approval.

### 3494 Internship In Special Education II (3-0-30)

Continuation of SPED 3493. *Prerequisite:* SPED 3493 and departmental approval.

### 6491 Student Teaching In Special Education/Elementary (1-0-30)

Minimum of ten weeks all-day student teaching in special education and elementary classroom plus fifteen hours of seminar. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses plus RED 3340.

# Teacher Education

601 Education Building  
(915) 747-5426

Chairperson: James L. Milson

PROFESSORS EMERITI: Lou Ella Burmeister, Richard W. Burns

ASSOCIATE PROFESSORS EMERITI: Mary Louise Zander Aho,  
John Paul Scarbrough

PROFESSORS: Ainsa, Bixler-Marquez, Hernández, Klingstedt,  
Milson, Tinajero

ASSOCIATE PROFESSORS: Ball, Descamps, Edwards, Kies, Seda

ASSISTANT PROFESSORS: Arenz, Blake, González, Hurley,  
Izquierdo, Norris, Shin

## Bilingual Education (BED)

### 3427 Literacy Acquisition in English as a Second Language (3-0)

The course covers the acquisition of reading and writing proficiency in English by literate and non-literate speakers of other languages. The emphasis is on the diagnosis of reading and writing difficulties encountered by students of limited English proficiency.

### 3440 Principles of Bilingual Education/ESL (3-0)

A survey of the philosophies, legal aspects, theories, and history of bilingual education and ESL in the United States to include paradigms and current research findings in bilingual education.

### 3441 Literacy Acquisition in Spanish/English Bilingual Education (3-0)

This course examines Spanish/English dual language development as related to literacy in both languages. Formal and informal language development is explored, along with the impact of structural delivery systems like television and school-based instruction. Alternate models (and their theoretical bases) for structural delivery systems will be compared and contrasted, with emphasis placed on those currently supported by research or the wisdom of educational practice.

### 3442 Mathematics, Social Studies, and Science Development in Spanish (3-0)

Survey of conceptual representations of science, math, and social studies appropriate for Spanish speakers. Acquisition of specialized vocabulary in Spanish. Exploration of available conceptual structure implied by first-language development in Spanish.

### 3443 ESL in the Content Areas (3-0)

Survey of conceptual representations of science, math, and social studies appropriate for Spanish speakers. Examination of English expressions, vocabulary, and grammatical constructions in these content fields.

### 3444 Involving Parents in the Educational Process (3-0)

This course focuses on building cooperative relationships with parents and community, with particular emphasis on parents of children in bilingual education programs, and explores knowledge and skills to help parents better understand how to be more involved in their children's education.

### 3450 Current Topics in Bilingual Education (3-0)

Studies in bilingual education. May be repeated for credit when topic varies.

### 3491 Student Teaching in Bilingual Education (1-0-15)

Minimum of five weeks of all-day student teaching in a bilingual education classroom plus five hours of seminar. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses plus RED 3340.

### 3493 Internship in Bilingual Education I (3-0-30)

One semester of teaching in the classroom. Observation by the university instructor of the candidates's classroom teaching and seminars designed to relate the classroom instructional situation to corresponding instructional theory. *Prerequisites:* Twelve hours of Professional Studies and departmental approval.

### 3494 Internship in Bilingual Education II (3-0-30)

Continuation of BED 3493. *Prerequisite:* ELED 3493 and departmental approval.

### 6491 Student Teaching in Bilingual Education in the Elementary School (1-0-30)

Minimum of ten weeks of all-day student teaching in a bilingual education classroom, plus fifteen hours of seminars. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses plus RED 3340.

## Early Childhood Education (ECED)

### 3333 Contemporary Child Care Programs (3-0)

Developmentally appropriate child care programs for infants, toddlers, preschoolers, and school-age children. Rationale, historical background, types of child care programs, and the relationship of child care programs to public school services. Includes organization and management of child care as well as planning, goals, regulations, training, and evaluation of developmentally appropriate individual programs for monolingual and bilingual children.

### 3340 Development of Literacy in Young Children (2-1)

The relationship of physical, intellectual, emotional, and language development and reading development. Emphasizes a child development approach to literacy through concepts of play, physical development, oral language development, and experiences. Includes whole written language through social interaction as well as specific reading and writing skills. Field experience required.

### 3453 Play Development in Early Childhood (3-0)

Explores how play interacts with emotional and intellectual development of the young child. Includes presentation of theories and research on play and their implementation in early childhood settings.

### 3456 Language Development for Young Children (3-0)

Oral and non-verbal communication, with particular attention to children in the Southwest. Theories of language development and research on the acquisition of communication skills.

### 3458 Development of Mathematics and Science Concepts in the Young Child (3-0)

Research on how children learn mathematics and science during early childhood, intellectual stages in the understanding of mathematics and science concepts during childhood, and appropriate objects, materials, activities, and programs to assist in the assimilation of mathematics and science concepts by young children.

### 3459 Children's Thinking in the Early Years (3-0)

The cognitive, social, and emotional development of children during the period of early childhood, the relationship of each of these types of developments to school settings, and appropriate and inappropriate objectives for children at particular stages of development in early childhood.

### 3491 Student Teaching in the Early Grades (1-0-15)

Minimum of five weeks of all-day student teaching in an early childhood classroom plus five hours of seminars. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses plus RED 3340.

### 3493 Internship in Early Childhood I (3-0-30)

One semester of teaching in the classroom. Observation by the university instructor of the candidate's classroom teaching and seminars designed to relate the classroom instructional situation to corresponding instructional theory. *Prerequisites:* Twelve hours of professional studies and departmental approval.

### 3494 Internship in Early Childhood II (3-0-30)

Continuation of ECED 3493. *Prerequisite:* ECED 3493 and departmental approval.

### 6491 Student Teaching in the Early Grades (1-0-30)

Minimum of ten weeks of all-day student teaching in an early childhood classroom plus fifteen hours of seminars. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses plus RED 3340.

## Educational Technology (EDT)

### 3371 Educational Technology I (3-0)

Basic principles of educational technology for prospective teachers including terminology, historical development, social and ethical implications, proficiency in the application of technology tools, and integration of technology in school curricula. *Prerequisite:* Admission to Teacher Education.

### 3372 Educational Technology II (3-0)

Advanced features of educational technology applications for creating a constructive, active, and generative learning environment using advanced telecommunications, utility programs, multimedia, and programming languages for instruction. *Prerequisites:* EDT 3371 or EDRS 3410 or CS 3110 with grade "C" or better and admission to Teacher Education.

### 3473 Educational Technology III (3-0)

Issues of technology integration and evaluation in education, and use of advanced and creative educational technology solutions for enhancing teaching, learning, and educational technology management. *Prerequisite:* EDT 3372 with grade "C" or better.

## Elementary Education (ELED)

### 3302 Principles and Practices of Learning in the Elementary School (3-0-2)

Basic principles of curriculum planning, classroom management, and evaluation in the elementary school. Field experience required.

### 3310 Teaching Mathematics in the Elementary School (3-0-2)

Materials and strategies for teaching mathematics in the elementary school. Includes computer applications. Field experience required.

### 3311 Teaching Science in the Elementary School (3-0-2)

Materials and strategies for teaching science in the elementary school. Includes computer applications. Field experience required.

### 3336 Teaching Music in the Elementary School (3-0)

Pre-adolescent growth and development as the basis of procedures in the teaching of music in the elementary grades. Designed to meet the needs of the special music teacher. The child voice, its development, and classification. Introduction of notation, song materials, rhythm bands, appreciation methods, and creative music for children. For elementary school music majors. *Prerequisites:* MUST 3214 and MUST 1212.

### 3419 P.E. Methods and Materials for Elementary School (3-0)

Curriculum planning, material selection and evaluation, Texas essential elements, classroom management, and teaching-learning process for elementary P.E. teachers. Field experience required.

### 3493 Internship in Elementary and Middle School I (3-0-30)

One semester of teaching in the classroom. Observation by the university instructor of the candidate's classroom teaching and seminars designed to relate the classroom instructional situation to corresponding instructional theory. *Prerequisite:* Twelve hours of Professional Studies and departmental approval.

### 3494 Internship in Elementary and Middle School II (3-0-30)

Continuation of ELED 3493. *Prerequisite:* ELED 3493 and departmental approval.

### 6491 Student Teaching in Elementary School (1-0-30)

Minimum of ten weeks all-day student teaching in the elementary school plus fifteen hours of seminar. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses plus RED 3340.

## Mathematics Education (MTED)

### 3330 Integration and Alternative Representation of Basic Mathematical Principles (3-0)

A course which integrates basic principles from various mathematical domains. Course will emphasize interrelationships among those principles and alternate conceptual representations of them. The representations will be analyzed to determine the mathematical skills and conceptual levels necessary to understand them.

## Reading Education (RED)

### 3010 Introductory College Reading (3-0)

Development of concepts and skills related to recognizing organizational patterns in expository text, comprehension development, and vocabulary development. Students will practice activities related to each of these areas. This course may not be used to satisfy any institutional degree requirements.

### 3340 Developmental Reading in the Elementary School (3-0-2)

Developmental reading, emphasizing curriculum and materials for teaching reading in the elementary school, including methods of instruction for second language students. Field experience required.

### 3342 Reading and Study in the Content Areas (3-0-2)

Methods and materials for developing maturity in reading and study skills, especially in the content areas from K-12. Special emphasis is given to the development of interest, the matching of students to proper materials, and instructional techniques for integrating the teaching of skills with the teaching of content. Field experience required.

### 3441 The Diagnostic Teaching of Reading (3-0-2)

Standardized and informal materials and techniques for diagnosing strengths and weaknesses of individuals and groups, techniques and materials for building specific reading abilities, and methods of individualizing instruction and grouping. Identification and teaching strategies for dealing with dyslexia and other reading disorders. Field experience required. *Prerequisite:* RED 3340.

### 3443 Teaching Critical Reading (3-0)

Methods and materials for developing higher level cognitive and affective reading behaviors among students from K-12. Teaching strategies which provide for the development of critical-creative readers in both reading and content area subjects. *Prerequisite:* RED 3340.

### 3444 Seminar in Reading (3-0)

Theories, materials, and research on topics including teaching reading through children's literature. *Prerequisite:* RED 3340.

### 3445 Analysis, Evaluations and Development of Reading Materials (3-0)

Classroom language arts materials representative of various facets and philosophies in the teaching of reading/writing with major emphasis focused upon the development of criteria for the selection of materials appropriate for specific individuals and groups of children. *Prerequisite:* RED 3340 or RED 3342.

### 3446 Reading Laboratory Experience--Primary and Middle Grades (2-1)

Laboratory experience for the application of reading concepts in the primary and middle grades. *Prerequisites:* RED 3340 and RED 3441.

### 3447 Reading Laboratory Experience--Middle and Junior High Grades (2-1)

Laboratory experience for the application of reading concepts in the middle and junior high grades. *Prerequisites:* RED 3340 and RED 3441.



## Science Education (SIED)

### 3330 Integration and Alternative Representations of Basic Science Principles (3-0)

A cross-disciplinary course which integrates basic science principles. Topics will be selected from the various sciences. Course will emphasize interrelationships among the various sciences and alternate conceptual representations of identified basic science principles.

## Secondary Education (SCED)

### 3311 Curriculum Planning in the Secondary School (3-0-2)

Basic principles of curriculum planning in the secondary school. Field experience required.

### 3312 General Methods in the Secondary School (3-0-2)

Selection and usage of instructional methods in the secondary school. Field experience required.

### 3317 Multicultural Education in the Secondary School (3-0-2)

A survey of cultural education models, instructional methods, and classroom interaction processes in secondary schools that reflect the cultural composition of the United States. For secondary and all-levels majors. Field experience required.

### 3401 Methods of Foreign Language Instruction (3-0)

Practical application of linguistic principles to the teaching of modern foreign languages. Classroom techniques, development, and evaluation of teaching and testing materials appropriate to the written and spoken languages.

### 3421 P.E. Methods and Materials for Secondary School (3-0)

Curriculum planning, material selection and evaluation, Texas essential elements, classroom management, and teaching-learning process for secondary P.E. teachers. Field experience required.

### 3433 Teaching of Music in Junior and Senior High Schools (3-0)

The study of the adolescent growth and development, and related procedures in the teaching of music in the upper level grades and in high school. Choral and instrumental music materials, organization of ensembles, and teaching of music appreciation and theory; correlation and integration with the entire school curriculum; public school type music as it is related to the life and needs of a community. *Prerequisites:* MUST 3214 and MUST 1212.

### 3447 Methods of Teaching Art (3-0)

A survey of the methods and practices involved in the effective and creative approach to art education. Special emphasis will be placed on demonstration techniques and opportunities to teach as a part of a group and on an individual basis. Each student will observe in both elementary and secondary art classrooms. This course must be taken prior to student teaching.

### 3455 Teaching Composition and Literature in the Secondary School (3-0)

Current theory and practice in teaching writing and literature in the secondary schools; review of applicable research along with practices for teaching literature and the composing practice. Field experience may be required.

### 3467 Teaching Math in Secondary School (3-0-2)

Materials and methods used in teaching mathematics in the secondary school. Skills in analysis and discovery, inquiry, and deductive teaching will be emphasized. Field experience required.

### 3468 Teaching Science in Secondary School (3-0-2)

Materials and methods used in teaching natural and physical science in the secondary school. Emphasis will be placed on developing skills in the use of inquiry, process approach, and discovery in teaching science. Field experience required.

### 3491 Student Teaching in the Secondary School (1-0-15)

Minimum of five weeks all-day of student teaching in the secondary school plus five hours of seminar. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses.

### 3493 Internship in Secondary School I (3-0-30)

One semester of teaching in the classroom. Observation by the university instructor of the candidate's classroom teaching and seminars designed to relate the classroom instructional situation to corresponding instructional theory. *Prerequisite:* Twelve hours of Professional Studies and departmental approval.

### 3494 Internship in Secondary School II (3-0-30)

Continuation of SCED 3493. *Prerequisites:* SCED 3493 and departmental approval.

### 6491 Student Teaching in the Secondary School (1-0-30)

Minimum of ten weeks all-day of student teaching in the secondary school plus fifteen hours of seminar. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses.

## Social Science (SOSC)

### 3330 Integration and Alternative Representations of Basic Social Science Principles (3-0)

A cross-disciplinary course which integrates basic concepts in the social sciences. Topics will be selected from the various disciplines. The course will emphasize interrelationships among the various disciplines and alternate conceptual representations of identified basic concepts. The representations will be analyzed to determine the skills and conceptual levels necessary to understand them.

## Teacher Education (TED)

### 1201 Orientation to Education (1-0)

Designed to orient the prospective teacher education student to the profession of teaching. Taken on a pass/fail basis.

### 3450 Educational Workshop (3-0)

Studies in designated area. May be repeated for credit when topic varies.

### 6496 Student Teaching in All-Levels Art (1-0-30)

Minimum of ten weeks all-day of student teaching (five weeks in an elementary school; five weeks in a secondary school) plus fifteen hours of seminar. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses.

### 6497 Student Teaching in All-Levels Music (1-0-30)

Minimum of ten weeks all-day of student teaching (five weeks in an elementary school; five weeks in a secondary school) plus fifteen hours of seminar. Special admission requirements for student teaching. *Prerequisites:* All other professional studies courses.

### 6498 Student Teaching in All-Levels Physical Education (1-0-30)

Minimum of ten weeks all-day of student teaching (five weeks in an elementary school; five weeks in a secondary school) plus fifteen hours of seminar. Special admission requirements for student teaching. *Prerequisite:* All other professional studies courses.






# College of Engineering

Civil Engineering  
Computer Science  
Electrical and Computer Engineering  
Mechanical and Industrial Engineering  
Metallurgical and Materials Engineering

Dr. Andrew Swift, Interim Dean  
Dr. Stephen Stafford, Associate Dean  
Dr. Darrell Schroder, Assistant Dean

Engineering/Science Complex  
Engineering Bldg., Room E230  
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# College of Engineering

## General Information

Engineers enjoy one satisfaction that not everyone can claim—they can point to tangible evidence of their efforts. Every modern structure, computer, jet aircraft, power-generating plant, or new automobile design is a lasting testimonial to the engineers responsible for it. Thus, to a great extent, our current standard of living and high level of technology are due to the diligent and innovative efforts of engineers. Future accomplishments could help increase energy and food supplies, develop more contamination-free power plants, aid in medical science's fight against disease, and expand our computational and design skills beyond imagination. A notable researcher once captured the engineer's career satisfaction in pointing out that while scientists "explore what is," engineers "create what never has been."

The future for engineering graduates remains very bright. Our rapid pace of technological and industrial developments has established an ever-increasing need for highly talented and qualified professional engineers. In addition, the increasing demand for goods and services has imposed new challenges to present and future engineers. To provide these things and at the same time conserve resources and minimize environmental impact, engineers must recognize that solutions to long-standing societal problems are only found by thorough planning and study. With a capacity for problem solving, engineers may be the best qualified persons to address society's problems.

The complexities of today's economy and environment are such that all resources must be used in an optimal manner. Thus, the College of Engineering, through its curricula, strives to educate and train engineers who have the desire to learn and the breadth of vision to formulate and solve the problems of today and tomorrow. It is expected that a student who applies himself or herself and successfully completes one of the engineering or computer science programs will not only be technically prepared but also broadly educated, and thus ready to make a significant contribution to the world.

The College offers many programs of study which should be selected on the basis of personal ambitions, interests, and abilities. The student may choose the traditional BS degree and also consider advanced research-oriented graduate programs leading to the MS and PhD degrees. Within the College, the undergraduate programs in civil, electrical, industrial, mechanical, and metallurgical engineering are accredited by the Accreditation Board for Engineering and Technology (ABET). The breadth of modern computer technology is covered by BS and MS degrees in Computer Science and a computer engineering option in Electrical and Computer Engineering. The program leading to the degree BS in Computer Science is accredited by The Computer Science Accreditation Commission.

To recognize outstanding achievement and encourage professional activities, each program has one or more active student sections of the appropriate professional and honor societies. Additionally, there are campus chapters of professional societies which cover all fields of engineering. Participation in these groups provides a valuable educational and professional experience and students are encouraged to participate to the extent of their eligibility.

## Mathematics and English Preparation

In addition to the usual preparatory work, applicants to the College of Engineering are expected to have at least two years of algebra, one year of geometry, and one semester of trigonometry in preparation for their freshman year. Mathematics 4110 and English 3110 are not counted for credit toward any engineering degree. Students requiring these courses are urged to complete them during the summer term before entering the regular freshman program.

## Transfer Course Work

A student may transfer a maximum of 66 semester hours, limited to lower division courses, from two-year junior or community colleges. A maximum of 100 semester hours of courses is transferable from accredited U.S. colleges and universities. Transfer credit for engi-

neering courses is restricted to ABET accredited curricula or is awarded on the basis of departmental recommendation. Transfer students may be required to take competency exams and/or take specified courses which the department feels they must have in order to establish the quality of their degree. Credit for upper division engineering courses will be given only on the basis of departmental recommendation.

The academic records of all transfer students are reviewed by the College of Engineering to determine eligibility for admission into an engineering program. International students must meet the additional requirement of an overall minimum GPA of 3.0 in mathematics, chemistry, physics, and engineering for all institutions attended.

All transfer credit that is to be applied toward undergraduate engineering degree requirements must be evaluated and approved by the Dean of Engineering. Transfer credit evaluation should be done when the student transfers to the College or before completion of the lower division requirements.

## Change of Major

1. All petitions for change of major to or within the College of Engineering are subject to the approval of the chairperson of the department gaining the student.
2. Any student enrolled in a non-engineering program at the University may change his or her major to a department in the College of Engineering if he or she has demonstrated an aptitude for the engineering profession and is qualified to enroll for Mathematics 4111 in his or her first semester of engineering.
3. Any student enrolled in an engineering program at the University may change his or her major to another department in the College of Engineering if he or she has a minimum overall GPA of 2.0 and earned a minimum GPA of 2.0 in the semester previous to applying for change of major.
4. All students entering the College of Engineering must follow the catalog (or a later catalog) that is in effect at the time of their transfer.

## Lower Division Program

1. A student entering the College of Engineering must complete the designated lower division course block prior to enrolling in the upper division engineering sequence or any junior/senior classes.
  - a. Enrollment in the upper division courses prior to completion of the lower division requires permission of the student's department chairperson.
  - b. Substitutions for the lower division course requirements require the permission of the student's department chairperson.
2. Completion of the lower division block also requires a minimum 2.0 GPA for the lower division courses designated by the department and a "C" or better in certain specified courses.
3. Any student who does not satisfy the "C" minimum rule in the appropriately designated courses must repeat those courses.
4. Any student who has not met the requirements for satisfactory completion of the lower division block as stated above or who fails to make satisfactory progress toward a degree will be denied subsequent enrollment in the College of Engineering.

## Pre-Engineering Program

Students wishing to major in engineering or computer science will be classified as pre-engineering students until they have received a grade of "C" or better in MATH 4110 or have demonstrated an equivalent mathematics background.

## Limit on Engineering Course Enrollments

The maximum number of times an engineering course can be taken is three. All enrollments in a course that result in a grade of A, B, C, D, F, or W will be counted. Once a student has reached the

maximum of three enrollments, he or she will not be allowed to enroll in the course a fourth time. If the course is required in the student's degree plan, the student will not be able to complete the requirements for that degree. Once a student has obtained a "C" or better in an engineering course that course may not be repeated for credit.

**Enrollment In Engineering/Computer Science Courses by Non-Majors**

Enrollment in nearly all engineering and computer science courses is restricted to students with the appropriate majors. Students from outside the engineering college wishing to take engineering/computer science courses should request permission from the chairperson of the department offering the course.

**Double Majors**

Students in the College of Engineering may pursue more than one undergraduate degree. However, all requirements for each degree must be completed before the degree can be awarded.

**Cooperative Education**

Cooperative education is a program which integrates a student's formal academic study with special periods of practical work experience in business, industry, government, professional, or service organizations. These work experiences are an integral part of the student's education, supplementing academic knowledge and promoting and encouraging personal development and professional preparation. The academic value of work completed under the cooperative education program is recognized by allowing credit to be earned for completion of three work periods and submission of required reports. Contact the Dean of Engineering for information on the availability of co-op work assignments.

**Five-Year Bachelor/Master of Science Program**

The College of Engineering provides an opportunity for qualified students to participate in a five-year bachelor/master of science degree program. The program is structured to allow qualified engineering students to enter a graduate research or design program during the senior year of the bachelor's degree. During this fourth year the student may reserve certain courses for graduate credit, work actively on a research project for nine months, and may be considered for employment as a teaching or research assistant at the appropriate salary. Both the bachelor's and master's degrees can be completed in five academic years.

**Graduate Study**

Students who rank high in their undergraduate class should give serious consideration to developing their full intellectual potential in engineering by continuing with advanced studies at the graduate level. For those students interested in the practice of professional engineering, the Master of Science in Engineering (MSE) degree should be given serious consideration. The program involves 33 hours of coursework without a thesis. Possible areas of specialization include business management, operations research, computer science and others.

The more traditional master of science (MS) degree is available in civil engineering, computer engineering, computer science, electrical engineering, industrial engineering, manufacturing engineering, mechanical engineering, and metallurgical engineering. This degree is more research-oriented, normally requiring a thesis and up to 27 hours of graduate course work. PhD degrees are offered in computer engineering, materials science and engineering, and environmental science and engineering. Graduate programs are more fully discussed in the Graduate Catalog.

**Bachelor of Science in Civil Engineering**

The Civil Engineering Program at the undergraduate level is broadly based and provides courses in the major divisions of Civil Engineering, while at the same time offering an opportunity for specialization through junior and senior electives. There are three electives that permit more in-depth study: (1) Environmental, (2) Structures, and (3) Geotechnical.

**FRESHMAN YEAR**

		<i>Hours</i>
<i>1st Semester</i>		
CE	4103+	Introduction to Civil Engineering .....4
CHEM	3105+	General Chemistry .....3
CHEM	1105+	Laboratory for Chemistry 3105 .....1
ENGL	3111+	Expository English Composition .....3
CE	3105+	Graphic Fundamentals in Engineering Design.....3
MATH	4111+	Calculus I .....4
		18

*2nd Semester*

ENGL	3112+	Research and Critical Writing .....3
CS	4120+	Computer Programming for Scientists & Engineers .....4
MATH	3112+	Calculus II .....3
HIST	3101	History of U. S. to 1865 .....3
CHEM	3106+	General Chemistry <sup>1</sup> .....3
CHEM	1106+	Laboratory for Chemistry 3106 <sup>1</sup> .....1
		17

**SOPHOMORE YEAR**

*1st Semester*

CE	3215+	Engineering Mechanics I .....3
HIST	3102	History of the U.S. since 1865.....3
MATH	3213+	Calculus III .....3
PHYS	4211+	Fields and Waves .....4
POLS	3210	Introduction to Politics.....3
		16

*2nd Semester*

MECH	3238+	Engineering Mechanics II .....3
CE	3234+	Mechanics of Materials .....3
MECH	3375+	Thermodynamics .....3
MATH	3226+	Differential Equations .....3
POLS	3211	American Government and Politics .....3
		Directed elective <sup>2</sup> .....3
		18

**JUNIOR YEAR**

*1st semester*

CE	3313	Engineering Measurements .....3
CE	3343	Structural Analysis I .....3
CE	3373	Statistics Applications .....3
GEOL	3321	Geology for Engineers .....3
MECH	4354	Fluid Mechanics .....4
		16

*2nd semester*

IE	3326	Engineering Economy .....3
CE	4448	Soil Mechanics .....4
CE	1336	Materials Laboratory .....1
CE	3440	Transportation Engineering.....3
		Directed electives <sup>2</sup> .....6
		17

**SENIOR YEAR**

*1st Semester*

CE	3435	Structural Design I .....3
CE	3441	Water Supply Engineering .....3
ITS	3350	Technology & Society .....3
CE	1495	Senior Professional Orientation.....1
		Directed elective <sup>2</sup> .....6
		16

*2nd Semester*

CE	4456	Hydraulic Engineering .....4
CE	3442	Wastewater Engineering .....3
CE	1453	Water & Waste Laboratory .....1
CE	3461	Structural Design II .....3
CE	3488	Senior Design.....3
		Directed elective <sup>2</sup> .....3
		17

Total Semester Credit Hours 135

+ Grade of "C" or better required in these courses.

<sup>1</sup> Students may substitute PHYS 4210 and PHYS 1120 for this course.

<sup>2</sup> Electives (18 semester hours) must be approved by an advisor.

**100/COLLEGE OF ENGINEERING**

Core Curriculum Requirements:  
 Cultural Diversity menu (3 semester hours)  
 Humanities menu (3 semester hours)  
 Fine Arts menu (3 semester hours)  
 Mathematics elective (3 semester hours)  
 Civil Engineering electives (6 semester hours)

<i>2nd Semester</i>			
CS	3411	Software Engineering II .....	3
		Quantitative Science elective .....	3
		Technical elective .....	3
		Technical elective .....	3
		Directed elective .....	3
			<hr/> 15

Total semester credit hours 129

**Bachelor of Science in Computer Science**

The Computer Science Program at the undergraduate level is designed to provide a strong base in programming skills, problem solving, theoretical understanding of computer science, and practical experience in applying the computer to the solution of problems. Specialization is provided through numerous upper division electives

**FRESHMAN YEAR**

<i>1st Semester</i>		<i>Hours</i>	
CS	4101+	Introduction to Computer Science .....	4
ENGL	3111+	Expository English Composition .....	3
MATH	4111+	Calculus I .....	4
HIST	3101	History of U.S. to 1865 .....	3
		Free elective .....	3
			<hr/> 17

<i>2nd Semester</i>			
MATH	3112+	Calculus II .....	3
PHYS	4210+	Mechanics and Thermal Physics .....	4
PHYS	1120+	Physics Laboratory I .....	1
ENGL	3112+	Research and Critical Writing .....	3
HIST	3102	History of U. S. since 1865 .....	3
		Free elective .....	3
			<hr/> 17

**SOPHOMORE YEAR**

<i>1st Semester</i>			
CS	4201+	Programming and Algorithms .....	4
MATH	3200+	Discrete Mathematics .....	3
MATH	3213+	Calculus III .....	3
PHYS	4211+	Fields and Waves .....	4
PHYS	1121+	Physics Laboratory II .....	1
POLS	3210	Introduction to Politics .....	3
			<hr/> 18

<i>2nd Semester</i>			
CS	3202+	Data Structures .....	3
CS	3320+	Introduction to Computer Architecture .....	3
EE	3269	Digital Systems Design I .....	3
POLS	3211	American Government and Politics .....	3
		Directed elective .....	3
			<hr/> 15

**JUNIOR YEAR**

<i>1st Semester</i>			
CS	4332	Assembler Language Programming .....	4
CS	3330	Problem Oriented Programming Languages .....	3
STAT	3330	Probability or	
EE	3384	Probabilistic Methods in Engineering & Science .....	3
		Technical elective .....	3
		Directed elective .....	3
			<hr/> 16

<i>2nd Semester</i>			
CS	3360	Design and Implementation of Programming Languages .....	3
CS	3335	Systems Programming .....	3
MATH	3323	Matrix Algebra .....	3
		Technical elective .....	3
		Directed elective .....	3
			<hr/> 15

**SENIOR YEAR**

<i>1st Semester</i>			
CS	3410	Software Engineering I .....	3
CS	1495	Senior Professional Orientation .....	1
MATH	3429	Numerical Analysis .....	3
CS	3350	Automata, Computability, & Formal Languages .....	3
ITS	3350	Technology and Society .....	3
		Technical elective .....	3
			<hr/> 16

+ Grade of "C" or better is required in these courses.

Technical Electives must be advanced-level computer science or computer-related Electrical Engineering courses.

Directed Electives (12 semester hours)

Core Curriculum Requirements:

Fine Arts menu (3 semester hours)  
 Humanities menu (3 semester hours)  
 Cultural Diversity (3 semester hours)  
 Economics menu (3 semester hours)

Quantitative Science elective must be from the list approved by the Computer Science department.

**Bachelor of Science in Electrical Engineering**

The Electrical Engineering program contains six options. All options are divided into two-year lower and upper divisions. The lower division provides diverse courses covering a broad base of technical subjects while the upper division provides the more specialized courses.

**Freshman Year**

<i>1st Semester</i>		<i>Hours</i>	
EE	3105+	Introduction to Electrical Engineering .....	3
ENGL	3111+	Expository English Composition .....	3
CHEM	3105+	General Chemistry .....	3
MATH	4111+	Calculus I .....	4
		Core Curriculum Requirement* .....	3
			<hr/> 16

<i>2nd Semester</i>			
ENGL	3112+	Research and Critical Writing .....	3
CHEM	3106+	General Chemistry .....	3
MATH	3112+	Calculus II .....	3
HIST	3101	History of U. S. to 1865 .....	3
CS	4120+	Computer Programming for Scientists & Engineers .....	4
EE	1205+	Measurements Laboratory .....	1
			<hr/> 17

**SOPHOMORE YEAR**

<i>1st Semester</i>			
MATH	3213+	Calculus III .....	3
HIST	3102	History of U. S. since 1865 .....	3
POLS	3210	Introduction to Politics .....	3
EE	3269+	Digital Systems Design I .....	3
PHYS	4210+	Mechanics and Thermal Physics .....	4
PHYS	1120+	Physics Laboratory I .....	1
			<hr/> 17

<i>2nd Semester</i>			
EE	3251+	Networks I .....	3
EE	1251+	Basic EE Lab .....	1
MATH	3226+	Differential Equations .....	3
MATH	3323+	Matrix Algebra .....	3
PHYS	4211+	Fields and Waves .....	4
MECH	3239+	Engineering Dynamics or	
MECH	3375+	Thermodynamics I .....	3
			<hr/> 17

**JUNIOR YEAR**

<i>1st Semester</i>			
EE	1309	Computation Lab .....	1
EE	3339	Electronics I .....	3
EE	3352	Networks II .....	3
EE	3321	Electromagnetic Field Theory .....	3

EE	3376	Microprocessor Instrumentation .....	3
EE	1376	Microprocessor Instrumentation Lab .....	1
PHYS	3325	Survey of Modern Physics .....	3
			<u>17</u>
<i>2nd Semester</i>			
EE	2310	Electrical Engineering Lab I .....	2
EE	3340	Electronics II .....	3
EE	3329	Electronic Materials .....	3
EE	3353	Signals and Systems .....	3
EE	3384	Probabilistic Methods .....	3
		Core Curriculum Requirement* .....	3
			<u>17</u>
<b>SENIOR YEAR</b>			
<i>Two Semesters</i>			
			<i>Hours</i>
EE	1495	Senior Professional Orientation .....	1
EE	1412	Senior Project Lab I .....	1
EE	2411	Electrical Engineering Lab II .....	2
		or .....	
EE	1442	Digital Lab II .....	2
		and .....	
EE	1478	Microprocessor and Interfacing Lab .....	2
EE	2412	Senior Project Lab II .....	2
POLS	3211	American Government and Politics .....	3
		Core Curriculum Requirement* .....	3
IE	3326	Engineering Economy .....	3
		Option Courses * .....	12
		Approved Technical electives* .....	6
			<u>33</u>
Total Semester Credit Hours			134

+ Grade of "C" or better required in these courses.

\* Nine hours of electives must be selected from core curriculum courses. Three of these hours must be in fine arts, three hours in humanities, and three hours in cultural diversity. At least 12 hours must be selected from one of the options described below. Three hours of approved technical electives must be selected from upper level courses in Engineering or the Biological or Physical Sciences. Three additional hours of technical electives must be chosen from the technology and society menu of the core curriculum and they must be upper level.

## Options

Each option lists courses that permit students to develop a specialization or pursue particular career objectives. In satisfying the requirements of an option, students will complete an in-depth program of current interest to electrical engineering. Students should select an option prior to completion of the junior year and plan their course of study in order to satisfy any prerequisite for courses within their chosen option. Most option courses are offered only once each academic year. By careful selection of electives, students may obtain more depth in their chosen option or develop breadth in electrical engineering. Students may petition their advisor for course substitution within the option.

### Option 1 – General Electrical Engineering

This option provides students with a program of study that emphasizes the major areas within electrical engineering. This option is intended for students with broad interests in all aspects of electrical engineering. To fulfill the requirements of this option, a student should complete at least one course from four of the five groupings listed below.

1. Electrical Engineering 3385 (Energy Conversion) or 3464 (Systems and Controls);
2. Electrical Engineering 3447 (Electromagnetic Energy Transmission and Radiation);
3. Electrical Engineering 3441 (Communication Systems) or 3488 (Digital Communications);
4. Electrical Engineering 3450 (Solid-State Physical Electronics);
5. Electrical Engineering 3442/1442 (Digital Systems Design II) or 3478/1478 (Microprocessor Systems II).

### Option 2 – Computer Engineering

The computer engineering option is concerned with the organization, design, and use of digital hardware. Students who satisfy the requirements of this option have the opportunity to be prepared to work in both the design and application of modern computing systems. To fulfill the requirements of this option, a student should complete Electrical Engineering 3372 and Electrical Engineering 3474 and at least two of the five groupings of courses and labs listed below.

1. Electrical Engineering 3442/1442 (Digital System Design II);
2. Electrical Engineering 3472 (Microcontroller Applications);
3. Electrical Engineering 3475. (VLSI Design I);
4. Electrical Engineering 3478/1478 (Microprocessor Systems II);
5. Electrical Engineering 3479 (Advanced Computer Architecture).

### Option 3 – Electromagnetic Engineering

This option emphasizes basic electromagnetic and other physical phenomena related to the generation, transmission, conversion and reception of signals throughout the entire frequency spectrum. To fulfill the requirements of this option, a student should complete at least four of the courses listed below.

1. Electrical Engineering 3447 (Electromagnetic Energy Transmission and Radiation);
2. Electrical Engineering 3461 (Fiber Optic Communications);
3. Electrical Engineering 3480 (Microwave Communications);
4. Electrical Engineering 3481 (Electro-optical Engineering);
5. Electrical Engineering 3482 (Antenna Engineering);
6. Electrical Engineering 3486 (Computational Methods in Electrical Engineering);
7. Electrical Engineering 3489 (High Resolution Radar).

### Option 4 – Communications and Control Engineering

This option stresses analysis and design of systems for information transmission, control and signal processing. Applications include industrial process control, communication systems, navigation and guidance systems, etc. To fulfill requirements for this option, students should complete at least four of the courses listed below.

1. Electrical Engineering 3385 (Energy Conversion);
2. Electrical Engineering 3441 (Communication Systems);
3. Electrical Engineering 3461 (Fiber Optic Communications);
4. Electrical Engineering 3464 (Systems and Control);
5. Electrical Engineering 3483 (Digital Signal Processing);
6. Electrical Engineering 3488 (Digital Communications).

### Option 5 – Solid State Devices and Materials

This option provides students with the opportunity to study basic semiconductor devices and materials that have applications to a variety of electronic systems. To fulfill the requirements of this option, a student should complete at least four of the courses listed below.

1. Electrical Engineering 3450 (Solid-State Physical Electronics);
2. Electrical Engineering 3461 (Fiber Optic Communications);
3. Electrical Engineering 3475 (VLSI Design I);
4. Electrical Engineering 3481 (Electro-optical Engineering);
5. Physics 3455 (Introductory Quantum Mechanics);
6. Physics 3456 (Atoms, Molecules, and Solids).

### Option 6 – Electronics Engineering

This option is designed to prepare students in the theoretical analysis, design, and testing of modern electronic circuits. To fulfill requirements of this option, a student should complete at least four of the courses listed below.

1. Electrical Engineering 3442/1442 (Digital Systems Design II);
2. Electrical Engineering 3450 (Solid-State Physical Electronics);
3. Electrical Engineering 3472 (Microcontroller Applications);
4. Electrical Engineering 3475 (VLSI Design I);
5. Electrical Engineering 3478/1478 (Microprocessor Systems II);
6. Electrical Engineering 3485 (Biomedical Instrumentation).

### Bachelor of Science in Industrial Engineering

The Industrial Engineering Curriculum is designed for students who desire to enter industry or pursue advanced studies. The curriculum provides a broad range of courses in the areas of management of human resources, plant design, operations research, and quality control.

#### FRESHMAN YEAR

<i>1st Semester</i>		<i>Hours</i>
CE 3105+	Graphic Fundamentals .....	3
ENGR 4101+	Introduction to Engineering.....	4
ENGL 3111+	Expository English Composition .....	3
MATH 4111+	Calculus I .....	4
CHEM 3105+	General Chemistry .....	3
CHEM 1105+	Chemistry Laboratory.....	1
		18

#### *2nd Semester*

HIST 3101	History of U. S. to 1865 .....	3
CS 4120	Computer Programming for Engineering.....	4
ENGL 3112+	Research and Critical Writing .....	3
MATH 3112+	Calculus II .....	3
PHYS 4210+	Mechanics and Thermal Physics .....	4
PHYS 1120+	Physics Laboratory II .....	1
		18

#### SOPHOMORE YEAR

<i>1st Semester</i>		<i>Hours</i>
CE 3215+	Engineering Mechanics I .....	3
IE 3216+	Ergonomics .....	3
IE 3236+	Manufacturing Processes .....	3
MATH 3213+	Calculus III .....	3
PHYS 4211+	Fields and Waves.....	4
		16

#### *2nd Semester*

CE 3234+	Mechanics of Materials .....	3
HIST 3102	History of U. S. since 1865.....	3
MATH 3226+	Differential Equations .....	3
MECH 3238+	Engineering Mechanics II .....	3
MECH 3241+	Engineering Analysis .....	3
Science Elective	GEOL 3101, BIOL 3105, CHEM 3106 .....	3
		18

#### JUNIOR YEAR

<i>1st Semester</i>		<i>Hours</i>
MECH 3375	Thermodynamics I .....	3
IE 3326	Engineering Economy .....	3
MATH 3323	Matrix Algebra.....	3
IE 3330	Prob. Models and Data Analysis.....	3
POLS 3210	Introduction to Politics.....	3
	Fine Arts Elective .....	3
		18

#### *2nd Semester*

EE 4377	Basic Electrical Engineering .....	4
MECH 4354	Fluid Mechanics .....	4
POLS 3211	American Government and Politics .....	3
IE 3389	Deterministic Operations Research .....	3
IE 3377	Methods Engineering.....	3
		17

#### SENIOR YEAR

<i>1st Semester</i>		<i>Hours</i>
ACCT 3309	Survey of Accounting .....	3
IE 3453	Industrial System Simulation .....	3
IE 3491	Production and Inventory Control .....	3
IE 3492	Probabilistic Operations Research .....	3
ITS 3350	Interdisciplinary Technology and Society .....	3
		15

#### *2nd Semester*

IE 3484	Industrial Layout.....	3
IE 3485	Statistical Quality Control & Reliability .....	3
IE 4466	Senior Design.....	4
	Humanities elective.....	3
	Cultural Diversity elective.....	3
		16

Total Semester Credit Hours 136

+ Grade of "C" or better required in these courses.

Approved IE Technical Electives: IE 3432, IE 3493, IE 3443, IE 3411, MECH 3241, MECH 3365, MECH 3305, MECH 3456.

### Bachelor of Science in Mechanical Engineering

The Mechanical Engineering curriculum is designed for students who desire to enter industry or pursue advanced studies. The curriculum provides a broad range of courses in the areas of thermal sciences, fluid mechanics, and mechanical design.

#### FRESHMAN YEAR

<i>1st Semester</i>		<i>Hours</i>
CE 3105+	Graphic Fundamentals .....	3
ENGR 4101+	Introduction Engineering.....	4
ENGL 3111+	Expository English Composition .....	3
MATH 4111+	Calculus I .....	4
CHEM 3105+	General Chemistry .....	3
CHEM 1105+	Chemistry Lab.....	1
		18

#### *2nd Semester*

HIST 3101	History of U. S. to 1865 .....	3
CS 4120+	Computer Programming for Engineering.....	4
ENGL 3112+	Research and Critical Writing .....	3
MATH 3112+	Calculus II .....	3
PHYS 4210+	Mechanics and Thermal Physics .....	4
PHYS 1120+	Physics Laboratory I .....	1
		18

#### SOPHOMORE YEAR

<i>1st Semester</i>		<i>Hours</i>
CE 3215+	Engineering Mechanics I .....	3
MME 3203+	Introduction to Materials Science & Engineering .....	3
IE 3236+	Manufacturing Processes .....	3
MATH 3213+	Calculus III .....	3
PHYS 4211+	Fields and Waves.....	4
		16

#### *2nd Semester*

CE 3234+	Mechanics of Materials .....	3
HIST 3102	History of U. S. since 1865.....	3
MATH 3226+	Differential Equations .....	3
MECH 3238+	Engineering Mechanics II .....	3
MECH 3241+	Engineering Analysis .....	3
Science elective	GEOL 3101, BIOL 3105, or CHEM 3106 .....	3
		18

#### JUNIOR YEAR

<i>1st Semester</i>		<i>Hours</i>
MECH 3375+	Thermodynamics I .....	3
MECH 3305	Basic Measurements and Instrumentation .....	3
IE 3330+	Prob. Models & Engineering Data Analysis .....	3
IE 3326	Engineering Economy .....	3
	Fine Arts Elective .....	3
POLS 3210	American Government and Politics .....	3
		18

#### *2nd Semester*

EE 4377	Basic Electrical Engineering .....	4
MECH 3365	Dynamic Response .....	3
MECH 4354	Fluid Mechanics .....	4
	Humanities Elective.....	3
POLS 3211	American Government and Politics .....	3
		17

#### SENIOR YEAR

<i>1st Semester</i>		<i>Hours</i>
ITS 3350	Interdisciplinary Technology and Society .....	3
MECH 3363	Kinematics of Mechanisms .....	3
MECH 3464	Mechanical Design .....	3
MECH 3376	Thermodynamics II .....	3
	Technical Elective* ME or IE course from list below.....	3
		15



*2nd Semester*

MECH 4451	Heat Transfer .....	4
MECH 3411	Automatic Controls.....	3
MECH 1411	Controls Laboratory .....	1
MECH 4466	Senior Design .....	4
	Cultural Diversity elective.....	3
		<u>15</u>

Total Semester Credit Hours 135

+ Grade of "C" or better required.

\* Approved technical electives are: MECH 3412, MECH 3443, MECH 3455, MECH 3456, MECH 3468, MECH 3471, MECH 3487, MECH 3495; IE 3377, IE 3432, IE 3465, IE 3484.

## Bachelor of Science in Metallurgical and Materials Engineering

The Metallurgical and Materials Engineering curriculum is a broad based program designed to provide a basic education in metallurgical and materials engineering. The student can specialize in one or more areas in the junior and senior year by taking appropriate elective courses. The program is well suited for a career in industry or as a basis for graduate study. Courses related to advanced materials topics are also available.

### FRESHMAN YEAR

*First Semester*

ENGL 3111+	Expository English Composition .....	3
MATH 4111+	Calculus I .....	4
CHEM 3105+	General Chemistry .....	3
CHEM 1105+	Chemistry Lab .....	1
HIST 3101	History of U.S. to 1865 .....	3
MME 4101+	Introduction to Engineering Calculations .....	4
		<u>18</u>

*Second Semester*

ENGL 3112+	Research & Critical Writing .....	3
MATH 3112+	Calculus II .....	3
CHEM 3106+	General Chemistry .....	3
CHEM 1106+	Chemistry Lab .....	1
HIST 3102	History of U.S. since 1865.....	3
MME 4102+	Introduction to Engineering Calculations and Design .....	4
		<u>17</u>

### SOPHOMORE YEAR

*Third Semester*

POLS 3210	Introduction to Politics.....	3
MATH 3213+	Calculus III .....	3
PHYS 4210+	Mechanics & Thermal Physics.....	4
PHYS 1210+	Physics Lab.....	1
CE 3215+	Mechanics I.....	3
	Cultural Diversity elective.....	3
		<u>17</u>

*Fourth Semester*

POLS 3211	American Government and Politics .....	3
MATH 3226+	Differential Equations .....	3
PHYS 4211+	Fields & Waves .....	4
PHYS 1121+	Physics Lab.....	1
MME 3203+	Introduction to Material Science and Engr .....	3
CE 3234+	Mechanics of Materials .....	3
		<u>17</u>

### JUNIOR YEAR

*Fifth Semester*

EE 4377+	Introduction to Electrical Engineering.....	4
MME 3305+	Material & Energy Balance .....	3
MME 4306+	Physical Metallurgy .....	4
	Fine Arts elective.....	3
	Science elective <sup>4</sup> .....	3
		<u>17</u>

*Sixth Semester*

MME 3306+	Transport Phenomena.....	3
MME 3308+	Applied Thermodynamics.....	3
MME 4307+	Mech. Behavior of Materials .....	4
	Humanities elective <sup>1</sup> .....	3
	Science elective <sup>4</sup> .....	3
		<u>16</u>

### SENIOR YEAR

*Seventh Semester*

MME 3309	Electronic Materials Science.....	3
MME 3403	Metals Processing.....	3
IE 3326	Engineering Economy .....	3
MME 1495	Senior Prof. Orientation .....	1
MME	elective <sup>3</sup> .....	3
MATH	elective <sup>2</sup> .....	3
		<u>16</u>

*Eighth Semester*

MME 4413	Structural Characterization .....	4
MME 4404	Materials Processing.....	4
MME 4419	Met. & Materials Design .....	4
ITS 3350	Technology and Society .....	3
MME	elective <sup>3</sup> .....	3
		<u>18</u>

Total Semester Credit Hours 136

+ Grade of "C" or better required. A "C" or better is required in MME courses through the junior year.

<sup>1</sup> Check current list of approved humanities/fine arts electives.

<sup>2</sup> Approved math electives are EE 3484, IE 3230, MATH 3323, MATH 3335, or a MATH course approved by advisor.

<sup>3</sup> Electives offered are Advanced Electronic Materials Science (3310), Composite Materials (3314), Engineering Alloys (3321), Corrosion (3409), Polymer Engineering (3410), Materials Fabrication (4405), Failure Analysis (3416), and High Temperature Materials Science (3420).

<sup>4</sup> CHEM 3324, CHEM 3325, CHEM 3321, CHEM 3322, CHEM 3351, CHEM 3351, CHEM 3352, PHYS 3325, or an upper division chemistry or physics course approved by advisor.

## Engineering (ENGR)

### 1100 Introduction to Engineering Seminar (1-0)

A pre-engineering program of study to include engineering ethics, pre-professional employment opportunities, and individual activities. Plant visits. Progress monitoring. *Prerequisite:* ENGR 3100 or instructor's approval.

### 3100 Introduction to Engineering (3-0)

An introduction to the engineering profession. Career choices in engineering and computer science. Approaches to engineering problem solving and design through the use of engineering principles. Developing communication skills and study techniques. Groups and individual activities. Progress monitoring. Engineering 3100 cannot be offered in substitution for any degree requirement in the College of Engineering. *Prerequisite:* Instructor's approval.

### 4101 Introduction to Engineering and Design (3-3)

This course will introduce the student to effective procedures for solving engineering and design problems using mathematics, computers, basic measuring systems and devices, computational tools, and statistical concepts. The course will also introduce the student to the engineering profession, including the role and responsibilities of the engineer in today's society. *Prerequisites:* Math 4110 or concurrently, and ENGL 3111 or concurrently.

### 4102 Foundations of Engineering and Design (3-3)

This course will introduce the student to foundations for computer programming, engineering design, project management, engineering economy, safety, human factors, engineering ethics, and legal aspects of engineering practice. These topics will be integrated with design projects that include written and oral presentations. *Prerequisites:* ENGR 4101 with a "C" or better and MATH 4111 or concurrently.

# Civil Engineering

201B Engineering Science Complex  
(915) 747-5464

CHAIRPERSON: Miguel Picornell-Darder  
PROFESSORS EMERITI: Howard G. Applegate, Herbert H. Bartell,  
Ralph M. Coleman, Paul C. Hassler, Jr.  
PROFESSORS: Tarquin, Turner  
ASSOCIATE PROFESSORS: Ferregut, Nazarian, Oey, Osegueda,  
Picornell-Darder, Rozendal  
ASSISTANT PROFESSORS: Ashur, Walton

## Civil Engineering (CE)

For Undergraduates

*General Prerequisite:* All upper division undergraduate courses (X3XX, X4XX) in Civil Engineering have an additional prerequisite. Junior standing in Civil Engineering or written permission of the instructor.

### 3105 Graphic Fundamentals in Engineering Design (2-4) (Common Course Number ENGR 1304)

Freehand projection, fundamentals of multiview projections, auxiliaries, sections, detailed drawings, and dimensioning, pictorials and computer-aided drafting. Laboratory fee required.

### 4103 Introduction to Civil Engineering (3-3) (Common Course Number ENGR 1304)

A general introduction to the field of civil engineering and the engineer's responsibilities to society. The class includes procedures for solving engineering and design problems with computational tools and statistical concepts. The class includes a three hour lab each week where the student learns to utilize the computer as an engineering tool, prepares a team design project, and visits engineering facilities.

### 3215 Engineering Mechanics I (3-0) (Common Course Number ENGR 2301)

Forces in space, equilibrium of particles and rigid bodies, friction, centroids, and centers of gravity. *Prerequisite:* MATH 4111.

### 3234 Mechanics of Materials I (3-0) (Common Course Number ENGR 2332)

Study of stress, strain, torsion, shear, moment, flexure, combined stresses, and column action. *Prerequisite:* CE 3215.

### 1336 Engineering Materials Laboratory (0-3)

Laboratory practice in manufacture and testing of concrete, steel, wood, and plastic specimens; instrumentation work in the measurement of stresses and strains. *Prerequisite:* CE 3234. Laboratory fee required.

### 3313 Engineering Measurements (2-3)

Theory and practice of surveying measurements with emphasis on precision, errors, and significant figures, the use of the level, transit, and engineer's tape. *Prerequisites:* CE 3105 and CS 4120. Laboratory fee required.

### 3343 Structural Analysis (3-0)

A study of framed structures, trusses, girders, and beams including applications of static and moving loads on bridges. *Prerequisite:* CE 3234.

### 3373 Probability, Statistics, and Decision Models for Civil Engineers (3-0)

Applications of statistical methods in structural, geotechnical, environmental, and transportation engineering data. Development of probabilistic models for winds, hydrologic precipitation, and other natural variables. Statistical decision models for engineering design. *Prerequisite:* MATH 4111.

For Undergraduates and Graduates

### 3325 Environmental Engineering Fundamentals (3-0)

Introduction to the engineering aspects of environmental systems to include such topics as water quality management, air pollution and control, solid and hazardous waste management, environmental impact assessment, and governmental regulation. *Prerequisite:* Junior standing in engineering or science.

### 4390 Introduction to Air Pollution (3-3)

Classification of air pollutants and their effects on man, animals, plants, and the environment; meteorological aspects of air pollution; sources of air pollution; plume characteristics; units of measurement; physical properties of dusts, gases, and aerosols. *Prerequisites:* Junior standing in engineering or sciences and instructor's approval. Laboratory fee required.

### 1453 Water and Waste Laboratory (0-3)

Laboratory analysis of water and wastes. Co-requisite: Concurrent enrollment in CE 3441 or CE 3442. Laboratory fee required.

### 1471 Engineering Problems (0-0-1)

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisites:* Senior standing and departmental approval.

### 1481 Co-op Work Experiences (0-0-1)

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

### 1482 Co-op Work Experiences (0-0-1)

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

### 1483 Co-op Work Experiences (0-0-1)

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

### 1495 Senior Professional Orientation (1-0)

Introduction to the Engineering profession with emphasis on job placement, professional ethics, and an engineering field examination. Required of all students prior to graduation.

# Computer Science

234 Computer Science Building  
(915) 747-5480

CHAIRPERSON: Daniel E. Cooke

PROFESSORS: Bernat, Gelfond

ASSOCIATE PROFESSORS: Cooke, Ewton, Kreinovich, Longpre

ASSISTANT PROFESSOR: Baral, Gates

LECTURER: Bell

## Computer Science (CS)

For Undergraduates

### 3110 Introduction to Computer Programming (3-0) (Common Course Number COSC 1301)

Fundamentals of computers including software, hardware, impact on society, and beginning programming in a high-level language, such as PASCAL. Designed for students not engaged in mathematically oriented studies.

### 4101 Introduction to Computer Science (3-3) (Common Course Number COSC 1430)

An introduction to computers, impact of computing, problem solving, programming environments including editors, compilers, and loaders, and to elementary PASCAL through arrays. Prerequisite to all other courses for the major in Computer Science. *Prerequisite:* MATH 4110.

### 4120 Computer Programming for Scientists and Engineers (3-3) (Common Course Number COSC 1405)

Introduction to computers and problem solving with digital computers. A procedural programming language will be utilized to solve scientific and engineering oriented problems. Visualization methods will also be used to provide an experimental approach to problem solving. *Prerequisite:* MATH 4110.

### 3202 Data Structures (3-0) (Common Course Number COSC 2318)

Abstract data types, representation of data using sets, lists, trees, and graphs. Storage allocation and collection techniques. *Prerequisites:* CS 4201 and MATH 3200.

### 4201 Programming and Algorithms (3-3) (Common Course Number COSC 1418)

Continuation of CS 4101, including the remainder of the PASCAL language. Introduction to algorithmic analysis including searching, sorting, string processing, and recursion. *Prerequisites:* CS 4101.

### 3320 Introduction to Computer Architecture (3-0)

The organization and structuring of the major hardware components of computers; the mechanics of information transfer and control within a digital computer system; the fundamentals of logic design; machine instructions; addressing techniques. *Prerequisites:* CS 4332.

### 3330 Problem Oriented Programming Languages (3-0)

A detailed study of one or more modern programming languages (C, Ada, Module-2, LISP, PROLOG, etc.), which is of particular value in a student's area of interest. Languages will be taught in rotation. May be repeated once for credit as a technical elective when the application area of the programming language differs. *Prerequisite:* CS 3202 or CS 3333.

### 3333 Basic Concepts in Computer Science (3-0)

Introduction to the fundamentals of data types (lists, trees, sets, graphs, etc.), searching and sorting, context-free languages, finite automata, and Turing Machines. May not be counted toward the major in Computer Science. *Prerequisite:* CS 4120 or CS 4101.

### 2471 Engineering Problems (0-0-2)

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisites:* Senior standing and departmental approval.

### 3435 Structural Design I (3-0)

Reinforced concrete theory, design of beams, columns, slabs, footings, and retaining walls using current design specifications. *Prerequisites:* CE 3343 and CE 1336.

### 3440 Transportation Engineering (3-0)

Study of planning, economics, finance, location, design, and administration of transportation systems. *Prerequisite:* CE 3313 or concurrent enrollment.

### 3441 Water Supply Engineering (3-0)

Principles of water supply and the application of those to the design and operation of municipal and industrial water systems. *Prerequisites:* IE 3326 and MECH 4354.

### 3442 Wastewater Engineering (3-0)

Principles of wastewater collection, treatment, and disposal and their application to the design and operation of municipal and industrial wastewater systems. *Prerequisites:* IE 3326 and MECH 4354.

### 3449 Foundation Engineering (3-0)

Subsoil exploration, spread footings, mat foundations, retaining walls, sheet pile structures, braced cuts, pile foundations, and caissons. *Prerequisite:* CE 4448.

### 3455 Pavement Material Characterization (3-0)

Asphalt cement, aggregates, hot mix, and asphalt mix design. Characterization of asphalt mixture. Mechanical modification of soils. Modification of soils by admixtures. *Prerequisite:* Instructor's approval.

### 3461 Structural Design II (3-0)

Design of steel structures including the application of plastic design methods using current design specifications. *Prerequisite:* CE 3343.

### 3471 Engineering Problems (0-0-3)

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisites:* Senior standing and departmental approval.

### 3488 Senior Design (1-6)

Conceptual, preliminary, and final design projects. *Prerequisites:* Departmental approval and minimum of 115 hours of Civil Engineering Curriculum completed. Laboratory fee required.

### 4448 Soil Mechanics (3-3)

Physical and mechanical properties of soils, plasticity, shrinkage, permeability, seepage, consolidation, shear strength, Rankine and Coulomb earth pressure, and braced cuts. *Prerequisites:* CE 3234, MECH 4354, and GEOL 3321. Laboratory fee required.

### 4456 Hydraulic Engineering (3-3)

Essential principles of hydraulics and hydrology demonstrated in the laboratory and applied to the design of hydraulic structures. *Prerequisite:* MECH 4354. Laboratory fee required.

### 4460 Structural Analysis II (3-3)

Analysis of statically indeterminate structures including continuous beams and frames. *Prerequisite:* CE 3343.

### 4470 Mechanics of Materials II (3-3)

Analysis of problems dealing with energy methods, curved bars, torsion of noncircular sections, fatigue, stress concentration, stress and strain, and experimental methods of stress determination. *Prerequisites:* CE 3234 and Senior standing.

See the *Graduate Studies Catalog* for graduate programs and courses.

**3335 Systems Programming (3-0)**

The design and implementation of the programming environment including editors, compilers, loaders and linkers, debuggers and operating systems. *Prerequisites:* CS 3202 or CS 3333.

**3350 Automata, Computability and Formal Languages (3-0)**

Languages and their grammars. Chomski's classification of abstract languages. The connections between languages, machines, and neural networks. Finite and infinite automata; their structure, capabilities, and limitation. *Prerequisites:* CS 3202 or CS 3333.

**3360 Design and Implementation of Programming Languages (3-0)**

Design features of modern programming languages including flow control mechanism and data structures; techniques for implementation of these features. *Prerequisite:* CS 3202 or CS 3333.

**3370 Computer Graphics (3-0)**

An introduction to representation and display of graphical information including line, character, and curve generation. Emphasis on two-dimensional techniques. *Prerequisites:* CS 3202 or CS 3333, and MATH 3323.

**4332 Assembler Language Programming (3-3)**

Symbolic coding of instructions and data, macro definition and use, subroutines and linkage, input/output handling at the assembly level, and the structure of assemblers. *Prerequisite:* CS 3202 or CS 3333.

**1471 Computer Science Problems (0-0-1)**

Original investigation of special problems in the student's area of interest, the problem being selected by the student in consultation with the instructor and with the permission of the Chairperson of the Computer Science Department. May be repeated for credit. *Prerequisites:* Senior standing in Computer Science and departmental approval.

**1495 Senior Professional Orientation (1-0)**

Introduction to the Computer Science profession with emphasis on job placement and professional ethics. Senior standing in Computer Science. Required of all students prior to graduation. Offered in the Fall semester only.

**3410 Software Engineering I (3-0)**

Design techniques including top-down design and development, information security, and stepwise refinement. Organizing and managing software system development including milestones, estimating, teams, walk-throughs, and documentation. *Prerequisite:* Senior standing.

**3411 Software Engineering II (3-0)**

Implementation of the project designed in CS 3410 providing practical experience in the design and implementation of large programming projects. *Prerequisite:* CS 3410.

**3420 Artificial Intelligence (3-0)**

Introduction to basic concepts and techniques of artificial intelligence including knowledge representation, search strategies, symbolic logic, expert systems, and applications. *Prerequisite:* CS 3350 or CS 3333.

**3442 Data Base Management (3-0)**

Introduction to data base concepts, hierarchical, network and relational data models, data description and query languages, file and index organization, and file security and integrity. Both main-frame and small computer approaches will be covered. *Prerequisite:* CS 3202 or CS 3333.

**3452 Translation of Programming Languages (3-0)**

The structure of compilers and interpreters. Lexical analysis, syntax analysis, and formal description of programming languages. Semantic analysis, intermediate languages, and optimization. Compiler writing languages and bootstrapping. *Prerequisite:* CS 3333 or CS 3350.

**3465 Neural Networks (3-0)**

Introduction to basic concepts and techniques of neural networks, including their relation to biological neurons, their computational and learning abilities, and applications of neural networks.

**3471 Computer Science Problems (0-0-3)**

Original investigation of special problems in the student's area of interest, the problem being selected by the student in consultation with the instructor and with the permission of the Chairperson of the Computer Science Department. May be repeated for credit. *Prerequisites:* Senior standing in Computer Science and departmental approval.

**3475 Theory of Operating Systems (3-0)**

Topics include multiprocessing, time sharing and real time systems, scheduling and resource allocation, virtual memory, paging and segmentation, and file management. *Prerequisite:* CS 3335 or CS 3330.

**3490 Special Topics In Computer Science (3-0)**

Selected topics of current interest in Computer Science. May be repeated for credit when topic varies. *Prerequisites:* Senior standing in Computer Science and departmental approval.

See the *Graduate Studies Catalog* for graduate programs and courses.

# Electrical and Computer Engineering

301 Engineering Science Complex  
(915) 747-5470

CHAIRPERSON: Michael E. Austin

PROFESSORS: Austin, Gibson, Liu, Pierluissi, Riter, Schroder, Singh, Smith, Starks, Williams

ASSOCIATE PROFESSORS: Cabrera, Manoli, Nemir, Shadaram

ASSISTANT PROFESSORS: Carrasco-Flores, Lush, Usevitch

LECTURER: Myers

## Electrical and Computer Engineering (EE)

For Undergraduates

*General Prerequisite:* Junior standing for all 300 or 400 level courses.

**3105 Introduction to Electrical Engineering (3-0)**

An exposure to the mathematical and physical concepts which are essential to the field of electrical engineering. Includes applications at an elementary level in the areas of networks, measurements, semiconductor electronics, energy conversion, and digital computers. *Prerequisite:* MATH 4110. Must be taken prior to registration for EE 3251.

**1205 Measurements Laboratory (1-2)**

Introduction to Electrical Engineering laboratory procedures, causes, and correction of errors in measurements, theory of operation and usage of basic Electrical Engineering test instruments, and report writing. *Prerequisite:* EE 3105. Fees required.

**1251 Basic Electrical Engineering Laboratory (1-2)**

Introduction to oscilloscopes, oscillators and function generators, transient RLC network experiments and iodes, fundamental laboratory procedures, and laboratory manual preparation. *Prerequisite:* EE 1205; must be taken concurrently with EE 3251. Fees required.

**3251 Networks I (3-0)**

Theory and analysis of electrical networks including basic fields and circuits concepts, Kirchhoff's laws, mesh and nodal analysis, and an introduction to the sinusoidal steady state. *Prerequisites:* MATH 3213, MATH 3226, and PHYS 4211 or concurrently; must be taken concurrently with EE 1251.

**3269 Digital Systems Design I (3-0)**  
(Common Course Number COSC 1309)

Design and synthesis of digital systems using both combinational and sequential circuits. *Prerequisite:* EE 3105 with grade of "C" or better. Course fee required.

**1309 Computer-aided Electronics Design (1-2)**

Design of electronic circuits using computer-based work station. Includes schematic capture, simulation, and PC board layout. *Prerequisites:* EE 3251 and EE 3269.

**1376 Laboratory for Electrical Engineering 3376 (0-3)**

Assembly programming, design, and implementation of micro-computer systems. *Prerequisite:* Must be taken concurrently with EE 3376.

**2310 Electrical Engineering Laboratory I (1-4)**

Introduction to experimental analysis of bipolar junction transistors, junction field effect transistors, switching power supplies, amplifiers, and oscillators. Includes digital circuits and introduction to transducers. *Prerequisite:* EE 3339 with grade of "C" or better. Fees required.

**3321 Electromagnetic Field Theory (3-0)**

Fundamentals of static and time-varying electromagnetic fields through the application of vector calculus to the solution of Maxwell's equations. Topics include propagation and reflection of plane waves in conductors and dielectrics, energy storage and forces, and transmission-line equations. *Prerequisite:* EE 3251.

**3329 Electronic Materials (3-0)**

Energy band models, electron and hole concentrations and transport, p-n junction, bipolar junction transistors, and field effect devices. *Prerequisites:* PHYS 3325; EE 3321 with grade of "C" or better.

**3339 Electronics I (3-0)**

Electronic properties of materials, terminal characteristics of semiconductor devices, graphical methods, two-port network analysis, small-signal equivalent circuits, frequency response methods, and root-locus analysis. *Prerequisite:* EE 3251.

**3340 Electronics II (3-0)**

Application of the concepts and methods developed in *Electronics I* to large- and small-signal tuned amplifiers and broad-band amplifiers. Concepts of wave-shaping, waveform generation, and switching are developed. *Prerequisites:* EE 3339 and EE 3352, each with grade of "C" or better.

**3352 Networks II (3-0)**

Continuation of theory and analysis of electrical networks. Includes sinusoidal steady state analysis, frequency plots, Fourier analysis, network theorems, and two-port networks. *Prerequisite:* EE 3251.

**3353 Signals and Systems (3-0)**

Representation and analysis of signals; fourier transforms, z-transforms and difference equations; linear systems response and transfer functions; state space analysis. *Prerequisite:* EE 3352 with grade of "C" or better.

**3376 Microprocessor Systems I (3-0)**

Study of microprocessor programming models, assembly language, macro assemblers, and an introduction to system integration and interfacing. *Prerequisites:* CS 4120, EE 3269, and EE 3251; must be taken concurrently with EE 1376.

**3385 Energy Conversion (3-0)**

Theory and performance characteristics of electro-mechanical energy conversion equipment to include transformers and both d-c and a-c generators and motors and the control devices employed therewith. *Prerequisite:* EE 3353 with grade of "C" or better.

**4377 Basic Electrical Engineering (3-3)**

Principles of electric circuits, transformers, generators, and motors, including motor applications with static and automatic feedback control thereof. Not intended for EE majors. *Prerequisite:* Junior standing in engineering or instructor's approval. Fees required.

**3465 Neural Networks (3-0)**

Introduction to basic concepts and techniques of neural networks, including their relation to biological neurons, their computational and learning abilities, and applications of neural networks.

For Undergraduates and Graduates

*Prerequisite for graduate credit:* At least twelve semester hours of undergraduate credit in Engineering.

**3372 Software Design Using C (3-0)**

Programming in the C language with the theory and application of software tools and data structures. *Prerequisites:* Junior standing, EE 1309, EE 1376, and EE 3376, each with grade of "C" or better.

**3384 Probabilistic Methods in Engineering and Science (3-0)**

Problems involving discrete and continuous random variables, distribution functions, moments, statistical dependence, and an introduction to statistical methods. Emphasis to be on formulation of physical problems.

**1412 Senior Project Laboratory I (1-2)**

Research and analysis leading to a preliminary design for an approved engineering project. Includes specification of functional, performance, and cost goals. Design process is concluded in EE 2412 through prototyping, testing, and revisions. *Prerequisite:* EE 3384 with grade of "C" or better; and for general engineering option, EE 2411, or concurrent registration; for computer engineering option, EE 1442, or EE 1478, or concurrent registration. Laboratory fee required.

**1442 Laboratory for Electrical Engineering 3442 (0-3)**

Design and laboratory implementation of digital systems using standard, integrated circuits. *Prerequisite:* Must be taken concurrently with EE 3442. Laboratory fee required.

**1471 Engineering Problems (0-0-1)**

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisite:* Senior standing and departmental approval.

**1478 Laboratory for Electrical Engineering 3478 (0-3)**

Use of development tools in the design and implementation of microprocessor-based systems. *Prerequisite:* Must be taken concurrently with EE 3478. Laboratory fee required.

**1481 Co-op Work Experiences (0-0-1)**

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

**1482 Co-op Work Experiences (0-0-1)**

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest.

A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

#### 1483 Co-op Work Experiences (0-0-1)

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

#### 1495 Senior Professional Orientation (1-0)

Introduction to the engineering profession with emphasis on job placement, professional ethics, and an engineering field examination. Required of all students prior to graduation.

#### 2411 Electrical Engineering Laboratory II (1-4)

Experimental introduction to modulation, communication and IF transformers, transmission lines, wave guides, and antenna measurements. Emphasis on laboratory investigation using specialized instrumentation. *Prerequisite:* EE 2310 and EE 3340 or concurrently, each with grade of "C" or better. Fees required.

#### 2412 Senior Project Laboratory II (1-4)

Laboratory development of special projects concerned with various electrical systems. Small group or individual semester projects are stressed. *Prerequisite:* For general engineering option, EE 1412 and EE 2411; for computer engineering option, EE 1412, and EE 1442, or EE 1478; each with grade of "C" or better. Laboratory fee required.

#### 2471 Engineering Problems (0-0-2)

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisites:* Senior standing and departmental approval.

#### 3441 Communication Systems (3-0)

Random signals and noise, analog communication techniques and systems, sampling and pulse modulation, and introduction to digital communications systems. *Prerequisites:* EE 3353 and EE 3384, each with grade of "C" or better.

#### 3442 Digital Systems Design II (3-0)

The design of complex digital systems with emphasis on computer hardware design and computer aided techniques, including the use of a hardware programming language and simulation. *Prerequisite:* EE 3376 with grade of "C" or better. Must be taken concurrently with EE 1442.

#### 3447 Electromagnetic Energy Transmission and Radiation (3-0)

In depth study and application of electromagnetic topics first introduced in EE 3321. Topics may include wave propagation in ionized media, circular waveguides, optical fiber waveguides, stripline antennas, radiation from apertures, and computational methods in electromagnetics. *Prerequisite:* EE 3321 with grade of "C" or better.

#### 3450 Integrated Circuits and Semiconductor Devices (3-0)

Bipolar and MOS integrated circuits, microelectronic processing technology, microwave devices, photonic devices, and power semiconductor devices. *Prerequisites:* EE 3329 with grade of "C" or better.

#### 3461 Fiber Optic Communications (3-0)

Ray theory versus electromagnetic wave theory, light propagation in optical fibers, attenuation and dispersion in optical fibers, measurement techniques, and optical transmitters and receivers. *Prerequisites:* EE 3339 and EE 3321, each with grade of "C" or better.

#### 3464 Systems and Controls (3-0)

Analysis and design of continuous and discrete time linear systems. Relationships between frequency and time domain design. Analysis of system stability using Nyquist and root locus techniques. *Prerequisite:* EE 3353 with grade of "C" or better.

#### 3471 Engineering Problems (0-0-3)

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisite:* Senior standing and departmental approval.

#### 3472 Microcontroller Applications (2-3)

Use and application of single chip microcontrollers in the design of instrumentation and control systems. *Prerequisites:* EE 3376 and EE 3340, each with grade of "C" or better. Laboratory fee required.

#### 3474 Operating Systems Design (3-0)

Study, design, and implementation of operating systems. Topics include interrupt handling, system resource management, file organization, and hardware consideration. A case study of an existing real time operating system. *Prerequisite:* EE 3372 with grade of "C" or better.

#### 3475 VLSI Design I (3-0)

Introduction to CMOS VLSI design and computer-aided VLSI design tools including MAGIC 6.3 and MOSIS system. A term project is required that involves layout editing, timing analysis, simulation, logic verification, and testing. *Prerequisite:* EE 3329 with grade of "C" or better.

#### 3478 Microprocessor Systems II (3-0)

A study of a 16/32 bit microprocessor family and companion devices, and various design aspects of microprocessor systems. *Prerequisites:* EE 3376 with grade of "C" or better. Must be taken concurrently with EE 1478.

#### 3479 Advanced Computer Architecture (3-0)

Memory hierarchies, including cache and virtual memories. Parallel processing, including pipelining and multiprocessing, and parallel processing algorithms. *Prerequisite:* EE 3442 with grade of "C" or better or concurrently.

#### 3480 Microwave Communications (3-0)

Primarily a terminal undergraduate course concerning high frequency energy generation and transmission. Topics include microwave oscillators, principles of solid-state microwave devices, propagation of radio waves in the atmosphere and the ionosphere, and atmospheric absorption of radio wave energy. *Prerequisite:* EE 3321 with grade of "C" or better.

#### 3481 Electro-Optical Engineering (3-0)

A general introduction to the principles, techniques, and systems that deal with the portion of the electromagnetic spectrum between optical and radio waves. Special emphasis is placed on laser and maser physics and applications. *Prerequisite:* EE 3321 with grade of "C" or better.

#### 3482 Antenna Engineering (3-0)

A broad introduction to antenna engineering with emphasis on design principles and applications, includes radiation fundamentals used in modern array systems, reflectors and frequency independent antennas, together with the associated measurements of their characteristics. *Prerequisite:* EE 3321 with grade of "C" or better.

#### 3483 Digital Signal Processing (3-0)

Introduction to discrete systems, signals, and signal processing. Topics include digital filter design, z-transforms, and fast Fourier transforms (FFT) as well as the applications of FFT's. *Prerequisite:* EE 3353 with grade of "C" or better.

**3485 Biomedical Instrumentation (3-0)**

An introduction to basic concepts in biomedical instrumentation, blood flow measurements, biopotential amplifiers, and electrodes as well as electrical safety of medical equipment. *Prerequisite:* EE 3340 with grade of "C" or better.

**3486 Computational Methods in Electrical Engineering (3-0)**

Computer solution of integro-differential equations associated with typical engineering problems from areas such as microwaves, antenna, solid-state electronics, and machine design. Techniques discussed include finite-differences, method of movements, boundary elements, and finite elements, with an emphasis on the latter. Fundamental knowledge of a high level language such as FORTRAN, BASIC, or C is necessary. *Prerequisite:* EE 3321 with grade of "C" or better.

**3488 Digital Communications (3-0)**

Techniques of sampling; digital baseband transmission; waveform coding techniques; error-control coding; digital modulation schemes; fundamental limits on performance. *Prerequisite:* EE 3353 and EE 3384, each with grade of "C" or better.

**3489 High Resolution Radar (3-0)**

A broad treatment of radar fundamentals, wideband coherent design, and radar waveform processing. Analysis and design of CHIRP, stepped frequency, and synthetic aperture techniques for radar imaging. *Prerequisites:* EE 3321 and EE 3353, each with grade of "C" or better.

**3495 Special Topics In Electrical Engineering (3-0)**

Selected topics of current interest in Electrical Engineering. May be repeated once for credit when topic varies. *Prerequisites:* Senior standing in engineering and instructor's approval.

See the *Graduate Studies Catalog* for graduate programs and courses.

# Mechanical and Industrial Engineering

101 Engineering Science Complex  
(915) 747-5450

CHAIRPERSON: Thomas J. McLean

PROFESSORS EMERITI: Kenneth Scott Edwards, John A. Whitacre, Jr.

PROFESSORS: Craver, Dowdy, Herrera, Hsu, McLean, Swift

ASSOCIATE PROFESSORS: Bhaduri, Golding, Johnson

ASSISTANT PROFESSORS: Hawkins, Quintana, Roderick, Robbins, Villalobos, Wu

## Mechanical Engineering (MECH)

For Undergraduates

*General Prerequisite:* Junior standing for all 300 or 400 level courses.

**3101 Introduction to Mechanical Engineering (3-0)**

A general introduction to Mechanical Engineering; engineering problem presentations and solutions in the areas of energy, mechanics, and thermodynamics; the application of mathematical principles to engineering problem solutions. *Prerequisite:* MATH 4110 or equivalent.

**3238 Engineering Mechanics II (2-3)  
(Common Course Number ENGR 2302)**

Principles of dynamics and their application, work and energy, impulse and momentum, and kinetics and kinematics of particles and rigid bodies. *Prerequisites:* CE 3215 and MATH 3112.

**3239 Engineering Dynamics (3-0)**

**(Common Course Number ENGR 2303)**

A broad coverage of dynamics applied to engineering problems; a review of vector algebra; kinematics of particles; kinetics of particles including Newton's second law, work and energy, impulse and momentum; mechanical vibrations, electrical analogues. *Prerequisite:* MATH 3213.

**3241 Engineering Analysis (3-0)**

Applications of mathematical principles to the analysis of engineering problems; derivation and solution of mathematical models of physical systems occurring in the study of Mechanical Engineering. *Prerequisites:* CS 4120; and MATH 3226 or concurrently.

**3305 Basic Measurements and Instrumentation (2-3)**

The theory and fundamentals of physical measurements, study of characteristics of dynamics signals, study of basic detector-transducer elements, and applied mechanical measurements. *Prerequisites:* MATH 3226, MECH 3238, and CE 3234. Fees required.

**3363 Kinematics of Mechanisms (2-3)**

Analysis of displacement, velocity, and acceleration in mechanisms; technology and design of gears, gear trains, cams, and linkages. *Prerequisites:* MECH 3238; and MECH 3241 or concurrently.

**3365 Dynamic Response (3-0)**

Fundamentals of vibration theory and system response. Single and multiple degrees of freedom, damping, and isolation. *Prerequisite:* MECH 3238 and MATH 3226.

**3375 Thermodynamics I (3-0)**

Principles of thermodynamics of single and multi-phase systems of pure substances. *Prerequisites:* MATH 3112, CHEM 3105, and PHYS 4210.

**3376 Thermodynamics II (3-0)**

Continuation of MECH 3375. Application of principles of cycles and reactive systems; energy relationships and equilibrium requirements. *Prerequisite:* MECH 3375.

**4354 Fluid Mechanics (3-3)**

Fluid properties and definitions, fluid statics, fluid flow concepts and basic equations, dimensional analysis and dynamic similitude, viscous effects; fluid resistance, laminar and turbulent boundary layers, flow through pipes and fluid measurement. *Prerequisites:* MECH 3375 and MATH 3226. Fees required.

For Undergraduates and Graduates

*Prerequisite for graduate credit:* At least twelve hours of undergraduate credit in Engineering.

**1411 Controls Laboratory (0-3)**

Experiments including Spring-mass-damped systems, internal structural damping, forced vibrations, open and closed loop pneumatic systems, servomotor control, and control simulator. Laboratory fee required.

**1481 Co-op Work Experiences (0-0-1)**

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

**1482 Co-op Work Experiences (0-0-1)**

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job train-

ing and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

#### 1483 Co-op Work Experiences (0-0-1)

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

#### 1495 Senior Professional Orientation (1-0)

Introduction to the Engineering profession with emphasis on job placement, professional ethics, and an engineering field examination. Required of all students prior to graduation.

#### 3411 Automatic Controls (3-0)

A study of classical control theory including transfer functions, stability and time response, error analysis and sensitivity functions, root locus, Nyquist diagrams, and Bode Plots; the analog computer as a simulation tool particularly as pertains to non-linear control systems. Also, an introduction to modern control theory is presented. *Prerequisite:* MECH 3365.

#### 3412 Fluid Power and Control Systems (3-0)

Fundamentals of fluid power system design; fluid power transmissions; basic circuit and control components; fluid power circuits and circuit design. *Prerequisite:* MECH 4354 or instructor's approval.

#### 3443 Robotics and Automated Manufacturing (2-3)

The use of robots and other automated equipment in manufacturing including feeding systems, input-output mechanisms, and the design of parts for automatic assembly. *Prerequisites:* Senior standing in Engineering and instructor's approval. Laboratory fee required.

#### 3455 Gas Dynamics (3-0)

A study of the flow of compressible fluids. One-dimensional steady flow, supersonic flow, normal and oblique shock, flow with heating and cooling, measurement of fluid properties and flow parameters. *Prerequisites:* MECH 4354 and MECH 3375.

#### 3456 Applications of Solar Energy (3-0)

A study of the uses of solar energy with emphasis on the heating and cooling of residences and commercial buildings. Team projects in the design of systems and subsystems. *Prerequisite:* MATH 3226 or instructor's approval.

#### 3464 Mechanical Design I (2-3)

Stress analysis; deflection analysis; strength of mechanical elements; design of screws, fasteners, and joints, clutches, brakes, and couplings, shafting. *Prerequisites:* CE 3234 and senior standing in Mechanical Engineering.

#### 3467 Mechanical Design II (3-0)

Design of springs, bearings, gears, shafts, axles, spindles, and flexible mechanical elements; lubrication. *Prerequisites:* MECH 3464.

#### 3468 Environmental Control Engineering (3-0)

A study of theory and practice leading to the design of heating and air conditioning systems to control the building environment for human comfort.

#### 3471 Engineering Problems (0-0-3)

Original investigation of special problems in the student's field; the problems to be selected by the student with approval of the department chairperson. May be repeated for credit. *Prerequisites:* Senior standing and departmental approval.

#### 3487 Aerodynamics (3-0)

Introduction to the aerodynamics of flight vehicles. One-dimensional flow of perfect gas, shock, and expansion waves, converging-diverging nozzles; subsonic, supersonic, and hypersonic flows. Evaluation of aerodynamic loads on flight vehicles, including aerodynamics and characteristics of various types of power plants for a wide range of Mach numbers. *Prerequisites:* MECH 4354, and MECH 3376, or instructor's approval.

#### 3495 Special Topics In Mechanical Engineering (3-0)

Selected topics of current interest in Mechanical Engineering. May be repeated once for credit when topic varies. *Prerequisites:* Senior standing in engineering and instructor's approval.

#### 4451 Heat Transfer (3-3)

Introduction to heat transfer by conduction, convection, and radiation; steady and transient states; steady periodic states. Heat transfer in engineering apparatus. *Prerequisites:* MECH 3241, MECH 3305, and MECH 4354. Laboratory fee required.

#### 4466 Senior Design (2-6)

Conceptual, preliminary, and final design solutions to problems furnished by industry, handled on team basis. *Prerequisites:* Should be graduating senior.

See the *Graduate Studies Catalog* for graduate programs and courses.

## Industrial Engineering (IE)

For Undergraduates

#### 3101 Introduction to Industrial Engineering (3-0)

A general introduction to Industrial Engineering; engineering problem presentations and solutions in the areas of manufacturing, production control, quality control, operations research, and methods engineering; a preparation for the study of Industrial Engineering.

#### 3216 Ergonomics (2-3)

Introduction to design of man-machine systems; application of ergonomics to manufacturing environment; use of anthropometric data in design; limitations of human performance; effects of environmental stress on work performance, safety, and health. Laboratory fee required.

#### 3236 Manufacturing Processes (2-3)

Theory and practice of metal cutting, finishing, product measurement and inspection; shop demonstrations and visits to area factories. Laboratory fee required.

#### 3326 Engineering Economy (3-0)

Application of economics to engineering and industrial problems which require a knowledge of engineering for their solution. *Prerequisite:* MATH 3112.

#### 3330 Probability Models and Engineering Data Analysis (3-0)

Fundamental concepts of probabilistic engineering systems and random events, engineering data analysis, and applications in engineering systems design and industrial quality control. *Prerequisite:* MATH 3112, or MATH 3213, or concurrently.

#### 3377 Methods Engineering (2-3)

Study of operations analysis, methods analysis, and work design techniques used in manufacturing and service industries. Macro and micro motion analyses, systematic time standards, labor standard data development, and their relations to line balancing, machine loading, and management control are studied. *Prerequisite:* IE 3236. Fees required.



**3389 Deterministic Operations Research (3-0)**

An introduction to deterministic optimization models. These include the concepts of operations research modeling, classical optimization, linear and dynamic programming, and network analysis. Current topics in deterministic modeling are included. *Prerequisite:* MATH 3323.

For Undergraduates and Graduates

**1481 Co-op Work Experiences (0-0-1)**

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

**1482 Co-op Work Experiences (0-0-1)**

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

**1483 Co-op Work Experiences (0-0-1)**

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

**1495 Senior Professional Orientation (1-0)**

Introduction to the Engineering profession with emphasis on job placement, professional ethics, and an engineering field examination. Required of all students prior to graduation.

**3411 Automatic Controls (3-0)**

A study of classical control theory including transfer functions, stability and time response, error analysis and sensitivity functions, root locus, Nyquist diagrams, and Bode Plots; the analog computer as a simulation tool particularly as pertains to non-linear control systems. Also, an introduction to modern control theory is presented. *Prerequisite:* MECH 3365.

**3432 Safety Engineering (3-0)**

A study of man-machine environment and the accident cause-effect relationship. Provides an analytic structure through which safety decision-making can be performed in light of changes in the legal, management, and technical aspects of industrial safety. *Prerequisite:* Senior standing.

**3443 Robotics and Automated Manufacturing (2-3)**

The use of robots and other automated equipment in manufacturing including feeding systems, input-output mechanisms, and the design of parts for automatic assembly. *Prerequisites:* Senior standing in Engineering and instructor's approval. Laboratory fee required.

**3453 Industrial Systems Simulation (3-0)**

Introduction to systems simulation with special emphasis on: Logic and methodologies of discrete event simulation, generation of random numbers and random deviates, survey of simulation languages. At the end of the course the student should be able to develop simulation models of industrial systems and to understand the issues involved in simulation studies. *Prerequisites:* IE 3491 and IE 3492, or instructor's approval.

**3471 Engineering Problems (0-0-3)**

Original investigation of special problems in the student's field; the problem to be selected by the student with approval of the head of the department. May be repeated for credit. *Prerequisites:* Senior standing and departmental approval.

**3484 Industrial Layout (2-3)**

The design, selection, and layout of buildings and equipment for proper utilization in manufacturing. *Prerequisite:* Senior standing or instructor's approval. Laboratory fee required.

**3485 Statistical Quality Control and Reliability (3-0)**

The statistical design of systems for prescribed quality levels and prevention of defects. *Prerequisite:* IE 3330 or equivalent.

**3491 Production and Inventory Control (3-0)**

A study of the principles and theory used in the design and maintenance of production operations and inventory systems. These include forecasting techniques, inventory models, production control models, and assembly line balancing. *Prerequisites:* IE 3389 and IE 3330 or equivalent.

**3492 Probabilistic Operations Research (3-0)**

An introduction to probabilistic optimization including queuing theory, Monte Carlo techniques of simulation, project scheduling, and basic Markov processes. Current topics in probabilistic modeling are included. A project is an integral part of the course. *Prerequisite:* IE 3330 or equivalent.

**3493 Engineers and Managing (3-0)**

Study of industrial organizations, supervision and compensation of personnel, labor unions and group interaction, from the engineering management viewpoint. *Prerequisite:* Senior standing.

**3495 Special Topics In Industrial Engineering (3-0)**

Selected topics of current interest in Industrial Engineering. May be repeated once for credit when topic varies. *Prerequisites:* Senior standing in engineering and instructor's approval.

**4466 Senior Project (2-6)**

A detailed investigation and analysis of industrial engineering problems furnished by industry, handled on a team basis. A formal written report presenting the solution to the problem is required. *Prerequisite:* Should be graduating senior.

See the *Graduate Studies Catalog* for graduate programs and courses.

## Metallurgical and Materials Engineering

M201 Engineering Science Complex  
(915) 747-5468

Chairperson: Lawrence E. Murr

PROFESSORS EMERITI: Lonnie L. Abernethy, Joseph C. Rintelen, Jr.

PROFESSORS: Bronson, Murr, Fisher, Stafford, Varma

ASSOCIATE PROFESSORS: Arrowood, McClure

## Metallurgical and Materials Engineering (MME)

For Undergraduates

*General Prerequisite:* Junior standing for all 300 or 400 level courses.

### 4101 Introduction to Engineering Calculations (3-3)

Report writing, introduction to computers including DOS, word processing, spreadsheets, and problem solving techniques, including graphing, curve fitting, least square analysis, simultaneous equation solution, polynomial curve solution, and statistics. *Prerequisites:* ENGL 3111 and MATH 4110 or concurrently.

### 4102 Introduction to Engineering Calculations and Design (3-3)

Engineering functions, ethics and responsibility, computer-based problem solving, and introduction to engineering economy, electrical circuits, material balance, material properties, energy and mechanics with design projects and computer applications. *Prerequisites:* MME 4101, MATH 4111 or concurrently.

### 3203 Introduction to Materials Science and Engineering (3-0)

An introduction to the relationship between structure and composition and the mechanical, chemical, electrical, optical, magnetic, and thermal properties of metals, ceramics, polymers, and composites. Emphasis is placed on the selection and application of materials for a variety of engineering applications. *Prerequisite:* CHEM 3105 with grade of "C" or better.

### 3305 Material and Energy Balance in Materials Systems (3-0)

Introduction to process variables, stoichiometry, materials balance, first law of thermodynamics, and energy balance applied to materials systems. *Prerequisite:* MME 4102, CHEM 3106, and MATH 3226 with grade of "C" or better.

### 3306 Rate Processes in Materials Systems (3-0)

Introduction to reaction kinetics, fluid flow, and heat transfer applied to materials systems. *Prerequisites:* MME 4102, CHEM 3106, and MATH 3226 with grade of "C" or better.

### 3308 Applied Chemical Thermodynamics (3-0)

First, second, and third law of thermodynamics applied to materials systems. Topics include thermochemistry, chemical equilibria, phase equilibria, solutions, activity, and electrochemical potential. *Prerequisite:* MME 3305 with grade of "C" or better.

For Undergraduates and Graduates

### 3309 Introduction to Electronic Materials Science (3-0)

Basic theory of the electrical, semiconductor, magnetic, optical, and superconductor properties of materials. Application and fabrication of selected materials. *Prerequisite:* PHYS 4211 with grade of "C" or better.

### 3310 Advanced Electronic Materials Science (3-0)

Basic theory, applications, and fabrication of semiconductors, p-n junctions, and solid state devices such as junction transistors, photovoltaics, and light emitting diodes with emphasis on the material properties of silicon and gallium arsenide. *Prerequisites:* PHYS 4211 and MME 3309, each with grade of "C" or better.

### 3314 Composite Materials (3-0)

Introduction to fiber-reinforced materials. Manufacturing technology for strong fibers and whiskers. Mechanical performance, design, and manufacturing of composite products. Adhesion, interfacial shear, and critical fiber length. Anisotropic plane-stress elasticity; multi-axial strength of anisotropic materials. Classical theory of laminates. Delamination and other performance problems. *Prerequisites:* CE 3234 and MME 3203.

### 3321 Engineering Alloys (3-0)

The study of the selection and specification of engineering alloys for use in industrial applications. Topics related to ferrous and non-ferrous metals in the cast, wrought, powder, and particle state will be covered. *Prerequisite:* MME 4307 or instructor's approval.

### 4306 Physical Metallurgy (4-0)

The underlying principles of physical metallurgy dealing with the structure-property relationships will be covered. Topics will include crystal structures and defects, solid solutions, deformation and annealing, diffusion, phase equilibria, nucleation and growth, phase diagrams, solidification, and phase analysis. *Prerequisites:* MME 3203 with grade of "C" or better.

### 4307 Mechanical Behavior of Materials (3-3)

The microstructure-property relationships will be emphasized in this course. The deformation processes for metals, ceramics, polymers, and composite materials will be analyzed in terms of current theories and models. The topics include twinning, martensite, fracture, dislocation theory, plastic deformation, creep, fatigue, strengthening mechanism, and mechanical testing. *Prerequisite:* MME 3203 with grade of "C" or better. Laboratory fee required.

### 1471 Engineering Problems (0-0-1)

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisites:* Senior standing and departmental approval.

### 1475 Undergraduate Research in Metallurgy (0-0-1)

Supervised individual research. May be repeated for credit as topic varies. Can only be substituted for metallurgy electives or technical electives. *Prerequisites:* Senior standing, a 3.0 grade point average, and permission of the faculty member who is to supervise the research.

### 1481 Co-op Work Experiences (0-0-1)

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator or department chair at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

### 1482 Co-op Work Experiences (0-0-1)

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator or department chair at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

### 1483 Co-op Work Experiences (0-0-1)

Work experience in business, industrial, governmental, professional, service, or other organizations to provide on-the-job training and professional preparation in the student's area of interest. A report covering the work experience must be submitted by the student to the departmental Co-op coordinator or department chair at the end of each work period. Upon completion of his or her third work period and submission of a report summarizing the total work experience, a student can use three hours of Co-op Work Experience in his or her degree plan in place of a technical elective or elective in the major. *Prerequisite:* Selection by the Co-op Coordinator, department chairperson, and employer.

### 1495 Senior Professional Orientation (1-0)

Introduction to the engineering profession with emphasis on job placement, professional ethics, and an engineering field examination. Required of all students prior to graduation.

**2471 Engineering Problems (0-0-2)**

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisite:* Senior standing and departmental approval.

**2475 Undergraduate Research in Metallurgy (0-0-2)**

Supervised individual research. May be repeated for credit as topic varies. Can only be substituted for metallurgy electives or technical electives. *Prerequisites:* Senior standing, a 3.0 grade point average, and permission of the faculty member who is to supervise the research.

**3403 Metals Processing (3-0)**

Analysis of the unit operations involved in metal and mineral production using the principles of material and energy balance, fluid flow, heat transfer, reaction kinetics, and thermodynamics. *Survey of processing operations for specific metals such as copper, iron, aluminum, magnesium, titanium, and uranium. Prerequisites:* MME 3305, MME 3306, and MME 3308, each with grade of "C" or better.

**3409 Corrosion (3-0)**

Application of electrochemistry and engineering principles to the corrosion, passivity, and protection of metals and alloys. *Prerequisite:* MME 3203 or instructor's approval.

**3410 Polymer Engineering (3-0)**

The course provides a basic introduction to the field of polymer science. Basic concepts of organic chemistry address typical polymerization and copolymerization reactions. The characterization of polymer molecules include discussions of thermodynamic solutions, solubility parameters, colligative properties, and scanning electron microscopy. Concepts on the structure and properties of bulk polymers emphasize the relationship to molecular characteristics and manufacturing processes. *Prerequisite:* MME 4307 with grade of "C" or better.

**3416 Failure Analysis (3-0)**

The mechanisms of materials failure, failure analysis techniques, and non-destructive testing methods are discussed with emphasis on analysis and interpretation of case studies. *Prerequisites:* MME 3203 and CE 3234.

**3420 High Temperature Materials Science (3-0)**

The fundamentals of thermodynamics and kinetics of high temperature materials are discussed with emphasis placed on the subjects of diffusion in inorganic compounds, phase relations of multicomponent systems, single/multilayered growth rates, and interfacial reactions of fluid/solid and solid/solid phases. *Prerequisites:* MME 3306 and MME 3308, each with grade of "C" or better.

**3471 Engineering Problems (0-0-3)**

Original investigation of special problems in the student's field, the problem to be selected by the student with the approval of the head of the department. May be repeated for credit. *Prerequisites:* Senior standing and departmental approval.

**3475 Undergraduate Research in Metallurgy (0-0-3)**

Supervised individual research. May be repeated for credit as topic varies. Can only be substituted for metallurgy electives or technical electives. *Prerequisites:* Senior standing, a 3.0 grade point average, and permission of the faculty member who is to supervise the research.

**4404 Materials Processing (3-3)**

Analysis of the unit processes involved in ceramic production and specialized processes such as zone refining, chemical vapor deposition, plasma spraying, and surface modification using the principles of material and energy balance, fluid flow, heat transfer, reaction kinetics and the thermodynamics. *Survey of specific processing techniques for materials such as silicon, glass, ceramic magnets, silicon carbide, silicon nitride, and ceramic superconductors. Prerequisite:* MME 3403 with grade of "C" or better. Laboratory fee required.

**4405 Materials Fabrication (3-3)**

Fundamentals of metalworking, forging, rolling, extrusion, and drawing; sheet metal forming, welding, joining, and casting. *Prerequisite:* MME 3203 and upper division standing. Laboratory Fee required.

**4413 Structural Characterization (3-3)**


The application of modern instrumentation and techniques to structural characterization problems. Both theory and operation will be stressed. X-Ray analysis, electron microscopy (TEM-SEM), and electron probe analysis will be included. *Prerequisite:* MME 4307 or instructor's approval. Laboratory Fee required.

**4419 Metallurgical and Materials Engineering Design (3-3)**

Introduction to creative industrial problem-solving and the design process in materials engineering. Topics include material and process selection, project planning and resource management, economic decision making in terms of cost evaluation and profitability, and optimization methods. Weekly discussions explore issues of professionalism including engineering ethics, public safety and environmental concerns in design, codes, and standards, etc. Student design teams define and investigate problems in metallurgical processing, materials selection and evaluation, quality control, etc. Design project teams make written and oral progress reports, as well as a final written report and presentation. Laboratory time is devoted to design projects. *Prerequisites:* MME 3403, MME 4307, and IE 3326.

See the *Graduate Studies Catalog* for graduate programs and courses.






# College of Liberal Arts

Aerospace Studies	Music
Art	Philosophy
Chicano Studies	Political Science
Communication	Psychology
Criminal Justice	Religious Studies
English	Social Work
History	Sociology and Anthropology
Languages and Linguistics	Theatre Arts
Latin American Studies	Western Cultural Heritage
Military Science	Women's Studies

Position Vacant, Dean  
Dr. William Sanders, Associate Dean  
Dr. John Dick, Assistant Dean

Liberal Arts Bldg., Room 350  
Phone: (915) 747-5666  
Fax: (915) 747-5905



# College of Liberal Arts

## Introduction

The College of Liberal Arts, the largest of the six undergraduate colleges, traces its origins to the earliest days of the State School of Mines. Courses in such areas as history, English, Spanish, and art were offered almost from the beginning of the school's history. In July 1931 the institution (then known as The Texas College of Mines and Metallurgy) was authorized to offer the Bachelor of Arts degree; by 1940-41, students taking courses in the arts and sciences far outnumbered those in engineering. The change of name in 1949 to Texas Western College served as recognition of the institution's development as primarily a college of arts and sciences. In 1967, when the School of Arts and Sciences was divided into four Schools—Liberal Arts, Business Administration, Education, and Science—Liberal Arts became a separate academic unit. The name "School" was changed to "College" in 1974.

The College of Liberal Arts offers a wide range of programs and courses in the humanities, the fine arts, and the social sciences. These programs include major fields of specialized study and minor fields in both specific academic areas and interdisciplinary study. Elective courses taught within the College provide students with further opportunities for intellectual and aesthetic growth.

The College faculty, through teaching, research, and performance on a variety of levels, exemplify their commitment to the values of liberal arts education: a focus on what is fundamental and enduring in human civilization; a respect for and fostering of intellectual diversity; and the development of skills in communication, analysis, and evaluation. Students who receive a liberal arts education are exposed to certain values which offer them an opportunity for success in a wide variety of fields, a foundation for later professional study, and the crucial ability to adapt to change. The College seeks to prepare students for their professional careers and for a lifetime of learning, intellectual growth, and personal enrichment.

## Degrees and Majors

### Bachelor of Arts

The BA degree is offered in the following major fields: Anthropology, Art, Chicano Studies, Communication, Criminal Justice, English, French, German, History, Latin American Studies, Linguistics, Music, Philosophy, Political Science, Psychology, Sociology, Spanish, and Theatre Arts; also Biology, Chemistry, Economics, Geology, Mathematics, and Physics.

Requirements for the Bachelor of Arts degree are designed to provide an essential unity in the programs of all Liberal Arts students and at the same time to offer each student substantial latitude in course selection. The degree consists of a minimum of 128 semester hours, including at least 45 at the advanced (300-400) level. Twenty-four of the last 30 hours must be taken in residence. With exceptions noted in departmental program descriptions, a course taken to satisfy one degree area requirement (University Core Curriculum, Liberal Arts General Education Requirements, major, or minor) may be used once, and only once, to satisfy one other degree area requirement; however, a course may not be used to satisfy a requirement in both the major and the minor.

**University Core Curriculum** (48-55 hours -- see the University Core Curriculum section of this Catalog for complete description)

**Liberal Arts General Education Requirements** (30-35 hours)

- 3-6 Communication Skills: COMM.3101; or COMM.3101 and ESOL 3203 (for those whose post-primary education has been in a language other than English).
- 6-8 One Modern or Classical Language: complete 3201 and 3202 in French, German, Latin, Portuguese, Russian, Spanish (prerequisites: completion of 4101 and 4102 in the language, or placement by examination); or Spanish 3203 and 3204 (prerequisite: placement by examination); or Linguistics 4203 and 4204.
- 9 Western Cultural Heritage: HUMN 3301\*, 3302\*\*, 3303.

\* Also fulfills University Core Curriculum requirement in Humanities.

\*\* Also fulfills University Core Curriculum requirement for an additional three hours from one of several Blocks, including Humanities.

- 3 Social/Behavioral Science: select one three-hour course from Geography 3110, 3312, Linguistics 3220, 3357, or any Psychology, Sociology, or Anthropology\*.

\* If used to fulfill the University Core requirement in Science, ANTH 3101, 3303, or 3304 may not be used to fulfill this requirement. If STAT 3180, PSYC 3103, or SOCI 3212 is used in partial fulfillment of the University Core requirement in Mathematics/Statistics, PSYC 3103 or SOCI 3212 may not be used to fulfill this requirement.

- 3 Fine Arts: select one three hour course from Art, Music, or Theatre Arts; must be in a discipline other than the one used to fulfill the University Core Curriculum requirement in Fine Arts.
- 3 Literature: to be selected from literature courses offered by the Department of English or the Department of Languages and Linguistics (a list of courses that meet this requirement is available from the Office of the Dean of Liberal Arts).
- 3 Philosophy: select any junior level (300 level) three- hour course taught by the Department of Philosophy.

### Major Field (27-36 hours)

Complete a major prescribed by an academic department in the College of Liberal Arts (or Science or Business Administration [for the Economics major]) of at least 27 hours, 18 of which must be advanced (300-400 level). See individual departmental listings in this Catalog for specific major field requirements.

Nine of the advanced hours in the major must be completed in residence within three years prior to the date of graduation. No course taken on a Pass/Fail basis may be counted for the major, even though the student changes majors after having taken the course. A completed degree plan must include a minimum grade point average of "C" (2.0) in the major. Credit for courses taken to fulfill the major field requirements may not also be counted to satisfy minor field requirements.

A student who fulfills requirements for two majors prescribed by academic departments in the College of Liberal Arts (or Science or Business Administration [for the Economics major]) may earn a degree with a double major, provided that the two majors are from different fields. The second major fulfills the requirement for a minor field. There must be a minimum grade point average of "C" (2.0) in both majors. Credit for courses taken to fulfill the major field requirements in one major may not also be counted to satisfy requirements in the other major field.

### Minor Field (18 hours)

Complete a minor of at least 18 hours, nine of which must be advanced (300-400 level). The minor field must be selected from a discipline different from that of the major field. Credit for courses taken to fulfill the minor field requirements may not also be counted to satisfy major field requirements. No course taken on a Pass/Fail basis may be counted for the minor, even though the student changes minors after having taken the course. A completed degree plan must include a minimum grade point average of "C" (2.0) in the minor. See individual departmental listings in this Catalog for specific minor requirements.

Liberal Arts minor fields are available in Anthropology, Art, Art History, Communication, Criminal Justice, English, French, German, History, Linguistics, Music, Philosophy, Political Science, Psychology, Sociology, Spanish, and Theatre Arts. See departmental listings for requirements.

Interdisciplinary minors are also available. However, no more than six hours from a student's major field may be counted toward such a minor, and courses so counting may not help satisfy the major requirement. In addition, no more than nine hours from any one discipline will be counted as part of such a minor. Students electing an interdisciplinary major may not elect an interdisciplinary minor. The following are approved interdisciplinary minors: Asian and African

Studies, Border Studies, Chicano Studies, Latin American Studies, Military Studies, Religious Studies, Russian and Post-Communist Studies, Translation (Spanish/English), Urban Studies, and Women's Studies. (See section on Interdisciplinary Minors)

Minors may also be selected from the following approved disciplines in other colleges:

General Business Minor – CIS 3200 and 15 hours from BLAW 3301, ACCT 3309 or 3201, MKT 3300, MGMT 3303 or MGMT 3304, FIN 3310, ECON 3320, or CIS 3345.

Accounting Minor – ACCT 3201 and 3202, CIS 3200, and 9 hours from ACCT 3321, ACCT 3322, ACCT 3323, ACCT 3327, ACCT 3401, ACCT 3405, or ACCT 3428.

Economics Minor – ECON 3203 and 3204, ECON 3302 or 3303, plus 9 hours from ECON 3300 or 3400 level courses.

Management Minor – CIS 3200, ACCT 3201, and 12 hours from BLAW 3301, MGMT 3303, MGMT 3311, MGMT 3320, POM 3321, or MGMT 3425.

Computer Information Systems Minor—ACCT 3201 and CIS 3200, 3235, 3335, 3350, and 3355.

Minor in Speech-Language Pathology for Bachelor of Arts (Liberal Arts) Students: SPLP 1110, 3110, 3210, 3315, and 3409 (13 hours), and two courses selected from SPLP 3312, 3313, 3314, or 3317 (6 hours).

Science Minors are available in Biology, Chemistry, Geology, Mathematics, and Physics. See College of Science departmental listings for details.

### Electives

Complete electives as needed to bring the total semester hours of credit to at least 128. Elective credit cannot also be used in meeting any other degree requirement. Electives of advanced (300-400) level may, however, be applied toward satisfaction of the requirement of 45 advanced hours.

## Teacher Certification

### Elementary Certification

Incoming students who plan to teach in the elementary schools will ordinarily earn the degree of Bachelor of Interdisciplinary Studies. These students are referred to the description of that degree contained in the catalog section for the College of Education.

Students who have completed a degree offered in the College of Liberal Arts, or who plan to earn such a degree, should consult with the Education Advising Office in the College of Education concerning the requirements for certification to teach in the elementary schools.

### All-Levels Certification

All-levels programs are available in Art and Music. Interested students are referred to the description of those programs in the Catalog section for the Department of Art and the Department of Music.

### Secondary Certification

Certification program requirements for students seeking a BA in mathematics or chemistry are described in the Catalog section for the College of Science. Other certification programs in the sciences are also described in that section.

Certification for teaching in the secondary schools is available in the following Liberal Arts fields: Communication, English, French, German, History, Political Science, Psychology, Sociology, Spanish, and Theatre Arts. Students who plan to teach these subjects in the secondary schools will earn the Bachelor of Arts degree in the selected field after meeting all the requirements for that degree as described above and in the Catalog section for the department of the major. In order to meet TEA's certification requirements courses must be selected in accordance with the following restrictions and recommendations:

- 36 semester hours in the major field are required. 21 semester hours in the major must be in upper-division courses. A GPA of 2.5 or higher is required in the major. In the case of some majors, specific courses are required for students seeking secondary certification. For further information, students should read the section of the Catalog that describes the requirements of the major department.

- 12 semester hours of courses in a supporting field are required. The supporting field will ordinarily be in an area where the student is interested in developing a second teaching field.
- The minor must be taken in Education. A GPA of 2.5 or higher is required in the minor.
- RED 3342 is required for certification. This course does not meet any of the requirements for the BA degree.
- The requirement of a course in computing can be met by completing one of the following courses: CS 3110, CS 4101, CS 4120, CIS 3200, or PSYC 3208.
- TED 1201 is recommended by the College of Education for students seeking secondary certification. This course does not meet any of the requirements for the BA degree.

Teacher certification in **Social Studies Composite** is available to students who complete the requirements above, major in History, minor in Secondary Education, and fulfill the following conditions:

- Courses taken as part of the History major should include HIST 3317 and either HIST 3309 or HIST 3328.
- The student should fulfill the University Core requirement in Economics by taking ECON 3203 and the Liberal Arts General Education requirement in Social Sciences by taking GEOG 3110.
- For certification, the student should also take ECON 3204, GEOG 3106, and nine semester hours from the following: POLS 3335, 3312, 3320, 3411, or 3336. These courses apply to the BA degree only as elective credits.

Teacher certification in **English/Language Arts**, which provides candidates the opportunity to prepare to teach communication, English, and reading in secondary schools, is available to students who complete the requirements above, major in English and American Literature, minor in secondary education, and take the following additional courses:

- RED 3441 and 3443
- COMM 3271 and 3313

These additional courses apply to the BA degree only as elective credits.

### Minor in education for the BA with Secondary Certification

Admission to professional teacher certification programs is required before enrollment in the courses. Students should contact the Advising Office in the College of Education for details. The following courses are required for the students in the Liberal Arts disciplines who are seeking secondary certification:

Foundation Block:	EDPC 3300 and SCED 3317
Methods Block:	
For English majors:	SCED 3311 and ENGL 3455
For French, German or Spanish majors:	SCED 3311 and FREN, GERM, or SPAN 3401
For majors in the Social Sciences:	SCED 3311 and SCED 3312
For other Liberal Arts majors:	SCED 3311 and SCED 3312
Student Teaching Block:	SCED 6491

## BACHELOR OF FINE ARTS

This professional Art degree is offered with the following areas of specialization:

MAJOR: Ceramics, Graphic Design, Metals, Painting, Printmaking, and Sculpture

MINOR: Art History, Ceramics, Graphic Design, Metals, Painting, Printmaking, and Sculpture.

The BFA graduation exhibition will be considered for outstanding art majors. Art students will be selected by the Art Faculty and given an opportunity to participate in the honors exhibition program during their senior year. For specific requirements see the Art Department Section.

### **BACHELOR OF MUSIC**

Students may pursue this professional Music degree in one of three areas:

General Music—choral and instrumental (All-Levels Teaching Program);

Performance—orchestra and band instruments, keyboard instruments, voice or ballet;

Theory and Composition.

For specific requirements, see the Music Department section.

### **BACHELOR OF SOCIAL WORK**

The Social Work Program offers a major consistent with the beginning level of professional Social Work practice. The degree reflects a generalist Social Work orientation. Students who wish to earn the BSW degree must apply to and be accepted by the Social Work Program and must demonstrate academic and professional readiness to begin generalist Social Work practice. For specific requirements, see the Social Work section.

### **GRADUATE STUDIES**

Graduate degrees are offered in most Liberal Arts disciplines, including Art, Communication, English, History, Interdisciplinary Studies, Linguistics, Music, Political Science, Public Administration, Psychology, Sociology, Spanish, and Theatre Arts. Details of graduate programs are contained in the *Graduate Studies Catalog* and are available from individual departments and the Graduate School.

### **Interdisciplinary Minors**

The College offers several interdisciplinary programs of study that can be pursued in conjunction with any major (except an interdisciplinary major). These minors require the completion of a minimum of 18 semester hours:

#### **ASIAN AND AFRICAN STUDIES**

The Asian and African Studies minor is a broad, interdisciplinary course of study for students interested in Asian and African cultures or in careers in international business, government service, international health, or in teaching overseas. The core courses are designed to encompass a study of both Asia and Africa (except for the specific area-oriented historical surveys).

Students must take nine hours of courses from the following list that constitutes the core. At least three disciplines must be represented by the core courses. The remaining nine hours may be taken from the core courses not taken to satisfy the core requirement or from the list of optional courses. No more than nine hours may be taken from any one discipline. No more than six hours may be taken from a student's major area.

Core Courses: ENGL 3215, 3216; HIST 3330, 3336, 3337, 3340; PHIL 3340; POLS 3336

Optional Courses: MICR 3230; ZOOL 4364; ECON 3367; HIST 3324, 3339; MGMT 3425; POLS 3455; HIST 3331.

#### **CHICANO STUDIES**

The Chicano Studies minor offers students the choice of three options: Social Science, Humanities, and Interdisciplinary. Specific requirements may be found under Chicano Studies.

#### **LATIN AMERICAN AND BORDER STUDIES**

Minors are available in both Latin American Studies and in Border Studies; they provide a student with any other major the opportunity to take advantage of the University's rich resources in these areas. Specific requirements are listed in the Latin American Studies section.

#### **MILITARY STUDIES**

The Military Studies minor is intended for students with an interest in the military as a social institution and in its policies and problems,

not solely as reflected in formal military, air, or naval science instruction but, particularly, as illuminated by the social sciences and humanities.

Students are required to complete a core course and to elect fifteen hours from among the optional courses. Not more than twelve hours of the optional courses may be selected from a single department; nor may a student elect courses from both Military Science and Aerospace Studies.

Core Course: HIST 3313

Optional Courses (15 hours): AS 3301, 3302, 3401, 3402; HIST 3305, 3307, 3308, 3311, 3312, 3321, 3324, 3369, 3374; MS 3301, 3302, 3401, 3402; POLS 3330, 3332, 3335, 3430, 3431; SOCI 3381; no more than one course from CS 3110, 4101, 4120; CIS 3215, 3235, 3345, or HSCI 3302.

#### **RELIGIOUS STUDIES**

The Religious Studies minor is designed to provide an interdisciplinary framework within which students can take courses that explore the nature of religion and its impact on human culture, past and present. Courses are academic and non-sectarian in nature. Specific course listings and requirements may be found under Religious Studies.

#### **RUSSIAN AND POST-COMMUNIST STUDIES**

The Russian and Post-Communist Studies minor is a broad, interdisciplinary plan designed to help acquaint students from any major with the Post-Soviet and East European world. It is especially recommended for students who plan advanced study in Russian and Post-Communist fields at the graduate level or who plan careers in business, education, or government agencies dealing with Russia and Post-Communist countries.

Core Courses: HIST 3332 or 3333; POLS 3432 or 3431; and one course chosen from RUSS 3301, 3350; ENGL 3381, 3382

Optional Courses: HIST 3202, 3369, or 3374; POLS 3441; RUSS 3320; SOCI 3341; GEOG 3110.

#### **TRANSLATION AND INTERPRETATION (Spanish/English)**

The Translation and Interpretation Program is designed to provide qualified students with the opportunity to acquire skills in these fields. Translation Certificates in either Spanish or English or both will be awarded to those who pass professional level competency examinations. Consultation with the Program Coordinator is necessary for students to be admitted into the Program. Details of the Program are listed in the Languages and Linguistics section.

#### **URBAN STUDIES**

The Urban Studies minor is intended for students with an interest in urbanism as an institutional phenomenon and a social process. It is an appropriate supporting study for all humanities as well as social and behavioral science majors, and is particularly appropriate for students who are pursuing professions or vocations which are functionally dependent on urbanism.

Students are required to complete all three of the core courses and to elect nine hours from among the optional courses. Including both core and optional courses, no more than six hours may be taken from any one discipline.

Core Courses: ANTH 3315, POLS 3311, and SOCI 3303.

Optional Courses: POLS 3352; SOWK 3360; SOCI 3327; and, with the approval of the Urban Studies advisor, all special topics courses when the topic is related to urbanism.

#### **WOMEN'S STUDIES**

The Women's Studies Program provides a broad, interdisciplinary minor in which students can take course work to specialize in issues of gender and/or women. Specific requirements are listed under Women's Studies.



## Special Programs

### HONORS

The University Honors Program, now a campus-wide endeavor involving students from all the colleges, began as a Liberal Arts Honors Program. Even today it remains most closely allied with the humanities disciplines, fostering academic excellence as well as intellectual curiosity and debate, establishing meaningful faculty-student dialogue, and building a sense of scholarly community. Honors courses, taught by outstanding faculty and limited in size, have been offered by the departments of Communication, Criminal Justice, English, History, Languages and Linguistics, Music, Philosophy, Political Science, Psychology, Sociology/Anthropology, and Theatre Arts. Moreover, History, Political Science, and Psychology offer departmental honors upon completion of an Honors thesis. Besides enrolling in courses restricted to program participants, Honors students may avail themselves of options for independent study or Honors contracts, in which special projects are carried out under faculty supervision. Through its close alliance with the University Honors Program, the College of Liberal Arts strengthens its commitment toward providing students with the satisfaction of having exercised their intellectual capabilities to the fullest.

### WESTERN CULTURAL HERITAGE

The College of Liberal Arts offers a special sequence of interdisciplinary courses required to fulfill the Western Cultural Heritage area of the General Education Core. Details on these courses, the creation of which was facilitated by grants from the National Endowment for the Humanities, can be found under the Western Cultural Heritage section.

### PRE-LAW

The University of Texas at El Paso is a very good place to prepare for law school. Law schools generally seek undergraduate students who have acquired a critical understanding of human institutions and values, demonstrated ability as creative thinkers, mastered certain skills such as comprehension, written and oral expression, and obtained a broad education. Any course or major that helps individuals acquire these skills is appropriate for pre-law students, and consequently no specific courses or majors are required. You should select a major that interests you, and since plans for a law career may change, you may also want to consider the career alternatives provided by the various majors. The most demanding courses will likely provide the best preparation for law schools.

While the Association of American Law Schools and the Law School Admissions Council do not prescribe courses or majors for pre-law students, they do advise against taking many law courses at the undergraduate level; however, the particular course of subject matter (as long as it is substantial) is far less important than the intensity with which the student pursues it.

For advice on which courses may be of greatest value to you personally, you should consult with the undergraduate advisor in your major department. If you have not yet selected a major, contact the Academic Advising Center (915) 747-5290.

In addition to seeking advice from the departmental undergraduate advisors, counsel should be sought from faculty who have special interest and expertise in legal education. A listing of official Pre-law Advisors is printed in the Schedule of Classes each semester or session.

### MILITARY SCIENCE

Military Science courses are designed to afford the student an opportunity to become a commissioned officer in the U.S. Army. These courses provide leadership training and military skills training required of an Army officer. Army ROTC is open to all male and female students in all academic majors leading to a bachelor's degree. Specific courses and requirements are listed under the departmental section for Military Science.

### AEROSPACE STUDIES

The Aerospace Studies curriculum includes the Air Force ROTC education program leading to a commission as second lieutenant in the Air Force. The Air Force ROTC Commissioning Program is open to all qualified male and female students in all academic majors leading to a bachelor's degree. Specific courses and requirements are listed under the departmental section for Aerospace Studies.

## Aerospace Studies

211 Graham Hall  
(915) 747-5232/5493

CHAIRPERSON: Alan D. Fisher

PARTICIPATING FACULTY: Fisher, Pratt, Thalmann, Zamora

The college Air Force Reserve Officer Training Corps (AFROTC) curriculum provides preprofessional preparation for future Air Force officers. It is designed to motivate and prepare college men and women for their initial active duty assignments as Air Force commissioned officers. The curriculum is designed to give the student an understanding of the military instrument of national power with emphasis on the United States Air Force and how it fits into American society. Inherent in course content and methodology are opportunities for the student to develop the capacity to think creatively, speak and write effectively, and lead and manage efficiently.

The Air Force ROTC Commissioning Program is open to all qualified male and female students in all academic majors leading to a bachelor's degree. The program is also open to graduate students. The program is divided into the General Military Course (Basic Course) and the Professional Officer Course (Advanced Course).

#### Scholarships:

**Four-year Scholarships.** Air Force ROTC scholarships are available annually. These scholarships are awarded on a nationally competitive basis to high school graduates. Interested high school seniors should obtain application requests from their counselors and submit the request by December. Application forms are also available at the Aerospace Studies Program.

**Two- and Three-year Scholarships.** These scholarships are awarded on a nationally competitive basis to college students. Students, including those not enrolled in Aerospace Studies, may apply through the Aerospace Studies Program. Applications may be submitted anytime.

**One-year Scholarships.** Limited one-year scholarships are available for certain high demand majors. Applications may be submitted anytime.

**General Military Course (GMC):** The first two years of Air Force ROTC (AS 1121-1122 and AS 1221-1222) form the basic course known as the GMC. Basic courses are normally taken during the freshman and sophomore years. There is no military obligation associated with basic courses and they count as free elective credit. Scholarships are available for qualified students. All GMC students with Air Force ROTC scholarships must complete one English composition course prior to completion of the first two years of the program.

**Professional Officer Course (POC):** The last two years (AS 3301-3302 and 3401-3402) form the advanced course known as the POC. The POC normally requires two academic years to complete. The two academic years can be a combination of junior-senior, senior-graduate or all graduate years. A one-year program may be offered for specific majors (i.e., Nursing). Students must be physically and mentally qualified for POC entry and have a desire to be commissioned in the Air Force. Completion of the GMC is not a prerequisite for the POC. All POC cadets must demonstrate proficiency in math reasoning before completion of the program. This requires the completion of MATH 3011, its equivalent, or a higher level of proficiency if math placement scores dictate enrollment in a higher level math course. Students must attend a four-week or a six-week summer orientation course. Advanced courses may be taken out of

sequence, but compressed or dual enrollment is prohibited. POC cadets are paid \$150.00 per month for a maximum of 30 months. Cadets also receive payment for the summer orientation course.

**Leadership Training:** This training is an integral and mandatory portion of the Aerospace Studies curriculum. Within the framework of the cadet corps, it provides a progression of experiences designed to develop each student's leadership potential and serves as an orientation to military life.

## Aerospace Studies (AS)

### BASIC COURSES

#### 1121 The Air Force Today I (1-0)

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for Air Force ROTC cadets, and it complements this course by providing cadets with followership experiences.

#### 1122 The Air Force Today II (1-0)

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for Air Force ROTC cadets, and it complements this course by providing cadets with followership experiences.

#### 1221 The Air Force Way I (1-0)

A survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Featured topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to ethics and values, introduction to leadership, group leadership problems, and continuing application of communication skills. Leadership Laboratory is mandatory for Air Force ROTC cadets, and it complements this course by providing cadets with their first opportunity for applied leadership experiences discussed in class.

#### 1222 The Air Force Way II (1-0)

A survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Featured topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to ethics and values, introduction to leadership, group leadership problems, and continuing application of communication skills. Leadership Laboratory is mandatory for Air Force ROTC cadets, and it complements this course by providing cadets with their first opportunity for applied leadership experiences discussed in class.

### ADVANCED COURSES

#### 3301 Air Force Management and Leadership I (3-0)

A study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles of this course.

#### 3302 Air Force Management and Leadership II (3-0)

A study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory

Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles of this course.

#### 3401 Preparation for Active Duty I (3-0)

Examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. An additional Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity to apply the leadership and management principles of this course.

#### 3402 Preparation for Active Duty II (3-0)

Examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. An additional Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity to apply the leadership and management principles of this course.

## Art

350 Fox Fine Arts  
(915) 747-5181

CHAIRPERSON: Albert Wong

PROFESSORS EMERITI: Clarke Garnsey, Wiltz Harrison

PROFESSORS: Fensch, Parish, Thiewes

ASSOCIATE PROFESSORS: Jones, López, Quinnan, Segal, Wong

ASSOCIATE PROFESSOR EMERITUS: John Arnold

ASSISTANT PROFESSOR: Bauer, Koontz, Perrigo

The Department of Art offers a comprehensive program in the visual arts. Degrees are awarded in the Bachelor of Fine Arts (BFA) and the Bachelor of Arts (BA), and the Bachelor of Arts with certification for students interested in certification as art teachers. Students may choose majors in the following areas: Ceramics, Graphic Design, Drawing, Metals, Painting, Printmaking, and Sculpture. Studio Art and Art History minors are available to Liberal Arts BA students.

The Department of Art is located in the Fox Fine Arts Center with over 30 professionally equipped studios, a computer lab, an art history lecture room, and two art galleries, making it one of the finest facilities in the Southwest.

### Bachelor of Fine Arts (a minimum of 135 semester hours)

- General Requirements** (48 hours, 53 hours if using ESOL option)
  - Communication Skills (6-11 hours)  
ENGL 3111, 3112; or ESOL 3111, 2110, 3112, and 3203 (for students who are not proficient in English.)
  - Social Sciences (12 hours)  
HIST 3101, 3102; POLS 3210, 3211
  - Mathematics/Science (6 hours)  
MATH 3120; MATH 3201 or PSYC 3103 or SOCI 3212 or STAT 3180 or QMB 3201
  - Science/Technology (9-12 hours)  
6-9 hours of Natural Science from the core menu, and ITS 3350
  - Fine Arts  
3-4 hours of Fine Arts from the core menu

Other (12-13 hours)

HUMN 3301; 3 hours of Economics; 3 hours of Cultural Diversity from the core menu; 3-4 hours selected from one of the following: Fine Arts, Natural Science Mathematics/Statistics, Humanities, Cultural Diversity, or Economics.

2. **Art Foundations** (54 hours)

ARTF 3101, 3102, 3103, 3104, 3315; ARTH 3105, 3106 (ARTH 3105 and 3106 also meet the Fine Arts requirements in section 1, above), 3319, 3329, ARTG 3206; CERM 3204; DRAW 3208, 3218; DRAW 3410 or ART 3307; MTLN 3203; PNTG 3201; PRNT 3205; SCUL 3202.

3. **Major Art Area** (21 hours)

To be selected from Ceramics, Drawing, Graphic Design, Metals, Painting, Printmaking, or Sculpture; 18 hours must be upper-division. (Courses required under Art Foundations cannot be applied to the major or minor art areas.)

Drawing major is comprised of 12 upper-division drawing hours, plus 9 hours of studio art electives, 6 of which must be upper-division.

4. **Minor Art Area** (12 hours)

Selected from one of the following other than the major area: Ceramics, Graphic Design, Drawing, Metals, Painting, Printmaking, or Sculpture. 9 hours must be upper-division. Courses required under Art Foundations cannot be counted again in the Minor Art Area.

5. **Electives**, if necessary, to bring the total to a minimum of 135 semester credit hours.

**Bachelor of Arts** (132 semester hours)

The Bachelor of Arts degree with a major in Art may be earned by completing the following, for a minimum total of 132 semester hours.

1. **University Core Curriculum** (48-55 hours): see the core curriculum section of this Catalog.

2. **Liberal Arts General Education Requirements** (30-35 hours); see the core curriculum section of this Catalog. (Note: HUMN 3301, required under Liberal Arts General Education Requirements, also fulfills the University Core Curriculum Humanities requirement.)

3. **Art Foundations** (24 hours)

ARTF 3101, 3102, 3103, and 3104; ARTH 3105\*, 3106\*; DRAW 3208, 3218

\* ARTH 3105 and 3106 may be used to fulfill the Fine Arts requirement in the University Core Curriculum and the University additional course work requirement which contains a Fine Arts option.

4. **Major Area** (21 hours)

To be selected from one or two of the following: Ceramics, Drawing, Graphic Design, Metals, Painting, Printmaking, or Sculpture. 18 hours must be upper-division. Courses required under Art Foundations cannot be counted again in the Major Area.

5. **Minor Area** (18 hours)

May be selected from Art History or a non-art minor area as described in the Liberal Arts introductory section; 12 hours must be upper-division. Courses required under Art Foundations, such as ARTH 3105 and 3106, cannot be counted again in the Minor Area.

Art History Minor for the Bachelor of Arts with a major in Art: ARTH 3319 and 3329, plus 12 hours from ARTH 3310, 3339, 3409, 3419, or 3429.

6. **Electives**, if necessary, to bring the total to a minimum of 132 semester credit hours.

The Department of Art also offers Liberal Arts majors the opportunity to seek a minor in Studio Art or Art History. Students seeking the minor in Art or Art History may do so through the completion of a course of study, approved by the Department of Art in advance, that consists of at least 18 credit hours (nine of which are 3300 or above). Minors have been approved in Ceramics, Drawing, Graphic Design, Printmaking, Metals, Sculpture, and Art History. Students interested in pursuing a minor in Art should contact the Department of Art.

**MINOR DEGREE PLANS**

Available for Art and Non-Art Majors:

**Art History:** 18 hours

ARTH 3105 Art History of the Western World I  
ARTH 3106 Art History of the Western World II  
ARTH 3319 History of Modern Art  
ARTH 3329 History of Contemporary Art

plus 6 hours from:

ARTH 3310 History of Latin-American Art  
ARTH 3339 Contemporary Latino Art in the U.S.  
ARTH 3409 Research Problems in Art History  
ARTH 3429 Multicultural Art in the U.S.

Not available for Art Majors:

**Ceramics:** 21 hours

ARTF 3103 Basic Design II  
CERM 3204 Ceramics I  
CERM 3214 Ceramics II  
CERM 3304 Ceramics III  
CERM 3314 Ceramics IV  
CERM 3324 Ceramics V  
ARTH 3106 Art History of the Western World II

**Drawing:** 18 hours

ARTF 3102 Basic Drawing I  
ARTF 3104 Basic Drawing II  
DRAW 3208 Life Drawing I  
DRAW 3308 Life Drawing II  
DRAW 3318 Life Drawing III  
DRAW 3410 Advanced Drawing Techniques I

**Graphic Design:** 24 hours

ARTF 3101 Basic Design I  
ARTF 3102 Basic Drawing I  
ARTF 3104 Basic Drawing II  
ARTG 3206 Graphic Design I  
ARTG 3216 Graphic Design II  
ARTG 3316 Graphic Design III  
ARTG 3336 Graphic Design IV  
ARTG 3406 Graphic Design V

**Metals:** 18 hours

ARTF 3103 Basic Design II  
MTLN 3203 Metals I  
MTLN 3213 Metals II  
MTLN 3303 Metals III  
MTLN 3313 Metals IV  
MTLN 3323 Metals V

**Printmaking:** 21 hours

ARTF 3102 Basic Drawing I  
ARTF 3104 Basic Drawing II  
PRNT 3205 Printmaking I  
PRNT 3225 Printmaking II  
PRNT 3305 Printmaking III  
PRNT 3325 Printmaking IV  
PRNT 3335 Printmaking V

**Sculpture:** 18 hours

ARTF 3103 Basic Design II  
15 hours in Sculpture courses of which 12 hours must be upper-division (3300 or above)

**Bachelor of Arts with All-Levels Teacher Certification** (a minimum of 132 semester hours)

A Bachelor of Arts degree with all-levels certification allows students to major in Art and minor in Professional Education. In lieu of the Additional Liberal Arts General Education Requirements, students pursuing this degree take additional requirements for certification. To complete this degree students must fulfill the following:

1. **University Core Curriculum** (48-55 hours)

2. **Additional Requirements** (15 hours)  
COMM 3101; CS 3110; RED 3340 or 3342; six semester hours of English, three of which must be upper division (three of these hours may be chosen from those English courses that fulfill the University Core Curriculum requirement in Humanities).
3. **Art Foundations** (18 hours)  
ARTF 3101, 3102, 3103, 3104; ARTH 3105, 3106 (the two ARTH courses fulfill the University Core Curriculum requirements in Fine Arts and the additional course work of three-four hours from one of several Blocks, including Fine Arts).
4. **Art** (45 hours)  
ARTG 3206; CERM 3204; DRAW 3208, 3218; MTLs 3203; PNTG 3201; PRNT 3205; SCUL 3202; ARTF 3315; ARTH 3319, 3329; ARTE 3327; ARTT 3337, 3427, and 3437.
5. **Professional Education** (18 hours)  
EDPC 3300; SCED 3317 (fulfills University Core Curriculum requirement in Cultural Diversity); ELED 3302 or SCED 3311, ARTE 3447; TED 6496.
6. **Electives**, if necessary, to bring the total to a minimum of 132 semester credit hours.  
See the Catalog section for the College of Education regarding requirements for admission to professional Education courses.

## General Courses (ART)

*General Prerequisite:* Junior standing for all 3300 and 3400 level courses.

- 3100 **Art Appreciation (non-majors) (3-0)**  
(Common Course Number ARTS 1301)  
A course, with slides and text, designed to give the general university student an understanding of the great historic styles in the arts. Course fee required.
- 3110 **Introduction to Art (non-majors) (3-0)**  
A hands-on studio course to introduce non-art majors to the techniques, materials, and terminology of both 2-dimensional and 3-dimensional image making. A brief overview of modern art history is also presented. Course fee required.
- 3307 **Special Topics in Art (3-0) or (0-6)**  
Lecture or studio art course on topic not included in regular curriculum. May be repeated for credit when topic varies. *Prerequisite:* Instructor's approval. When the topic is in studio art, an appropriate fee will be assessed.
- 3339 **Special Studies (0-6)**  
Special course work in new or experimental offerings for which there is immediate need and for which special resources and faculty are available. May be repeated for credit for varied subject matter. Primarily for art majors.
- 3340 **Gallery Art (1-2)**  
This is a basic course on gallery preparation which emphasizes all aspects of gallery management such as curatorial considerations, installation, design, handling, and presentation of art work.

## Art Education (ARTE)

- 3317 **Elementary Art Education (3-0)**  
For non-art majors only, the course is designed for the prospective classroom teacher. The course will encourage an understanding of the visual/artistic growth and development of children as well as an exploration of the methods and materials available to the elementary teacher.
- 3327 **Introduction to Art Education (3-0)**  
For art education majors only or for those students seeking to teach art as a second teaching field. This is a foundation course that will examine the field of art education, its literature, its history, its trends, its theories, and its philosophies. The course also includes the study of child artistic, creative, and aesthetic growth and development.

## 3447 Methods of Teaching Art (3-0)

A survey of the methods and practices involved in the effective and creative approach to art education. Special emphasis will be placed on demonstration techniques and opportunities to teach as a part of a group and on an individual basis. Each student will observe in both elementary and secondary art classrooms. This course must be taken prior to student teaching. *Prerequisites:* ARTE 3327 and ARTT 3437. Course fee required.

## Basic Studies (ARTF)

- 3101 **Basic Design I (0-6)**  
(Common Course Number ARTS 1311)  
A study of the basic visual elements and materials of two-dimensional design, including value, color, space, and their dynamics. Should be taken concurrently with ARTF 3102. Six hours of studio per week. Laboratory fee required.
- 3102 **Basic Drawing I (0-6)**  
(Common Course Number ARTS 1316)  
Emphasis on basic aesthetic and technical drawing skills including proportion, scale, and the control of illusionistic space, along with compositional structure and effectiveness. Both line and value are explored. Should be taken concurrently with ARTF 3101. Six hours in studio per week. Laboratory fee required.
- 3103 **Basic Design II (0-6)**  
(Common Course Number ARTS 1312)  
An exploration of the elements of three-dimensional design involving both aesthetic and structural principles. Students will develop projects with a variety of materials and concepts to be determined by the instructor. *Prerequisite:* ARTF 3101 and ARTF 3102. Should be taken concurrently with ARTF 3104. Laboratory fee required.
- 3104 **Basic Drawing II (0-6)**  
(Common Course Number ARTS 1317)  
A continuation of basic drawing aesthetics and skills, with added emphasis on composition and content. Images from both imaginary and historically based sources are investigated. Six hours in studio per week. *Prerequisite:* ARTF 3102. Should be taken concurrently with ARTF 3103. Laboratory fee required.
- 3315 **Advanced Design (0-3)**  
In-depth study of the fundamental elements and principles of two and three dimensional design. Emphasis on individual direction and self-expression. *Prerequisite:* Junior standing. Laboratory fee required.

## Ceramics (CERM)

- 3204 **Ceramics I (0-6)**  
(Common Course Number ARTS 2346)  
Exploring the design principles in the clay media, with major emphasis on hand building in stoneware; an introduction to potter's wheel techniques and glaze theory and application. Six hours in studio per week. *Prerequisites:* ARTF 3101, 3102, 3103, and 3104, or instructor's approval. May be taken concurrently with ARTF 3103, and 3104. Laboratory fee required.
- 3214 **Ceramics II (0-6)**  
(Common Course Number ARTS 2347)  
Stressing wheel production for throwing techniques. Emphasis toward increasing the student's proficiency, control, and aesthetic development. Kiln firing. Six hours in studio per week. *Prerequisite:* CERM 3204 or instructor's approval. Laboratory fee required.
- 3304 **Ceramics III (0-6)**  
Continuation of Ceramics II with emphasis on exploration of utilitarian form and surface treatment in series with further investigation of glaze materials and techniques. Six hours in studio per week. *Prerequisite:* CERM 3214 or instructor's approval. Laboratory fee required.

**3314 Ceramics IV (0-6)**

Continuation of Ceramics III with concentration on designing and fabrication of related functional forms. Six hours in studio per week. *Prerequisite:* CERM 3214 or instructor's approval. Laboratory fee required.

**3324 Ceramics V (0-6)**

Exploration of clay from the non-utilitarian aspects, stressing sculptural relationship of joined forms, both thrown and hand built. Research into clay and clay bodies. Six hours in studio per week. *Prerequisite:* CERM 3314 or instructor's approval. Laboratory fee required.

**3404 Ceramics VI (0-6)**

Continuation of Ceramics V. Six hours in studio per week. *Prerequisite:* CERM 3324 or instructor's approval. Fees required.

**3414 Ceramics VII (0-6)**

Emphasis upon individual direction and achievement. *Prerequisite:* 12 semester hours in ceramics or instructor's approval. Fees required.

**3424 Special Problems in Ceramics (0-6)**

Emphasis upon individual direction and achievement in ceramics. May be repeated for credit when problem varies. *Prerequisite:* 12 semester hours in ceramics or instructor's approval. Fees required.

**Graphic Design (ARTG)****3206 Graphic Design I (3-3)**

(Common Course Number ARTS 2331)

Student will explore the fundamental principles of design as applied to graphic communication. Introduction to basic terminology, tools, and media. Major topics covered are letter form, typographic design, and symbol identification. *Prerequisites:* ARTF 3101, ARTF 3102, and ARTF 3104. Laboratory fee required.

**3216 Graphic Design II (3-3)**

(Common Course Number ARTS 2332)

This is a further investigation of effective visual communication with emphasis on problem solving and conceptual development. *Prerequisite:* ARTG 3206 and DRAW 3208. Laboratory fee required.

**3316 Graphic Design III (3-3)**

This advanced communication course emphasizes design expression and conceptual approaches to solving graphic communication problems. *Prerequisites:* ARTF 3103 and ARTG 3216. Laboratory fee required.

**3326 Illustration (1-5)**

The student will explore contemporary directions in illustration and experiment with various drawing and painting media and techniques in the discipline. *Prerequisite:* ARTG 3316, PNTG 3201 and DRAW 3218. Laboratory fee required.

**3336 Graphic Design IV (3-3)**

This course provides basic information regarding various technical problems faced by the graphic designer in the preparation of art work for reproduction. Topics include printing methods, layout formats, and elements of the mechanical from single to multi-color process. *Prerequisite:* ARTG 3206. Laboratory fee required.

**3406 Graphic Design V - Special Problems (3-3)**

Emphasizes individual direction and achievement in Graphic Design. May be repeated for credit at the recommendation of instructor. *Prerequisite:* 12 hours in Graphic Design. Laboratory fee required.

**3416 Graphic Design VI - Portfolio Design (3-3)**

This course gives the student guidance to organize a professional portfolio for presentation. Discussion topics include resume, interviews, and slide presentation. *Prerequisite:* 18 hours in Graphic Design. Laboratory fee required.

**3426 Graphic Design VII - Internship (0-6)**

Upon the recommendation of the instructor, a student with a minimum of 3.0 grade point average in Graphic Design, may be placed in a design firm, art studio, television station, or advertising agency. This opportunity provides the student with actual work experience in a realistic setting. *Prerequisites:* 18 hours in Graphic Design and instructor's approval. Laboratory fee required.

**History of Art (ARTH)****3105 Art History of the Western World I (3-0)**  
(Common Course Number ARTS 1303)

A survey of western art including painting, sculpture, and architecture from prehistoric times to the Gothic/early Renaissance. Course fee required.

**3106 Art History of the Western World II (3-0)**  
(Common Course Number ARTS 1304)

A survey of western art including painting, sculpture, and architecture from the early Renaissance to the twentieth century. Course fee required.

**3310 History of Latin-American Art (3-0)**

This slide lecture course surveys the History of Latin American Art from PreColumbian times to the present; and explores the historical emergence of the Latin American aesthetic and the issues of cultural and national identity. Course fee required.

**3319 History of Modern Art (3-0)**

A critical survey of Western painting, sculpture, and architecture from the mid-nineteenth century to World War II (Realism/Impressionism to Abstract Expressionism). Emphasis will be placed upon an analysis of the specific artworks and stylistic groups of this period in terms of their relation to changing cultural conditions, e.g., philosophical, scientific, technological, political, and economic factors. *Prerequisite:* ARTH 3106. Course fee required.

**3329 History of Contemporary Art (3-0)**

A critical survey of Western painting, sculpture, and architecture from World War II to the present. *Prerequisite:* ARTH 3106. Course fee required.

**3339 Contemporary Latino Art in the U.S. (3-0)**

A survey of contemporary Latino art in the United States designed to examine the development of the Latino aesthetic and its relationship to the spirit of Latin American art. Issues of cultural and political identity will be explored. Course fee required.

**3409 Research Problems in Art History (3-0)**

A special topics seminar for the advanced student. May be repeated for credit if problems vary. *Prerequisites:* ARTH 3105, ARTH 3106, and instructor's approval. Course fee required.

**3419 Special Problems in Art History (3-0)**

A course for the advanced student which allows the student and the instructor to set up individual problems. May be repeated for credit when problems vary. *Prerequisite:* Instructor's approval. Course fee required.

**3429 Multicultural Art in the U.S. (3-0)**

Using an interdisciplinary perspective, the seminar investigates the important emergence of the art of oppressed minorities (African-Americans, Asian Pacific Islanders, Latino, American Indians, and women) within the context of contemporary American society. Course fee required.

**Art Theory (ARTT)****3337 Art Practices (3-0)**

This is a survey course examining the nature of art, its theories and trends, and its application in a variety of settings. Some field experience may be required. *Prerequisite:* Instructor's approval.

**3427 Art and Cultural Pluralism (3-0)**

This is a course investigating the nature of art in a pluralistic society, its philosophies, trends, and aesthetic theories, and its application in a variety of settings. Some field experience may be required. *Prerequisite:* Instructor's approval.

**3437 Applied Art Criticism (3-0)**

This is a course investigating the nature of art criticism, art appreciation, and aesthetics, and its application in a variety of settings. Some field experience may be required. *Prerequisite:* Instructor's approval.

**Drawing (DRAW)****3208 Life Drawing I (0-6)**

(Common Course Number ARTS 2323)

Human Anatomy for Artists. Academic study and drawing of the skeleton and superficial muscles of the human figure. *Prerequisites:* ARTF 3101 and 3102, or instructor's approval. Laboratory fee required.

**3218 Life Drawing II (0-6)**

(Common Course Number ARTS 2324)

Drawing the human figure from live model(s). Emphasis upon rendering of form through use of line and value, using varied perceptual approaches. Mixed media experience. *Prerequisite:* DRAW 3208 or instructor's approval. Laboratory fee required.

**3308 Life Drawing III (0-6)**

Drawing the human figure from the live model(s). Emphasis upon placing the figure in composition, the use of varied media, and encouragement of individual direction. *Prerequisite:* DRAW 3218 or instructor's approval. Laboratory fee required.

**3318 Life Drawing IV (0-6)**

Study of animal forms. Emphasis upon learning the differences and similarities among vertebrates. Includes research, gestural sketches, studies, and finished compositions. *Prerequisite:* DRAW 3218 or instructor's approval. Laboratory fee required.

**3410 Advanced Drawing Techniques I (0-6)**

Exploration of mixed drawing techniques. Expansion of subject matter capabilities with emphasis on personal expression. Studies and finished compositions. *Prerequisite:* DRAW 3218. Supplemental Tuition and Coaching fee required.

**3420 Advanced Drawing Techniques II (0-6)**

Individual assignments. Emphasis upon the combining of drawing techniques/media with the techniques/media from the student's major art area. *Prerequisite:* DRAW 3410 or instructor's approval. Supplemental Tuition and Coaching fee required.

**3430 Special Problems in Life Drawing (0-6)**

Independent study in drawing from living forms. May be repeated for credit. *Prerequisite:* 6 semester hours in life drawing or instructor's approval. Supplemental Tuition and Coaching fee required.

**Metals (MTLS)****3203 Metals I (0-6)**

(Common Course Number ARTS 2341)

An examination of several basic metal techniques--sawing, soldering, forming, cold connections, and surface finishes. Six hours in studio per week. *Prerequisites:* ARTF 3101, 3102, and 3103, or instructor's approval. May be taken concurrently with ARTF 3103 and ARTF 3104. Laboratory fee required.

**3213 Metals II (0-6)**

(Common Course Number ARTS 2342)

Exploration of forging and hollow construction techniques first half of semester. Last six weeks will cover the basics of lost wax casting with various metal alloys. Six hours in studio per week. *Prerequisite:* MTLS 3203 and ARTF 3104. Laboratory fee required.

**3303 Metals III (0-6)**

Concentrated work on metal construction techniques including marriage of metals, hammer inlay, mokume and mechanisms. Six hours in studio per week. *Prerequisite:* MTLS 3213. Laboratory fee required.

**3313 Metals IV (0-6)**

Continuation of Metals III with emphasis on the die-forming, repousse, and chasing. Six hours in studio per week. *Prerequisite:* MTLS 3303. Laboratory fee required.

**3323 Metals V (0-6)**

Concentration on various forming techniques, angle raising, shell forming and construction, and work on series problem. Six hours in studio per week. *Prerequisite:* MTLS 3313. Laboratory fee required.

**3403 Metals VI (0-6)**

Emphasis on advanced metal design with individual investigation. Six hours in studio per week. *Prerequisite:* MTLS 3323. Fees required.

**3413 Metals VII (0-6)**

Emphasis upon individual direction and achievement. Minimum of six hours in studio per week. *Prerequisites:* MTLS 3403 or instructor's approval. Fees required.

**3423 Special Problems in Metals (0-6)**

Emphasis on individual direction and achievement. Minimum of six hours in studio per week. May be repeated for credit if problems vary. *Prerequisites:* MTLS 3403 and instructor's approval. Fees required.

**Painting (PNTG)****3201 Painting I (0-6)**

(Common Course Number ARTS 2316)

Painting in oil, with a concentration in developing color perception, exploring color theory, technical manipulation of media, and beginning to explore personal statements. *Prerequisites:* ARTF 3101, 3102, 3103, 3104, or instructor's approval. May be taken concurrently with ARTF 3103, ARTF 3104. Laboratory fee required.

**3231 Painting II (0-6)**

(Common Course Number ARTS 2317)

Concentration on the issues of the interrelatedness of form and content while beginning to explore contemporary concerns and developing the analytical skills to criticize artworks. Students are encouraged to explore various media. *Prerequisite:* PNTG 3201. Laboratory fee required.

**3301 Painting III (0-6)**

Continuation of Painting II with an emphasis on developing a personal visual vocabulary while continuing the exploration of contemporary concerns and analytical skills. *Prerequisite:* PNTG 3231. Laboratory fee required.

**3331 Painting IV (0-6)**

Continuation of Painting III with further emphasis upon development of a personal visual vocabulary and researching a paper on contemporary issues to be presented to the class. *Prerequisite:* PNTG 3301. Laboratory fee required.

**3341 Painting V (0-6)**

Continuation of Painting IV with added emphasis upon individual direction and achievement. *Prerequisite:* PNTG 3331. Laboratory fee required.

**3401 Painting VI (0-6)**

Continuation of Painting V with emphasis upon the refinement of concepts and the encouragement of exploratory techniques. *Prerequisite:* PNTG 3341. Laboratory fee required.

**3431 Painting VII (0-6)**

Continuation of Painting VI with emphasis upon the development of a consistent body of work that could constitute an exhibition. *Prerequisite:* PNTG 3401. Fees required.

**3441 Special Problems in Painting (0-6)**

Emphasis on individual direction and achievement in painting. May be repeated for credit when problem varies. *Prerequisite:* 12 semester hours in painting or instructor's approval. Fees required.

## Printmaking (PRNT)

### 3205 Printmaking I (0-6)

(Common Course Number ARTS 2333)

An introductory course focusing on the basics of relief, intaglio, and stone lithographic Printmaking techniques, the terminology, and a brief history of these processes. Students will be encouraged to develop personal original imagery to execute in these media. Course will include a brief demonstration of screen techniques. A minimum of six hours in studio per week. *Prerequisites:* ARTF 3101, ARTF 3102, and ARTF 3104 or instructor's approval. May be taken concurrently with ARTF 3104. Laboratory fee required.

### 3225 Printmaking II (0-6)

(Common Course Number ARTS 2334)

Continuation of processes presented in Printmaking I with the addition of at least one multi-color print. Exploration of additional print processes including: chine colle, monoprints, monotypes. Possible exploration of screen processes including photoscreen. Personal original imagery further developed. A minimum of six hours in studio per week. *Prerequisite:* PRNT 3205. Laboratory fee required.

### 3305 Printmaking III (0-6)

Continued exploration of previous print processes with introduction of collographic print techniques and the photographic gum bichromate process. Aluminum plate lithography may also be explored. Emphasis on the production of like multiples and the development of solid drawing skills and personal imagery. A minimum of six hours in studio per week. *Prerequisite:* PRNT 3225. Laboratory fee required.

### 3325 Printmaking IV (0-6)

Combining two or more print processes into a single image will be explored along with a continuation of the student's personal imagery in chosen print media. Papermaking will also be explored. A minimum of six hours in studio per week. *Prerequisite:* PRNT 3305. Laboratory fee required.

### 3335 Printmaking V (0-6)

Choice and execution of best print media for student's imagery. Strong personal image and technical development expected. A minimum of six hours in studio per week. *Prerequisite:* PRNT 3325. Laboratory fee required.

### 3405 Printmaking VI (0-6)

Emphasis upon further technical development, image, and concept. A minimum of six hours in studio per week. *Prerequisite:* PRNT 3335. Fees required.

### 3425 Printmaking VII (0-6)

A continuation of PRNT VI further refining and exploring techniques, images, and concepts. A minimum of six hours in studio per week. *Prerequisite:* PRNT 3405. Fees required.

### 3435 Special Problems in Printmaking (0-6)

Emphasis upon individual course of study developed jointly between the instructor and the student or specialized Summer program offering. Written proposal may be required. A minimum of six hours in studio per week. May be repeated for credit when problem varies. *Prerequisite:* PRNT 3425 or instructor's approval. Fees required.

## Sculpture (SCUL)

### 3202 Sculpture I (0-6)

(Common Course Number ARTS 2326)

An introduction to basic sculptural concepts and materials with emphasis on simple manipulation of wood, steel, and found objects. Six hours in studio per week. *Prerequisite:* ARTF 3101, 3102, and 3103. May be taken concurrently with ARTF 3103. Laboratory fee required.

### 3232 Sculpture II (0-6)

(Common Course Number ARTS 2327)

Continued exploration of Sculptural concepts through the use of combining traditional sculptural materials. Six hours in studio per week. *Prerequisite:* SCUL 3202 or instructor's approval. Laboratory fee required.

### 3302 Sculpture III (0-6)

Sculptural fabrication through the manipulation of steel. To include steel cutting, forging, welding, and safety procedures. Six hours in studio per week. *Prerequisite:* SCUL 3202 or instructor's approval. Laboratory fee required.

### 3332 Sculpture IV (0-6)

Experimentation in the casting of non-ferrous metals to include a variety of techniques and safety procedures. Six hours in studio per week. *Prerequisite:* SCUL 3302 or instructor's approval. Laboratory fee required.

### 3342 Sculpture V (0-6)

The exploration of Sculptural form through the use of non-traditional materials. Six hours in studio per week. *Prerequisite:* SCUL 3202 or instructor's approval. Laboratory fee required.

### 3402 Sculpture VI (0-6)

Investigation into the facets of public Sculpture and formal proposal writing. Six hours in studio per week. *Prerequisite:* SCUL 3202 or instructor's approval. Fees required.

### 3432 Sculpture VII (0-6)

Advanced sculptural investigation emphasizing individual directional development. Six hours in studio per week. *Prerequisite:* SCUL 3202 and 6 semester hours of sculpture. Fees required.

### 3442 Special Problems in Sculpture (0-6)

Continued individual direction in Sculpture. May be repeated for credit when problem varies. *Prerequisite:* SCUL 3202 and 9 semester hours of sculpture. Fees required.

See the Graduate Studies Catalog for graduate programs and courses.

## Chicano Studies

104 Graham Hall  
(915) 747-5462

DIRECTOR: Dennis J. Bixler-Marquez

PROFESSOR EMERITUS: John McCarty Sharp

ASSOCIATE PROFESSOR EMERITA: Eleanor G. Cotton

PROFESSORS: Amastae, Bixler-Marquez, Cardon, Cortez González, Dieppa, Elerick, Garcia, Haddox, M. Hernández, N. Hernández, Ingle, Pacheco, A. Pérez, Staudt, Stoddard, Teschner, Tinajero, Villarreal, West

ASSOCIATE PROFESSORS: Armengol, Amaya, Castillo, Descamps, Howard, López, Meléndez-Hayes, Seda, Springer

ASSISTANT PROFESSORS: Baca, Barrera-Herrera, Campbell, Chávez, Chacón, A. González, Izquierdo, Kootnz, E. Pérez, Rael, Ramos, Rocha, F. Rodriguez, Sáenz, Topp, Vila, Zárate

LECTURER: Albin

Chicano Studies offers a variety of courses from a number of disciplines. These courses are designed to provide knowledge about Chicanos, their origins, history, literature, culture, and language.

Chicano Studies is designed to provide individuals with the opportunity to prepare for: (1) further study in the fields of the humanities, social science, law, medicine, engineering, and business; (2) careers in community programs and teaching at all levels; and (3) advanced study in Chicano Studies fields. All courses listed in this interdisciplinary program are open to students having the academic prerequisites. Students may start at the freshman or sophomore level.

Students desiring to pursue one of these programs should consult with the Chicano Studies Director to determine a course of study suitable to their interests and professional needs.

**Major In Chicano Studies (27 hours)**

Students wishing to major in Chicano Studies must complete the following:

1. 27 semester hours of academic Core Courses as follows:
  - 3 Chicano Studies 3201 (It is recommended that this course be taken first.)
  - 3 CHIC 3109 (Philosophy 3109)
  - 3 One of the following: CHIC 3205; CHIC 3213 (Philosophy 3213); CHIC 3258, 3259 (Sociology 3258, 3259)
  - 3 CHIC 3374 (English 3374) or CHIC 3335 (Theatre Arts 3335)
  - 3 CHIC 3310 (English 3310)
  - 3 CHIC 3309 (History 3309)
  - 3 CHIC 3412 (Political Science 3412)
  - 6 From the following: CHIC 3440 (Bilingual Education 3440); CHIC 3328 (History 3328), HIST 3327, 3342, 3343, 3350, 3390; Linguistics-Spanish 3472; CHIC 3351 (Philosophy 3351), PHIL 3452; POLS 3336, 3413; CHIC 3325 (Spanish 3325); CHIC 3339, 3450; CHIC 3361 (Social Work 3361)
2. Proficiency in Spanish must be established by completing eight hours of Spanish (4102 and 4104) or by appropriate examination.
3. A term paper, with a minimum grade of "B", in a Chicano Studies (3300-3400 level) course must be on file in the program's office.

**Minor In Chicano Studies (18 hours)**

For students with multiple interests, a minor in Chicano Studies may be pursued with any other major. To complete a minor, students must have 18 hours, at least 12 of which must be upper-division courses.

Students have the choice of three areas from which to choose depending on their desire and need. The areas are as follows:

**Social Science Option**

- 3 CHIC 3201 (It is recommended that this course be taken first.)
- 3 From the following: SOCI 3258, 3259; CHIC 3320 (SPAN 3320)
- 12 From the following: ENGL 3374; CHIC 3301, 3339, 1450, 2450, 3450, 4450 (when topic is appropriate); POLS 3321, 3336, 3413, 3470 (when topic is appropriate); PHIL 3351; SOWK 3326, 3336, 3366, 3385.

**Humanities Option**

- 3 CHIC 3201 (It is recommended that this course be taken first.)
- 3 From the following: PHIL 3213; CHIC 3320 (SPAN 3320); ARTH 3339
- 12 From the following: CHIC 1450, 2450, 3301, 3450, 4450 (when topic is appropriate); ENGL 3310, 3374; HIST 3309, 3328, 3342, 3343, 3390 (when topic is appropriate); PHIL 3351, 3453 (when topic is appropriate); LING 3472 (SPAN 3472).

**Interdisciplinary Option**

- 3 CHIC 3201 (It is recommended that this course be taken first.)
- 3 From the following: PHIL 3213; SOCI 3258, 3259; CHIC 3320 (SPAN 3320); ARTH 3339
- 12 From the following: ENGL 3374; BED 3440; CHIC 3301, 3339, 1450, 2450, 3450, 4450; ENGL 3310; HIST 3309; PHIL 3351; POLS 3412; SPAN 3325; SOWK 3326, 3336, 3366, 3385; THEA 3335.

**Core Courses**

BED 3440  
 CHIC 3201, 3301, 3339, 1450, 2450, 3450, 4450  
 ENGL 3310, 3374  
 HIST 3309, 3328, 3342, 3343, 3350  
 LING 3472, 3473 (same as SPAN 3472, 3473)  
 PHIL 3213, 3351, 3453 (when topic is appropriate)  
 POLS 3412, 3413, 3430

SOCI 3258, 3259, 3341 (when topic is appropriate)  
 SOWK 3326, 3336, 3366, 3385  
 SPAN 3320, 3325  
 TED 3450  
 THEA 3335

**Recommended Electives**

ANTH 3211  
 ARTH 3310  
 ECON 3366  
 ENGL 3371, 3372  
 HIST 3316, 3349  
 LING 3308, 3309, 3315 (SPAN 3309, 3315)  
 MUSL 3126, 3325  
 PHIL 3312  
 POLS 3333, 3415, 3435, 3430, 3441  
 SOCI 3327, 3352  
 SPAN 3309, 3315 (LING 3309, 3315)

**Chicano Studies (CHIC)****3201 Chicano Studies Survey and Analysis (3-0)**

Interdisciplinary survey of the historical, socio-economic, political, artistic, literary, and educational characteristics of the Chicano.

**3301 La Chicana (3-0)**

An interdisciplinary examination of the socioeconomic, political, and cultural forces that affect the status of Chicanas in American society. Special considerations will be given to the role of Chicanas in the Women's and Chicano Movements, as well as the Mexicana/Chicana confluence in the U.S.-Mexico border region.

**3320 Hispanic Civilization (3-0)**

A survey of the cultural traditions of Spanish-speaking populations, including Spain, Spanish America, and Spanish-speaking groups in the U.S. *Prerequisite:* SPAN 3202 or SPAN 3204.

**3339 Youth at Risk In the U.S.: Cultural Factors (3-0)**

Survey of socioeconomic and cultural characteristics of ethnic groups in the U.S. and how they affect the participation of these groups in the American education system. Includes examination of specific policies and practices in those institutions which promote or inhibit participation.

**1450 Topics In Chicano Studies (1-0)**

An examination of a currently relevant subject from the perspective of Chicano Studies. Topics will vary and will be drawn from the Social Sciences, Humanities, Fine Arts, and Education. May be repeated for credit when topic varies.

**2450 Topics In Chicano Studies (2-0)**

An examination of a currently relevant subject from the perspective of Chicano Studies. Topics will vary and will be drawn from the Social Sciences, Humanities, Fine Arts, and Education. May be repeated for credit when topic varies.

**3450 Topics In Chicano Studies (3-0)**

An examination of a currently relevant subject from the perspective of Chicano Studies. Topics will vary and will be drawn from the Social Sciences, Humanities, Fine Arts, and Education. May be repeated for credit when topic varies.

**4450 Topics In Chicano Studies (4-0)**

An examination of a currently relevant subject from the perspective of Chicano Studies. Topics will vary and will be drawn from the Social Sciences, Humanities, Fine Arts, and Education. May be repeated for credit when topic varies.



# Communication

202 Cotton Memorial  
(915) 747-5129

**CHAIRPERSON:**

**PROFESSOR EMERITUS:** Ray Small

**PROFESSOR:** Ingle

**ASSOCIATE PROFESSOR EMERITA:** Jean H. Miculka

**ASSOCIATE PROFESSORS:** Byrd, Riccillo

**ASSISTANT PROFESSORS:** Barrera, Della-Piana, Jones, Lawrence, Power, Ross, Trejo

The Department of Communication affords students the opportunity to pursue a Bachelor of Arts degree in Communication. Five study concentrations are available: Print Media, Organizational/Public Relations, Media Advertising, Electronic Media, and Communication Studies.

**Core Courses: All Concentrations (9 hours)**

- COMM 3170 Introduction to Communication
- COMM 3271 Writing for the Mass Media
- COMM 3371 Communication Theory and Analysis

**PRINT MEDIA CONCENTRATION**

**Requirements (15 hours)**

- COMM 3212 History of Print Media
- COMM 3311 Public Affairs Reporting
- COMM 3313 News Gathering and Investigation
- COMM 3411 News Editing
- COMM 3471 Communication Law and Society

**Electives (12 hours)**

Selected from the following courses:

- COMM 3317 Photography
- COMM 3331 Graphics of Print Media
- COMM 3333 Ad Layout and Copy
- COMM 3351 General Semantics
- COMM 3357 New Communication Technologies
- COMM 3359 Mass Communication Theory
- COMM 3400 Communication Internship
- COMM 3412 Feature Writing
- COMM 3450 Selected Topics
- COMM 3472 Methods of Research in Communication

**ORGANIZATIONAL COMMUNICATION/  
PUBLIC RELATIONS CONCENTRATION**

**Requirements (15 hours)**

- COMM 3311 Public Affairs Reporting
- COMM 3321 Public Relations
- COMM 3354 Small Group Communication
- COMM 3355 Organizational Communication
- COMM 3472 Methods of Research in Communication

**Electives (12 hours)**

Selected from the following courses:

- COMM 3353 Intercultural Communication
- COMM 3357 New Communication Technologies
- COMM 3359 Mass Communication Theory
- COMM 3400 Communication Internship
- COMM 3423 Case Studies in Public Relations
- COMM 3450 Selected Topics
- COMM 3455 Advanced Organizational Communication
- COMM 3471 Communication Law and Society

**MEDIA ADVERTISING CONCENTRATION**

**Requirements (15 hours)**

- COMM 3230 Principles of Advertising
- COMM 3331 Graphics of Print Media
- COMM 3333 Ad Layout and Copy
- COMM 3335 Advertising Campaigns
- COMM 3471 Communication Law and Society

**Electives (12 hours)**

Selected from the following courses:

- COMM 3317 Photography
- COMM 3321 Public Relations
- COMM 3353 Intercultural Communication
- COMM 3357 New Communication Technologies
- COMM 3400 Communication Internship
- COMM 3430 Media Planning
- COMM 3433 Magazine Production
- COMM 3435 Advanced Advertising Campaigns
- COMM 3450 Selected Topics
- COMM 3472 Methods of Research in Communication

**ELECTRONIC MEDIA CONCENTRATION**

**Requirements (15 hours)**

- COMM 3240 History of Electronic Media
- COMM 3242 Introduction of Video Systems
- COMM 3243 Audio in Media
- COMM 3341 Writing for Electronic Media
- COMM 3471 Communication Law and Society

**Electives (12 hours)**

Selected from the following courses:

- COMM 3342 Advanced Electronic Media Systems
- COMM 3344 Media Programming for Radio and Television
- COMM 3357 New Communication Technologies
- COMM 3400 Communication Internship
- COMM 3430 Media Planning
- COMM 3441 Advanced Writing for Electronic Media
- COMM 3450 Selected Topics
- COMM 3472 Methods of Research in Communication

**COMMUNICATION STUDIES CONCENTRATION**

**Requirements (15 hours)**

- COMM 3250 Introduction to Interpersonal Communication
- COMM 3252 Persuasion and Social Influence
- COMM 3353 Intercultural Communication
- COMM 3359 Mass Communication Theory
- COMM 3472 Methods of Research in Communication

**Electives (12 hours)**

Selected from the following courses:

- COMM 3350 Advanced Interpersonal Communication
- COMM 3351 General Semantics
- COMM 3354 Small Group Communication
- COMM 3355 Organizational Communication
- COMM 3357 New Communication Technologies
- COMM 3400 Communication Internship
- COMM 3450 Selected Topics
- COMM 3455 Advanced Organizational Communication
- COMM 3459 Seminar in Communication
- COMM 3471 Communication Law and Society

**Minor in Communication (18 hours)**

COMM 3170, 3271, 3371, and nine hours of upper-division Communication courses. A MINOR PROGRAM REQUEST FORM including departmental approval must be filed with the department.

**Teacher Certification**

Programs that combine the BA degree with secondary certification are available in Communication. For further information on requirements for certification, see the general information for the College of Liberal Arts and the College of Education.

**Communication (COMM)**

For Undergraduates

**3101 Public Speaking (3-0)**

Introduction to the theory and practice of public speaking; the inventing, arranging, phrasing, and presenting of ideas to an audience. The complementary skills of speaking and listening are developed through criticism of speeches presented in class.  
*Prerequisite:* ENGL 3110 or placement test into ENGL 3111.

**3102 Business and Professional Communication (3-0)**

A course in communication covering both informative and persuasive presentations as these occur in business and professional activities. Instruction and guided practice in informal and semi-formal speaking situations. *Prerequisite:* ENGL 3110 or placement test into ENGL 3111.

**3104 Mass Media and Society (3-0)**

An introduction to the mass communication media in the United States, their history, their roles, and issues within these media.

**3170 Introduction to Communication Studies (3-0)**

An introduction to the field of communication. A survey of theories and issues associated with the communication process from interpersonal communication to mass communication.

**6111 Written and Oral Communication (6-0)**

Integrated study of and practice in oral and written communication, with emphasis on the process leading to the creation of effective essays and speeches; complementary skills of reading and listening are developed through extensive response to others written and spoken work. Counts for both ENGL 3111 and COMM 3101. *Prerequisite:* ENGL 3110 or placement by exam.

**2201 Forensic Practicum (0-4)**

Practical Laboratory experience in all phases of research, case preparation, argumentation, and analysis of the current national debate topic and/or the current cross-examination debate association topic for public competitive persuasion. Includes participation in on-campus public debate program which may include topics of local/current interest. May be repeated for credit. *Prerequisite:* Instructor's approval.

**2202 Forensic Practicum Individual Events (0-4)**

Practical Laboratory experience in all phases of oratory, oral interpretation, extemporaneous and impromptu speaking, expository speaking, dramatic duo, and other individual events for public and competitive presentations. Includes participation in on-campus public presentations program. May be repeated for credit. *Prerequisite:* Instructor's approval.

**3200 Beginning Media Writing (3-0)**

An introduction to writing techniques used in media. Emphasis on media style and story construction, grammar, spelling, and punctuation. *Prerequisites:* Sophomore standing, ENGL 3111, and ENGL 3112.

**3212 History of Print Media (3-0)**

A history of print media in the United States from the colonies to the twentieth century. Emphasis on the influence of journalism on social institutions. *Prerequisite:* COMM 3104, COMM 3170, or instructor's approval.

**3230 Principles of Advertising (3-0)**

An overview of advertising principles and practices including media characteristics, rates and budgeting, introduction to campaigns, and social and economic criticism of advertising. *Prerequisites:* Sophomore standing and COMM 3170.

**3240 History of Electronic Media (3-0)**

The history and uses of the electronic media from early radio to satellite and digital technology. *Prerequisite:* COMM 3170 or instructor's approval.

**3242 Introduction to Video Systems (3-2)**

An introduction to the history, theory, technology, and production of visual communication from cameras to computers. *Prerequisite:* COMM 3170. Laboratory fee required.

**3243 Audio in Media (3-2)**

The history, theory, and production of audio communication. Development and review of audio techniques from analogue to digital formats. *Prerequisite:* COMM 3170. Laboratory fee required.

**3250 Introduction to Interpersonal Communication (3-0)**

The study of contemporary interpersonal communication theory and research. Both theory and skills are emphasized. *Prerequisites:* Sophomore standing and ENGL 3112.

**3252 Persuasion and Social Influence (3-0)**

An introduction to theories of persuasion. Analysis of the communication process as social influence in various contexts of communication. *Prerequisite:* Sophomore standing or instructor's approval.

**3271 Writing for the Mass Media (2-5)**

Fundamentals of newswriting and story structures with emphasis on development of information gathering skills as well as journalistic style. Concentration on print media. *Prerequisites:* ENGL 3111, ENGL 3112, COMM 3170, COMM 3200, and sophomore standing. Laboratory fee required.

**3290 Introduction to Art of the Motion Picture (3-0)**

Understanding and appreciating film as a unique medium for communication and artistic expression. Introduces students to a broad range of types of films. Basic theory presented in class. Films viewed in class and on campus are discussed in class. Course fee required.

**3311 Public Affairs Reporting (2-5)**

An intensive reporting course that examines public institutions, their structures and operations and provides student practice for publication in reporting on city, county, state, and federal offices. *Prerequisites:* Junior standing, COMM 3170, COMM 3271, and COMM 3200. Laboratory fee required.

**3313 News Gathering and Investigation (2-6)**

Emphasis on developing and writing news stories of substance and depth for publication. Emphasis on more complex issues and story structures with development of journalistic writing style. Includes news features, interpretive and investigative reporting, and news gathering. *Prerequisites:* Junior standing, COMM 3170, COMM 3271 with grade of "C" or better, and COMM 3311. Laboratory fee required.

**3317 Photography (3-3)**

Basic instruction in photographic media. Camera lighting and development of techniques. Principles of composition development and printing techniques. *Prerequisites:* COMM 3170 and COMM 3271. Laboratory fee required.

**3321 Public Relations (3-0)**

Principles, techniques, and methods used in public relations. *Prerequisites:* Junior standing and COMM 3271 with grade of "C" or better.

**3331 Graphics of Print Media (3-3)**

Use of graphics for effective communication including typography, color, photography, design in advertising, newspaper and magazine, computer-based pagemaker, and printing methods. *Prerequisites:* Junior standing, COMM 3170, COMM 3230, and COMM 3271. Laboratory fee required.

**3333 Ad Layout and Copy (3-3)**

Basic course in production of newspaper, magazine, and television advertising from conceptualization to comprehensives. *Prerequisites:* Junior standing and COMM 3331. Laboratory fee required.

**3334 Communication Education (3-0)**

Designed for the teacher of speech in the language arts program or the secondary school. Includes the study of methods of teaching and evaluating classroom speech activities, conducting extracurricular speech activities. *Prerequisite:* Junior standing.

**3335 Advertising Campaigns (3-4)**

Research planning, designing, client presentation, and execution of an advertising campaign. Offered in fall semester only. *Prerequisites:* COMM 3333 with grade of "C" or better, junior standing for majors or instructor's approval for non-majors. Laboratory fee required.

**3341 Writing for Electronic Media (3-0)**

The techniques of writing for broadcast news, advertising for radio and television, and public programs for radio, television, and video. *Prerequisites:* COMM 3271, COMM 3240, and COMM 3242.

- 3342 Advanced Electronic Media System (3-4)**  
Advanced techniques of video production and technology. *Prerequisites:* COMM 3242 and COMM 3341. Laboratory fee required.
- 3344 Media Programming for Radio and TV (3-0)**  
History and development of techniques for media programming in radio and television. *Specific program formats will be analyzed and developed. Prerequisites:* COMM 3243 and COMM 3342.
- 3350 Advanced Interpersonal Communication (3-0)**  
Examines recent trends in theory and analysis of social interaction. Analysis of the communication processes underlying formation, maintenance and termination of relationships. *Prerequisites:* Junior standing, COMM 3250, or instructor's approval.
- 3351 General Semantics (3-0)**  
A survey of problems in language use, concentrating on theories of meaning. Review of semantics principles from general semantics to general systems theory. *Prerequisite:* Junior standing.
- 3353 Intercultural Communication (3-0)**  
Course explores the process of communication in culture, verbal, nonverbal cues, values and person perception in cross and intercultural interaction. *Prerequisites:* COMM 3170, Junior standing, or instructor's approval.
- 3354 Small Group Communication (3-0)**  
An examination of theories, research, and principles to small group communication. Both theory and skill development are stressed. *Prerequisite:* Junior standing or instructor's approval.
- 3355 Organizational Communication (3-0)**  
An examination of the theory and research on the communication process in organizations. Functional and interpretive theories and applications are explored. *Prerequisite:* Junior standing or instructor's approval.
- 3357 New Communication Technologies (3-0)**  
The theory and research of the effects of technology on human communication. Surveys the impact of the effects on human interaction mediated by various technologies. *Prerequisites:* Junior standing, COMM 3170, or instructor's approval.
- 3359 Mass Communication Theory (3-0)**  
A survey of major mass communication theories. Emphasis on analysis and implication of attempts to influence social behavior or institutions through media. *Prerequisite:* Junior standing or instructor's approval.
- 3371 Communication Theory and Analysis (3-0)**  
Survey of significant communication theories, providing a history of similarities and differences among theories and theorists. Theories will range from intrapersonal processes to mass communication. *Prerequisites:* Junior standing and COMM 3170.
- 3400 Communication Internship (1-15)**  
*Students in this program are provided an opportunity to gain practical experience through unremunerated professional participation in the activities of professional firms, agencies, or departments in their major emphasis area. Prerequisites:* Junior standing, COMM 3170, and COMM 3271.
- 3411 News Editing (3-3)**  
Instruction and practice in basic story editing and production with focus on practical experience in editing and copy preparation for publication. Emphasis on development of news judgement, accuracy, and fairness, while exposing students to legal problems confronting the media. *Prerequisites:* Junior standing, COMM 3311, and COMM 3313.
- 3412 Feature Writing (3-0)**  
Methods of gathering materials for feature stories through interviews, research and observation; study of feature story form and style; discussion of markets for literary material practice in writing feature stories. *Prerequisites:* Senior standing, COMM 3170, COMM 3271, COMM 3311, and COMM 3313 with grade of 'C' or better.
- 3423 Case Studies-Public Relations (3-0)**  
Advanced theory and application of principles of public relations. Significant case studies are reviewed and analyzed. *Prerequisite:* COMM 3321.
- 3430 Media Planning (3-0)**  
Planning media strategies to evaluate and select media vehicles for advertising. Integrates theories of marketing communication and database marketing. *Prerequisite:* Senior standing, COMM 3335, or instructor's approval.
- 3433 Magazine Production (3-3)**  
Production of small magazines through offset reproduction. Stresses basics of organization, layout, design, and copyfitting. *Prerequisites:* COMM 3230 and COMM 3301. Laboratory fee required.
- 3435 Advanced Advertising Campaigns (3-3)**  
Advanced research, planning, design, client presentation, and execution of major advertisement campaigns. Designed for student competition for American Advertising Federation. Offered spring semester only. *Prerequisites:* COMM 3333, COMM 3335, COMM 3354, and instructor's approval for non-majors. Course fee required.
- 3441 Advanced Writing-Electronic Media (3-0)**  
Advanced techniques of writing for broadcast news, corporate instructional and promotional video. *Prerequisite:* COMM 3341.
- 3450 Selected Topics (3-0)**  
Instruction of students individually and in groups in significant areas of communication which are not covered by regular catalog offerings. May be repeated for credit when content varies. *Prerequisite:* Junior standing.
- 3452 Contemporary Rhetoric (3-0)**  
Study of modern humanistic contributions to theories of communication and persuasion.
- 3455 Advanced Organizational Communication (3-0)**  
In-depth study of organizational communication. Theory and research emphasis given to the exploration of issues with appropriate communication methodologies employed. *Prerequisite:* COMM 3355 or instructor's approval.
- 3459 Seminar in Communication (3-0)**  
Seminar for systematic discussion and research of topics in the field of communication. *Specific content is determined by participating faculty and students.*
- 3471 Communication Law and Society (3-0)**  
A study of the rights and responsibilities imposed upon and exercised by the mass media under the American system of law. Ethical considerations in exercising responsibilities vested in the media are highlighted. *Prerequisites:* Junior standing, COMM 3170, COMM 3271, or instructor's approval.
- 3472 Methods of Research in Communication (3-0)**  
An overview of the various social science methodologies used in conducting research in the communication discipline. Includes problems of formulation, measurement of concepts, design, collecting, and analyzing data. *Prerequisites:* Senior standing, STAT 3280, and STAT 1282.

See the *Graduate Studies Catalog* for graduate programs and courses.

# Criminal Justice Program

312 Jack Vowell Hall  
(915) 747-7943

DIRECTOR: Roy S. Malpass

PROFESSORS: Daudistel, Graves, Hosch, Malpass, Sanders, Whitworth

ASSISTANT PROFESSORS: Giacomazzi, Guinn, Rodríguez, Shaw, Smithey

LECTURER: McCleary

The Criminal Justice Program offers an interdisciplinary major leading toward a BA degree designed to provide students with a broad social science background for understanding crime, criminal behavior, and the criminal justice system and to offer the opportunity to prepare for a professional career in criminal justice.

## Requirements for the B.A. degree in Criminal Justice:

1. Complete a minimum of 131 semester hours, including at least 54 hours at the advanced (300 or 400) level.
2. Fulfill the general education core requirements for the Bachelor of Arts degree in the College of Liberal Arts
  - a. Criminal Justice majors are encouraged to take ENGL 3359 (Technical Writing) in addition to the Communication Skills sequence.
  - b. Criminal Justice majors are encouraged to fulfill the mathematics requirement by taking Psychology 3103, Sociology 3212, or Statistics 3280.
  - c. Criminal Justice majors are encouraged to take Sociology and Psychology courses to fulfill the social/behavioral science requirements.
3. Complete 33 hours of criminal justice courses including the following required courses: CRIJ 3101, 3102, 3206, 3302, 3313, and 3350. A minimum of 24 credit hours in the major must be taken at the advanced (3300-3400) level.
4. Complete a minor of at least 18 hours, nine of which must be at the advanced (300-400) level. The minor field must be selected from a discipline different from that of the major field. Credit for courses taken to fulfill the minor may not be used to satisfy the major or general education core requirements. See the general BA minor requirements for a list of acceptable minors.
5. Complete electives as needed to bring the total semester hours of credit to 131. Elective credit cannot be used in meeting any other degree requirement. Electives of advanced (300 or 400) level may, however, be applied toward satisfaction of the requirement of 54 advanced hours.

**Minor in Criminal Justice:** Students who wish to minor in Criminal Justice should complete CRIJ 3101, 3102, 3206, 3302, 3313, and 3350 for a total of 18 semester hours.

## Criminal Justice (CRIJ)

For Undergraduates

*General Prerequisite:* Junior standing for all 3300 or 3400 level courses.

### 3101 Introduction to Criminal Justice I (3-0) (Common Course Number CRIJ 1301)

Development and philosophy of criminal justice in a democratic society; introduction to agencies involved in the administration of criminal justice.

### 3102 Introduction to Criminal Justice II (3-0)

A critical examination of selected problems and issues in the criminal justice system from an interdisciplinary perspective. *Prerequisite:* CRIJ 3101 with grade of "C" or better.

### 3200 Criminal Law (3-0)

(Common Course Number CRIJ 1310)

History and philosophy of modern criminal law, including the structure, definition, and application of statute and leading case law; the elements of crimes and penalties. Texas Penal Code used as a reference.

### 3201 Effectiveness Assessment in Criminal Justice (3-0)

An overview of the process of effectiveness assessment in the development, application, and administration of criminal justice policy. *Prerequisite:* CRIJ 3102 with grade of "C" or better.

### 3206 Introduction to Corrections (3-0)

A tracing of the evolution and the philosophical underpinnings of institutional and community based correctional practices.

### 3301 Criminal Investigation (3-0)

Fundamentals of criminal investigation, including theory and history, and collection and preservation of evidence. *Prerequisite:* CRIJ 3350 or consent of instructor.

### 3302 Police Systems and Practice (3-0)

An overview of the structures, functions, and operations of law enforcement agencies in the United States, with emphasis on municipal police departments. The course surveys police operations, staff functions, personnel policies, and current innovations utilized in delivering police services. Covers such topics as police discretion, ethics, police-community relations, and the future of policing in American society.

### 3303 The Private Sector and Criminal Justice (3-0)

The roles of nongovernmental actors in the justice process, with a focus on the legal and sociological implications of their existence in a democratic society. Both volunteer and profit-making agencies will be examined in relation to the traditional criminal justice agencies of police, courts, and corrections. Private security and loss prevention operations will be surveyed along with private adjudicatory systems and correctional programs.

### 3306 Community Corrections (3-0)

An examination of the role of the community in the reintegration of offenders. Analysis of those correctional programs which are designed to be administered in a community setting, including probation, parole, halfway houses, restitution, and community service.

### 3308 Juvenile Justice (3-0)

The law of juvenile delinquency and the administration of the juvenile justice system. The historical development of the concept of delinquency, the special status of juveniles before the law, and juvenile justice procedural law will be examined in detail.

### 3309 Correctional Counseling (3-0)

Methods used by correctional officers in rehabilitating criminal offenders. *Prerequisite:* 6 hours of Psychology.

### 3311 Crime Control and Prevention (3-0)

An examination of those activities undertaken by public and private organizations to control and prevent crime. Those programs which have been successful in reducing the amount of crime will be analyzed, as well as attempts which have been made at predicting and deterring criminal behavior.

### 3313 Crime in America (3-0)

An overview of crime in contemporary America, including discussions of the various types of crime, crime causation, crime trends, the impact of crime, and social and public policy factors affecting crime.

### 3322 Research Methods in Criminal Justice (3-0)

Assessment of data collection and interpretation strategies in criminal justice research, including hypothesis formation, research design, types of data, and data analysis. *Prerequisites:* CRIJ 3201 with grade of "C" or better and PSYC 3103, or SOCI 3212, or STAT 3180 with grade of "C" or better.

**3350 The Courts and Legal Process (3-0)**

Focuses on the role of the courts in the administration of criminal justice, with special attention to the legal processing of criminal defendants. Topics include the structure of the American courts, due process, right to counsel, pre-trial release, plea bargaining, trial proceedings, and sentencing.

**3351 Criminal Justice on the United States-Mexico Border (3-0)**

An examination of the nature and scope of crime on the United States-Mexico border and an evaluation of the strategies and programs employed by both governments to control criminal activity on the border.

**3400 Selected Topics in Criminal Justice (3-0)**

Focuses on those selected issues and problems confronting the various components of the criminal justice system. Topics covered may change each semester. May be repeated for credit upon change of topic.

**3401 Readings in Criminal Justice (3-0)**

This course is designed for the advanced student who is capable of independent study. Existing regulations, both formal and informal, which govern practitioners in the area of criminal justice will be examined. This course may be repeated for credit when the topics vary.

**3410 Internship in Criminal Justice (3-0)**

A program in which the student is assigned two days (or 16-20 hours) each week to a criminal justice agency. A weekly seminar is also required. Designed to provide the student with an opportunity to apply academic training in practical situations.  
*Prerequisite:* Consent of the Program Director.

**3411 Immigration Law and Administration (3-0)**

An examination of federal regulations pertaining to legal and illegal immigration into the United States. Among the topics discussed are legalization, employer sanctions, amnesty, and constitutional rights of aliens.

**3420 Criminal Justice Organization and Management (3-0)**

The structures, functions, and operations of criminal justice agencies, including the police, the courts, and corrections are analyzed from an organizational and managerial perspective. Particular attention is given to supervision, decision-making, and policy analysis in the administration of justice.

**3425 Moot Court (3-0)**

Substantive and procedural problems encountered in a criminal court proceeding. Focus will be on the role of the law enforcement and correctional officer in the judicial process.  
*Prerequisites:* CRIJ 3200 or departmental approval.

**3499 Research Practicum in Criminal Justice (0-0-3)**

A course designed to give students supervised experience in conducting social science research on criminal justice problems. May be taken for a maximum of 9 credit hours. *Prerequisite:* Either CRIJ 3322, PSYC 2301 and PSYC 1301, or SOCI 3311 and instructor's approval.

See the *Graduate Studies Catalog* for graduate courses.

## English

113 Hudspeth Hall  
(915) 747-5731

113 Hudspeth Hall  
(915) 747-5731

CHAIRPERSON: G. Douglas Meyers

PROFESSORS EMERITI: Robert Northcutt Burlingame, Lurline H. Coltharp, James Milton Day, Joseph Leach, Ray Small

PROFESSORS: Bledsoe, DeMarinis, Gladstein, Hernández, Mortimer, Stafford, Taylor, Ullman, West

ASSOCIATE PROFESSORS EMERITI: Lillian Collingwood, James K. P. Mortensen, Joan Phelan Quarm, Roberta Walker

ASSOCIATE PROFESSORS: Antone, Boley, Dick, Esch, Johnson, Jussawalla, Lawson, Marchino, Meléndez-Hayes, Meyers, Potts, Smith

ASSISTANT PROFESSORS: Clark, Justice, Mangelsdorf, Mansfield-Kelley, Michaelsen, Polette, Posey, Sáenz, Schmid, Whitley

LECTURERS: Bardas, Cason, Price, Wasem

### Undergraduate Degree Requirements

Requirements for all undergraduate degrees from the University of Texas at El Paso include successful completion of English 3112 or 3113 (or ESOL 3112). Course work toward this goal consists of a three-step program to develop college-level competence in composition, rhetoric, and research procedures. This program is designed to provide students with the skills in language and communication that they will need for the remainder of their undergraduate careers and for professional achievement in their selected fields following graduation.

Unless ENGL 3110 is completed by advanced placement (by TSWE or ACT test results), the course must be taken until it is passed; thereafter, unless ENGL 3111 is completed by advanced placement, the course must be taken each time the student enrolls until it is passed; thereafter, unless ENGL 3112 is completed by advanced placement, the course must be taken each time the student enrolls until it is passed.

ALL STUDENTS MUST PRESENT TEST SCORES FOR PLACEMENT IN THE FRESHMAN COMPOSITION PROGRAM. FOR INFORMATION CONCERNING PLACEMENT INTO THE PROPER FRESHMAN COMPOSITION COURSE, SEE POLICY AND PROCEDURES AND THE PLACEMENT EXAMINATION SECTION.

### English Major Degree Options

Students are expected to consult with the Director of Literature and/or the Director of Creative Writing concerning the selection of options and courses.

BA DEGREE--ENGLISH AND AMERICAN LITERATURE: This option is directed primarily toward students interested in studying English and American Literature, providing them an opportunity to prepare themselves for postgraduate study in fields as diverse as literature, law, and public relations, or for teaching careers on the secondary and university levels. After completing the freshman English requirement, students selecting the Literature Option take English 3211 and 3212. They then take 30 hours in advanced-level literature courses as follows:

1. One of the following: 3319 (Renaissance Prose and Poetry), 3323 (Seventeenth-Century Prose and Poetry), 3330 (Neo-Classical Literature), or 3447 (The English Novel through the Eighteenth Century).
2. 3320 (Shakespeare's Major Plays) or 3321 (Representative Shakespearean Works).
3. Two of the following: 3333 (Romantic Literature), 3337 (Victorian Literature), 3344\* (Contemporary Poetry), 3425 (British Drama since 1880), 3448 (The English Novel: Nineteenth Century), or 3449 (The English Novel: Twentieth Century).
4. 3408 (Chaucer), 3409 (Milton), or 3440 (when the topic is a major British author).
5. Two of the following: 3311 (American Literature to 1860), 3312 (American Literature since 1860), 3344\* (Contemporary Poetry), 3416 (American Poetry through the Nineteenth Century), 3417 (American Fiction to 1900), 3418 (Early Twentieth-Century American Fiction), 3419 (American Fiction since 1945), or 3422 (American Drama).
6. 3450 (Major American Author).
7. 6 hours of advanced English Department courses, with 3414 (Literary Criticism) strongly recommended. At least 3 hours must be literature courses.

\*May be counted for credit under either 3 or 5 but not both.

**BA DEGREE--CREATIVE WRITING:** This option is directed primarily toward students interested in preparing themselves for careers in professional writing and editorial activities or in teaching creative writing at the secondary or college level. After completing the freshman English requirement, students selecting the Creative Writing Option take English 3211 and 3212. They take 30 hours in advanced-level English courses as follows:

1. 3361 (Introduction to Creative Writing: Forms and Techniques), and 3362 (Creative Writing Workshop: Introduction to Fiction and Poetry Writing).
2. Four of the following: 3365 (Advanced Composition and Rhetoric), 3367 (Advanced Fiction Techniques), 3368 (Commercial Fiction), 3369 (Television and Screenplay Writing), 3370 (Poetry Techniques), 3414 (Literary Criticism), 3441 (Advanced Studies: Creative Writing), and 3460 (The Literary Essay).
3. Four of the following: 3311, 3312, 3319, 3320, 3321, 3323, 3330, 3333, 3337, 3344, 3408, 3409, 3416, 3417, 3418, 3419, 3422, 3425, 3447, 3448, 3449, 3450.

**Minors in English.** There are four options for the Minor in English, each of which requires the completion of 18 advanced hours:

1. Literature--3 hours, British literature before 1800; 3 hours, British literature since 1800; 3 hours, American literature; plus 9 elective hours in literature courses. (Note: English 3211 and/or 3212 may be counted in the minor, but the remaining hours must be advanced hours.)
2. Creative Writing, for students interested in writing poetry, fiction, non-fiction, literary essays, screenplays, or plays--ENGL 3361 and 3362; 6 hours, literature; 6 hours, creative writing.
3. Composite--The student may elect to concentrate on a specific field such as folklore, American Studies, Ethnic Studies, or dramatic literature, or may elect a more varied course of study. Students selecting this minor should consult with the director of the program in which they intend to complete most of their course work.
4. Professional Writing and Rhetoric--Required Courses (12 hours): ENGL 3303, English Grammar and Usage; 3359, Technical Writing (ENGL 3355, Business Communications, may be substituted for English 3359 with permission of PWR Program Director); 3365, Advanced Composition and Rhetoric; 3400, Senior Writing Practicum. Elective Courses: 6 hours from the following list of courses: ENGL 3358, Special Problems in Writing; ENGL 3363, Creative Writing: Contemporary Non-Fiction and Editing; POLS 3454, Administrative Theory; COMM 3355, Organization Communications; COMM 3452, Contemporary Rhetoric; CIS 3200, Business Computer Applications; CIS 3235, Introduction to Business Application Programming; MGMT 3303, Introduction to Management and Organizational Behavior; MGMT 3304, Advanced Organizational Behavior; ENGL 3355, Professional Writing and Rhetoric.

## Teacher Certification

Students seeking secondary certification in English must complete the BA requirements as described above. Certification requires 36 semester hours of courses in the major as described in the Liberal Arts section of this Catalog. Note that English 3455 may not be counted as part of the major since it is required for the minor in Education. For further information on requirements for certification, see the Catalog sections for the College of Liberal Arts and the College of Education.

## English (ENGL)

Courses for Undergraduates

### 3010 Introduction to Writing (3-0)

Through a variety of computer-supported writing and reading activities, students practice effective writing and effective analysis and evaluation of model and peers' essays. Topics include prewriting, determining purpose and addressing audience, drafting, revising, editing, and proofreading. This course is designed as an introduction to English 3110 and may not be used to satisfy any institutional degree requirements

### 3110 Basic English Composition (3-0)

Introduction to the writing process: prewriting, drafting, revision, and editing/proofreading; emphasis on adapting the writer's ideas and purpose to an audience. Editing skills (punctuation, spelling, grammar/usage) are presented within the context of the students' own writing. The course is designed as an introduction to English 3111 or English 6111. (ESOL 5110 may be substituted by non-native English speakers.)

### 3111 Expository English Composition (3-0) (Common Course Number ENGL 1301)

Instruction in addressing academic writing tasks through the composing process, with emphasis on strategic use of language, of rhetorical form, and of authorial voice and point-of-view to inform and persuade effectively; development of critical thought through writing and reading complex discourse. *Prerequisite:* ENGL 3110 or placement by examination. (Non-native English speakers may substitute ESOL 3111).

### 3112 Research and Critical Writing (3-0) (Common Course Number ENGL 1302)

Instruction in incorporating research into writing, with emphasis on 1) focusing questions, 2) using academic methods and resources, 3) learning to comprehend, analyze, synthesize, and critically evaluate materials, 4) shaping materials into coherent pieces of persuasive discourse appropriate to the writer's purpose and audience, and 5) understanding the logic and forms of documentation. (Non-native English speakers may substitute ESOL 3112.) *Prerequisite:* ENGL 3111/6111 or placement by examination.

### 3113 Writing about Literature (3-0)

A research and writing course in the analysis and interpretation of literature, progressing from basic exegesis of diction and syntax to the broad range of critical and stylistic approaches to literary works. Strongly suggested as preparation for junior and senior level courses in literature. Required of all English majors in lieu of English 3112. Strongly advised for all English Education students. Fulfills the catalog requirements for English 3112.

### 6111 Written and Oral Communication (6-0)

Integrated study of and practice in oral and written communication, with emphasis on the processes leading to the creation of effective essays and speeches. Students are offered the opportunity to develop complementary skills of reading and listening through extensive response to others' written and spoken work. Counts for English 3111 and Communication 3101. *Prerequisite:* ENGL 3110 or placement by examination.

### 3211 English Literature (3-0) (Common Course Number ENGL 2322)

English literature from its beginning through the eighteenth century. Required of all English majors. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

### 3212 English Literature (3-0) (Common Course Number ENGL 2323)

English literature from the Romantics to the present. Required of all English majors. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

### 3213 Introduction to Fiction (3-0)

Contemporary works as well as the historical development of the short story and the novel. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

### 3214 Introduction to Drama (3-0)

Study of the nature and variety of drama through examination of the contemporary Theatre and its historical development. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

### 3215 World Literature in Ancient, Medieval, and Early Renaissance Times (3-0) (Common Course Number ENGL 2332)

Ancient literatures such as the works of Homer, the Bible, Greek tragedy and comedy, up to Cervantes' *Don Quixote*. All foreign literatures are read in contemporary translation. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

- 3216 World Literature from the Late Renaissance to the Present (3-0)**  
(Common Course Number ENGL 2333)  
Great writers from the late Renaissance to such modern authors as Dostoevsky, Kafka, Hesse, and Solzhenitsyn. All foreign literatures are read in contemporary translation. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3218 Introduction to Poetry (3-0)**  
Study of the nature and forms of poetry through examination of modern poetry and its historical antecedents. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- The prerequisites for 3300-3400 level courses are English 3112 or 3113 or ESOL 3112 and junior standing.**
- 3301 Literary Studies (3-0)**  
A study of special literary subjects of interest to non-English majors. Topic varies with the instructor. May be repeated once for credit when subject changes. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3303 English Grammar and Usage (3-0)**  
Concepts and terminology of traditional grammar, the conventions of the written language, issues in contemporary usage. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3305 Children's Literature (3-0)**  
A survey of the major genres of literature for children from the seventeenth century to the present, including traditional to contemporary poetry, folk and fairy tales, fantasy, realistic fiction, biography, and informational books. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3306 Young Adult Fiction (3-0)**  
Study of major works of fiction that appeal to the young adult reader, with emphasis on contemporary novels and short stories. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3310 Chicano Literature (3-0)**  
Study of representative Chicano works, in prose, poetry, drama, and folklore, from 1848 to the present. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3311 American Literature to 1860 (3-0)**  
Representative writers from the Pre-Colonial period to 1860. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3312 American Literature since 1860 (3-0)**  
Representative writers from the Civil War to the present, with emphasis on major figures. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3315 African-American Literature (3-0)**  
Study of representative African-American prose and poetry from the Colonial period to the present. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3319 Sixteenth-Century Prose and Poetry (3-0)**  
The study of the major non-dramatic prose and poetry from More through Drayton, with special emphasis on the period of Spenser. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3320 Shakespeare's Major Plays (3-0)**  
Detailed study of the major plays, including *Hamlet*, *King Lear*, *Macbeth*, *The Tempest*, and others. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3321 Representative Shakespearean Works (3-0)**  
Detailed study of Shakespeare's other well-known plays, such as *Romeo and Juliet*, *The Taming of the Shrew*, *Twelfth Night*, *Troilus and Cressida*, as well as non-dramatic works such as the *Sonnets*. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3323 Seventeenth-Century Prose and Poetry (3-0)**  
A study of the major poets and prose writers, with emphasis on such authors as Donne, Jonson, the Cavalier Poets, Milton, Bacon, Browne, and Hobbes. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3330 Neo-Classical Literature (3-0)**  
A study of major poets and prose writers from 1660 to the end of the eighteenth century, with emphasis on such authors as Rochester, Dryden, Pope, Swift, Gay, Fielding, Johnson, Collins, and Cowper. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3333 Romantic Literature (3-0)**  
A study of the major poets and prose writers, with emphasis on such authors as Burns, Blake, Wordsworth, Coleridge, Lamb, Hazlitt, Byron, Shelley, Keats, Landor, and DeQuincey. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3337 Victorian Literature (3-0)**  
A study of the major poets and prose writers, with emphasis on such authors as Tennyson, Browning, Macaulay, Carlyle, Arnold, Newman, Ruskin, Pater, Stevenson, Rossetti, Meredith, Morris, Swinburne, Hardy, Hopkins, and Housman. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3344 Contemporary Poetry (3-0)**  
The most important poets, British and American, of the later twentieth century, with emphasis on such authors as Auden, Creeley, Hughes, Plath, Sexton, Stafford, Bly, Berryman, Roethke, Wright, and Wilbur. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3355 Business Communications (3-0)**  
A course that focuses on critical decision making in professional contexts. Principles of professional rhetoric are applied to the composing process; strategies for planning, organizing, drafting, and presenting written and oral communication for a workplace context are emphasized. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3358 Special Topics in Writing (3-0)**  
An advanced writing course emphasizing topics in professional writing and rhetoric. Course may be repeated when the topic changes. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3359 Technical Writing (3-0)**  
A professionally oriented communication course centered on assembling, organizing, drafting, revising, and presenting technical information for generating written documents and oral reports. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3360 Women in Literature (3-0)**  
A study of women writers and images of women in literature. Topic varies with the instructor. May be repeated once for credit when the topic changes. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3361 Introduction to Creative Writing: Forms and Techniques (3-0)**  
An introduction to creative writing, with emphasis on reading and analysis of recent poetry, fiction, and non-fiction to determine how form and technique are used to achieve desired effects and how a given work is put together. Analysis and writing assignments in each genre are designed to give students the opportunity to gain a working knowledge of fundamental elements such as visualization, freewriting, journal writing, prosody, concrete versus abstract language, imagery, characterization, dialogue, and narration. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.
- 3362 Creative Writing Workshop: Introduction to Fiction and Poetry Writing (3-0)**  
An extension of techniques in 3361, continued in workshop format and aimed towards an understanding of writing as a process that involves the conception, structuring, and revision of complete poems and stories. Students will be asked to critique one another's work and to use critiques of their own work towards making revisions. *Prerequisite:* ENGL 3361.
- 3365 Advanced Composition and Rhetoric (3-0)**  
Study of classical and contemporary rhetorical theory with emphasis upon the aims and modes of contemporary discourse; practice in techniques of invention, organization, and style as applied to written composition. *Prerequisite:* ENGL 3112 or 3113 or ESOL 3112. Open to freshmen exempted from ENGL 3112.

**3367 Creative Writing: Fiction Techniques (3-0)**

Study and practice in the techniques of contemporary fiction writing, emphasizing such matters as point of view, tone, characterization, plot, setting, and diction, with assignments requiring the resolution of fiction writing problems. *Prerequisite:* ENGL 3362.

**3368 Creative Writing: Commercial Fiction (3-0)**

Emphasis on writing contemporary fiction for commercial publication. Attention is given to the techniques necessary for the freelance writer to meet the requirements at various levels of the ever-changing literary marketplace. *Prerequisite:* ENGL 3362.

**3369 Creative Writing: Television and Screenplay Writing (3-0)**

Basic techniques for conceiving and writing the contemporary television and screen play with assignments devoted to resolving specific problems. *Prerequisite:* ENGL 3362.

**3370 Creative Writing: Poetry Techniques (3-0)**

Study and practice in writing and critiquing poetry, with attention to basic elements such as imagery, the line, and use of formal techniques. *Prerequisite:* ENGL 3362.

**3371 Life and Literature of the Southwest (3-0)**

The social background of the Southwest and its reflection in literature. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3372 Folklore (3-0)**

The types and characteristics of folk literature with particular emphasis on the folklore of the Southwest and Mexico. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3374 Folklore of the Mexican American (3-0)**

A study of folklore theory and Mexican-American folk genres, with background readings on Mexico and with a special emphasis on the folklore of the border. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3381 Nineteenth-Century Russian Literature in Translation (3-0)**

Prose fiction beginning with Pushkin and extending through the Golden Age of the nineteenth century, with special emphasis on Lermontov, Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov, Andreyev, and Gorky. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3382 Twentieth-Century Russian Literature in Translation (3-0)**

Emphasis on prose fiction from the 1917 Revolution to the present day. Covers such writers as Blok, Babel, Sholokhov, Bulgakov, Pasternak, Yevtushenko, and Solzhenitsyn. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3386 Background Readings (3-0)**

A course of variable content that will provide readings of foreign literature in translation as background support for significant portions of English and American literature. May be repeated once for credit when the topic varies. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3400 Senior Writing Practicum (3-0)**

Required for Professional Writing and Rhetoric minors. Directed study to be taught with the consent of the professor and with the approval of the Department Chairperson. Advanced writing Practicum aimed toward design and completion of a senior project. Students will submit a Practicum proposal and engage in all aspects of a professional-level writing project. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3408 Chaucer (3-0)**

A survey of the works of Geoffrey Chaucer with emphasis on *The Canterbury Tales* and on the relationship of Chaucer's poetry to the literary tradition of his time. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3409 Milton (3-0)**

An introduction to the works of John Milton, with emphasis on *Paradise Lost*, *Paradise Regained*, and *Samson Agonistes*. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3414 Literary Criticism (3-0)**

The theory and practice of the major critical approaches to literature. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3416 American Nonfiction and Poetry through the Nineteenth Century (3-0)**

A study of American nonfiction and/or poetry through the nineteenth century. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3417 American Fiction to 1900 (3-0)**

A study of representative works of fiction in America from their beginnings through early naturalism, with emphasis on such writers as Brown, Cooper, Melville, Hawthorne, Twain, James, Howells, Wharton, and Crane. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3418 Early Twentieth-Century American Fiction (3-0)**

A study of representative works of American fiction from the successors of Stephen Crane to 1945, with emphasis on such writers as Dreiser, Norris, London, Glasgow, Cather, Lewis, Anderson, Porter, Fitzgerald, Hemingway, Steinbeck, and Faulkner. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3419 American Fiction since 1945 (3-0)**

A study of representative works of contemporary American writers with emphasis on such writers as Wright, Ellison, Heller, Barth, O'Connor, Bellow, Welty, and Oates. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3422 American Drama (3-0)**

Drama from the Colonial and Revolutionary periods to modern times, with special attention to the mature period in American drama from Eugene O'Neill to the present. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3425 British Drama since 1880 (3-0)**

Historical study of dramatic theory and practice in England during the modern era, through reading of representative plays. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3440 Advanced Literary Studies (3-0)**

Seminar involving intensified study of a particular author or topic, to vary with the professor in charge. May be repeated once for credit when the topic varies. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3441 Advanced Studies: Creative Writing (3-0)**

A creative writing course, the genre to vary with the professor in charge. May be repeated once for credit when topic varies. *Prerequisite:* ENGL 3362.

**3447 The English Novel through the Eighteenth Century (3-0)**

Prose fiction in England from the Middle Ages through the eighteenth century, with emphasis on such authors as Defoe, Richardson, Fielding, Smollett, Walpole, Burney, and Austen. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3448 The English Novel: Nineteenth Century (3-0)**

A continuation of English 3447, with emphasis on such authors as Dickens, Thackeray, the Brontes, Eliot, Meredith, and Hardy. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3449 The English Novel: Twentieth Century (3-0)**

The important English novelists of the twentieth century, with emphasis on such authors as Conrad, Lawrence, Joyce, Forster, Waugh, Woolf, Greene, Cary, Golding, Burgess, and Murdoch. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3450 Major Individual American Author (3-0)**

Close study of the work, life, and critical reputation of a major American author chosen from such authors as Hawthorne, Melville, Whitman, Dickinson, Twain, Cather, O'Neill, Frost, Faulkner, Steinbeck, and Hemingway. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3454 Writing Processes of Children (3-0)**

Current theory and practice in K-8 writing development; review of applicable rhetorical and linguistic theories; evaluation and assessment of written work; relationships between reading and composition. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.



**3455 Teaching Composition and Literature in the Secondary School (3-0)**

Current theory and practice in teaching writing and literature in the secondary schools; review of applicable research along with practices for teaching literature and the composing process. Field experience may be required. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3457 Special Subjects in English for Teachers (3-0)**

Special subjects in teaching elementary or secondary school English language arts. Topic may vary with professor in charge. May be repeated for credit when the topic varies. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

**3460 Creative Writing: The Literary Essay (3-0)**

An essay course which emphasizes the use of fictional techniques and imagery as a means to exposition and persuasion through autobiographical form such as the memoir and personal essay, and through more journalistic forms such as the profile, the interview, and historical account. *Prerequisite:* ENGL 3362.

**3490 Directed Study (3-0)**

Individual directed study on an approved topic, to be taught with the consent of the professor and with the approval of the Department Chairperson. For English majors only.

**The following Linguistics courses may be taken for English credit (see advisor for special prerequisites).**

**3220 Introduction to Linguistics (3-0)**

Introduction to modern language studies with emphasis on contemporary as opposed to historical linguistics.

**3308 Methods of Teaching English to Speakers of Other Languages (3-0)**

Modern foreign-language teaching techniques with particular attention to the problems of the learner of English. Theories of language learning and testing, and the practical use of language laboratory equipment. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112.

Students majoring in English are also encouraged to consider taking courses, or to fulfill requirements for the minor, in Translation (TRAN). See the Translation section of the Department of Languages and Linguistics course offerings for details.

See the *Graduate Studies Catalog* for graduate programs and courses.

student must satisfactorily complete an honors thesis, which will be judged by a thesis committee. A candidate for Departmental Honors must request approval of candidacy during the second semester of the junior year. The Department reserves the right to accept or reject any student, taking into consideration the number of applicants, availability of faculty, and competence of individual students. Once accepted, the honors candidate will enroll in HIST 3490 during both semesters of the senior year, accumulating a total of 6 hours of 3490 credit on completion of the honors program. Contact the chairperson or the undergraduate advisor for further information.

**BA Degree with Minor in History**—Students wishing to minor in History are required to complete HIST 3201 and 3202, plus 12 hours of advanced (3300-3400 level) courses in History. The 12 hours of advanced courses must include courses from at least two of the history fields.

**Russian and Post-Communist Specialization**—History students wishing a Russian and Post-Communist specialization must meet all of the basic requirements for History majors listed above, including 3201-02, 3425, and 21 advanced hours in history selected from at least three fields of history. The advanced hours in history must include HIST 3332 and 3333, and 12 hours from among the following: 3312, 3330, 3340, 3369, 3374, and 3390 (when the topic is appropriate). In addition, the student must satisfy the language requirement with Russian 3201-02 and must complete a minor in Russian and Post-Communist Studies as described elsewhere in this catalog. Courses taken for the major may not also be used for the minor.

**Teacher Certification**—Students seeking secondary certification in History must complete the BA requirements as described above. Certification requires 36 semester hours of courses in the major as described in the Liberal Arts section of this Catalog. History 3317 is required and either History 3309 or 3328 is strongly recommended for prospective teachers. Students using History as a directly supporting field for another major will take 12 semester hours including the following courses: History 3201, 3202, 3317, and 3309 or 3328. For further information on requirements for certification, see the Catalog sections for the College of Liberal Arts and the College of Education. Students interested in Social Studies certification should consult the College of Liberal Arts section of this Catalog or the Department of History or the College of Education.

# History

334 Liberal Arts  
(915) 747-5508

CHAIRPERSON: Kenton Clymer

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

PROFESSORS: Clymer, Jackson, Kawashima, C.E. Martin, McGee Deutsch, Richter, Schalk

ASSOCIATE PROFESSORS: Ambler, Hackett, Smith, Weber

ASSISTANT PROFESSORS: Chavez, C.H. Martin, Pérez, Topp

LECTURER: Harding

**BA Degree with Major in History**—Specific course requirements for History majors are: HIST 3201-3202 and HIST 3425 and 21 advanced (3300-3400 level) hours of history courses, which must include courses from at least three of four fields; no more than 12 hours may be taken in any one field of history.

**BA Degree with Departmental Honors in History**—A candidate for departmental honors in History must have demonstrated ability in history, must normally have a grade point average of 3.5 in history and 3.0 overall by the end of the junior year, and must maintain these averages until graduation. To graduate with Departmental Honors, a

## History (HIST)

### LOWER-DIVISION COURSES

**3101 History of the United States to 1865 (3-0)**  
**(Common Course Number HIST 1301)**

Survey of American history through the Civil War, emphasizing the European background, the colonial contribution, the American Revolution, the republican government, growth of democracy, and the background and course of the Civil War. With 3102, fulfills the statutory requirement for American History.

**3102 History of the United States since 1865 (3-0)**  
**(Common Course Number HIST 1302)**

Reconstruction, rise of big business, clash of economic interests, struggle for reform, imperialism, and world power status. Progressivism, World War I, the Twenties, the New Deal, World War II, post-war America. With 3101, fulfills the statutory requirement for American History.

**3201 World History to 1648 (3-0)**  
**(Common Course Number 2321)**

An analysis of the development of civilizations in Asia, Africa, Europe, and the Americas from the ancient period to the seventeenth century, with an emphasis on cultural change and contact among cultures.

**3202 World History since 1648 (3-0)**  
**(Common Course Number HIST 2322)**

An analysis of the development of civilizations in Asia, Africa, Europe, and the Americas from the seventeenth century through the age of imperialism to the global conflicts of the twentieth century.

UPPER-DIVISION COURSES

*General Prerequisites:* Appropriate class standing.

**FIELD I: THE UNITED STATES**

**3301 Colonial America to 1763 (3-0)**

Background of European exploration and colonization, settlement and development of the English colonies, British imperial policy, and the Anglo-French conflict in North America.

**3302 The American Revolution and the New Nation, 1763-1815 (3-0)**

The breakdown of the Anglo-American political system, the development of American political principles, the War for Independence and social readjustment, the creation of new governments, the rise of political parties, the Federalist and Jeffersonian administrations, the War of 1812, and the emergence of national character.

**3304 The Age of Jackson, Clay, and Webster, 1815-1860 (3-0)**

Political, economic, social, and sectional aspects of the Jacksonian era. The Old South and slavery, the North and reform, Manifest Destiny, nativism, and the disruption of the political party system.

**3305 The Civil War and Reconstruction Era, 1860-1877 (3-0)**

The Civil War and Reconstruction: Election of Lincoln, outbreak of war, Union and Confederacy, military problems, nations at war, Reconstruction conflicts, triumph of Radicalism, and Compromise of 1876.

**3306 From Plutocracy to Progressivism, 1877-1917 (3-0)**

Focuses on the incorporation and urbanization of the United States, the end of the frontier, immigration to the United States, the rise of organized labor and populism, attempts at protest and reform, the pursuit of a colonial empire, and World War I and its consequences.

**3307 The Interwar Years, 1918-1941 (3-0)**

The domestic history of the United States between the two world wars. Emphasis on postwar reaction, Republican politics, cultural conflict during the 1920s, the Great Depression, the impact of the New Deal, and the rise of organized labor.

**3308 The United States since 1941 (3-0)**

The domestic history of the United States since 1941. Major topics include the home front during the World War II, the Red Scare, the expansion of the welfare state, the civil rights movement, the impact of the Vietnam War, and the Reagan revolution.

**3309 Mexican American History (3-0)**

A survey of Mexican Americans in the southwestern U.S. since the Treaty of Guadalupe Hidalgo, with emphasis on interactions between Mexican- and Anglo-American cultures.

**3310 American Legal History (3-0)**

Study of the growth of American law from colonial times to the present. Particular emphasis on the operation of the law in a broad social context. Strongly recommended for Pre-law students.

**3311 History of American Foreign Relations to 1914 (3-0)**

Analysis of the diplomacy of the American Revolution and of the new nation; diplomatic aspects of the War with Mexico and continental expansion, and the rise of the United States to world power in the late nineteenth and early twentieth centuries, with emphasis on imperial expansion overseas.

**3312 History of American Foreign Relations since 1914 (3-0)**

Analysis of 20th century American diplomacy, including the diplomatic aspects of the two world wars, the origins and development of the Cold War with the Soviet Union, and the American response to Third World nationalism including the war in Vietnam.

**3313 American Military History (3-0)**

A study of American military history from colonial times to the present. The course begins with a consideration of the origins of the American military system in seventeenth-century England and concludes with a discussion of issues of contemporary military affairs. Both the problems faced by the American military and the relationships of the military to the rest of American society are examined.

**3316 Southwest Frontier (3-0)**

A study of the nineteenth-century American Southwest, the arid frontier, and the area of the international boundary. Note: History majors may count this course in either Field I or Field III.

**3317 History of Texas since 1821 (3-0)**

Spanish and Mexican Texas, Anglo-American colonization, the Texas Revolution, the Republic, statehood, Civil War and Reconstruction, railroad and industrial growth, political, social, and economic trends in the twentieth century, and ethnic and racial change. Note: History majors may count this course in either Field I or Field III.

**3318 American Environmental History (3-0)**

A history of American attitudes and actions toward the environment, with particular emphasis on land and natural resources. The course will focus on two conflicting themes: (1) exploitation and development and (2) preservation of nature.

**3321 19th Century American West (3-0)**

Focuses on the frontier and the American character, the westward movement to the Pacific Slope, conflict with the American Indian and other ethnic and minority groups, women and the West, and exploitation of the natural resources. The course will center on the Trans-Mississippi frontier with emphasis on the arid West.

**3322 20th Century American West (3-0)**

Examines the new West in terms of conservation policies, natural resource issues, urbanization, tourism, economic development, immigration, and cultural conflict. Regions covered include the Great Plains, the Rocky Mountain states, the arid West, and the Pacific Slope.

**3323 American Indian History (3-0)**

A survey of the history of North American Indians from the Pre-Columbian period to the present. Examines inter-tribal relations as well as Indian-European and Indian-Anglo American interactions. Emphasis on trans-Mississippi West tribes and events.

**3324 The United States In Vietnam and Southeast Asia (3-0)**

American relations with Southeast Asia in the twentieth century, focusing on the American acquisition and governance of the Philippines, the American response to Asian nationalism during and after World War II, and the war in Vietnam.

**3325 History of Immigration and Ethnicity in the United States (3-0)**

Explores the social, political, cultural, and religious lives of the diverse peoples who immigrated to the United States, as well as their impact on the political and cultural life of the United States as a whole. Primary focus on second-wave immigrants, including Southern and Eastern Europeans, and on Asians and Mexicans.

**3326 Life and Labor in the United States in the 19th and 20th Centuries (3-0)**

Examines why so few American workers are in unions today, and why the United States is virtually the only Western industrialized nation without a labor party. Explores the history of the cultural and political life of the American working class covering topics ranging from the impact of slavery and immigration to the historic relationship between unions and the Democratic Party to recent organizing efforts by university clerical workers.

**3328 History of Hispanic Peoples in the United States (3-0)**

Traces the historical experiences of the Mexican, Puerto Rican, Cuban, and other Hispanic migrants to the United States; investigates the causes of their migrations, the communities they formed in the United States, their problems of adjustment, the cultural changes they have undergone, and the similarities and differences among their cultures.

**FIELD II: AFRICA, ASIA, AND RUSSIA**

**3330 East Asia (3-0)**

A brief survey of traditional China, Korea, and Japan, westernization and modernization, and East Asia in the twentieth century. Special emphasis on the uniqueness of East Asian societies and on the differences among these countries.

**3331 The History of Religion In the East (3-0)**

The history of the Hindu, Buddhist, Confucian, and Taoist communities from their beginnings to the modern era, with emphasis on the development of their ideas, the interaction between communities, and parallels in movements and teachings. The historical development of each religion is stressed.

**3332 Russia (3-0)**

A history of Russia from its medieval origins in the ninth century to the rise of the Russian empire in the eighteenth and nineteenth centuries emphasizing the development of the Russian political condition, culture, and society before the 1917 revolutions.

**3333 The Soviet Union (3-0)**

A history of the USSR including the Russian revolutions of 1917, revolutionary experimentation in the 1920s, collectivization, industrialization, and the purges in the 1930s, World War II, and an overview of Soviet life in the 1970s and 1980s.

**3336 PRE-Modern Africa (3-0)**

The history of Africa from the emergence of the kingdom of Ghana in the eighth century to the advent of colonialism in the nineteenth. Emphasis on the spread of Islam, the growth and impact of the slave trade, the political and economic crisis of the 1800s, and the rise of European imperialism. Primary focus is on Africa south of the Sahara.

**3337 Modern Africa (3-0)**

Examination of Africa from the imperial conquest of the late nineteenth century to the present day. Emphasis on the social, economic, and cultural impact of colonialism, religious change, African nationalism, decolonization and independence, the struggle for development, and racial conflict in South Africa. Primary focus is on Africa south of the Sahara.

**3339 Pyramids and Prophets: Ancient Egypt, Mesopotamia and Palestine (3-0)**

Examines the distinct series of circumstances which led to the development of civilization in the Ancient Near East. Emphasis is upon the government, society, religion, art, and manners that evolved through the eras of Stone Age nomads, Bronze Age temple-states, and Iron Age kingdoms.

**3340 The Middle East and Islam (3-0)**

The rise and expansion of Islam, the golden age of Arab culture, the Ottoman Empire, the impact of European imperialism, the economics of oil, the Arab-Israeli conflict, and present-day Muslim revitalization.

**FIELD III: LATIN AMERICA****3342 The Spanish Borderlands (3-0)**

A study of the Spanish northern frontier in North America from California to Florida with particular emphasis on the Spanish impact on the American Southwest from the sixteenth-century explorations to 1821. Note: History majors and minors may count this course in either Field I or Field III.

**3343 The U.S.-Mexican Border (3-0)**

History of the border region, with an emphasis on the twentieth century. Themes include the delimitation and maintenance of the boundary, international relations, ethnic relations, the Mexican Revolution, economic development, migration, and culture.

**3346 Central America and the Caribbean (3-0)**

Social, economic and political patterns in Central America and in the Spanish-, English-, French-, Dutch-, and Creole-speaking Caribbean, emphasizing the twentieth century. Topics include race relations, ideological struggle, nationalism, popular culture, and U.S. involvement.

**3347 Argentina, Brazil and Chile since 1810 (3-0)**

The politics, economy, culture, and international relations of the ABC powers, with emphasis on the twentieth century.

**3349 History of Mexico to 1900 (3-0)**

The Pre-Columbian civilizations, the conquest, Spanish institutions and culture, the Mexican movement for independence, the era of Santa Ana, Juarez and the Reform, and the Diaz regime.

**3350 The Mexican Revolution (3-0)**

The background of the Revolution and political, social, economic, and military developments of the Mexican Revolution. Mexico since the Revolution.

**FIELD IV: EUROPE, EXCEPT RUSSIA****3354 England to 1603 (3-0)**

Focusing on the medieval and Tudor periods, this course emphasizes mentalities and institutions peculiar to England, while relating them to continental European developments.

**3355 England Since 1603 (3-0)**

A survey of major developments in English history since 1603 including the English Civil War, the Glorious Revolution, the Industrial Revolution, Victorian Britain, the age of Imperialism, the two World Wars, and postwar Britain.

**3359 The History of Religion in the West (3-0)**

The history of the Jewish, Christian, and Islamic communities from their beginnings to the modern era, with emphasis on the development of their ideas, the interaction between communities, and parallels in movements and teachings. The historical development of each religion is stressed.

**3360 Ancient Greece (3-0)**

Surveys the development of Greek society and government from the Bronze Age palace cultures of Crete and Mycenae to the aftermath of the Peloponnesian War. Special emphasis on the evolution of the polis system with consideration of Greek art and literature.

**3361 Hellenism and the Coming of Rome (3-0)**

Examines how the attitudes and institutions of the Roman city-state energized the conquest of the Mediterranean Basin and then disintegrated into civil war. Special emphasis upon the importance of Alexander the Great and Hellenistic culture in Roman development.

**3362 The Medieval World (3-0)**

A survey of the period in Western Europe from about 500 to about 1300, focusing especially on the nature and accomplishments of the revolutionary new society which emerged in the three centuries following the invasions of the ninth and tenth centuries.

**3363 The Roman Empire (3-0)**

Examines the culture that evolved from the chaos of the Roman Republic into the religious, administrative, economic, and legal apparatus that formed the theoretical basis of the first European state systems. Attention shall focus on the development of Christianity and the expressions of Roman ideals in art and literature.

**3364 The Age of Renaissance (3-0)**

A survey of Western Europe in the fourteenth, fifteenth, and early sixteenth centuries, focusing especially on the great age of the Renaissance in Italy and including an analysis of some of the most famous art and artists of the period seen in their historical context.

**3365 The Age of the Reformation (3-0)**

A survey of Western Europe in the sixteenth and first half of the seventeenth centuries, focusing on the Reformation and its consequences and including an analysis of the social, economic, political, and intellectual changes that accompanied that split and that ushered in the modern world.

**3366 The Age of Absolutism and Enlightenment (3-0)**

A survey of Western and Central Europe in the second half of the seventeenth and the eighteenth centuries (until 1789), focusing on the development of absolutism and its alternatives, the scientific revolution, the Enlightenment and the growth of modern rationalism, popular culture and the growing social and institutional crisis in France before the French Revolution.

**3369 Twentieth Century Europe, 1900 to the Present (3-0)**

The collapse of the European dynastic monarchies, World War I, the Versailles Treaty, totalitarian dictatorships in Italy, Germany, and Russia, World War II, the Cold War, and the Common Market era.

**3370 The Holocaust in Europe, 1933-1945 (3-0)**

An analysis of the background, causes, events, and aftermath of the destruction of European Jewry in the era of the Second World War; the fate of Gypsies and other victims of Nazi racial policies; and the role of individuals of various nations as perpetrators, bystanders, resisters, and rescuers during that era.

**3374 Modern Germany since 1866 (3-0)**

The emergence of a unified German National State, relations with neighboring powers, World War I, the revolution of 1918, the Weimar Republic, rise and fall of the Third Reich, and divided Germany.

**3381 The History of Spain and Portugal (3-0)**

A survey of the Iberian Peninsula from the earliest times to the regimes of Franco and Salazar, with particular emphasis on the rise, development, and decline of the Spanish and Portuguese empires. Note: History majors may count this course in either Field III or Field IV.

**3382 Spain in the Age of Expansion, Eighth - Sixteenth Centuries (3-0)**

Analysis of the success, then the downfall, of the Muslims; the simultaneous rise of the Christian kingdoms which became Castile, Portugal, and Aragon-Catalonia; the unification of Spain and the conquest of empire; and the character of the societies and intellectual, religious, and artistic currents they produced.

**Other Courses****3390 History, Special Topics (3-0)**

An examination of a currently relevant subject from a historical perspective. Topics will vary and will be drawn from such fields as minority groups, women's history, local history, ecology, historical methodology, and the relationship of history to other social sciences. History majors and minors should count the course in the appropriate field.

**3391 History of Women (3-0)**

An examination of the values, roles, and contributions of women in various historical contexts. May be repeated once for credit when topic changes. History majors and minors should count the course in the appropriate field.

**3425 Junior-Senior Seminar (3-0)**

Readings and discussion on a major issue in history, and individual research into a related topic. The course theme will change from semester to semester. Junior or senior standing required. Required of all History majors; open to History minors and others by permission.

**3490 Directed Study (0-0-3)**

Individual directed study on approved topic; to be taught at the consent of the professor and with the approval of the department chairperson. History majors and minors should count the course in the appropriate field.

See the *Graduate Studies Catalog* for graduate programs and courses.

## Languages and Linguistics

136 Liberal Arts  
(915) 747-5767

CHAIRPERSON: Frederick J. Kluck

PROFESSORS EMERITI: Lurline H. Coltharp, Edgar T. Ruff,  
John McCarty Sharp

PROFESSORS: Amastae, Blansitt, Elerick, García, Manley, Natalicio,  
Pérez, Teschner

ASSOCIATE PROFESSOR EMERITA: Eleanor Greet Cotton

ASSOCIATE PROFESSORS: Armengol, Bagby, Beyer, Ewton, Ford,  
Goodall, Kluck

ASSISTANT PROFESSORS: Blanco, Loudon, Montalbetti, Montes,  
Ramos, Suárez

LECTURERS: Brown, de Lopez, Gámez, Koch, Shekhter, Wood

**Information for New Students****Examinations for Placement**

**SPANISH:** Courses at the elementary and intermediate level in Spanish are of two types: Spanish for Non-Native Speakers (SPAN 4101-4102-3201-3202) and Spanish for Spanish Speakers (SPAN 3203-3204). Students with no knowledge or very little knowledge of Spanish will register for SPAN 4101. Those who have acquired a significant knowledge of the language (as by taking two or more years of high school Spanish) are strongly urged to take the Placement Exam. Those who know Spanish by virtue of using it with family or friends MUST take the Spanish Placement Exam before enrolling. The Exam is offered by the Testing and Student Assessment Center, 210 Education (call 747-5009 for schedule). The Department of Languages and Linguistics reserves the right to rectify errors in placement caused by a student's failure to observe these guidelines, including the option to drop a student enrolled in an inappropriate course. Students who take the Placement Exam and place out of one or more courses will receive equivalent credit upon completion, with a grade of "C" or better, of the course into which they have placed. No credit is granted by examination only. For further information, including information about the CLEP and AP exams, consult the department.

**FRENCH:** Students who have acquired a significant knowledge of French through high school study (usually two years or more) or by some other means are urged to take the French Placement Exam before enrolling. The Exam is offered by the Student Assessment and Testing Center, 210 Education (call 747-5009 for schedule). The Department of Languages and Linguistics reserves the right to rectify errors in placement caused by a student's failure to observe these guidelines, including the option to drop a student enrolled in an inappropriate course. Students who take the Placement Exam and place out of one or more courses will receive equivalent credit upon completion, with a grade of "C" or better, of the course into which they have placed. No credit is granted by examination only. For further information, including information about the CLEP and AP exams, consult the department.

**GERMAN:** Students who have acquired a significant knowledge of German through high school study (usually two years or more) or by some other means are urged to take the German Placement Exam before enrolling. Contact the Department of Languages and Linguistics for scheduling information. The Department of Languages and Linguistics reserves the right to rectify errors in placement caused by a student's failure to observe these guidelines, including the option to drop a student enrolled in an inappropriate course. Students who take the Placement Exam and place out of one or more courses will receive equivalent credit upon completion, with a grade of "C" or better, of the course into which they have placed. No credit is granted by examination only. For further information, including information about the CLEP and AP exams, consult the department.

**Latin, Portuguese, Russian:** Students who have acquired a significant knowledge of any of these languages through high school study (usually two years or more) or by some other means are urged to consult an instructor of the language in question for advising. Students with no or inadequate knowledge of any of these languages should enroll in the first-semester course.

**ESOL:** A placement exam is required of all students whose post-elementary education has not been in English. Information about testing schedules is available from the Testing Center (747-5009).

**Major In Languages**

**BA Degree**—30 semester hours, at least 24 of which must be advanced (3300-3400) level. 41xx may not count toward the major. Courses 3201 and 3202 or 3203 and 3204 must be completed in a language other than the major in order to fulfill the Liberal Arts language requirement. The Spanish major must include: 1) SPAN 3300 and 3357; 2) SPAN 3320 or 3330; 3) at least two of the following: SPAN 3301, 3302, 3303, 3304; 4) at least one of the following: SPAN 3309, 3311, 3315; and 5) at least six hours of 3400-level courses. PORT 3490 and/or any one translation (TRAN) course may count toward the Spanish major.

**Minor In Languages**—The basic requirement is 18 hours in a language, at least 12 of which must be advanced (3300-3400) level. SPAN 3357 is required for the Spanish minor.

**Major In Linguistics**

**BA Degree**—Linguistics 3220, plus 24 semester hours in Linguistics courses at the 3300-3400 level.

**Minor In Linguistics**—Linguistics 3220 plus 15 semester hours in Linguistics courses, at least nine hours of which must be at the 3300-3400 level.

**Teacher Certification**

Programs which combine the BA degree with secondary certification are available in French, German, and Spanish. Endorsement is also available for ESL. Several Linguistics/Spanish courses are required for certification in Bilingual Education. Interested students must consult with the departmental undergraduate advisor.

Certification for secondary teaching in the following three areas requires the courses listed:

**FRENCH:** All requirements for the BA degree, as described above, must be met. Secondary certification requires 36 hours in the major (which may include French 4101, 4102, 3201 and 3202). French 3301 or 3303 and 3357 are required; 3220 is highly recommended. French 3305 and 3355 are recommended for students who are not native speakers of French. Note that French 3401 may not be counted as part of the major since it is a required course for the minor in Education. In addition, a passing score on the Texas Oral Proficiency Test (TOPT) is required for certification.

**GERMAN:** All requirements for the BA degree, as described above, must be met. Secondary certification requires 36 hours in the major (which may include German 4101, 4102, 3201 and 3202). German 3302 and 3357 are required. Note that German 3401 may not be counted as part of the major since it is a required course for the minor in Education.

**SPANISH:** All requirements for the BA degree, as described above, must be met. Secondary certification requires 36 hours in the major (which may include Spanish 4101, 4102, and 3201, 3202 or 3203, 3204). Spanish 3301 or 3303, 3302 or 3304, 3309, 3320, 3357, and 3472 are required. Spanish 3355 is recommended for students who are not native speakers of Spanish. Note that Spanish 3401 may not be counted as part of the major since it is a required course for the minor in Education. In addition, a passing score on the Texas Oral Proficiency Test (TOPT) is required for certification.

Approved supporting fields for languages are any other language or the 12 hours of course work approved for the ESL endorsement.

For further information on certification requirements, see the Catalog sections for the College of Liberal Arts and the College of Education.

**DESCRIPTION OF COURSES****English for Speakers of Other Languages (ESOL)**

For Undergraduates

**2101 Pronunciation Laboratory for Non-Native Speakers (0-2)**

Individual and group work to improve pronunciation of English for non-native speakers. Includes articulation, intonation, and fluency practice. *Prerequisite:* Departmental approval. Course fee required.

**2110 Reading English as a Second Language (2-0)**

Practice in reading academic, informative, and literary texts, with emphasis on vocabulary development, text analysis, and critical thinking. Study of library research and documentation techniques. *Prerequisites:* Grade of "C" or better in ESOL 3106 and ESOL 3109 or placement of 4 or better on the SLEP. This course is obligatory for all ESOL students and must be taken prior to or concurrently with ESOL 3112.

**3105 Oral Communication Skills for Non-Native Speakers of English (3-0)**

Practice in spoken English to improve fluency and develop strategies to improve communication skills. Topics will vary. May be repeated for credit when topics vary. *Prerequisite:* ESOL 5110 with minimum grade of "C". Course fee required.

**3106 Basic English Sentence Structure (3-0)**

A systematic presentation of English grammar and sentence structure for speakers of English as a foreign language. *Prerequisite:* Grade of "C" or better in ESOL 5110 or departmental placement. Corequisite: ESOL 3109.

**3109 Writing and Reading in English for Non-Native Speakers (3-0)**

Development of writing ability, strategies for the writing process, reading fluency, and vocabulary for non-native speakers of English. *Prerequisite:* Grade of "C" or better in ESOL 5110, or departmental placement.

**3111 Expository English Composition for Speakers of ESL (3-0)**

Practice in composition with emphasis on rhetorical and writing principles for the different expository modes; emphasis on style and variety in sentences, paragraphs, and essays; stress on reading comprehension and outlining. *Prerequisites:* Grade of "C" or better in ESOL 3106 and 3109, or department placement.

**3112 Research and Critical Writing for Speakers of ESL (3-0)**

Study and practice in the use of library facilities and research and documentation techniques; emphasis on research papers and on critical essays. *Prerequisites:* Grade of "C" or better in ESOL 3111; grade of "C" or better in ESOL 2110, or take concurrently with ESOL 2110.

**5110 Intermediate English for Speakers of Other Languages (5-0)**

Practice with the basic structures of English, including their expansion into more complex structures. Practice with the conversational structures of modern English. *Prerequisite:* Grade of "C" or better in ESOL 8110, or department placement. Course fee required.

**8110 Intermediate English for Speakers of Other Languages (8-0)**

Practice with the basic structures of English, including their expansion into more complex structures. Practice with the conversational structures of modern English. By departmental placement. Course fee required.

**3201 English for Science and Technology (3-0)**

This course is designed to provide additional practice for non-native speakers of English in the specialized discourse patterns of scientific and technological disciplines. It will emphasize reading and interpretation of technical/scientific articles, reports, and books, and the writing of technical articles and reports. *Prerequisite:* Grade of "C" or better in ESOL 3112 or departmental approval. Required of all majors in the Colleges of Science and Engineering who present ESOL 3112 in lieu of ENGL 3112. Course fee required.

**3202 English for Business, Finance and Economics (3-0)**

This course is designed to provide additional practice for non-native speakers of English in the specialized discourse patterns of business, finance, and economics. It will emphasize reading and interpretation of technical books, articles, and reports in these fields as well as the writing of articles and reports. *Prerequisite:* Grade of "C" or better in ESOL 3112 or departmental approval. Elective credit only. Course fee required.

**3203 English for Humanities and Social Sciences (3-0)**

This course is designed to provide additional practice for non-native speakers of English in the specialized discourse patterns of the humanities and social sciences. It will emphasize reading and interpretation of books and articles in the humanities and social sciences as well as the writing of them. *Prerequisite:* Grade of "C" or better in ESOL 3112 or departmental approval. Required of all majors in the College of Liberal Arts who present ESOL 3112 in lieu of ENGL 3112. Course fee required.

**French (FREN)**

For Undergraduates

**4101 French One (3-2)**

(Common Course Number FREN 1411)

An introductory course with emphasis on pronunciation and the basic elements of grammar; practice in understanding, speaking, reading, and writing. (No prerequisite.) Course fee required.

**4102 French Two (3-2)**

(Common Course Number FREN 1412)

A continuation of French 4101, with the introduction of more complex elements of grammar; additional practice in the four basic skills. *Prerequisite:* FREN 4101 or the departmental placement test. Course fee required.

**3201 French Three (3-0)**

(Common Course Number FREN 2311)

Oral and written work in French, grammar review; reading from modern French authors. *Prerequisite:* FREN 4102 or the departmental placement test. Course fee required.

**3202 French Four (3-0)**

(Common Course Number FREN 2312)

Grammar review; reading from modern French authors. *Prerequisite:* FREN 3201 or the departmental placement test. Course fee required.

**3301 French Literature To 1715 (3-0)**

Introduction to French literature through the seventeenth century. *Prerequisite:* FREN 3202.

**3303 French Literature Since 1715 (3-0)**

Introduction to French literature from 1715 to the present. Main literary trends and principal writers from the Romantic Period to the present. *Prerequisite:* FREN 3202.

**3305 French Phonology and Phonetics (3-0)**

Analysis of the sound structure of French, as well as corrective phonetics directed toward individual students in the class. The course is intended to improve the student's pronunciation as well as to give a theoretical basis for teaching the sounds of French. *Prerequisite:* FREN 3202 or concurrently.

**3320 French Civilization (3-0)**

A survey of the political, social, intellectual, and artistic history of France. *Prerequisite:* FREN 3202.

**3350 French Literature in Translation (3-0)**

Readings in English translation from periods and genres of French literature. Taught in English. *Prerequisite:* six hours of sophomore literature.

**3355 Advanced Conversation (3-0)**

Practice in pronunciation, comprehension, and oral expression. Selected readings and written exercises designed to promote development of oral skills. Recommended for non-native speakers before progressing to other advanced courses. *Prerequisite:* FREN 3202.

**3357 Advanced Composition (3-0)**

Review of aspects of grammar essential to effective writing, introduction to elements of style and rhetoric, vocabulary building, and intensive practice with written assignments and graded compositions. *Prerequisite:* FREN 3202.

For Undergraduates and Graduates

**3401 Methods of Foreign Language Instruction (3-0)**

Practical application of linguistic principles to the teaching of modern foreign languages. Classroom techniques, and development and evaluation of teaching and testing materials appropriate to the written and spoken language. May not be counted for credit in addition to GERM 3401, SPAN 3401, or LING 3401.

**3487 Poetry (3-0)**

May be repeated once for credit when the topic varies. *Prerequisite:* six hours of advanced French courses.

**3488 Prose (3-0)**

May be repeated once for credit when the topic varies. *Prerequisite:* six hours of advanced French courses.

**3489 Theatre (3-0)**

May be repeated once for credit when the topic varies. *Prerequisite:* six hours of advanced French courses.

**3490 Topics in French (3-0)**

May be repeated for credit when topics vary. *Prerequisites:* six hours of advanced French and instructor's approval.

See the *Graduate Studies Catalog* for graduate courses.

**German (GERM)**

For Undergraduates

**4101 German One (3-2)**

(Common Course Number GERM 1411)

An introductory course with emphasis on pronunciation and the basic elements of grammar; practice in understanding, speaking, reading, and writing. (No prerequisite.) Course fee required.

**4102 German Two (3-2)**

(Common Course Number GERM 1412)

A continuation of German 4101, with the introduction of more complex elements of grammar; additional practice in the four basic skills. *Prerequisite:* GERM 4101 or the departmental placement test. Course fee required.

**3201 German Three (3-0)**

(Common Course Number GERM 2311)

Oral and written work in German, with some more advanced grammar and an introduction to the writing of compositions. Reading from contemporary authors. *Prerequisite:* GERM 4102 or the departmental placement test. Course fee required.

**3202 German Four (3-0)**

(Common Course Number GERM 2312)

Grammar review, compositions, and reading from contemporary authors. *Prerequisite:* GERM 3201. Course fee required.

For Undergraduates and Graduates

**3401 Methods of Foreign Language Instruction (3-0)**

Practical application of linguistic principles to the teaching of modern foreign languages. Classroom techniques, and development and evaluation of teaching and testing materials appropriate to the written and spoken languages. May not be counted for credit in addition to FREN 3401, SPAN 3401, or LING 3401.

**3487 Poetry (3-0)**

May be repeated once for credit when the topic varies. *Prerequisite:* six hours of advanced German.

**3488 Prose (3-0)**

May be repeated once for credit when the topic varies. *Prerequisite:* six hours of advanced German.

**3489 Theater (3-0)**

May be repeated once for credit when the topic varies. *Prerequisite:* six hours of advanced German.

**3490 Topics in German (3-0)**

May be repeated once for credit when the topic varies. *Prerequisites:* six hours of advanced German and instructor's approval.

See the *Graduate Studies Catalog* for graduate courses.

**Greek (GREK)**

**4105 Koine Greek (4-0)**

(Common Course Number GREE 1311)

The study of the essential aspects, lexicon, morphology, and syntax of Koine Greek. Course fee required.

**4106 Koine Greek (4-0)**

(Common Course Number GREE 1312)

A continuation of 4105. Course fee required.

**Latin (LATN)**

**4101 Latin One (3-2)**

(Common Course Number LATI 1411)

Fundamentals of Latin grammar. Declension of nouns and adjectives and indicative verbal inflection. Vocabulary study. (No prerequisite.) Course fee required.

**4102 Latin Two (3-2)**

(Common Course Number LATI 1412)

More complex aspects of Latin grammar including forms and uses of subjunctive. Vocabulary study. Reading of simple texts. *Prerequisite:* LATN 4101. Course fee required.

**3201 Latin Three (3-0)**

(Common Course Number LATI 2311)

Continuing study of Latin grammar and vocabulary. Reading of significant prose texts. *Prerequisite:* LATN 4102. Course fee required.

**3202 Latin Four (3-0)**

(Common Course Number LATI 2312)

Readings from the works of Catullus, Ovid, Horace, and Virgil. *Prerequisite:* LATN 3201. Course fee required.

**3301 Advanced Latin (3-0)**

Readings in Latin prose and poetry with alternate emphasis on fluency and close attention to text. May be repeated for credit when materials vary. *Prerequisite:* LATN 3202.

**Linguistics (LING)**

**3220 An Introduction to Linguistics (3-0)**

Introduction to basic concepts and techniques of modern linguistics. (May be taken as ENGL 3220 or ANTH 3220.)

**4203 Intensive Language Study (3-2)**

Presentation and analysis of the fundamentals of a language that is structurally distinct from Modern English and other modern European languages. Reading of elementary texts. Laboratory exercises. May be repeated for credit as language varies. Course fee required.

**4204 Intensive Language Study (3-2)**

Presentation and analysis of the fundamentals of a language that is structurally distinct from Modern English and other modern European languages. Reading of elementary texts. Laboratory exercises. May be repeated for credit as language varies. Course fee required.

**3301 Phonological Analysis (3-0)**

Techniques of analyzing sound patterns in a variety of languages. Formulating phonological rules, including the use of distinctive features. *Prerequisites:* LING 3220 or ENGL 3220.

**3302 Syntactic Analysis (3-0)**

Techniques of analyzing syntax and aspects of morphology, as applied to English and a variety of other languages. Emphasis on understanding the range of possible syntactic phenomena in language. *Prerequisite:* LING 3220 or ENGL 3220.

**3308 Methods of Teaching English to Speakers of Other Languages (3-0)**

Modern foreign language teaching techniques with particular attention to the problems of the learner of English. Theories of language learning and testing, and the practical use of audio-visual equipment. Recommended background: LING 3220. (May be taken as ENGL 3308.)

**3309 The Structure of Spanish for Language Professionals (3-0)**

Linguistic analysis of Spanish orthography, sound system, morphology, and syntax. Course oriented toward needs of teachers of Spanish at all levels. Same as SPAN 3309. *Prerequisite:* SPAN 3202 or SPAN 3204 or equivalent.

**3310 The Structure of English for Language Professionals (3-0)**

An examination of the structure of English in a descriptive framework. Consideration of structural phenomena in the context of teaching grammar to native and non-native speakers of English. LING 3220 recommended.

**3311 Spanish Phonetics and Phonology (3-0)**

Linguistic analysis of the sound system of the Spanish language. Course oriented toward the needs of teachers of Spanish at all levels. *Prerequisite:* SPAN 3202 or SPAN 3204. Same as SPAN 3311.

**3313 English Historical Linguistics (3-0)**

The development of English from its beginnings to Modern English. A study of the changes in the phonological, morphological, and syntactic systems. *Prerequisite:* ENGL 3211 and ENGL 3212 or LING 3220 or ENGL 3220.

**3315 History of the Spanish Language (3-0)**

A survey of the development of the Spanish language from Vulgar Latin to modern Spanish. *Prerequisite:* SPAN 3202 or SPAN 3204. (May be taken as SPAN 3315.)

**3344 Making and Using Language Tests (3-0)**

The study of how language tests of various kinds are produced, used, and evaluated, with special attention given to tests in English for speakers of other languages.

**3357 Sociolinguistics (3-0)**

Language variables and sociological correlates, a review of current research, theories, and applications. Recommended background: LING 3220

For Undergraduates and Graduates

**3401 Methods of Foreign Language Instruction (3-0)**

Practical application of linguistic principles to the teaching of foreign languages. Classroom techniques, development, and evaluation of teaching and testing materials appropriate to the written and spoken languages. (Same as FREN, GERM, SPAN 3401).

**3406 Language Acquisition (3-0)**

Overview of recent findings in child language acquisition. Includes theories of acquisition, application of linguistic theory, and research techniques. *Prerequisite:* LING 3220 and LING 3301 or LING 3302.

**3416 Psychology of Language (3-0)**

A study of the psychology of language and verbal learning. Will include psychological studies of language acquisition and reading. May be taken as PSYC 3416.

**3448 Analyses of Second Language Acquisition (3-0)**

A theoretical and practical examination of various (though complementary) theories of second language learning, with their implications for the second language classroom.

**3471 Studies in Linguistics (3-0)**

Topics to be discussed will be selected. May be repeated for credit when topic varies. *Prerequisite:* Six hours of 3300- 3400 linguistics or departmental approval.

**3472 Contrastive Linguistics: Spanish/English (3-0)**

The Contrastive study of the phonological, morphological, and syntactic systems of Spanish and English. *Prerequisite:* SPAN 3202 or 3204. Recommended background: LING/ENGL/ANTH 3220 and LING/SPAN 3309.

See the *Graduate Studies Catalog* for graduate programs and courses.

**Portuguese (PORT)**

For Undergraduates

**3201 Accelerated Portuguese One (3-0)**

An introductory accelerated course in pronunciation and grammar of Brazilian Portuguese; practice in speaking, understanding, reading, and writing. *Prerequisite:* One year in or working knowledge of another Romance language. Course fee required.

**3202 Accelerated Portuguese Two (3-0)**

A continuation of Portuguese 3201 with the introduction of more complex elements of grammar and additional practice in the four basic skills. Reading from modern Brazilian and Portuguese writers. *Prerequisite:* PORT 3201. Course fee required.

For Undergraduates and Graduates

**3490 Topics in Portuguese (3-0)**

May be repeated when topics vary. *Prerequisites:* six hours of advanced Portuguese and instructor's approval.

**Russian (RUSS)**

For Undergraduates

**4101 Russian One (3-2)****(Common Course Number RUSS 1411)**

An introductory course with emphasis on pronunciation and the basic elements of grammar; practice in understanding, speaking, reading, and writing. (No prerequisite.) Course fee required.

**4102 Russian Two (3-2)****(Common Course Number RUSS 1412)**

A continuation of Russian 4101, with the introduction of more complex elements of grammar; additional practice in the four basic skills. *Prerequisite:* RUSS 4101 or the departmental placement test. Course fee required.

**3201 Russian Three (3-0)****(Common Course Number RUSS 2311)**

Oral and written work in Russian, with some more advanced grammar. *Prerequisite:* RUSS 4102. Course fee required.

**3202 Russian Four (3-0)****(Common Course Number RUSS 2312)**

Grammar review, compositions, and reading from Russian literature. *Prerequisite:* RUSS 3201. Course fee required.

**3301 Pre-Revolutionary Russian Literature (3-0)**

Main trends and principal writers in Russian in the Pre-revolutionary period. May be repeated when topics vary. *Prerequisite:* RUSS 3202 or instructor's approval.

**3302 Twentieth Century Russian Literature (3-0)**

Main trends and principal Russian writers from the silver period to the present. *Prerequisite:* RUSS 3202.

**3320 Russian Civilization (3-0)**

A survey of the political, social, intellectual, and artistic history of Russia. *Prerequisite:* RUSS 3202 or instructor's approval.

**3350 Russian Literature in Translation (3-0)**

Readings in English translation from various periods and genres of Russian Literature. Taught in English. *Prerequisite:* ENGL 3112 or ENGL 3113 or ESOL 3112 with grade of "C" or better.

**3355 Advanced Conversation (3-0)**

Practice in pronunciation, comprehension, and oral expression. Selected readings and written exercises designed to promote development of oral skills. Recommended for non-native speakers before progressing to advanced courses. *Prerequisite:* RUSS 3202.

**3490 Topics in Russian (3-0)**

Study of particular area within Russian Language or literature/culture. May be repeated for credit when topics vary. *Prerequisite:* Six hours of advanced Russian.

**Spanish (SPAN)**

For Undergraduates

**4101 Elementary Spanish One (3-2)****(Common Course Number SPAN 1411)**

An introductory course for non-native speakers with emphasis on pronunciation and the basic elements of grammar; practice in understanding, speaking, reading, and writing. *Prerequisite:* Departmental approval. Course fee required.

**4102 Elementary Spanish Two (3-2)****(Common Course Number SPAN 1412)**

A continuation of Spanish 4101, with the introduction of more complex elements of grammar; additional practice in the four basic skills. *Prerequisite:* SPAN 4101 or departmental placement. Course fee required.

**3201 Intermediate Spanish One for Non-Native Speakers (3-0)****(Common Course Number SPAN 2311)**

A course emphasizing development of conversational and reading skills. Review and continuation of grammar study begun in Spanish 4101 and 4102. Readings from contemporary sources. *Prerequisite:* SPAN 4102 or departmental placement. Course fee required.

**3202 Intermediate Spanish Two for Non-Native Speakers (3-0)****(Common Course Number SPAN 2312)**

A continuation of Spanish 3201, with some grammar review and more extensive readings from the contemporary period. *Prerequisite:* SPAN 3201 or departmental placement. Course fee required.

**3203 Spanish for Spanish Speakers One (3-0)**

A first course for bilingual students who have acquired listening and speaking skills in Spanish because it is spoken in their home or social environment. Development of reading and writing skills, with attention to spelling and use of the written accent. Entrance into SPAN 3203 is by examination only; completion of this course with a grade of "C" or better entitles a student to 8 hours of credit by examination for SPAN 4101-4102. *Prerequisite:* Spanish placement exam. Course fee required.

**3204 Spanish for Spanish Speakers Two (3-0)**

A continuation of Spanish 3203, with additional opportunities for reading and composition, a review of the written accent, and an introduction to the systematic study of Spanish grammar. *Prerequisite:* SPAN 3203 or Spanish placement exam. Course fee required.

**3300 Critical Introduction to Hispanic Literature (3-0)**

An overview of major literary movements, genres, and writers from the Middle Ages to the present. Introduction to literary analysis, with special emphasis on uniquely Hispanic elements such as Spanish prosody, the *romances*, the *auto sacramental*, character types and the like. Required of all Spanish majors, to be taken preferably before other upper-division literature courses. *Prerequisite:* SPAN 3202 or 3204 or departmental placement.

**3301 Spanish Literature before 1700 (3-0)**

Main literary trends and principal writers from the Middle Ages through the Golden Age. *Prerequisite:* SPAN 3202 or SPAN 3204.

**3302 Spanish American Literature to Modernism (3-0)**

Main literary trends and principal writers in Spanish America from the sixteenth century to Modernism. *Prerequisite:* SPAN 3202 or SPAN 3204.

**3303 Spanish Literature since 1700 (3-0)**

Main literary trends and principal writers from the eighteenth century to the Contemporary period. *Prerequisite:* SPAN 3202 or SPAN 3204.

**3304 Spanish American Literature since Modernism (3-0)**

Main literary trends and principal writers in Spanish America from the Modernist Period to the present. *Prerequisite:* SPAN 3202 or SPAN 3204.



- 3309 Structure of Spanish for Language Professionals (3-0)**  
Linguistic analysis of Spanish orthography, sound system, morphology, and syntax. Course oriented toward needs of teachers of Spanish at all levels. Same as Linguistics 3309. *Prerequisite:* SPAN 3202 or SPAN 3204.
- 3311 Spanish Phonetics and Phonology (3-0)**  
Linguistic analysis of the sound system of the Spanish language. Course oriented toward the needs of teachers of Spanish at all levels. *Prerequisite:* SPAN 3202 or SPAN 3204. Same as LING 3311.
- 3315 History of the Spanish Language (3-0)**  
A survey of the development of the Spanish language from Vulgar Latin to modern Spanish. *Prerequisite:* SPAN 3202 or SPAN 3204. Same as LING 3315.
- 3320 Culture and Civilization of Spain (3-0)**  
A survey of the country and its peoples, emphasizing historical, geographic, political, social, and artistic elements. *Prerequisite:* SPAN 3202 or SPAN 3204.
- 3325 The Confluence of Mexican and Chicano Literature (3-0)**  
Comparative study of representative works in both Mexican and Chicano literature, stressing differences and correlations between the two. *Prerequisite:* SPAN 3202 or SPAN 3204.
- 3330 Spanish American Civilization (3-0)**  
A survey of historical, geographic, political, social, and artistic elements of Spanish America, including the cultures of Spanish-speaking groups in the United States. *Prerequisite:* SPAN 3202 or SPAN 3204.
- 3350 Masterpieces Hispanic Literature Translation (3-0)**  
A study of selected great works of Spanish and Spanish American literature. Includes an introduction to the major periods and movements in the history of Hispanic literature. Not for Spanish majors/minors. *Prerequisites:* ENGL 3112 or ENGL 3113 or ESOL 3112 with grade of "C" or better.
- 3355 Advanced Conversation for Non-Native Speakers (3-0)**  
Practice in pronunciation, comprehension, and oral expression. Selected readings and written exercises designed to provide the opportunity for development of oral skills. Recommended for non-native speakers before progressing to other advanced Spanish courses. *Prerequisite:* SPAN 3202.
- 3356 Advanced Conversation for Native Speakers (3-0)**  
Practice in oral expression. Includes making oral reports, participation in roundtable discussions, delivery of short presentations with attention to vocabulary and pronunciation. Selected readings and written exercises designed to provide the opportunity for development of oral skills. *Prerequisite:* SPAN 3204 and departmental approval.
- 3357 Advanced Composition (3-0)**  
Review of aspects of grammar essential to effective writing, introduction to elements of style and rhetoric, vocabulary building, and intensive practice with written assignments and graded compositions. *Prerequisite:* SPAN 3202 or SPAN 3204.
- 3361 Introduction to Creative Writing in Spanish (3-0)**  
Basic techniques of imaginative writing applicable to fiction, poetry and non-fiction. For students interested in pursuing an interest in writing through advanced workshop courses and/or expanding their powers of written expression through exercise of the senses, memory, and imagination. The course introduces students to the uses of concrete language, imagery, character portrayal, and plotting techniques. Writing assignments and readings in Spanish. *Prerequisite:* SPAN 3357 or instructor's approval.

For Undergraduates and Graduates

- 3401 Methods of Foreign Language Instruction (3-0)**  
Practical application of linguistic principles to the teaching of modern foreign languages. Classroom techniques, and development and evaluation of teaching and testing materials appropriate to the written and spoken languages. May not be counted for credit in addition to FREN, GERM or LING 3401.

- 3424 The Literature of Mexico (3-0)**  
Principal genres and major works of Mexican literature. *Prerequisite:* six hours of advanced Spanish.
- 3428 Golden Age Drama (3-0)**  
A study of the leading dramatists: Lope de Vega, Tirso de Molina, Calderón de la Barca, Ruiz de Alarcón, Moreto, and others. *Prerequisite:* six hours of advanced Spanish.
- 3435 Nineteenth Century Spanish Literature (3-0)**  
Consideration of the two major literary movements of the century: Romanticism and Realism. Readings from representative authors, including Larra, Bécquer, and others. *Prerequisite:* six hours of advanced Spanish.
- 3439 The Short Story (3-0)**  
Shorter fictional forms in Spain and Spanish America from Juan Manuel to the present. *Prerequisite:* six hours of advanced Spanish.
- 3441 Modern Drama (3-0)**  
Readings from representative Spanish American and Spanish dramatists. *Prerequisite:* six hours of advanced Spanish.
- 3458 Twentieth Century Spanish Literature (3-0)**  
Readings in outstanding works by the principal authors of Spain in this century. Emphasis on a genre or type. *Prerequisite:* six hours of advanced Spanish.
- 3460 Twentieth Century Spanish American Novel (3-0)**  
Reading and analysis of works by some major Spanish American novelists of the twentieth century. Emphasis on the development and evolution of major themes and techniques in these works, as typified by the novels of such writers as Juan Rulfo, Carlos Fuentes, Mario Vargas Llosa, Gabriel García Márquez, Isabel Allende, and others. *Prerequisite:* six hours of advanced Spanish.
- 3461 Cervantes (3-0)**  
The literary value and influence of the Quixote and the *Novelas ejemplares*. Traditional and modern interpretations. The life and times of Cervantes. *Prerequisite:* six hours of advanced Spanish.
- 3463 Spanish American Poetry (3-0)**  
Study and interpretation of major poets and movements from the Colonial period to the present. Emphasis on the Modernist period and contemporary poetry. *Prerequisite:* SPAN 3202 or SPAN 3204.
- 3472 Contrastive Linguistics: Spanish/English (3-0)**  
The Contrastive study of the phonological, morphological, and syntactic systems of Spanish and English. *Prerequisite:* SPAN 3202 or 3204; SPAN 3309. *Recommended background:* LING/ENGL/ANTH 3220.
- 3490 Topics in Spanish (3-0)**  
May be repeated when topics vary. *Prerequisite:* six hours of advanced Spanish.

See the *Graduate Studies Catalog* for graduate programs and courses.

#### Translation and Interpretation Program

The program in Spanish-English, English-Spanish translation is designed to complement any academic major and to provide qualified students with the opportunity to acquire skill and experience in translating and interpreting. It may be taken as a minor to satisfy the BA degree requirements of the College of Liberal Arts. Students will receive instruction primarily in the practice of translation, including utilization of available resource materials, but will also examine translation theory and issues of professional ethics and responsibilities. A second objective of the program is to develop students' writing ability in both English and Spanish.

Students normally begin with TRAN 3359, then take senior-level classes. Those who wish to take 3400-level classes first must consult the Program Coordinator.

Program participants who have completed at least four (4) semesters of work in translation are eligible to take professional-level certification examinations, either English to Spanish or Spanish to English or both. Translation Certificates will be awarded to those who demonstrate professional-level competency in this manner. Consult

the Program Coordinator for additional information about certification testing.

The Minor in Translation will consist of 18 hours, which includes TRAN 3490 and five courses chosen from the following: TRAN 3359, 3481, 3482, 3483, 3484, and 3489.

## Translation (TRAN)

### 3359 Introduction to Translation (3-0)

Exploration of basic notions of translation, with special emphasis on defining the translator's goals, resources, and methods. Practice in rendering texts, with careful attention to grammatical and lexical correctness in both Spanish and English. *Prerequisite:* SPAN 3202 or SPAN 3204 and ENGL 3112 or ESOL 3112.

### 3481 Commercial and Legal Translation (3-0)

Consideration of the particular characteristics of business and legal texts (commercial correspondence, company policy documents, advertising copy, product-related literature, contracts, official documents, law enforcement, etc.) as they differ in English and Spanish. Study of specialized vocabulary and conventions governing such texts. Careful attention to the translator's responsibility to the client. Practice in translating a wide variety of authentic materials. *Prerequisite:* TRAN 3359 or permission of the Program Coordinator.

### 3482 Translation from the Information Media (3-0)

This course deals with material taken from newspapers, magazines, and other media. Journalistic practices in English- and Spanish-language publications will be compared and contrasted. Special emphasis on the vocabulary of current events, public issues, and news reporting. *Prerequisite:* TRAN 3359 or permission of the Program Coordinator.

### 3483 Literary Translation (3-0)

An introduction to the theory and practice of translating literature, emphasizing short fiction, the essay, and poetry. Comparative study of the role of essential rhetorical devices in Spanish and English. Students will have the opportunity to analyze reliable models (published translations) as well as to generate their own original versions of various works. *Prerequisite:* TRAN 3359 or permission of the Program Coordinator.

### 3484 Introduction to Interpreting (3-0)

Examination of the special nature of interpreting (translating orally) and the particular skills the interpreter must develop. Overview of the role and responsibilities of interpreters in the judicial setting. Extensive practice in sight translation and in simultaneous as well as consecutive interpreting. *Prerequisite:* TRAN 3359 or permission of the Program Coordinator.

### 3489 Topics in Translation (3-0)

Examination of a particular area or skill in translation/interpretation, such as technical, scientific, or medical translation, translation into English, translation into Spanish, consecutive interpreting, simultaneous interpreting, and the like. Course may be repeated once for credit as topic varies. *Prerequisite:* TRAN 3359.

### 3490 Senior Project in Translation (3-0)

Students will take this course during their last semester of enrollment in the Translation Program. In consultation with the instructor, they will select an area of interest and define a task within that area. Project translations will normally be exclusively into the student's dominant language. The instructor and student will confer on a frequent basis throughout the course of the semester. A copy of the final project will be bound and retained as part of the departmental Translation Program Library. *Prerequisite:* at least two of the following: TRAN 3481, TRAN 3482, TRAN 3483, TRAN 3484.

# Latin American Studies

209 Burges Hall  
(915) 747-5196, 747-5157

## DIRECTOR:

PROFESSORS EMERITI: James M. Day, Julius Rivera

ASSOCIATE PROFESSOR EMERITUS: David B. Eyde

PROFESSORS: Amastae, Bath, Cardon, Elerick, García, Haddox, James, McGee Deutsch, Natalicio, Pérez, R. Schmidt, Stoddard, Teschner, Villarreal

ASSOCIATE PROFESSORS: Armengol, Bagby, Brannon, Ford, Howard, Ibarreche, López, Meléndez-Hayes, R. Peterson, S. Schmidt

ASSISTANT PROFESSORS: Blanco, Campbell, Carmichael, Martin, Montes, Ramos, Rocha, J. Peterson

## B.A. in Latin American Studies

The Latin American Studies degree is an interdisciplinary major consisting of interrelated fields designed to provide students with the opportunity to prepare themselves for appropriate employment in business, government, or education or for advanced study in a Latin American area at the graduate level. In addition to the regular academic program, lectures, special seminars, and other Latin American resource opportunities are provided. The Director of the Center for Inter-American and Border Studies serves as advisor to Latin American Studies majors.

In addition to fulfilling the general requirements for the Bachelor of Arts degree, the student must complete 30 hours of credit toward the major. In order to provide flexibility and relevance in the program, the student may choose among five options. In fulfilling the options, no single course may be used to satisfy more than one course requirement.

Students may satisfy the language requirement by successfully completing SPAN 3201-3202 (for non-native speakers) or 3203-3204 (for native speakers). This requirement may be waived upon successful completion of an approved competency examination. If the requirement is waived, students must complete one of the following: SPAN 3320: Hispanic Civilization (recommended for students relatively fluent in the language), SPAN 3355: Advanced Conversation, SPAN 3356: Advanced Conversation for Native Speakers, or SPAN 3357: Advanced Composition (recommended for students needing enhancement of either oral or writing skills).

## Behavioral Science Option (30 semester hours)

- 6 hours from ECON 3366; GEOG 3312; POLS 3435; or HIST 3346, 3347, or 3350;
- 9 hours of 3400 level Political Science courses in Latin American politics; or 9 hours of 3300-3400 level Economics courses with Latin American content;
- 6 hours CS 3110; SOCI 3212 or 3311 (SOCI 3212 may not count in the BA Mathematics/Sciences block);
- 9 hours of 3400 level courses with Latin American content, selected from an approved list.

## Border Studies Option (30 semester hours)

- 6 hours from ECON 3366; GEOG 3312; POLS 3435; or HIST 3346, 3347, or 3350;
- 6 hours from ECON 3468; HIST 3349; POLS 3437;
- 3 hours from HIST 3342, 3343;
- 3 hours from ANTH 3361; SOCI 3361;
- 3 hours from ANTH 3310; HIST 3316; POLS 3413;
- 3 hours from MUSL 3325; THEA 3335;
- 3 hours from ENGL 3371; SPAN 3325;
- 3 hours from an approved list of courses with a border focus.

**Business-Economics Option** (30 semester hours)

- 6 hours from GEOG 3312; POLS 3435; or HIST 3346, 3347, or 3350;
- 6 hours of Accounting;
- 9 hours, FIN 3310; MGMT 3303; and MKT 3300;
- 9 hours, ECON 3366, 3367, and 3468.

**Humanities Option** (30 semester hours)

- 6 hours from ECON 3366; GEOG 3312; POLS 3435; HIST 3346, 3347, or 3350;
- 9 hours of 3300-3400 level modern languages or English courses in Latin American literature;
- 9 hours of 3300-3400 level history courses with Latin American content;
- 6 hours from PHIL 3312; ARTH 3310; MUSL 3126.

**Spanish-Linguistics Option** (30 semester hours)

- 6 hours from ECON 3366; GEOG 3312; POLS 3435; HIST 3346, 3347, or 3350;
- 15 hours of 3300-3400 level Spanish courses with Latin American content;
- 6 hours in the linguistics of Spanish;
- 3 hours of 3300-3400 level course work with Latin American content, selected from an approved list.

**Minor in Latin American Studies**

A student may pursue an 18-hour minor in Latin American Studies as part of the BA degree or as a complement to other degrees. Courses taken to fulfill minor field requirements may not be used to satisfy other degree requirements.

- 6 hours, SPAN 3201-3202 or 3203-3204. This requirement may be waived upon successful completion of an approved competency examination and if waived, the student must complete SPAN 3320, 3355, 3356 or 3357.
- 12 hours from ECON 3366; GEOG 3312; HIST 3346, 3347, or 3350; POLS 3435;
- 6 hours in two disciplines from PHIL 3213; POLS 3437; SPAN 3304, 3424, 3463; or approved special topics course with a Latin American focus.

**Minor in Border Studies**

A student may pursue an 18-hour minor in Border Studies as part of the BA degree or as a complement to other degrees. Requirements for this minor are:

- 3 hours from HIST 3342, 3343;
- 3 hours from ANTH 3361; SOCI 3361;
- 3 hours from ANTH 3310; HIST 3316; POLS 3413;
- 3 hours from MUSL 3325; THEA 3335;
- 3 hours from ENGL 3371; SPAN 3325;
- 3 hours from courses not taken above, or selected from an approved list of courses with a border focus.

## Military Science

107 Military Science Building  
(915) 747-5621

CHAIRPERSON: Major Christopher G. Hennen

PARTICIPATING FACULTY: Heiland, Hennen, San Nicolas, Vallejos, Williams

**General:** Courses offered by this department are designed to offer qualified students an opportunity to become a commissioned Army officer. The curriculum provides opportunities for leadership training and experience which are not duplicated in other college courses. Instruction encourages the development of resource management skills, self-assurance, confidence, personal discipline, executive abil-

ities, personal responsibility, professional ethics, physical stamina, bearing, and other fundamental qualities required of an Army officer. These same qualities will enhance any civilian career.

The first two years (MS I and MS II) comprise the Basic Course which offers an introduction to Military and Confidence Building Skills, First Aid and Survival Skills, Land Navigation, and Leadership Assessment and Managerial Skills. Basic Courses are normally taken during the freshman and sophomore years without any military obligation. The last two years (MS III and MS IV) constitute the Advanced Course and are normally taken during the student's junior and senior years. Courses for MS II, III, and IV, require a non-credit Leadership Lab. Additionally, Advanced Course students are required to satisfactorily complete selected courses in Written Communication, Human Behavior, Computer Literacy, Math Reasoning, and Military History, prior to commissioning.

**Eligibility:** *Basic Course.* To enroll in ROTC, you must be a full-time student of UT El Paso and a U.S. citizen. Enrollment in the Basic Course is open to all students at any academic level. Credit for all or part of the Basic Course may be granted by the Professor of Military Science (PMS) for participation in high school ROTC or for active military service of four or more months. This is done on a case-by-case basis.

*Two Year Program.* Students who did not enroll in the Basic Course, or who cannot be given credit for the Basic Course by virtue of active military service or participation in Junior ROTC (high school), may qualify for the Advanced Course by attending a six-week summer training camp (Camp Challenge located at Fort Knox, Kentucky). Applicants for the camp should visit the Department of Military Science no later than 1 March to obtain application forms and schedule a physical examination. You must have a minimum of four semesters remaining prior to completion of a baccalaureate or advanced degree.

*Advanced Course.* Admission requires approval of the PMS based on medical fitness, an acceptable degree plan, a cumulative GPA of 2.0 or higher, and military qualification under one of the following plans:

1. Prior military service
2. Completion of the Basic Course requiring MS 1101, 1103, 2202, and 2204
3. Completion of Camp Challenge at Fort Knox, Kentucky
4. Junior ROTC-advanced placement (approved on an individual basis by the PMS)

The student is required to sign a contract with the U.S. government to accept a commission in the Army or Army Reserve upon graduation.

**Scholarships:** *Four-year Scholarships.* Army ROTC scholarships are available annually. These scholarships are awarded on a nationally competitive basis to high school graduates. Interested high school seniors should obtain application requests from their counselors and submit the request by December. Application forms are also available at the Military Science Department.

*Three-year Scholarships.* These scholarships are awarded on a nationally competitive basis to College Freshmen. Freshmen, including those not enrolled in Military Science, may apply through the Military Science Department. Applications may be submitted from January until mid-March.

*Two-year Scholarships.* Limited two-year scholarships are available, on a competitive basis, to students attending Camp Challenge. Application for these scholarships is made at camp. Several two-year scholarships are available through the Military Science Department. These are awarded on a campus-wide competitive basis. Applications must be submitted through the Military Science Department by April 1.

**Pay and Allowances:** All students enrolled in Army ROTC are furnished uniforms, textbooks, and equipment on a loan basis. All advanced course cadets are paid \$150 per month for a maximum of twenty months, excluding the six-week Advanced Camp. The U.S. Government pays the tuition, required fees, textbooks, and essential classroom supplies for Army ROTC scholarship students.

Additionally, four-year and three-year ROTC scholarship recipients are paid \$150 per month during the fall and spring semesters of their freshman and sophomore years.

**Additional Programs:** Qualified cadets may attend Airborne School, Air Assault School. Additionally, Advanced Course cadets may attend Cadet Troop Leader Training (CTLT), serving a two- to three-week tour with an active Army unit upon completion of Advanced Camp.

**Commissions Offered:** Upon successful completion of all Military Science studies and requirements for a baccalaureate degree, a cadet is awarded a commission as a Second Lieutenant in the United States Army or Army Reserve and may be required to serve on active duty not to exceed three years (four years for ROTC scholarship students). Reserve Officers may request that their active duty be for a period of only three months. Since UT El Paso offers a general Military Science curriculum, a commission in most branches of the Army is possible. Following graduation, newly commissioned officers are sent to an Officer Basic Course (OBC) to qualify for a specific branch, and then complete a tour of active duty through a variety of challenging assignments. Reserve officers return to a local Reserve unit upon completion of OBC. Active duty can be delayed for those students who wish to pursue graduate studies leading to a master's degree, law degree, medical degree, or others.

## Military Science (MS)

Basic Course (MS I and II)

### 1101 Introduction to Basic Military Skills (1-1)

An introduction of basic military skills and professional knowledge subjects essential for the development of the novice military leader. No military obligation.

### 1103 Introduction to Basic Military Skills (1-1)

An introduction of basic military skills and professional knowledge subjects essential for the development of the novice military leader. No military obligation.

### 2202 Military Skills (2-2)

A study of various military skills and professional knowledge subjects essential to a military leader. No military obligation. *Prerequisites:* MS 1101, MS 1103, or instructor's approval.

### 2204 Military Skills (2-2)

A study of various military skills and professional knowledge subjects essential to a military leader. The MS 2204 course concludes with a leadership assessment evaluation which provides a screening technique, involving behavioral simulations, to determine the competency of potential junior officers. No military obligation. *Prerequisites:* MS 1101, MS 1103, MS 2202, or instructor's approval.

Advanced Course (MS III and IV)

### 3301 Military Science III (3-1)

A comprehensive treatment of those qualities and skills fundamental to the military profession. This course addresses the role of the Army in national affairs as well as from the historic context. Concurrently, it provides instruction in the organizational, planning, and directive processes of control while incorporating those leadership dimensions associated with written and verbal communicative forms, training procedures, counseling techniques, systems and resource management. This body of information is superimposed over a framework involving selected military skills. *Prerequisites:* Completion/credit for Basic Course and PMS approval.

### 3302 Military Science III (3-1)

A comprehensive treatment of those qualities and skills fundamental to the military profession. This course addresses the role of the Army in national affairs as well as from the historic context. Concurrently, it provides instruction in the organizational, planning, and directive processes of control while incorporating those leadership dimensions associated with written and verbal communicative forms, training procedures, counseling techniques, systems and

resource management. This body of information is superimposed over a framework involving selected military skills. *Prerequisites:* Completion/credit for Basic Course and PMS approval.

### 3401 Military Science IV (3-1)

An in-depth examination of the profession of arms as it relates to military ethics and professionalism and the military justice system. Provides the opportunity to develop executive leadership and managerial skills associated with their attendant functions such as planning and analysis; training management; Command and Staff relationships; personnel, fiscal, and logistics management. Concurrently the MS IV student is placed in leadership, managerial, and instructional roles within an Army Command and Staff framework, and is required to exercise those skills in day-to-day operations. *Prerequisite:* MS 3301, 3302, and PMS approval.

### 3402 Military Science IV (3-1)

An in-depth examination of the profession of arms as it relates to military ethics and professionalism and the military justice system. Provides the opportunity to develop executive leadership and managerial skills associated with their attendant functions such as planning and analysis; training management; Command and Staff relationships; personnel, fiscal, and logistics management. Concurrently the MS IV student is placed in leadership, managerial, and instructional roles within an Army Command and Staff framework, and is required to exercise those skills in day-to-day operations. *Prerequisite:* MS 3301, 3302, and PMS approval.

### 4301 Summer Field Training (0-0-4)

Intensive field training course stressing practical application of leadership, management, and performance with emphasis on tactical and technical military skills. The Nursing Advanced Training is supervised by the Chief of the Department of Nursing at a major Army hospital and provides an unparalleled opportunity for professional nursing experience. Students are enrolled on a pass/fail basis (credit toward free elective only). *Prerequisites:* MS 3301, 3302, fully enrolled as an Advanced Course Student, and PMS approval.

Elective Courses

### 1113 Marksmanship (1-1)

An extensive skill course emphasizing the techniques of marksmanship and the firing of .22 caliber rifles, pistols, and match-grade air rifles. No military obligation. Laboratory fee required.

### 1116 Marksmanship (Advanced) (1-0)

An intensive, advanced skill course emphasizing the techniques of competitive marksmanship with match-grade .22 caliber rifles. May be repeated for credit. No military obligation. *Prerequisites:* MS 1113. Laboratory fee required.

## Music

301 M Fox Fine Arts  
(915) 747-5606

CHAIRPERSON: Ronald A. Hufstader

PROFESSOR EMERITUS: Richard E. Henderson

PROFESSORS: Cardon, Chávez, Fountain, Hufstader, Paul

ASSOCIATE PROFESSORS: Chacon, Colgin, Gibson, Packales, Ross, Trimble, Warren, White

ASSISTANT PROFESSORS: Glarner, Heuser, Tredway, Wilkinson, Williamson

SENIOR LECTURER: Kim

LECTURERS: Beehler, Gutierrez, Laubach, Zubeck

The Department of Music offers programs leading toward the Bachelor of Music (BM) degree in three major fields:

**Major in Performance**

Performance majors may select either orchestra/band instruments, keyboard instruments, voice, guitar, ballet, or keyboard performance pedagogy as an option within the major.

**Academic Requirements** (50-54 hours) for all options except ballet performance

ENGL 3111 and 3112 or equivalent\*

HIST 3101 and 3102\*

POLS 3210 and 3211\*

MATH 3120, plus three hours from STAT 3180, PSYC 3103, QMB 3201, or SOCI 3212\*\*

GEOL 3103 and 3104\*\*

3 hours Humanities\* (from those listed in Block VII of University Core Requirements)

3 hours Technology and Society\*

3 hours Economics\* (from those listed in Block IX of University Core Requirements)

MUSL 3324\* (meets Block VIII of University Core Requirements)

MUSL 2121 and 2122\* (meets Block VI of University Core Requirements)

*For option in keyboard performance pedagogy:*

4 hours from MUSL 2319, 2320, 2321, 2322, 2328\* (meets Block XI of University Core Requirements)

*For all options except keyboard performance pedagogy:*

8 hours from MUSL 2319, 2320, 2321, 2322, 2328\* (4 of these hours meet Block XI of University Core Requirements)

\* Meets a University Core Requirement

\*\* Recommended option, to meet a University Core Requirement; any substitution must be from the same area of the Core.

**Music Major Basics** (58-66 hours)

20 hours Theory: MUST 3113, 1111, 3114, 1112, 3213, 1211, 3214, 1212, 2315, and 2318

3 hours Electronic Music: MUST 3115

Individual Instruction:

12 hours MUSA 3191

12 hours MUSA 3391

3 hours MUSA 3331

8-16 hours (minimum 8 semesters) Ensemble

0-8 hours Piano Proficiency (to level of MUSA 2272)

8 semesters Recital (0191)

**Option Requirements**

Orchestra/Band Instruments: (13 hours—minimum 133 hours for degree)

4 hours MUSA 2165

9 hours Electives

Junior year, half recital; Senior year, full recital

Keyboard Instruments: (14 hours—minimum 134 hours for degree)

4 hours MUSA 2165

4 hours Voice Study

6 hours of free electives

Junior year, half recital; Senior year, full recital

Keyboard Performance Pedagogy: (23 hours—minimum 139 hours for degree)

4 hours MUSA 2165

6 hours Psychology: PSYC 3101 plus 3 hours from PSYC 3202, 3204, 3206, or 3210

4 hours Voice Study, class or private

9 hours MUSE 3494

Junior year, half recital; Senior year, full recital

Voice: (18 hours—minimum 138 hours for degree)

8 hours Diction—MUSA 2151, 2152, 2251, and 2252

2 hours Vocal Pedagogy—MUSA 2493

4 hours from Music Theatre Workshop—MUSA 2253, 2254, 2353, and 2354

4 hours foreign language, 4101

Junior year, half recital; Senior year, full recital

Guitar: (12 hours—minimum 132 hours for degree)

6 hours MUSA 1148 or 1149

6 hours MUSA 3181 (Classical or Jazz Guitar as secondary instrument)

Minimum 6 hours Choir, Band, or Orchestra in Music Major Basics

Junior year, half recital; Senior year, full recital

Ballet Performance Option:

Academic Requirements (57 hours)

ENGL 3111 and 3112 or equivalent\*

HIST 3101 and 3102\*

POLS 3210 and 3211\*

MATH 3120, plus 3 hours from STAT 3180, PSYC 3103, QMB 3201, or SOCI 3212\*\*

GEOL 3103 and 3104\*\*

3 hours Humanities\* (from those listed in Block VII of University Core Requirements)

3 hours Technology and Society\*

3 hours Economics\* (from those listed in Block IX of University Core Requirements)

3 hours Cultural Diversity\* (from those listed in Block VIII of University Core Requirements)

MUSL 3124\* (meets Block VI of University Core Requirements)

4 hours MUSL 2121 and 2122\* (meets Block XI of University Core Requirements)

8 hours foreign language--4101 and 4102, preferably French

\* Meets a University Core Requirement

\*\* Recommended option, to meet a University Core Requirement; any substitution must be from the same area of the Core.

Music and Ballet Courses (57 hours)

MUSB 3141, 3142, 3241, 3242, 3341, 3342, 3441, 3442

8 hours MUSA 1147

2 hours MUSA 1155

THEA 3113, MUST 3111, MUSA 2171, 2172, MUSL 2343, 2344, MUSB 3343, 3344, 3444

15 hours free electives, for a total of 129 hours minimum for degree.

**Major in Theory and Composition**

Students may select either voice, orchestral instruments, or guitar or keyboard as the major instrument.

Academic Requirements (54 hours)

ENGL 3111, 3112 or equivalent\*

HIST 3101, 3102\*

POLS 3210, 3211\*

MATH 3120, plus three hours from STAT 3180, PSYC 3103, QMB 3201, or SOCI 3212\*\*

GEOL 3103, 3104\*\*

3 hours Humanities\* (from those listed in Block VII of University Core Requirements)

3 hours Technology and Society\*

3 hours Economics\* (from those listed in Block IX of University Core Requirements)

MUSL 3324\* (meets Block VIII of University Core Requirements)

## 148/COLLEGE OF LIBERAL ARTS

MUSL 2121, 2122\* (meets Block VI of University Core Requirements)  
8 hours from MUSL 2319, 2320, 2321, 2322, 2328\* (four of these hours meet Block XI of University Core Requirements)

\*Meets a University Core Requirement

\*\* Recommended option, to meet a University Core Requirement

### MUSIC MAJOR BASICS (50 hours)

18 hours Theory: MUST 3113/1111, 3114/1112, 3213/1211, 3214/1212, and 2315  
3 hours Electronic Music: MUST 3115  
Individual Instruction: 12 hours MUSA 3191  
6 hours MUSA 3391  
3 hours MUSA 3331  
8 - 16 hours (minimum 8 semesters) Ensemble  
0 - 8 hours Piano Proficiency (to level of MUSA 2272)  
8 semesters recital (0191)

### THEORY AND COMPOSITION REQUIREMENTS (23 hours)

3 hours MUST 3315  
4 hours MUST 2219  
6 hours MUST 3319  
10 hours advanced level Theory

### VOCAL/INSTRUMENTAL OPTION REQUIREMENTS (2-8 hours)

Vocal Option: 8 hours MUSA 2151, 2152, 2251, and 2252  
Instrumental Option: 2 hours MUSA 2173  
9 hours free electives  
138 hours minimum for degree

### Bachelor of Music with Teacher Certification

#### ACADEMIC REQUIREMENTS (77 hours)

ENGL 3111, 3112 or equivalent\*  
HIST 3101, 3102\*  
POLS 3210, 3211\*  
MATH 3120, plus three hours from STAT 3180, PSYC 3103, QMB 3201, or SOCI 3212\*\*  
GEOL 3103, 3104\*\*  
COMM 3101  
6 hours Humanities\* (from those listed in Block VII of University Core Requirements)  
3 hours Technology and Society\*  
3 hours Economics\* (from those listed in Block IX of University Core Requirements)  
Education Classes (21 hours):  
RED 3340 or 3342  
SCED 3317\* (meets Block VIII of University Core Requirements)  
EDPC 3300  
MUSE 3336, 3433  
TED 6497  
MUST 3115  
MUSL 2121, 2122\* (meets Block VI of University Core Requirements)  
4 hours from MUSL 2319, 2320, 2321, 2322, 2323, 2328\* (meets Block XI of University Core Requirements)

\*Meets a University Core Requirement

\*\* Recommended option, to meet a University Core Requirement; any substitution must be from the same area of the Core.

### MUSIC MAJOR (53-66 hours)

18 hours Theory: MUST 3113/1111, 3114/1112, 3213/1211, 3214/1212, and 2315 or 2318  
6-8 hours Either Diction: MUSA 2151, 2152, 2251, 2252 or Instrumental Ensemble: MUSA 3275, 3276

2-4 hours 2 hours MUSA 2493 (Vocal), or  
4 hours MUSA 2165 (Instrumental), or  
4 hours MUSA 1148/1149 (Guitar/instrumental)  
0-9 hours Piano and Guitar majors must have nine hours Voice or

### Band/Orchestra Instrument

12 hours MUSA 3191  
9 hours MUSA 3391  
6 hours MUSA 3331, 3333

### Other requirements: (8-24 hours)

Senior year's half recital  
8-16 hours Minimum 8 semesters ensemble  
0-8 hours Piano Proficiency to level of MUSA 2272  
8 semesters Recital (0191)  
Minimum total of 138 hours for degree

### Minor in Music:

Students pursuing the BA degree in another discipline may minor in music, with either an applied music or an academic music option. Some background in music is required and the student will take placement tests in both theory and applied music. Requirements are:

#### For the Applied Music Option--

8 hours (4 semesters) MUSA 2191  
9 hours (3 semesters) MUSA 3391  
MUSL 2121 and 2122

#### For the Academic Music Option--

MUST 3113-3114 and 1111-1112  
MUSL 2121-2122, 2319, 2320, 2321, and 2322

## Applied Music (MUSA)

**ENSEMBLE:** Symphonic Wind Ensemble, Symphonic Band, Marching Band, Lab Stage Band, Ballet Corps, Chorale, Chorus, Orchestra, Guitar, and small chamber groups are maintained. These organizations are open to all students who wish to enjoy the performance of a great variety of music. On special occasions each year several organizations are combined in large productions including operas, ballets, and oratorios. Home concerts and concert tours are a part of the program. Consent of the instructor is required for some ensemble courses, and all may be repeated for credit.

### 1102 Goldluggers (0-6)

A course for women in dancing, twirling, pom pom, and marching activities; participation in football shows and other public appearances. May be repeated for credit. *Prerequisite:* Admission by try-out only.

### 1140 Ballet Folklorico (1-0)

This course explores the performance aspects of ballet Folklorico. Open to all through audition.

### 1141 Band Literature (0-0-3)

A study of selected works in the field of band literature. May be repeated for credit.

### 1142 Mariachis (1-0)

This course explores the performance aspects of the mariachis. Participants must be able to perform on one of the mariachi instruments. Open to all through audition. Equipment Maintenance fee required.

### 1143 Band (0-0-3)

#### (Common Course Number MUSI 1121)

May be repeated for credit. Equipment Maintenance fee required.

### 1144 Orchestra (0-0-3)

May be repeated for credit. Equipment Maintenance fee required.

### 1145 University Chorale (0-0-3)

May be repeated for credit.

### 1146 Lab Band (0-0-3)

May be repeated for credit. Equipment Maintenance fee required.

**1147 Ballet Ensemble (0-0-10)**

Performing techniques and participation in the University Ballet Corps. Ballet majors are required to participate for eight semesters and/or each semester in attendance. May be repeated for credit. Open to all through audition.

**1149 Jazz Guitar Ensemble (0-0-2)**

May be repeated for credit.

**1151 Choral Literature (0-0-3)**

A study of selected works in the field of choral literature. May be repeated for credit.

**1155 University Chorus (0-0-3)**

A mixed singing organization open to all students interested in any kind of choral work. Audition is not required. Oratorios and operas are presented with orchestral accompaniment, occasionally in combination with the University Chorale. Open to all. May be repeated for credit.

**1161 String Orchestra Literature (0-0-3)**

A study of selected works in the fields of orchestra literature. May be repeated for credit.

**2165 Chamber Music and Accompanying (0-0-3)**

Reading of music and study of selected works characteristic of the performing group. May be repeated for credit.

GROUP INSTRUCTION: Credit granted only when taken as a secondary instrument or elective. Open to all students with permission of instructor.

**2151 English Diction and Repertory (2-0)**

Introduction to English singing diction and its application through selected repertory.

**2152 Italian/Spanish Diction and Repertory (2-0)**

Introduction to Italian and Spanish singing diction and its application through selected repertory.

**2171 Piano Class I (0-3)**

Equipment Maintenance fee required.

**2172 Piano Class II (0-3)**

*Prerequisite:* MUSA 2171. Equipment Maintenance fee required.

**2173 Voice Class (2-0)****2174 Voice Class (2-0)****2179 Percussion Pedagogy (3-0)**

Equipment Maintenance fee required.

**2180 Beginning Guitar Class (0-0-2)**

An introduction to beginning techniques of classical and folk guitar styles with emphasis on note reading. Open to all.

**2251 German Diction and Repertory (2-0)**

Introduction to German singing diction and its application through selected repertory.

**2252 French Diction and Repertory (2-0)**

Introduction to French singing diction and its application through selected repertory.

**2253 Music Theatre Workshop (2-0)**

Exploration through active participation of the aspects of stage production peculiar to music theatre, styles and techniques of acting with music, stage directing problems in treating a musical score, and rudimentary technical production. Brief survey of literature for the musical stage appropriate to public school, community, and television productions. May be repeated for credit.

**2254 Music Theatre Workshop (2-0)**

Exploration through active participation of the aspects of stage production peculiar to music theatre, styles and techniques of acting with music, stage directing problems in treating a musical score, and rudimentary technical production. Brief survey of literature for the musical stage appropriate to public school, community, and television productions. May be repeated for credit.

**2271 Piano Class III (0-3)**

*Prerequisite:* MUSA 2172. Equipment Maintenance fee required.

**2272 Piano Class IV (0-3)**

*Prerequisite:* MUSA 2271. Equipment Maintenance fee required.

**2280 Intermediate Guitar Class (2-0)**

Continued work on the classical techniques and literature of the guitar. *Prerequisite:* MUSA 2180 or instructor's approval.

**3275 Secondary Instruments I (3-0)**

A study of instrumental technique and pedagogy for teachers and conductors. *Prerequisites:* MUST 3114 and MUST 1112. Equipment Maintenance fee required.

**3276 Secondary Instruments II (3-0)**

A study of instrumental technique and pedagogy for teachers and conductors. *Prerequisite:* MUSA 3275. Equipment Maintenance fee required.

**3371 Advanced Piano Class (3-0)**

Study of standard solo and duo repertoire for piano. *Prerequisite:* Departmental approval. Equipment Maintenance fee required.

For Undergraduates and Graduates

**2353 Music Theatre Workshop (2-0)**

Continuation of MUSA 2253. May be repeated for credit.

**2354 Music Theatre Workshop (2-0)**

Continuation of MUSA 2254. May be repeated for credit.

**3331 Beginning Conducting Techniques (3-0)**

Techniques of conducting and organizing vocal and instrumental ensembles. Baton techniques, score reading, interpretation, rehearsal techniques, and literature of various ensembles. *Prerequisites:* MUST 3214 and MUST 1212.

**3333 Advanced Conducting Techniques (3-0)**

Continued study of conducting begun in MUSA 3331. *Prerequisite:* MUSA 3331.

**2493 Pedagogy of Voice (2-0)**

Methods of voice development through voice-building and song literature. The study of psychological and physiological vocal problems, including the changing voice, the monotone and registers of all voice classifications. Attention also given to training voices for choral singing and solo performance. *Prerequisites:* Senior standing in music or equivalent vocal study and experience; MUSA 3391, 2151-52, and 2251-52, and instructor's approval.

INDIVIDUAL INSTRUCTION: Placement auditions are required on the major and secondary instruments. Students who demonstrate adequate proficiency on any required instrument or voice will be encouraged to substitute other courses outside of the music area. Students will perform before the music faculty at the close of each semester. The audition at the close of the second year also determines admission to upper division courses. For full description of the course of study for any applied music course, consult the Music Department Handbook, which is available in the departmental office.

Students are expected to study on campus with members of the University music faculty. Performance majors must present a full graduation recital approved by the music faculty. Music Education majors must present a partial recital.

Consent of the instructor is required for all individual instruction.

**0191 Student Recital Lab (0-0-1)**

Lab for 2191, 3191, 2391, and 3391. Required of all students registered in these courses. May be repeated for credit. Graded Pass/Fail.

**2181 Individual Instruction (0-0-6)**

For non-majors, as a secondary instrument, and for students needing preparatory study. One thirty-minute lesson and five practice hours per week. May be repeated for credit. *Prerequisite:* Departmental approval. Supplemental Tuition and Coaching fee required.

## 150/COLLEGE OF LIBERAL ARTS

### 2191 Individual Instruction (0-0-6)

Lower-level applied lessons for Music Education and Theory/Composition majors. One thirty-minute lesson and five practice hours per week. May be repeated for credit. *Prerequisite:* Departmental approval. Supplemental Tuition and Coaching fee required.

### 3181 Individual Instruction (0-0-10)

For non-majors, as a secondary instrument, and for students needing preparatory study. Two thirty-minute lessons and nine practice hours per week. May be repeated for credit. *Prerequisite:* Departmental approval. Supplemental Tuition and Coaching fee required.

### 3190 Individual Instruction (0-0-3)

Private lessons for those preparing for entry into music major curriculum. Supplemental Tuition and Coaching fee required.

### 3191 Individual Instruction (0-0-10)

Lower-level applied lessons for Music Education, Performance, and Theory/Composition majors. Two thirty-minute lessons and nine practice hours per week. May be repeated for credit. *Prerequisite:* Departmental approval. Supplemental Tuition and Coaching fee required.

### 2391 Individual Instruction (0-0-6)

Upper-level applied lessons for Music Education and Theory/Composition majors. One thirty-minute lesson and five practice hours per week. *Prerequisite:* Departmental approval. Supplemental Tuition and Coaching fee required.

### 3391 Individual Instruction (0-0-10)

Upper-level applied lessons for Music Education and Theory/Composition majors. Two thirty-minute lessons and nine practice hours per week. May be repeated for credit. *Prerequisite:* Departmental approval. Supplemental Tuition and Coaching fee required.

**REPERTORY CLASS:** Repertory classes offer the student performance experience and added instruction in technique and literature in a two-hour class. These courses must be taken concurrently with an appropriate Individual Instruction class. All repertory classes may be repeated for credit.

### 1192 Piano Repertory (0-0-2)

May be repeated for credit.

### 1194 Guitar Repertory (0-0-2)

May be repeated for credit.

## Ballet (MUSB)

For Undergraduates

### 3141 Ballet Technique (0-0-5)

(Common Course Number DANC 1341)

Basic ballet techniques combining the methods of the Russian Cecchetti and French schools. Sections open to all students meet three days a week. Sections open to Ballet majors meet five days a week.

### 3142 Ballet Technique (0-0-3)

(Common Course Number DANC 1342)

Basic ballet techniques combining the methods of the Russian Cecchetti and French schools. Sections open to all students meet three days a week. Sections open to Ballet majors meet five days a week.

### 3241 Intermediate Ballet (5-0)

(Common Course Number DANC 2341)

Continuation of 3142 with more advanced work in the creative aspects of dance movements. *Prerequisite:* MUSB 3142 or instructor's approval.

### 3242 Intermediate Ballet (5-0)

(Common Course Number DANC 2342)

Continuation of 3142 with more advanced work in the creative aspects of dance movements. *Prerequisite:* MUSB 3142 or instructor's approval.

### 3341 Ballet Techniques (0-0-5)

Continuation of 3242; advanced techniques with increased emphasis on certain creative aspects of dance movements. *Prerequisites:* Departmental approval.

### 3342 Ballet Techniques (5-0)

Continuation of 3242; advanced techniques with increased emphasis on certain creative aspects of dance movements. *Prerequisites:* MUSB 3242 or equivalent, junior standing, and instructor's approval.

### 3343 Character and Jazz Dance (3-0)

Interpretation of national dancing; fundamentals and techniques of jazz dance. May be repeated for credit.

### 3344 Character and Jazz Dance (3-0)

Interpretation of national dancing; fundamentals and techniques of jazz dance. May be repeated for credit.

### 3441 Advanced Ballet Techniques (0-0-10)

For students wishing to study ballet as a principal performance medium. Concentrated study including points and adagio work. Admission is by audition only. *Prerequisite:* MUSB 3342.

### 3442 Advanced Ballet Techniques (5-0)

For students wishing to study ballet as a principal performance medium. Concentrated study including points and adagio work. Admission is by audition only. *Prerequisite:* MUSB 3342.

### 3444 Choreography (3-0)

Principles of development, rehearsal, and execution of ballet choreography. *Prerequisite:* MUSB 3342.

## Music Education (MUSE)

For Undergraduates and Graduates

### 3336 Teaching of Music in the Elementary Schools (3-0)

Pre-adolescent growth and development as the basis of procedures in the teaching of music in the elementary grades. Designed to meet the needs of the special music teacher. The child voice, its development and classification. Introduction of notation, song materials, rhythm bands, appreciation methods, and creative music for children. For Elementary School Music majors. *Prerequisites:* MUST 3214 and MUST 1212.

### 3433 Teaching of Music in the Junior and Senior High Schools (3-0)

The study of the adolescent growth and development, and related procedures in the teaching of music in the upper level grades and in high school. Choral and instrumental music materials, organization of ensembles, teaching of music appreciation and theory; correlation and integration with the entire school curriculum; public school type music as it is related to the life and needs of a community. *Prerequisites:* MUST 3214 and MUST 1212.

### 3435 Selected Problems in Music Education (0-0-3)

The student may receive individual instruction and guidance in the area in which a specific need is demonstrated. Credit may be received in the elementary or secondary school field. *Prerequisites:* Six hours of Education, six hours of Music, senior standing, or equivalent background as determined by the instructor and chairman of the department.

### 3494 Piano Pedagogy (3-1)

Materials and methods for beginning, elementary, intermediate, and advanced piano students. Emphasis on both class and private instruction. Observation and internship included. May be repeated for credit.



## Literature and History (MUSL)

For Undergraduates

### 2121 Introduction to Music Literature (2-0) (Common Course Number MUSI 1208)

A general survey of the history of music in the Western world, including some discussion of the music of non-western cultures. Emphasis on skills needed for oral and written communication about music. *Prerequisite:* Instructor's approval.

### 2122 Introduction to Music Literature (2-0) (Common Course Number MUSI 1209)

A general survey of the history of music in the Western world, including some discussion of the music of non-western cultures. Emphasis on skills needed for oral and written communication about music. *Prerequisite:* Instructor's approval.

### 3124 Music In Western Societies (3-0) (Common Course Number MUSI 1306)

A survey of music and its roots in Western civilization. Emphasis on music listening skills as well as relationships between music and other arts and society. Performance of live and recorded music offered to class. No musical background is assumed. Open to all.

### 3126 The Music of Mexico (3-0)

A survey of Mexican musical development including pre-conquest Mayan, Aztec, colonial, and 20th century periods as well as the Mariachi and folk styles. Representative literature demonstrated by guest artists and recordings. Open to all.

### 3127 Jazz to Rock (3-0)

A study of the styles, performers, and composers of American Jazz music, beginning with the evolution of early jazz styles which combine English, Spanish, and French folk songs with African tribal rhythms, and continuing to the present. Guest artists and audio-visual aids are used. Open to all.

For Undergraduates and Graduates

### 2319 Music in the Middle Ages and Renaissance (2-0)

Music history and style from the fall of Rome through 1600. *Prerequisites:* MUST 3114 and MUST 1112; MUSL 2121 and MUSL 2122.

### 2320 Music in the Baroque Period (2-0)

Music history and literature from 1600 to 1750. *Prerequisites:* MUST 3114 and MUST 1112; MUSL 2121 and MUSL 2122.

### 2321 Music in the Viennese Classical Period (2-0)

Music history and literature from 1770 to 1830. *Prerequisites:* MUST 3114 and MUST 1112; MUSL 2121 and MUSL 2122.

### 2322 Music in the Romantic Period (2-0)

Music history and literature in the nineteenth century. *Prerequisites:* MUST 3114 and MUST 1112; MUSL 2121 and MUSL 2122.

### 2323 Music in the Twentieth Century (2-0)

The history and literature of music in the twentieth century. *Prerequisites:* MUST 3114, MUST 1112, MUSL 2121, and MUSL 2122.

### 2328 Topics in Music History (2-0)

The history and literature of music from varying perspectives. *Prerequisites:* MUST 3114, MUST 1112, MUSL 2121, and MUSL 2122.

### 2330 World Music Seminar (2-0)

An upper-level course designed to explore changing topics in World Music in depth. Intended for upper level music majors, but may be taken by others with instructor permission. May be repeated for credit. *Prerequisite:* Instructor's approval.

### 2343 History of Ballet (2-0)

The evolution of ballet, choreographic styles and traditions, significant artists and their contributions, and contemporary ballet. *Prerequisite:* MUSB 3242.

### 2344 History of Ballet (2-0)

The evolution of ballet, choreographic styles and traditions, significant artists and their contributions, and contemporary ballet. *Prerequisite:* MUSB 3242.

### 3324 Introduction to Ethnomusicology (3-0)

General introduction to the relationships between music and culture with special emphasis upon the music of Asians, Africans, and Native Americans. Listening and ethnomusicological activities. Open to all.

### 3325 Music on the Border (3-0)

An investigative course designed to promote a greater awareness of the role music plays in contemporary life along the U.S./Mexico border, with special attention to folk and popular styles. Supervised field research will be emphasized in which each student is encouraged to relate music to his personal interest and/or major field. No musical background is assumed.

## Theory (MUST)

For Undergraduates

### 1111 Sight-Singing and Dictation (2-0)

(Common Course Number MUSI 1116)

Experience in aural recognition of tone relations through sight-singing, dictation, and keyboard activities. *Prerequisite:* MUST 3112. Co-requisite: MUST 3113.

### 1112 Sight-Singing and Dictation (2-0)

(Common Course Number MUSI 1117)

Experience in aural recognition of tone relations through sight-singing, dictation, and keyboard activities. *Prerequisite:* MUST 3113 and MUST 1111. Co-requisite: MUST 3114.

### 3111 Fundamentals (3-0)

(Common Course Number MUSI 1311)

Functional experiences in the basic fundamentals of music with simple melodic, harmonic, and rhythmic activities; one through four-part singing and dictation. Open to all.

### 3112 Fundamentals (3-0)

(Common Course Number MUSI 1312)

Functional experiences in the basic fundamentals of music with simple melodic, harmonic, and rhythmic activities; one through four-part singing and dictation. Open to all.

### 3113 Music Theory and Essentials of Acoustics (3-0)

(Common Course Number MUSI 2311)

The combination, transmission, and effects of musical sounds, utilizing symbols. The logic of order in music as exemplified in acoustics, overtone series, scales, diatonic harmony, rhythm, melody writing, non-harmonic devices, and simple modulation. *Prerequisite:* MUST 3112. Co-requisites: MUST 1111.

### 3114 Music Theory and Essentials of Acoustics (3-0)

(Common Course Number MUSI 2312)

The combination, transmission, and effects of musical sounds, utilizing symbols. The logic of order in music as exemplified in acoustics, overtone series, scales, diatonic harmony, rhythm, melody writing, non-harmonic devices, and simple modulation. *Prerequisite:* MUST 3113 and 1111. Co-requisite: MUST 1112.

### 3115 Introduction to Electronic Music (3-2)

Creating sounds with digital synthesis. Computer controlled digital synthesizers. Tape recording of music. May be repeated once for credit.

### 1211 Sight Singing and Dictation (2-0)

(Common Course Number MUSI 2116)

Continuation of MUST 1112. *Prerequisites:* MUST 3114 and MUST 1112. Co-requisite: MUST 3213.

### 1212 Sight Singing and Dictation (2-0)

(Common Course Number MUSI 2118)

Continuation of MUST 1112. *Prerequisites:* MUST 3213 and MUST 1211. Co-requisite: MUST 3214.

**2219 Introduction to Composition (2-0)**

Traditional and contemporary styles of composition with an emphasis on small forms. May be repeated for credit. *Prerequisite:* Instructor's approval.

**3213 Harmony (3-0)**

Continuation of melodic and harmonic dictation and part writing; harmonic analysis and simple forms; seventh chords; altered chord, keyboard practice. *Prerequisites:* MUST 3114 and MUST 1112. Co-requisite: MUST 1211.

**3214 Harmony (3-0)**

Continuation of melodic and harmonic dictation and part writing; harmonic analysis and simple forms; seventh chords; altered chord, keyboard practice. *Prerequisites:* MUST 3213 and MUST 1211. Co-requisite: MUST 1212.

**3216 Introduction to Commercial Music (3-0)**

Topics may include any of the following: historical and theoretical aspects of structures used in the commercial music industry. Time formats, MIDI programming, combining live and synthetic elements. Introduction to Recording Techniques. May be repeated for credit. *Prerequisite:* Instructor's approval.

For Undergraduates and Graduates

**2315 Analytical Processes In Music (2-0)**

Detailed study of the logic of musical structure as exemplified in representative works of all historical periods. Introduction to graphic analysis. *Prerequisites:* MUST 3214 and MUST 1212.

**2316 Theory Seminar (2-0)**

An upper level course which exposes the student to a wide variety of traditional and contemporary analytical and compositional thought. Includes counterpoint, advanced analysis, orchestration, non-western music, choral arranging, etc. Intended for theory/composition majors, but may be taken by all upper level music students. May be repeated for credit three times. *Prerequisite:* MUST 2315.

**2318 Composing and Arranging Instruments and Voice (2-0)**

Techniques for writing idiomatically for various performing forces. *Prerequisites:* MUST 3214 and MUST 1212.

**3315 Advanced Electronic Music (3-2)**

Digital and analog synthesis of music. Computer control of MIDI systems. Sound sampling and manipulation. May be repeated for credit. *Prerequisite:* MUST 3115.

**3316 Commercial Music Composition (3-0)**

Study of commercial composition. Topics may include any of the following: scoring for small and large ensembles as well as for various electronic media. Study of modern musical styles and traditional hybrids. Analysis of commercial music from radio and television to film scores. May be repeated for credit. *Prerequisites:* MUST 3216 and instructor's approval.

**3317 Applied Audio Production (3-0)**

Advanced study of recording techniques and post-audio production. Topics may include advanced MIDI programming, live instruments, microphone techniques. Includes artistic and business theories and how they apply to production. May be repeated for credit. *Prerequisite:* MUST 3216.

**3319 Advanced Composition (3-0)**

Advanced study of composition with increasing emphasis on contemporary techniques and larger forms. May be repeated for credit. *Prerequisites:* MUST 2219 and admission to the theory/composition curriculum as a major or equivalent.

# Philosophy

113 Hudspeth Hall  
(915) 747-6617

PROGRAM DIRECTOR: Peter Robinson

PROFESSORS: Haddox, Hall

ASSOCIATE PROFESSORS: Robinson, Springer

ASSISTANT PROFESSOR: Best

**BA Degree**—The requirements for a Bachelor of Arts in Philosophy are 30 semester hours of philosophy courses, 24 hours of which are advanced (3300-3400). The following courses are required: Philosophy 3314, 3315, 3317, 3318, 3335, 3451, and 3452.

The requirements for a minor in Philosophy are 18 semester hours of Philosophy of which 12 are advanced (3300-3400). The following courses are required: Philosophy 3314, 3317, 3335, and either 3451 or 3452.

## Philosophy (PHIL)

### 3103 Introduction to Philosophy: Men, Movements and Ideas in Western Philosophy (3-0)

(Common Course Number PHIL 1301)

An examination of the thought of the principal men whose arguments have shaped Western tradition and institutions insofar as these have been characterized by a search for an understanding of reality, truth, goodness, justice, and beauty.

### 3104 Logic (3-0)

(Common Course Number PHIL 2303)

A survey of modern logic including traditional logic, informal fallacies, sentential logic, quantification theory, and inductive logic.

### 3206 Ethics: Critical Appraisal of Human Conduct and Motivation (3-0)

(Common Course Number PHIL 2306)

An examination of some positions on moral value taken by various philosophers and their application to contemporary moral issues.

### 3213 Chicanos and American Thought (3-0)

After an analysis of the intellectual heritage (Pre-Hispanic, Spanish, and Mexican) of the present-day Chicano, contemporary Chicano value orientations are compared and contrasted with such orientations in American society.

General *Prerequisite:* Junior standing for all 3300 and 3400 level courses.

### 3302 Reasoning About Ethical Values (3-0)

After a presentation of the principles of semantics and formal logic, and the rules of evidence and inquiry, critical analyses of selected articles on contemporary moral issues will be undertaken. This course is designed to improve a student's ability to think critically about the ethical dimensions of human conduct.

### 3308 Aesthetics: Philosophy of Art (3-0)

A philosophical examination of the nature of art, artistic creativity, art criticism, and aesthetic experience.

### 3311 Philosophy of Science (3-0)

An analysis of the concepts and methods of both the natural and social sciences with consideration of their historical development and philosophical significance.

### 3312 Latin American Thought (3-0)

After a survey of philosophical developments in Latin America during the colonial period, during the struggles for independence, and in the nineteenth century, the thought of major twentieth century intellectual leaders in Latin America is examined. These include professional philosophers but also certain literary and political figures who expressed significant and influential philosophical positions.

# Political Science

210 Benedict Hall  
(915) 747-5227/5337

CHAIRPERSON: Robert H. Webking

PROFESSORS EMERITI: Kenneth E. Beasley, Melvin P. Straus

PROFESSORS: Agor, Bath, Graves, Kruszewski, Neighbor, Segal, Staudt, Villarreal

ASSOCIATE PROFESSORS: Peterson, Price, Schmidt, Webking

ASSISTANT PROFESSORS: Clingermayer, Frederickson, Giacomazzi, Rocha, Weaver

INSTRUCTOR: Ketter

## Major in Political Science

In addition to POLS 3210-3211, the major requires 27 semester hours in Political Science, including POLS 3212, which should be taken in the sophomore year. At least one course must be taken in three of the following subfields: American Political Processes, Public Law, Comparative and International Politics, Political Theory and Thought, and Public Administration. Each major must also complete a minor of at least 18 hours. The minor may be from another liberal arts discipline, from approved inter-disciplinary minors, or from approved disciplines in other colleges, and should be selected in consultation with the departmental Undergraduate Advisor.

## Minors in Political Science

Three options are available to students majoring in other disciplines:

**Political Science** – 18 hours, including POLS 3212, one advanced course in each of three of the five subfields, and 6 additional hours in Political Science.

**Comparative and International Politics** – 18 hours, including POLS 3330, 3335 and 12 advanced hours from the subfield.

**Public Administration** – 18 hours, including POLS 3350, 3352, and 3454 and 3 courses from POLS 3311, 3351, 3353, 3420, 3455, and 3460.

## Russian and Post-Communist Studies

For students who wish to complete an education in Russian and Post-Communist studies that is more thorough and rigorous than a minor, the Department of Political Science offers a major in Political Science with a specialization in Russian and Post-Communist Studies. Students wishing to take advantage of this specialization should follow this plan:

1. Major in Political Science and include in the courses used to satisfy the requirements for the major, POLS 3330, 3332, 3335, 3430, 3431, 3432, and 3441.
2. Minor in Russian and Post-Communist Studies (as described elsewhere in this catalog), substituting other core courses for POLS 3431 and 3432.
3. Satisfy the language requirement with RUSS 3201 and 3202.

## Departmental Honors in Political Science

Outstanding students may complete an Honor's Thesis. For details, see the Chairperson.

## Teacher Certification

Students seeking secondary certification in Political Science must complete the BA requirements as described above. Certification requires 36 semester hours of courses in the major as described in the Liberal Arts section of this Catalog. Students using Political Science as a supporting field for another major will take 12 hours of advanced Political Science courses selected from the following: POLS 3311, 3312, 3410, 3411, 3412, 3414, or 3415. For further information on certification requirements, see the Catalog sections for the College of Liberal Arts and the College of Education.

For information on certification in the composite social studies area, see the Liberal Arts section of the Catalog.

### 3313 American Philosophers: Pierce, James and Dewey (3-0)

An investigation of the writings of three of America's most important philosophers, emphasizing their influence upon contemporary philosophical activity in America and Europe.

### 3314 Ancient Philosophy: The Origins of Western Thought (3-0)

Studies the origin and development of those ideas and problems which have come to characterize the philosophic tradition in the West as reflected in the thought of the Pre-Socratics, Socrates, Plato, Aristotle, and the Stoics.

### 3315 Medieval Philosophy: The Scholastic Synthesis (3-0)

Studies the philosophies of the medieval period of the Christian West. Philosophers to be examined include Augustine, Anselm, Aquinas, Duns Scotus, William of Ockham, and others.

### 3317 Modern Philosophy: The Age of Reason and Doubt (3-0)

Focuses on rationalism (Descartes, Leibniz, Spinoza) and empiricism (Locke, Berkeley, Hume) as well as on Kant's attempt to synthesize these two traditions.

### 3318 Nineteenth Century Philosophy (3-0)

Studies the reaction to Kant's attempted rejection of speculative philosophy in the thought of Fichte, Schelling, Hegel, Schopenhauer, and Marx. Also examines the critical assault on these systems by Kierkegaard and Nietzsche.

### 3322 Philosophy of Religion (3-0)

Drawing upon western and non-western religions in ancient and modern forms, the philosopher of religion examines such subjects as religious experience and expression, belief in, and the knowledge of God (or gods), and the functions of religious myths.

### 3325 Social Philosophy (3-0)

This course will consider such concepts as law, freedom, authority, justice, violence, revolution, etc., in their relevance to an understanding of extant forms of social existence.

### 3335 Twentieth Century Philosophy (3-0)

This course will consider the principal forms of contemporary philosophy, logical-positivism, linguistic analysis, existentialism, phenomenology, and speculative philosophy. (Any one or several of these traditions will be stressed depending on the instructor. Consult the philosophy bulletin board for current offering.) May be repeated when course content varies.

### 3340 Oriental Philosophy (3-0)

A survey of some aspects of oriental philosophy, traditions, and cultures concentrating on those of India and China.

### 3402 Metaphysics (3-0)

Often called ontology or speculative philosophy, metaphysics studies the attempts to develop coherent sets of principles by which to understand comprehensive notions such as being and change, appearance and reality, God, freedom, mind, and the universe.

### 3411 Epistemology: Belief, Perception and Truth (3-0)

Analysis of the leading philosophical positions regarding knowledge, its source, criteria, and limits.

### 3451 Great Philosophers (3-0)

The life and work of one or more of the most influential philosophers will be the focus of this course. May be repeated when the course content varies.

### 3452 Problems in Philosophy Seminar (3-0)

The problem of knowledge, the meaning of persons, technological society, the nature of sexuality, and the new religious sensibility have been recent topics. May be repeated when the course content varies.

### 3453 Independent Study (0-0-3)

Student research under supervision of the staff. *Prerequisite:* Instructor's approval.

See the *Graduate Studies Catalog* for graduate courses.

## Political Science (POLS)

### Courses for Undergraduates

POLS 3210-3211 fulfill the legislative requirements of the State of Texas for courses on the Constitutions of the United States and Texas and are prerequisites to upper division political science course offerings.

#### 3210 Introduction to Politics (3-0) (Common Course Number GOVT 2305)

An overview of the concepts, principles, and practices of politics as background for the study of American and Texas political institutions. The course may employ an international, comparative, or theoretical focus. *Prerequisite:* Sophomore standing.

#### 3211 American Government and Politics (3-0) (Common Course Number GOVT 2306)

A survey of contemporary American national, state, and local political processes and institutions, with emphasis upon the Constitutions of the United States and Texas. This course meets teacher certification requirements for out-of-state graduate students. *Prerequisite:* Sophomore standing.

#### 3212 The Study of Politics (3-0)

A review of the various techniques used in the study of politics. Students will examine political situations and prepare written reports on their findings. Grade of "C" or better required for majors and minors. *Prerequisite:* POLS 3210.

### For Undergraduates and Graduates

The following undergraduate courses have been approved for graduate credit. Enrollment in them for graduate credit must be in consultation with the graduate advisor:

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

*General Prerequisite:* Junior standing for all 3300 or 3400 level courses.

## AMERICAN POLITICAL PROCESSES

#### 3310 Political Socialization and Political Culture (3-0)

An analysis of the influence of cultural, psychological, and social patterns on the nature of political orientations and political systems. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3311 Urban Politics (3-0)

The American political process in its urban environment. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3312 The Party System (3-0)

An analysis of the nature and role of political parties and interest groups and their impacts on the political process. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3313 Public Opinion and Public Policy (3-0)

A study of the nature and formation of public opinion, its measurement, and the impact of public opinion on policy formation. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3314 Ethnicity and Race in American Politics (3-0)

A survey of the nature and role of ethnicity and race in the American political system. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3410 The Legislative Process (3-0)

The interaction of congress, the president, supreme court, and state government in the policy making process. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3411 The Presidency (3-0)

Examination of the office of the President in relation to the functions, roles, powers, and duties which have accrued to the office as it has developed in scope and authority from Washington to the present. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3412 Chicanos in American Politics (3-0)

Survey of the nature and role of the Chicano in the American political system. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3413 Southwestern Border Politics (3-0)

An analysis of U.S. political behavior in the environment of the Southwestern Border. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3414 Women, Power and Politics (3-0)

This course focuses on the distribution of power between women and men in society and the political implications of that distribution. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3415 Latinos in the American Political System (3-0)

The growing impact of the political participation of Latino peoples. *Prerequisites:* POLS 3210 and POLS 3211.

## PUBLIC LAW

#### 3320 Constitutional Law (3-0)

A study through the use of court cases of the allocation of governmental powers with emphasis on the national government, and an introduction to the judicial function and the American legal system. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3321 Civil Rights and Liberties (3-0)

A study of the limitations on governmental power in the United States, with primary emphasis on civil and political rights. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3322 Law and Society (3-0)

An examination of the legal-judicial arrangements in the Western world and particularly the United States, with emphasis on the interaction of legal systems with society. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3420 Administrative Law and Regulation (3-0)

The study of the law as it affects public officials and agencies in their relations with private citizens and the business community. Attention is given to appropriate case materials and regulatory practices. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3421 Philosophy of Law (3-0)

A study of the origin, nature, and development of law. The philosophical explanation of law as propounded by the various schools of jurisprudence. *Prerequisites:* POLS 3210 and POLS 3211.

## COMPARATIVE AND INTERNATIONAL POLITICS

#### 3330 International Politics (3-0)

The theory and practice of international politics with particular attention to the forces and processes contributing to conflict and cooperation among global political structures and institutions. *Prerequisites:* POLS 3210 and POLS 3211.

#### 3331 International Regimes (3-0)

The study of political structures at the global regional level such as the European Economic Community or interamerican system, among intergovernmental or nongovernmental actors, and also functional areas such as the arts, sports, energy, food, the seas, disarmament, or the environment. Course may be repeated under different topic and/or instructor. *Prerequisites:* POLS 3210 and POLS 3211.

**3332 Political Geography (3-0)**

The study of political phenomena and the impact of decision-making in their spacial context. *Prerequisites:* POLS 3210 and POLS 3211.

**3333 State and Society (3-0)**

The study of the state and distribution of power in different societies. Topics include classical theories of the relationship between the state and society, growth of the state sector in modern societies, functions of the state, and studies of distribution of the community, national, and international power. *Prerequisites:* POLS 3210 and POLS 3211.

**3335 Comparative Political Systems (3-0)**

An examination of theories and methods used in comparative political analysis with illustrative cases drawn from a variety of political cultures. *Prerequisites:* POLS 3210 and POLS 3211.

**3336 Third World Politics (3-0)**

The study of political cultures, interest groups, political parties, processes, and structure of Third World areas. Specific areas of subject matter to be studied may vary with instructor. *Prerequisites:* POLS 3210 and POLS 3211.

**3430 Foreign Policy of the United States (3-0)**

A study of the structures and processes of United States foreign policy decision-making. *Prerequisites:* POLS 3210 and POLS 3211.

**3431 Relations of Post-Communist States (3-0)**

Study of the objectives, methods, and results of international relations of Russia and selected post-communist states. *Prerequisites:* POLS 3210 and POLS 3211.

**3432 Russian and Post-Communist Politics (3-0)**

A survey of contemporary politics of the Russian Federation and selected post-communist countries stressing challenges in transition to democracy and the market economy. *Prerequisites:* POLS 3210 and POLS 3211.

**3433 European Politics (3-0)**

A comparative analysis of the political systems of selected European powers and emerging integration of Europe. *Prerequisites:* POLS 3210 and POLS 3211.

**3434 Regional Politics (3-0)**

The study of political institutions and processes in regions such as Africa, the Middle East, and the Pacific Rim. Course may be repeated under a different topic and/or instructor. *Prerequisites:* POLS 3210 and POLS 3211.

**3435 South American Politics (3-0)**

A survey of the political systems and institutional structures of the major countries in South America. Emphasis is placed on the sources of political cleavage and the problems of stability and instability within and among the nations of the region. *Prerequisites:* POLS 3210 and POLS 3211.

**3436 Caribbean and Central American Politics (3-0)**

A study of the nature and scope of the problems encountered in the political development of countries in Central America and the Caribbean. *Prerequisites:* POLS 3210 and POLS 3211.

**3437 The Politics of Mexico (3-0)**

A study of the political processes and institutions within Mexico. Attention will be given to the political culture of Mexico, the role of interest groups and political parties, the nature of federalism and separation powers, public policy and administration, and human rights. *Prerequisites:* POLS 3210 and POLS 3211.

**3438 Relations Between The United States and Mexico (3-0)**

A study of relations between the United States and Mexico. Attention will be devoted to critical issues such as trade, immigration, narcotics, and especially to issues in the U.S.-Mexico borderland. *Prerequisites:* POLS 3210 and POLS 3211.

**POLITICAL THEORY AND THOUGHT****3340 Western Political Heritage I (3-0)**

A study of the ideas of the major political philosophers from the ancient and medieval periods. *Prerequisites:* POLS 3210 and POLS 3211.

**3341 Western Political Heritage II (3-0)**

A study of the ideas of the major political philosophers from the Renaissance through the nineteenth century. *Prerequisites:* POLS 3210 and POLS 3211.

**3342 American Political Thought (3-0)**

A study of American political thought from the colonial period to the present. *Prerequisites:* POLS 3210 and POLS 3211.

**3440 The American Constitution (3-0)**

An analysis of America's founding document and its evolution over time. *Prerequisites:* POLS 3210 and POLS 3211.

**3441 Democracy (3-0)**

The development of democratic theory and its relation to contemporary political problems and challenges. Particular attention will be given to the conditions and requisites for democracy as a worldwide phenomena. *Prerequisites:* POLS 3210 and POLS 3211.

**3442 Contemporary Political Thought (3-0)**

The ideas of contemporary political thinkers concerning the issues of democracy, dictatorships, and the relations between economic systems and political systems. Emphasis also will be placed upon the process of political theorizing today. *Prerequisites:* POLS 3210 and POLS 3211.

**PUBLIC ADMINISTRATION****3350 Introduction to Public Administration (3-0)**

A study of management processes involved in the accomplishing of government; analysis of the structure and procedures of the administrative or executive branch of government, with particular reference to national, state, and local governments in the United States. *Prerequisites:* POLS 3210 and POLS 3211.

**3351 Public Policy Analysis (3-0)**

Issues and techniques in the analysis of public agenda- building, decision-making, implementation, and evaluation. Course may be comparative in content and may be repeated under different topic and/or instructor. *Prerequisites:* POLS 3210 and POLS 3211.

**3352 Urban Administration (3-0)**

The organization and administration of urban government in the United States. *Prerequisites:* POLS 3210 and POLS 3211.

**3353 State Administration (3-0)**

The administration of state government in the United States with emphasis on administration in the state of Texas. *Prerequisites:* POLS 3210 and POLS 3211.

**3454 Administrative Theory (3-0)**

Emphasis is placed on administrative decision-making, leadership, supervision, communications, and control in public and private organizations. *Prerequisites:* POLS 3210 and POLS 3211.

**3455 Development Management (3-0)**

A course on the management of development programs and projects in low-income countries of Africa, Asia, and/or Latin America. *Prerequisites:* POLS 3210 and POLS 3211.

**3460 Internship in Public Administration (0-0-3)**

This course is open to seniors and graduate students with the approval of the Chairperson of the Department or Director of the MPA Program. It is a work-study program in which the student is assigned two days (or 16-20 hours) each week to a governmental agency. Normally open to students interested in professional preparation in Public Administration. *Prerequisites:* POLS 3210 and POLS 3211.

## GENERAL

### 3470 Readings in Political Science (0-0-3)

Special course to be taken only with prior approval of the instructor and the departmental chair. May be taught as a regular class for experimental courses. *Prerequisites:* POLS 3210 and POLS 3211.

### 3480 Undergraduate Research in Political Science (3-0)

A research and writing experience for undergraduates in Political Science. Prior approval of the instructor and departmental chair is required before enrollment. *Prerequisites:* POLS 3210 and POLS 3211.

### 3490 Advanced Research Techniques (3-0)

A study of advanced data generation and statistical analysis techniques. Students will use these techniques in individual or group research projects. This course is recommended for majors intending to go to graduate school and for those interested in the latest analytical techniques used in public and private organizations. *Prerequisites:* POLS 3211 and POLS 3212.

See the *Graduate Studies Catalog* for graduate programs and courses.

# Psychology

112 Psychology Building  
(915) 747-5551

CHAIRPERSON: Randolph H. Whitworth

PROFESSORS EMERITI: Edmund B. Coleman, Philip Himelstein

PROFESSORS: Devine, Goggin, Hosch, Malpass, Moss, Whitworth

ASSOCIATE PROFESSORS: Barrientos, Cohn, Ellis, Lucker

ASSISTANT PROFESSORS: Ahadi, Crites, Schneider, Shaw, Tomaka, Wood, Zárate

The Psychology Department offers two programs leading to the Bachelor's Degree.

**BS Degree** - The BS degree is recommended for students who intend to pursue graduate work in psychology. The reason for this is that the BS requires more extensive mastery of mathematics and laboratory science than does the BA. Training in science and mathematics is advantageous for students who elect to continue in psychology beyond the baccalaureate. Required courses are:

Major- 30 hours (15 advanced) including 3101, 3103, 2301-1301, 3320, 3330, 3417, and at least one of the following: 3348, 3409, or 3424.

Minor- 18 hours (6 advanced) selected from Biological Sciences, Chemistry, Mathematics, or Physics.

Foreign language, while not required, is strongly recommended.

For additional requirements, see Bachelor of Science degree plan in the College of Science section.

**BA Degree** - Specific requirements are:

Major- 30 hours (15 advanced) including 3101, 3103, 2301-1301, and 3320 or 3330.

Minor- 18 hours (9 advanced) Minors may be chosen from any of the areas listed under the Bachelor of Arts degree plan.

**Minor in Psychology** - 18 hours (12 advanced) including 3101, 3103, 2301-1301, and 3320 or 3330.

For additional requirements, see Bachelor of Arts degree plan.

### Departmental Honors in Psychology

A candidate for departmental honors in psychology will have demonstrated ability in psychology, will have maintained grade point averages of 3.0 overall and in psychology by the end of the junior year, and will maintain these averages until graduation. The candi-

date may be enrolled in either the BS or BA degree plan in psychology. The main requirement for Departmental Honors will be the satisfactory completion of the honors thesis that will be judged by the thesis-research director in conjunction with the Honors Committee.

The candidate for departmental honors must request approval of candidacy during the second semester of the junior year. The Department of Psychology reserves the right to accept or not accept a qualified student, taking into consideration the number of applications, the number of available faculty, and the competence of an individual student. The accepted honors candidate will enroll in PSYC 3452 during both semesters of the senior year and will have accumulated a total of 6 hours of 3452 credit on completion of the honors program. Other regulations, procedures, and dates of use by honors candidates are available from the Chairperson, Department of Psychology.

### Teacher Certification

Students seeking secondary certification in Psychology must complete the BA requirements as described above. Courses must include PSYC 3210, 3212, 3306, 3347, and one of the following: 3205, 3206, or 3208. Certification requires 36 semester hours of courses in the major as described in the Liberal Arts section of this Catalog. Students using Psychology as a supporting field for another major will take 12 hours of courses including 3101, 3103, 3210, and one upper-division course. For further information on certification requirements, see the Catalog sections for the College of Liberal Arts and the College of Education.

## Psychology (PSYC)

For Undergraduate Credit Only

*General Prerequisites:* PSYC 3101 is prerequisite for all psychology courses, with the exceptions of PSYC 3103 and PSYC 3205. Junior standing for all 3300 and 3400 level courses.

### 3101 Introduction to Psychology (3-0) (Common Course Number PSYC 2301)

A survey of basic principles in general psychology.

### 3103 Statistical Methods (3-0) (Common Course Number PSYC 2317)

A study of the basic concepts of descriptive and inferential statistics as applied to research in the behavioral sciences. Topics may include descriptive statistics, experimental design, correlation, analysis of variance, and non-parametric tests. Required of all psychology majors and minors. *Prerequisite:* MATH 3120 or MATH 4109.

### 3202 Social Psychology (3-0) (Common Course Number PSYC 2319)

The study of the individual in the social context. Consideration of topics such as social cognition, person perception, nonverbal communication, social influence, attitudes, prosocial behavior, aggression, and applied social psychology. *Prerequisite:* PSYC 3101.

### 3205 Psychology of Human Sexuality (3-0) (Common Course Number PSYC 2306)

A study of human sexuality on a broad range of levels. Topics will include the biological and hormonal factors that affect sexual behavior, developmental aspects, sexual differentiation, various types of sexual behavior, sexual dysfunction, cultural differences, and a comparison of sex-related differences in abilities. No prerequisite.

### 3206 Psychology of Personality (3-0) (Common Course Number PSYC 2316)

A study of the normal personality. Includes such topics as biological and social determinants of personality; appraisal of personality; and reactions to anxiety, frustration, and conflict. *Prerequisite:* PSYC 3101.

**3208 Computer Applications in Psychology (3-0)**

A study of the applications of computers in the field of psychology. Topics include the use of computers in psychological testing, perceptual and cognitive factors affecting human performance with computers, and design of effective interactions between people and computers. *Prerequisite:* PSYC 3101 and CS 4120 or equivalent.

**3210 Life Cycle Development (3-0)**  
**(Common Course Number PSYC 2312)**

The study of the psychological development and adjustment of the individual through the life span. *Prerequisite:* PSYC 3101.

**3212 Introduction to Abnormal Psychology (3-0)**

A review of historical approaches to the problems of abnormal behavior. Topics will include the dynamics of abnormal behavior, its classification, symptomatology, and treatment. *Prerequisite:* PSYC 3101.

**3220 Industrial Psychology (3-0)**

An introduction to the principles, techniques, and theories of psychology applied to the industrial setting. *Prerequisite:* PSYC 3101.

**1301 General Experimental Psychology Laboratory (0-2)**

Laboratory experience in experimental psychology. Co-requisite: PSYC 2301. Laboratory fee required.

**2301 General Experimental Psychology (2-0)**

Introduction to the planning and execution of experiments in psychology and to the analysis and interpretation of data. Co-requisite: PSYC 1301. *Prerequisite:* PSYC 3101 and PSYC 3103.

**3302 Theories of Personality (3-0)**

A study of major systematic positions (i.e., Freud, Lewin, Cattell, etc.). Major emphasis is on the various theoretical interpretations of human dynamics. *Prerequisite:* PSYC 3101.

**3306 Abnormal Child Psychology (3-0)**

The study of children whose development deviates significantly in the mental, emotional, or social areas of functioning. Factors contributing to these deviant patterns of development will be discussed as well as current theoretical explanations of these problems. *Prerequisite:* PSYC 3101.

**3315 Psychology and the Law (3-0)**

A review of the relationship of psychology to the criminal justice system. Topics may include an examination of the premises of criminal responsibility, psychological testimony in court, and psychological evaluation and management of public offenders, including juveniles and prison populations. *Prerequisite:* PSYC 3101.

**3320 Learning and Memory (3-0)**

An introduction to the basic concepts of learning and memory, with a review of both human and animal experimentation. *Prerequisite:* PSYC 2301 and PSYC 1301.

**3330 Sensation and Perception (3-0)**

Study of the major experimental findings and contemporary theory in sensation and perception. Emphasis on audition and vision. *Prerequisites:* PSYC 2301 and PSYC 1301.

**3347 Behavior Modification (3-0)**

A review of the application of experimental principles of learning for behavior change. Topics include: applications of classical, operant, and cognitive learning in clinical, educational, family, and socio-cultural settings. *Prerequisite:* PSYC 3101.

**3348 Psychology of Thinking (3-0)**

An analysis of thought that will include principles and research approaches to information processing, concept formation, decision processes (judgment), and creative accomplishment. *Prerequisite:* PSYC 2301 and PSYC 1301.

**3350 Health Psychology (3-0)**

Introduces students to the concepts, theory, and research that comprise health psychology. Emphasis is placed on understanding the relations among psychological and behavioral factors, and psychological well-being, wellness, and disease. *Prerequisite:* PSYC 2301 and PSYC 1301.

For Undergraduates and Graduates

*General Prerequisite:* Six advanced hours in psychology.

**3401 Psychological Testing (3-0)**

Introduction to and training in the administration, scoring, and interpretation of psychological tests. *Prerequisite:* PSYC 3101 and PSYC 3103, PSYC 3417 recommended.

**3409 History and Systems of Psychology (3-0)**

A review of the main systems and schools of psychology since 1879. The main assumptions of structuralism, functionalism, psychoanalysis, behaviorism, gestalt psychology, physiological psychology, cognitive psychology, information theory, and current trends are comparatively examined. *Prerequisite:* PSYC 3101.

**3410 Clinical Psychology (3-0)**

A study of clinical problems, case study methods and discussion of psychological tests used in common clinical situations. *Prerequisite:* PSYC 3101.

**3412 Advanced Abnormal Psychology (3-0)**

A study of the psychological factors contributing to pathological behavior. Emphasis will be placed on current research in genetics, biochemistry, and learning theory in the area of schizophrenia and neurotic processes. *Prerequisite:* PSYC 3212.

**3417 Advanced Statistics (3-0)**

Further study of experimental design, analysis of variance, covariance, correlation, orthogonal polynomials, complex experimental designs, and non-parametric statistics. *Prerequisite:* PSYC 3101 and PSYC 3103; MATH 4110-4111 and some knowledge of computer software recommended.

**3424 Psychobiology (3-0)**

A study of the physiological and biochemical basis of psychopathology in humans and models of psychopathology studied in animals. Background in chemistry and physiology recommended. *Prerequisite:* PSYC 3101 and Senior standing.

**3440 Advanced Industrial/Organizational Psychology (3-0)**

A study of the current theories of individual behavior in complex organizations. Topics include the major areas of industrial psychology such as selection, placement, training procedures, and human factors research. *Prerequisite:* PSYC 3220.

**3441 Motivation and Emotion (3-0)**

Defines motivational states in terms of physiological patterns, brain function, and psychological models from learning and personality theories. Evaluates the usefulness of these states as explanations of human behavior. *Prerequisite:* PSYC 3101.

**3452 Independent Research (0-0-3)**

Independent student library or laboratory research under the supervision of a faculty member. Regular meetings and reports are required. May be repeated once when topics vary. *Prerequisite:* Permission of instructor of student's choice. Psychology Research Course fee required.

**3454 Seminar in Psychology (3-0)**

Topic to be selected. May be repeated when topic varies. *Prerequisite:* Instructor's approval.

See the *Graduate Studies Catalog* for graduate programs and courses.

# Religious Studies

COORDINATOR: Bruce Lawson

## Minor In Religious Studies

The Religious Studies Program is designed to provide an interdisciplinary framework within which students can take courses to explore the nature of religion and its impact upon human culture, past and present. Courses are academic in nature and non-sectarian.

Students must complete 18 hours of courses approved by the Coordinator of Religious Studies, of which at least 12 must be at the upper-division level. Of the 18 hours, students must take 9 hours of core courses, selecting one course from each of the following categories:

1. Introduction to Religious Studies: RS 3101 (Introduction to Religious Studies).
2. World Religions: HIST 3331 (History of Religion in the East); HIST 3359 (History of Religion in the West); RS 3310 (Major World Religions).
3. Nature of Religious Experience: PHIL 3322 (Philosophy of Religion).

The remaining 9 hours of courses needed for the concentration may be selected from among core courses not taken to satisfy the core requirement, non-core courses (listed below) or other courses approved by the program's advisor. No more than six hours from a student's Major may be counted toward the Minor, and courses so counting may not be used to satisfy Major requirements.

### Non-Core Courses:

- ARTH 3105 — Art History of the Western World I
- GREK 4105 — Koine Greek
- GREK 4106 — Koine Greek
- HIST 3340 — The Middle East and Islam
- HIST 3365 — The Age of Reformation
- PHIL 3315 — Medieval Philosophy
- PHIL 3340 — Oriental Philosophy
- RS 3350 — Special Topics in Religious Studies

## Religious Studies (RS)

### 3101 Introduction to Religious Studies (3-0)

An introduction to religious concepts, sociology, phenomena, and ideas; survey of world religions; exploration of the relationship between ethics and religion.

### 3310 Major World Religions (3-0)

Brief examination of the world's major religions, followed by an in-depth study of one religion, such as Buddhism, Christianity, Hinduism, Islam, or Judaism. Course may be repeated for credit when main focus of the course varies.

### 3350 Special Topics In Religious Studies (3-0)

An advanced course in some aspect of Religious Studies. May be repeated for credit when topic varies.

# Social Work

202 Jack Vowell Hall  
(915) 747-5095

PROGRAM DIRECTOR: Ismael Dieppa

PROFESSOR: Dieppa

ASSOCIATE PROFESSOR: Rael

ASSISTANT PROFESSORS: Coggins, Gilbert-Martinez, Hatchett, Martinez, Ryan

The primary goal of the Social Work Program is to educate culturally competent professional social work generalists capable of providing services to the unique multi-cultural, bi-national population of the border region served by the University. The Program envisions the preparation of generalist practitioners who are able to understand, define, and act upon the complex and oppressive barriers which inhibit the social functioning of individuals, families, groups, and communities and which prevent them from improving their quality of life. Ultimately, the Program's mission is to be a causative force in fostering constructive community and regional change that will promote and enhance the optimal functioning of individuals, families, groups, organizations, and communities. The Social Work Program is accredited by the Council on Social Work Education.

## Bachelor of Social Work

Persons wishing to complete a BSW degree will be designated as Pre-Social Work majors. Every Pre-Social Work major must meet with the advisement coordinator of the Social Work Program after completion of the freshman year (30 credit units). Failure to do so will result in an automatic withdrawal of the Pre-Social Work designation. Pre-Social Work majors must complete 60 semester hours of course work, including SOWK 3210, 3220, and 3231. A grade of "C" or better must be earned in each Social Work course, and an overall 2.5 or better grade point average is required in the major. Formal application for the major is made to the Social Work Program. Applications are available at the program's office.

The general course requirements for the BSW include ENGL 3111, 3112, and 3359; HIST 3101 and 3102; POLS 3210 and 3211; Language 3201 and 3202, or 3203 and 3204 (Spanish highly recommended); Humanities: PHIL 3317 or 3451; MATH 3120 and SOCI 3212; BIOL 3103, 1103 and 3104, 1104; PSYC 3101; SOCI 3101; one three credit course in Fine Arts; SOWK 3326; ITS 3350; ECON 3203.

The major course requirements are SOWK 3210, 3220, 3231, 3270, 3341, 3320, 3355, 3358, 3330, 3470, 4480, 1481, 4490, and 2482. In addition, two social work electives must be chosen in consultation with the academic advisor.

Each Social Work major must have a minor. Recommended professional minors include Chicano Studies and Women's Studies.

### ADMISSION CRITERIA FOR THE BSW PROGRAM:

- 1) Two letters of professional reference from qualified individuals who can attest to the applicant's potential for the profession.
- 2) Completion of application form for admission into the major.
- 3) Submission of an autobiographical or personal interest statement with emphasis on vocational choice of social work.
- 4) Completion of the Pre-major social work courses (SOWK 3210, 3220, 3231, and 3341) with a cumulative GPA or 2.5 or better and a minimum of "C" in each course.

### ADMISSION TO FIELD INSTRUCTION AND GRADUATION CRITERIA:

- 1) 2.5 GPA in major for admission to Field Instruction (SOWK 4480 and 4490).
- 2) A 2.5 GPA in the major, and a minimum of "C" in each course.
- 3) A GPA of 2.5 in the generalist practice courses (SOWK 3355, 3358, and 3470), and in the Field Instruction courses and Field Seminars (SOWK 4480, 4490, 1481, and 2482). In addition, a minimum of "C" in each course.

Violation of the NASW Code of Ethics and/or lack of practice competence may result in a failing grade in the Field Instruction courses (SOWK 4480 and 4490) and dismissal from the program.

A failing grade in the Field Instruction course(s) (SOWK 4480 and 4490) may also result in termination or dismissal from the program.

## Social Work (SOWK)

### 3210 Introduction to Social Work and Social Welfare (3-0)

Introduction to the human service delivery system in the United States, with an emphasis on the social work profession: its mission, philosophy, ethics, values, diverse fields, and ethnocultural perspectives. Observations of social service agencies and guest speakers provide a career orientation to the social work profession.



**3320 Social Welfare Policy and Services I (3-0)**

Examination of the historical evolution of Social Welfare and the social work profession, with focus on the social policies which comprise the foundation of the welfare state in the United States. Present patterns of social welfare services will also be examined. Emphasis is on the historical evolution of contemporary social problems in the El Paso/Juarez, urban/rural border region. Oppression, discrimination, justice/immigration issues and policies, and their impact on diverse populations at risk will be explored. Required for Pre-social work majors. *Prerequisites:* SOWK 3210, SOCI 3101, and PSYC 3101.

**3331 Human Behavior and Social Environment I (3-0)**

Designed to introduce beginning social work students to some mainstream theoretical explanations by which to view individuals, groups, and families. Students will be given an opportunity to compare traditional mainstream models with newer alternative paradigms that focus on human growth and development from a strengths perspective. Special emphasis is placed on issues of cultural, racial, ethnic diversity, racism, sexism, ageism, and disabling mental or physical conditions. *Prerequisites:* SOWK 3210 and SOWK 3220.

**3370 Computers and Social Services: Application to Practice and Evaluation (3-0)**

Introduction to the application of computers and information systems to social services, social work practice, and evaluation. Provides "hands-on" experience and application of the CASS (Computer Assisted Social Services) and other software. *Prerequisite:* SOWK 3210.

**3320 Social Welfare Policy and Services II (3-0)**

An analysis of current major issues and problems in the formulation of social welfare policies on the local, state, and federal levels in the U.S. Social Security, health, education, public welfare and income maintenance, immigration, and international agreements will be highlighted. The impact of various policies upon Hispanics and other at risk populations in the El Paso/Juarez, urban/rural border region. Application of strategies of change will be emphasized. FOR SOCIAL WORK MAJORS ONLY. *Prerequisites:* SOWK 3210, SOWK 3220, and SOWK 3231; ECON 3203; POLS 3210 and POLS 3211.

**3326 Social Work in Mexican-American Communities (3-0)**

Emphasis is placed on special needs of the Spanish-speaking population in the El Paso/Juarez, urban/rural border region. This course will focus on the following areas: language and culture as barriers or facilitators to service delivery; cultural competence needed in the delivery of services; international considerations for service delivery; cultural pluralism considerations for service delivery; community organization with groups in Spanish-speaking communities. *Prerequisite:* Departmental approval.

**3330 Research Methods in Social Work (3-0)**

An understanding and appreciation of a scientific, analytic approach to building knowledge for practice and for evaluating service delivery in all areas of intervention including student's own practice. Ethical standards, critical thinking, and writing skills will be emphasized. Various methods for analyzing, evaluating, and utilizing research findings will be presented. Theoretical constructs for conducting culturally sensitive, quantitative/qualitative research in the El Paso/Juarez, urban/rural border region will be examined. FOR SOCIAL WORK MAJORS ONLY. *Prerequisites:* SOWK 3210, SOWK 3220, SOWK 3320, SOWK 3341, SOWK 3270, and SOCI 3212.

**3336 Child Welfare Practice and Services (3-0)**

Overview of practice and policy issues, problems, and opportunities in the provision of child welfare services in the El Paso/Juarez, urban/rural border region. Emphasis will be given to: collaborative international efforts, culturally sensitive intervention approaches, case management, family preservation, and other intervention strategies. *Prerequisite:* Departmental approval.

**3341 Human Behavior and Social Environment II (3-0)**

Designed to introduce beginning social work students to various theoretical models by which to view how groups, communities, and organizations interface and interact with the social environment. Students will also examine various theoretical models of poverty, particularly as these influence social welfare policies and/or affect the delivery of social services to impoverished populations. FOR SOCIAL WORK MAJORS ONLY. *Prerequisites:* SOWK 3210 and SOWK 3320.

**3345 Social Work and the Aging: Cross Cultural Perspective (3-0)**

An examination of the needs and concerns of the aging person in our society from a social/cultural/physiological/emotional perspective and of methods used to address those needs and concerns. Emphasis will be on advocacy, case management, networking, and direct care methods, and their application to Hispanics and other diverse populations in the El Paso/Juarez, urban/rural border region. *Prerequisite:* Departmental approval.

**3346 The Process of Addiction: A Cross-Cultural Perspective (3-0)**

An examination of the cross-cultural implications of the process of addiction in the El Paso/Juarez, urban/rural border region. Focus is on the comparative patterns of addictions by gender, age, family, and ethnocultural culturally competent intervention modalities will be explored. *Prerequisite:* Departmental approval.

**3355 Generalist Social Work Practice I (3-0)**

This is the first of three generalist practice courses designed to provide entry level theory, knowledge, research, values, and skills for social work practice with individuals. Self-awareness, problem solving, interviewing, professional relationships, intervention planning and skills, and ethics are included. An ethnocultural perspective with particular focus on the El Paso/Juarez, urban/rural border region is emphasized. FOR SOCIAL WORK MAJORS ONLY. *Prerequisites:* SOWK 3210, SOWK 3220, SOWK 3231, AND SOWK 3341.

**3358 Generalist Social Work Practice II (3-0)**

This is the second of three generalist practice courses designed to provide entry-level theory, knowledge, research, values, and skills for social work practice with groups and families. This course continues to build on the problem-solving model, intervention methods, and planning introduced in Social Work 3355. An ethnocultural perspective with particular focus on the El Paso/Juarez, urban/rural border region is emphasized. Sixty hours of volunteer service are required. FOR SOCIAL WORK MAJORS ONLY. *Prerequisite:* SOWK 3210, SOWK 3220, SOWK 3231, SOWK 3341, and SOWK 3355. Co-requisites: SOWK 3330.

**3360 Community Organization (3-0)**

A general survey of the history, current theories and review of methods and techniques used in community organizations in relation to the delivery of human services. Emphasis on urban/rural areas. *Prerequisite:* Departmental approval.

**3365 Social Work with Groups (3-0)**

Emphasis is placed on theories, concepts, and techniques of social group work in a wide range of social work settings. This course also covers content on the importance of age, gender, ethnicity, socio-economic status, and disabilities in the small group process. *Prerequisites:* Junior level standing, SOWK 3345, and departmental approval.

**3366 Comparative Social Policy and Services: U.S./Mexico (3-0)**

A critical analysis of social policies and services in the United States and Mexico from a comparative perspective including social security, health, mental health, and child welfare. Emphasis is on the areas of possible collaboration between public agencies in the U.S. and Mexico. Field visits to agencies in Juarez will be made to familiarize students with policies and programs. *Prerequisite:* Departmental approval and SOWK 3220.

**3370 Special Issues in Social Work (3-0)**

Professional concerns and issues of social work will be selected by the instructor dependent on student needs. *Prerequisite:* Instructor's approval. Course fee required.

**3375 Independent Study (0-0-3)**

Supervised individual reading and research leading to development of a major paper or report. *Prerequisite:* 9 hours of advanced course work in Social Work and departmental approval.

**3385 General Social Work Practice in the Colonias and Rural Areas (3-0)**

Policy and practice issues/problems in "Colonias" and rural areas along the border. A bi-national border service area will be examined, with an emphasis on social services, health care, education, housing, and environmental needs. Generalist practice skills and strategies for community development and change in "Colonias" and rural settings will be emphasized. *Prerequisite:* Departmental approval.

**1481 Introductory Generalist Field Instruction Seminar (1-0)**

A capstone seminar that enables students to integrate the theory, knowledge, values, skills, ethics, and ethnocultural competence of generalist social work practice. *Co-requisites:* SOWK 3470 and SOWK 4480.

**2482 Advanced Generalist Field Seminar (2-0)**

A capstone seminar that enables students to integrate the theory, knowledge, values, skills, ethics, and ethnocultural competence of generalist social work practice. Emphasis will include an evaluation of one's own practice. FOR SOCIAL WORK MAJORS ONLY. *Prerequisite:* Formal admission to field placement. *Co-requisite:* SOWK 4490.

**3470 Generalist Social Work Practice III (3-0)**

This is the third of three generalist practice courses designed to provide entry-level theory, knowledge, research, values, and skills for social work practice with organizations and communities. This course continues to build on the problem-solving model, intervention methods, and planning introduced in SOWK 3355 and SOWK 3358 with an emphasis on community development skills and strategies of change. An ethnocultural perspective with particular focus on the El Paso/Juarez, urban/rural border region is emphasized. FOR SOCIAL WORK MAJORS ONLY. *Prerequisites:* SOWK 3210, SOWK 3320, SOWK 3231, SOWK 3341, SOWK 3355, and SOWK 3358. *Co-requisites:* SOWK 4480 AND SOWK 1481.

**4480 Field Instruction I (0-0-4)**

First of two field courses in a supervised, laboratory learning experience in a selected social welfare agency. A weekly seminar (SOWK 1481) accompanies this course which enables the student to integrate and apply classroom learning (theory and practice) in a field setting. An ethnocultural practice perspective is emphasized (240 hours minimum). FOR SOCIAL WORK MAJORS ONLY. *Prerequisite:* Formal admission to field placement. *Co-requisites:* SOWK 3470 AND SOWK 1481. Course fee required.

**4490 Field Instruction II (0-0-4)**

The second course of the field learning experience in a selected social welfare agency accompanied by a seminar (SOWK 1482) to optimally integrate and apply generalist social work practice. An ethnocultural practice perspective is emphasized (240 hours minimum). FOR SOCIAL WORK MAJORS ONLY. *Prerequisite:* Formal admission to field placement. *Co-requisite:* SOWK 2482.

# Sociology and Anthropology

109 Old Main  
(915) 747-5740

CHAIRPERSON: Howard C. Daudistel

PROFESSOR EMERITUS: Julius Rivera

PROFESSOR: Daudistel, Sanders, Stoddard

ASSOCIATE PROFESSORS EMERITI: David Bruener Eyde, Paul Wershub Goodman

ASSOCIATE PROFESSOR: Howard

ASSISTANT PROFESSORS: Campbell, Carmichael, Cummings, Gunn, Peterson, Rodriguez, Smithey, Vila, Watley-Beal

INSTRUCTOR: Bergdahl

**Major in Sociology**

Specific requirements are 30 semester hours in Sociology, of which 24 must be at the advanced (3300-3400) level, including SOCI 3101, 3311, and 3401. Sociology majors are encouraged to satisfy the BA degree mathematics/statistics requirement by taking SOCI 3212, PSYC 3103, or STAT 3180.

**Major in Anthropology**

Specific requirements are 30 semester hours in Anthropology, of which at least 18 must be at the advanced (3300-3400) level. ANTH 3101, 3102 and 3480 are required. In addition, at least one course must be taken from each of three groups: cultural anthropology (3306, 3308, 3316, 3319, 3320, 3321, 3358, 3361), archaeology (3100, 3310, 3312, 3313, 3347, 3359, 3360) and general anthropology (3220, 3303, 3304, 3309, 3314, 3315, 3380, 3465). Students are encouraged to gain fieldwork experience; ANTH 3347 and/or 3358 are strongly recommended. Two semesters of field courses may be counted toward the major, provided the research topics differ.

**Minor in Sociology**

18 semester hours of Sociology, of which 9 must be advanced level, including SOCI 3101, 3311, and 3401, are required.

**Minor in Anthropology**

18 semester hours in Anthropology, including at least 9 at the advanced level. ANTH 3101, 3102, and 3480 are required.

**Teacher Certification**

Students seeking secondary certification in Sociology must complete the BA requirements as described above. Certification requires 36 semester hours of courses in the major as described in the Liberal Arts section of this Catalog. Courses must include SOCI 3101, 3311, and 3401. Students using Sociology as a supporting field for another major will take SOCI 3101, 3311, 3401, and one upper-division course. For further information on certification requirements, see the Catalog sections for the College of Liberal Arts and the College of Education.

**Sociology (SOCI)**

For Undergraduates Only

Unless otherwise noted, SOCI 3101 is a prerequisite for all other courses in Sociology. Exceptions to this must secure permission from the Department Chairperson or Undergraduate Advisor or instructor.

**3101 Introduction to Sociology (3-0)**

(Common Course Number SOCI 1301)

Nature and scope of sociology, its terminology and concepts; study of social processes, social institutions, development of society, and characteristics of group life.

**3102 Social Problems (3-0)**

(Common Course Number SOCI 1306)

A study of selected social problems in our society, including causes, interrelationships, and programs of amelioration. *Prerequisite:* None; however, Sociology 3101 is recommended.

**3122 Measurement and Inference in Social Research (3-0)**

Sociological factors and their measurement, development and use of scales, assumptions underlying the use of statistical models in analysis of social data, application and limitations of statistical analysis. *Prerequisite:* MATH 3120 or MATH 4109.

**3125 The Sociology of Marriage and the Family (3-0)**

(Common Course Number SOCI 2301)

The historical development, current problems, and prospects of the American marriage and family institutions. *Prerequisite:* None; SOCI 3101 is recommended.

**3258 Chicanos in the Southwest (3-0)**

Introductory course to major themes in Mexican American studies: cultural pluralism, bilingualism, biculturalism, ethnicity and race, assimilation, cultural nationalism, and folk culture. *Prerequisite:* None in Sociology.

**3259 Chicanos and American Society (3-0)**

Analysis of Chicano experiences in selected institutions such as schools, churches, governmental structures, military, and mass media. *Prerequisite:* None in Sociology.

For Undergraduates and Graduates

**3306 Cultural Diversity (3-0)**

A cross-cultural comparison of human behavior addressing the areas of family life, marriage, kinship, and ritual. The course will also deal with the potential for misunderstandings that arise in the context of cross-cultural interactions. *Prerequisite:* SOCI 3101 or ANTH 3101. (Same as ANTH 3306.)

**3311 Methods of Research (3-0)**

Basic procedure and methodology of sociology as applied by the profession to various areas of social investigation. *Prerequisite:* SOCI 3101.

**3319 Indigenous Cultures of Latin America (3-0)**

A survey of the Native American cultures of Latin America, focusing on patterns of similarity among groups, and the distribution of different adaptations relative to environmental diversity. *Prerequisite:* SOCI 3101 or ANTH 3101. *Recommended Background:* ANTH 3102. (Same as ANTH 3319.)

**3327 Majority/Minority Relations in the United States (3-0)**

A study of the racial and ethnic group relationships in the U.S. concentrating on the dynamics and consequences of prejudice, discrimination, and related factors. *Prerequisite:* SOCI 3101.

**3333 Juvenile Delinquency (3-0)**

An investigation of the social and legal definitions of juvenile delinquency; major theories of juvenile deviancy, the social system of the gangs; factors contributing to apprehension, conviction, detention, and parole; assessment of present and potential prevention programs. *Prerequisite:* SOCI 3101.

**3341 Special Undergraduate Topics (3-0)**

Special topics of current interest in Sociology. May be repeated for credit when topic varies. Topics may include, for example:

—La Chicana

The role of the Chicana in the family and the community as well as Chicanos' participation in the labor force and liberation movements.

—Women in Society

Women in social institutions such as the family, education, economy, and politics in American society as well as their images in popular culture.

*Prerequisite:* SOCI 3101.

**3342 Sociology of Deviance (3-0)**

A study of deviations from social norms which encounter disapproval and to which theory and concepts derived from sociology and social psychology may be applied. Includes a study of deviators and societal reactions to them. *Prerequisite:* SOCI 3101.

**3348 Criminology (3-0)**

Theories, causes, characteristics, and social function of crime in our society. Methods of prevention and reduction of crime will be analyzed. *Prerequisite:* SOCI 3101.

**3361 Contemporary Mexican Culture (3-0)**

A course about social and regional diversity of modern Mexico with special emphasis on indigenous cultures. *Prerequisite:* SOCI 3101 or ANTH 3101. *Recommended Background:* ANTH 3102. (Same as ANTH 3361.)

**3362 Medical Sociology (3-0)**

Cultural factors in medical beliefs and practices; professionalization of medical practitioners; group factors in medical practice and medical care programs. *Prerequisite:* SOCI 3101.

**3370 Sociology of Sex Roles (3-0)**

Sociological evaluation of the emergence of sex roles and relationship between such roles and social status, class, and power. Problems of Women's Liberation, changing roles, and the variable effects of socialization for role taking and role making will be discussed. *Prerequisite:* SOCI 3101.

**3381 Complex Organizations (3-0)**

Examines structures, processes, interactions, and human problems of modern organizations. Classical and contemporary sociological theories of organizations are compared. Issues regarding organizational authority, change, conflict, control, cooperation, division of labor, efficiency, goals, and relationships with consumer-clients are studied. *Prerequisite:* SOCI 3101.

**3401 General Sociological Theory (3-0)**

Study of the major concepts of general sociology as these have been developed by contemporary sociologists and by the founding fathers of the field. *Prerequisites:* SOCI 3101 and nine hours of advanced sociology.

**3447 Population Analysis and Problems (3-0)**

Statistical analysis of the population of the world, the United States, and the Southwest. Study of fertility, mortality, and migration patterns and their social consequences. *Prerequisite:* SOCI 3101.

**3490 Independent Study (0-0-3)**

Independent study in an area which is too specialized to offer as an organized class. Supervised individual reading and research leading to development of a major paper or report. *Prerequisites:* SOCI 3101, 12 hours of advanced sociology, and consent of Department Chairperson, advisor, or instructor.

**Anthropology (ANTH)**

For Undergraduates Only

**1101 Laboratory for ANTH 3101 (0-2)**

Introduction to the nature and interpretation of archeological artifacts and hominoid remains. Emphasis is on processes of making inferences from physical remains. *Prerequisite:* ANTH 3101 may be taken concurrently.

**3100 Popular Archeology: Exploring Myths and Mysteries (3-0)**

Introduction to the field of archeology and what it means to the public. Emphasis is on developing students' abilities to identify and evaluate scientific and pseudoscientific treatments of the archeological record. Includes discussion of ancient astronauts, lost continents, the Moundbuilders, scientific creationism, and psychic archeology.

**3101 Introduction to Physical Anthropology and Archeology (3-0)**

Introduction to the evolution of the human adaptive system with particular attention to the somatic and technological components. The biological development of man, from 3.5-million-year-old Lucy to

modern Homo sapiens, is discussed and correlated with developments in stone and bronze tools, dwelling types, social groupings, political organization, etc. This course is not prerequisite to 3102.

**3102 Introduction to Cultural Anthropology (3-0)**

Introduction to the evolution of human behavioral systems with particular attention to the social and cultural, or ideational components. The variety of types of societies and ideologies is discussed together with the ecological situations to which they are adapted.

**3110 Cultural Geography (3-0)**

Introduction to cultural elements, their spatial distribution, and their interrelationship to the physical environment. (Same as GEOG 3110.)

**3220 Introduction to Linguistics (3-0)**

Introduction to basic concepts and techniques of modern linguistics. *Prerequisite:* None in Anthropology. (Same as LING 3220.)

**3258 Chicanos in the Southwest (3-0)**

Introductory course to major themes in Mexican American studies; cultural pluralism, bilingualism, biculturalism, ethnicity and race, assimilation, cultural nationalism, and folk culture. *Prerequisite:* None in Anthropology.

**3259 Chicanos and American Society (3-0)**

Analysis of Chicano experiences in selected institutions such as schools, churches, governmental structures, military, and mass media. *Prerequisite:* None in Anthropology.

For Undergraduates and Graduates

**3303 Ecological Anthropology (3-0)**

The study of human societies as part of ecological systems. The use of ecological principles and models in anthropological description and explanation is discussed. Folk models of ecology are also considered. *Recommended Background:* ANTH 3101 and ANTH 3102.

**3304 Biological Anthropology (3-0)**

The course focuses on human evolution and the biological basis for human behavior. Topics include human phylogeny, physical and behavioral adaptation, genetics, and human diversity. *Prerequisite:* ANTH 3101.

**3306 Cultural Diversity (3-0)**

A cross-cultural comparison of human behavior addressing the areas of family life, marriage, kinship, and ritual. The course will also deal with the potential for misunderstandings that arise in the context of cross-cultural interactions. *Prerequisite:* SOCI 3101 or ANTH 3101.

**3308 Anthropology of Law and Political Systems (3-0)**

A comparative ethnographic study of legal and political systems with an introduction to the anthropological theories developed in these areas. The focus is on informal means of social control and the origins of political systems in tribal societies and chiefdoms, rather than nation-states. *Recommended Background:* ANTH 3102.

**3309 Mesoamerican Cultures (3-0)**

A survey of the prehistoric, protohistoric, and historic development of social systems in Mesoamerica from the preceramic cultures through the Olmec, Maya, Toltec, and Aztec. Attention will be directed to the interaction among environmental, demographic, cultural and historical factors, drawing upon evidence from prehistory, history, and ethnohistory. *Recommended Background:* ANTH 3101 and ANTH 3102.

**3310 Southwestern Archeology (3-0)**

The development and characteristics of prehistoric Indian societies, from the Elephant Hunters to the Pueblos, is considered with particular attention to the Mogollon, Hohokam, Anasazi, and Casas Grandes areas. Ties of the area to nuclear Mesoamerica will be discussed. *Recommended Background:* ANTH 3101.

**3312 New World Archeology (3-0)**

Traces the course of human cultural development in North, Central, and South America and the Caribbean from the first arrival of Ice Age hunters, through the invention of agriculture, to the development of complex civilizations. *Recommended Background:* ANTH 3101.

**3313 Historic Archeology of the El Paso - Ciudad Juarez Area (3-0)**

The course provides an overview of the historic development of the El Paso-Ciudad Juarez region from the earliest mission and presidio settlements to the modern bi-national metropolis. Evidence from archeological materials and archival documents will be considered. *Recommended Background:* ANTH 3101.

**3314 Economic Anthropology (3-0)**

A study of economic problems of production, distribution, and consumption in non-Western societies, and an introduction to the concepts and perspectives brought to such studies by anthropologists. *Recommended Background:* ANTH 3102.

**3315 Urban Anthropology (3-0)**

A consideration of the nature of cities, both non-Western and Western, Pre-industrial and industrial. The impact of urbanization upon a region and upon individuals will be discussed. *Recommended Background:* ANTH 3101 and ANTH 3102.

**3316 Ciudad Juarez as a Soclocultural System (3-0)**

A consideration of the social, political, and ideological institutions of Ciudad Juarez and the dynamics of their interaction. *Recommended Background:* ANTH 3102.

**3319 Indigenous Cultures of Latin America (3-0)**

A survey of the Native American cultures of Latin America, focusing on patterns of similarity among groups, and the distribution of different adaptations relative to environmental diversity. *Prerequisite:* SOCI 3101 or ANTH 3101. *Recommended Background:* ANTH 3102.

**3320 Indigenous Cultures of North America (3-0)**

Survey of Native American cultures of the United States and Canada, with an emphasis on their development in various environmental settings, and the regulatory/legal contexts within which they now exist. *Recommended Background:* ANTH 3102.

**3321 Indians of the Southwest (3-0)**

Ethnographic and ethnohistorical perspectives on the socio-politics, economics, belief systems, and technologies of contemporary Native American groups such as the Apache, Hopi, Hualapai, Navajo, Pima, Tarahumara, and Tohono O'odham. May include guest lectures by tribal representatives. *Recommended Background:* ANTH 3102.

**3323 American Indian History (3-0)**

A survey of the history of North American Indians from the Pre-Columbian period to the present. Examines inter-tribal relations as well as Indian-European and Indian-Anglo American interactions. Emphasis on trans-Mississippi West tribes and events. (Same as HIST 3323.)

**3341 Plants in Southwest Cultures (3-0)**

Study of food, fiber, medicinal, and dye plants utilized by Southwest cultures with an emphasis on ethnobotany. Student may be required to take one weekend field trip. *Prerequisites:* BOT 4210. (Same as BIOL 3341.)

**3347 Archeological Field Studies (0-0-3)**

Intensive field course on the recovery and analysis of archeological data. Includes archeological survey and/or excavation and preliminary laboratory analysis. Variable credit. May be repeated when study area or research topic differs. Transportation and/or lodging fees vary according to project location. *Prerequisite:* ANTH 3359 or instructor's approval.

**3357 Sociolinguistics (3-0)**

Language variables and sociological correlates, a review of current research, theories, and applications. *Recommended Background:* LING 3220.

**3358 Ethnographic Methods (3-0)**

Theory and practice in the elicitation of ethnographic data. Participant observation, interviewing, and the development of questionnaires will be conducted in the laboratory and field settings. *Prerequisite:* ANTH 3102 or instructor's approval.

**3359 Archeological Methods (3-0)**

Introduction to the analytical methods used to interpret archeological sites. Topics addressed include sampling, statistical analysis, formulation of hypotheses, and survey and excavation techniques. *Prerequisite:* ANTH 3101 or instructor's approval.

**3360 Laboratory Methods In Archeology (0-3)**

Methods for, and practical experience in, the analysis and interpretation of archeological materials, including ceramics, stone tools, floral and faunal remains, archeological dating, and spatial data. Course will be taught as one 3-hour lecture lab, but individual or group lab projects involving additional time outside class will be required. *Prerequisite:* Open only to majors in anthropology or instructor's approval.

**3361 Contemporary Mexican Culture (3-0)**

A course about social and regional diversity of modern Mexico with special emphasis on indigenous cultures. *Recommended Background:* ANTH 3102.

**3372 Folklore (3-0)**

The types and characteristics of folk literature with particular emphasis on the folklore of the Southwest and Mexico. (Same as ENGL 3372.)

**3374 Folklore of the Mexican-American (3-0)**

A study of folklore theory and Mexican-American folk genres, with background readings on Mexico and with a special emphasis on the folklore of the border. (Same as ENGL 3374.)

**3379 Independent Study (0-0-3)**

Individual investigation of an area of anthropology that is not adequately covered by an organized class. Periodic meetings, reports, and a major paper are required. *Prerequisite:* Departmental approval and instructor's approval.

**3380 Environmental Policy and Applied Anthropology (3-0)**

Provides an introduction to environmental laws and policies that affect the practice of archeology, history, and ethnography in the context of development projects and land management. Among the topics discussed are environmental impact assessment, social impact assessment, historic preservation planning, and traditional cultural properties.

**4347 Archeological Field Studies (0-0-4)**

Intensive field course on the recovery and analysis of archeological data. Includes archeological survey and/or excavation and preliminary laboratory analysis. Variable credit. May be repeated when study area or research topic differs. Transportation and/or lodging fees vary according to project location. *Prerequisite:* ANTH 3359 or instructor's approval.

**5347 Archeological Field Studies (0-0-5)**

Intensive field course on the recovery and analysis of archeological data. Includes archeological survey and/or excavation and preliminary laboratory analysis. Variable credit. May be repeated when study area or research topic differs. Transportation and/or lodging fees vary according to project location. *Prerequisite:* ANTH 3359 or instructor's approval.

**6347 Archeological Field Studies (0-0-6)**

Intensive field course on the recovery and analysis of archeological data. Includes archeological survey and/or excavation and preliminary laboratory analysis. Variable credit. May be repeated when study area or research topic differs. Transportation and/or lodging fees vary according to project location. *Prerequisite:* ANTH 3359 or instructor's approval.

**3407 Geography of Arid Lands (3-0)**

A study of the physical complexes of the world's dry regions. Salient factors emphasized include climate, landforms, water, soils, natural vegetation, and various aspects of human occupation. *Prerequisite:* GEOG 3106 or GEOG 3110 or GEOL 3103 or instructor's approval. GEOG 3306 recommended.

**3426 Bioarcheology (2-3)**

Recovery, processing, and interpretation of biological material associated with prehistoric and historic man in the New World. Laboratory fee required. (Same as BIOL 3426.)

**3465 Museum Fundamentals (2-8)**

An introduction to practical aspects of museum work, including organization and display of exhibits, care of collections, communication with visitors, and other museum tasks. Lectures will be combined with opportunities for solving concrete problems.

**3470 Studies In Anthropology (3-0)**

Subject matter will be announced each semester. May be repeated for credit when topic varies. Among the material that may be covered are the following: foraging bands; tribes; chiefdoms; states; peasant and plantation communities; forensic anthropology; primate behavior; lithic technology.

**3480 Theory In Anthropology (3-0)**

A discussion of the goals of anthropology with a critical review of current theory and methodology. *Recommended Background:* ANTH 3101 and ANTH 3102.

See the *Graduate Studies Catalog* for graduate programs and courses.

## Theatre Arts

371 Fox Fine Arts  
(915) 747-5146  
FAX (915) 747-5438

CHAIRPERSON: Charles Fensch  
PROFESSORS EMERITI: R. Milton Leech, Gifford W. Wingate  
PROFESSORS: Fensch, Gladstein  
ASSOCIATE PROFESSOR EMERITUS: Charles L. Etheridge  
ASSOCIATE PROFESSORS: Eastman  
ASSISTANT PROFESSORS: Abunuwara, Baca, Ramos, Wright  
LECTURER: Farah

The Theatre Arts degree curriculum consists of a core of required courses which provide the student with a broad base of Theatre arts knowledge and skills. Beyond the requirements, students may select elective options of specialized study in acting, directing, playwriting, design, and Theatre history. An extensive co-curricular play production program offers students the opportunity to participate in all aspects of production. On campus, plays are produced in the 435 seat University Playhouse and the flexible Studio Theatre. The production program regularly includes selections from Theatre classics, contemporary plays, children's Theatre, bilingual Theatre, experimental Theatre, and original playscripts. In addition, there are touring Theatre opportunities. All productions showcase student work under faculty guidance and direction.

**Major in Theatre Arts:** Students pursuing the BA degree with a major in Theatre Arts must take the following:

1. THEA 3103 and 1103;
2. THEA 3110, 3113, 3210, 4213, 3221, 3325, and 3332 or 3342;
3. 6 hours from THEA 3340, 3351, 3352, 3353; plus 6 advanced Theatre Arts hours selected in consultation with the advisor;
4. The Fine Arts requirement of the BA must be met with one 3-hour course in Art and one in Music.

**Minor in Theatre Arts:** The minor requires 18 semester hours, 12 of which must be advanced (3300-3400) level, including:

1. THEA 3113; plus one course from THEA 3110, 4213, 3215, 3221, 3222; plus four courses from THEA 3310, 4313, 3325, 3332, 3335, 3340, 3342, 3350, 3351, 3352, 3353, 3418, 3440;
2. The Fine Arts requirement of the BA must be met with one 3-hour course in Art and one in Music.

**Teacher Certification:** Students seeking secondary certification in Theatre Arts must complete the BA requirements as described above. Certification requires 36 semester hours of courses in the major as described in the Liberal Arts section of this Catalog. For further information on requirements for certification, see the Catalog sections for the College of Liberal Arts and the College of Education.

**Theatre Arts (THEA)**

For Undergraduates

**1103 Voice and Articulation Laboratory (0-1)**

This laboratory is required for students enrolled in THEA 3103. Practice in the skills of relaxation, respiration, phonation, resonance, and articulation through exercises and the use of recording equipment. May be taken twice for credit.

**1111 Basic Theatre Practice (0-4)****(Common Course Number DRAM 1120)**

Play production experience in faculty directed drama productions. All cast and crew members of such productions are eligible to enroll for the appropriate number of hours of credit after consultation with the undergraduate advisor in Theatre Arts. This course may be taken only as a free elective.

**2111 Basic Theatre Practice (0-8)****(Common Course Number DRAM 1220)**

Play production experience in faculty directed drama productions. All cast and crew members of such productions are eligible to enroll for the appropriate number of hours of credit after consultation with the undergraduate advisor in Theatre Arts. This course may be taken only as a free elective.

**3103 Voice and Articulation (3-0)****(Common Course Number DRAM 2336)**

A course designed to improve the student's speech. Includes the study of and personal application to the speech anatomy and the processes of speech, phonetics, and the major dialects of American English and stage diction. The required laboratory is THEA 1103. Credit will not be given for 3103 unless 1103 is taken and passed at the same time. May not be counted as a fine arts distribution requirement.

**3110 Theatre Co. & Production Process (0-12)****(Common Course Number DRAM 1323)**

This is a sequence of courses through which the major drama productions of the season will be realized. Entering freshman drama majors should take THEA 3110 in their first semester.

**3113 Introduction to Theatre (3-0)****(Common Course Number DRAM 1310)**

Analysis of the principles and techniques involved in representing human experience in a play; the relationship of acting, directing, staging, lighting, costuming, and other Theatre arts to one another and to the written word. The course is designed to serve not only as an introduction to drama for departmental majors, but as a general survey for non-majors. Course fee required.

**3210 Theatre Co. & Production Process (0-12)****(Common Course Number DRAM 1320)**

This is a sequence of courses through which the major drama productions of the season will be realized. Entering freshman drama majors should take THEA 3110 in their first semester.

**3215 Theatre Workshop Laboratory (0-9)**

A Practicum course giving the student experience in all phases of Theatre production, and involving one or more major productions depending upon the University Theatre's production schedule. Open to all university students. May be repeated for credit. An elective course for Theatre Arts majors and minors.

**3221 Stagecraft (3-0)****(Common Course Number DRAM 1330)**

An introduction to Theatre architecture, stage rigging, scenic construction, painting, hardware, shop tools, scene shifting mechanisms, and operating techniques. Course fee required.

**3222 Makeup (3-0)****(Common Course Number DRAM 1341)**

Study of the history of makeup, types and kinds of makeup, and techniques of application for stage, film, and television. Course fee required.

**3290 Introduction to the Art of the Motion Picture (3-0)**

Understanding and appreciating film as a unique medium for communication and artistic expression. Introduces students to a broad range of types of films. Basic theory presented in class. Films viewed in class and on campus and discussed in class. Course fee required.

**4213 Acting I (3-3)****(Common Course Number DRAM 1351)**

A lecture-laboratory course in which a student may develop ability to analyze a character and create a role.

**4313 Acting II (3-3)**

Detailed study of characterization and styles of acting through assignment of individual roles and group rehearsal of scenes. *Prerequisite:* THEA 4213.

**3310 Theatre Co. & Production Process (0-12)**

This is a sequence of courses through which the major drama productions of the season will be realized. Entering freshman drama majors should take THEA 3110 in their first semester.

**3325 Directing I (3-0)**

Study of techniques in various styles, modes, and periods together with analysis of the problems of the producer and Theatre manager. Scene work required. *Prerequisite:* THEA 4213 or instructor's approval.

**3332 Scene Design (3-0)**

An introduction to the specific design needs of the performing arts, including scenic drafting, period ornament, scenic styles, decor, perspective sketching, and rendering in watercolor. *Prerequisite:* THEA 3221.

**3335 Chicano Theatre and Drama (2-4)**

Examination of the Chicano and Chicanismo through drama and theatrical presentations. Chicano Theatre and drama is studied as literature, as a political statement, and as a social and ethnic phenomenon. Several short plays of the Chicano Theatre are prepared for presentation to the public.

**3336 Theatre in Spanish (2-4)**

Study of a specific Hispanic play each semester from literary and theatrical points of view. The play is mounted and staged, in Spanish, for the public. May be repeated once for credit.

**3340 A History of Costume Design (3-0)**

A study of costume from the earliest time to the present and its use on the stage. Practical experience in designing and executing costumes for actual production.

**3341 Costume Production (3-0)**

The study of costume technology including design analysis, pattern development, fabric selection and modification, and construction techniques. Offers experience in executing costumes for theatrical production. Course fee required.

**3342 Lighting Design (3-0)**

A history of lighting and an analysis of contemporary lighting practice as applied to Theatre and television lighting including a study of lighting instruments, use of color media, control equipment, and designing for different staging and studio configurations. Course fee required.

**3350 Creative Drama (3-0)**

Methods of developing original dramatizations with children and creating plays from children's literature. Discussion of basic skills for the teaching of creative Theatre and drama. Recommended for Education majors.

**3351 History of the Theatre I: The Early Theatre (3-0)**

Historical survey of Theatre and drama from earliest times through the close of the Middle Ages.

**3352 History of the Theatre II: Renaissance Through Romanticism (3-0)**

Historical survey of Theatre and drama from the beginning of the Renaissance through the Romantic Movement.

**3353 History of the Theatre III: The Modern Theatre (3-0)**

Historical survey of Theatre and drama from the rise of Realism to the present.

**3355 The Musical Theatre (3-0)**

A survey of the American Musical Theatre as evolved since the mid-nineteenth century to the present. With the use of film-videos, recorded material, and slides, this course explores the historical and aesthetic contributions of the genre to the American Theatre.

**3356 Women In Drama (3-0)**

This course will investigate the writings of feminist playwrights who are committed to the development and vision of women in the Theatre. These dramatic works will be examined in light of the sociological and humanistic realities which are a part of contemporary American life.

**3390 Cinematic Director and Genres (3-0)**

An examination of the stylistic cinematic works of modern and contemporary European and American film directors and their aesthetic relationship to their political, religious, socio-cultural, and commercial environment. *Prerequisite:* THEA 3290 or instructor's approval. *Course fee required.*

**3410 Theatre Co. & Production Process (0-12)**

This is a sequence of courses through which the major drama productions of the season will be realized. Entering freshman drama majors should take THEA 3110 in their first semester.

**3418 Playwriting (3-0)**

*Principles of writing for stage presentation.*

**3440 Selected Topics in Drama and Theatre (3-0)**

Special research and production projects – individual or group – under the supervision of a faculty member. *Prerequisite:* instructor's approval.

**3490 Film Theory and Criticism (3-0)**

To identify the philosophical ideas and theoretical approaches that have influenced filmmakers and film scholars and to study the writings of some of the best exponents of film criticism in its popular and scholarly forms. *Prerequisite:* THEA 3290. *Course fee required.*

See the *Graduate Studies Catalog* for graduate programs and courses.

# Western Cultural Heritage

401 Liberal Arts Bldg.  
(915) 747-5835

**DIRECTOR:** Mimi Gladstein

**PROFESSORS:** Bledsoe, Gladstein, Haddox, Hall, Stafford

**ASSOCIATE PROFESSORS:** Johnson, Jones, Kluck, Meléndez-Hayes, Potts, Robinson, Springer, Weber

**ASSISTANT PROFESSORS:** Best, Louden

**LECTURERS:** Harding, Wren

The Western Cultural Heritage sequence (HUMN 3301, 3302, and 3303) is required of all BA students and is open to students from other colleges as well. The objective of the sequence is to promote the sort of awareness that will situate the student in his or her cultural environment (culture being that complex of aims, ideals, and interests that define and organize human social activity and its productions). An articulate understanding of Western cultural heritage requires examination of the character and interrelations of the cultural interests of the fine arts, history, literature, philosophy, politics, reli-

gion, and science. The sequence is designed to foster such an understanding by focusing, in a carefully coordinated three-semester sequence, upon selected Western epochs characterized by peculiarly intense activity in the various aspects of culture.

Through a combination of lecture and discussion, the Western Cultural Heritage sequence seeks to ensure that students receive a systematic, broad (but also intense) exposure to the thinkers, ideas, texts, and art works that have been produced by Western civilization. The fundamental emphasis will be on ways of thinking about basic human questions. Such questions concern the nature of the state; the rights and responsibilities of individuals as citizens and members of the community; concepts of human nature; the human species as victim, antagonist, or part of nature; the supernatural; esthetics; technology; and epistemology.

Such questions as these will be explored by raising them in the context of pivotal epochs or focal loci in which interest in them has been demonstrably widespread. Although the sequence is structured chronologically in the broadest sense, attention will focus on selected moments of intense activity, from which vantage-points collateral lines of influence and ramification will be scrutinized.

## Western Cultural Heritage (HUMN)

**3301 Eastern Mediterranean Culture from ca. 2500 B.C. to ca. 200 A.D. (3-0)**

This course will examine significant cultural developments in the ancient Near East and Classical Greece. It will focus on one or more pivotal loci, such as the period of the monarchy in Israel, the Periclean age in Athens, the Augustan epoch in Rome, or nascent Christianity, and will consider collateral developments as they flow into or out of the pivotal loci. Required of all Liberal Arts majors. *Prerequisite:* English 3112.

**3302 Western Mediterranean Culture from ca. 200 A.D. to ca. 1650 (3-0)**

Building on themes developed in HUMN 3301, this course will examine cultural developments in medieval Europe and post-medieval Italy, England, and/or Spain. Pivotal loci might include the Classical-Christian synthesis of Dante and Aquinas, the emergence of Renaissance culture in Italy, the Reformation and its Counter-Reformation offshoots, and the Golden Age of Spain. Collateral developments will be approached as ramifications of the pivotal loci. Required of all Liberal Arts majors. *Prerequisite:* HUMN 3301.

**3303 Modern Western Culture Since 1650 (3-0)**

The purpose of this course is to foster in students an appreciation of the complexity and diversity of our Western cultural heritage through a survey of four major revolutions that were instrumental in shaping the modern world from 1650 to the present. These include the scientific, the social, the industrial, and the artistic. Through readings of primary sources, excerpts from major works, reproductions of art and musical works, and lectures, students will be stimulated to develop a capacity for critical assessment of many of the ideas and movements that have helped to shape the world they live in. *Prerequisite:* HUMN 3301 or 3302.

**3490 Special Topics in Humanities (3-0)**

Intensified study of a special topic such as Postmodern Culture, Western and Non-Western Cultures, the Cultures of the Humanities and the Sciences, and other areas of special interest in the Humanities. Topic varies with professor in charge. May be repeated for credit when the topic varies. *Prerequisite:* HUMN 3303 or instructor's approval.

# Women's Studies

401 Liberal Arts  
(915) 747-5200

ACTING DIRECTOR: Mimi R. Gladstein

PROFESSORS: Gladstein, Martin, Mortimer, Staudt

ASSOCIATE PROFESSORS: Byrd, Deutsch, Howard, Marchino,  
Meléndez-Hayes

ASSISTANT PROFESSOR: Baca, Ryan, Whitley

Women's Studies allows the interdisciplinary study of women's history, current status, and future options from an expanded perspective that integrates current information, research methodologies, and conceptual approaches regarding women and women's issues into the existing disciplines.

## Minor in Women's Studies

To complete a Women's Studies minor, students must earn at least 18 hours in courses approved for Women's Studies credit. At least 12 of those hours must be at the upper-division level. Core courses include WS 3200, ENGL 3360 (Women in Literature), HIST 3391 (History of Women), POLS 3414 (Women, Power and Politics), and SOCI 3370 (Sociology of Sex Roles).

A variety of other courses appropriate for the Women's Studies minor are taught regularly or as special topics in a number of departments. These include (but are not limited to) CRIJ 3400 (Women and Crime), CHIC 3301 (La Chicana), ENGL 3440 (Biography and Autobiography of the Female Experience), MGMT 3499 (Men and Women as Colleagues in Organizations), PHIL 3452 (Philosophy and Feminism), SOCI 3215 (Marriage and Family), THEA 3356 (Women in Drama).

## Women's Studies (WS)

### 3200 Introduction to Women's Studies (3-0)

This course focuses on the experience of women from the perspective of the social sciences and humanities. Students will be introduced to historical, cross-cultural, and contemporary issues relating to women's lives as well as to responses to these varied issues from the realms of both feminist theory and public policy.






# College of Nursing and Health Sciences

Nursing  
Health Sciences

Dr. Patricia Castiglia, Dean  
Dr. Gail Ackall, Associate Dean  
Dr. Joseph Perozzi, Assistant Dean

1101 N. Campbell  
Phone: (915) 747-7280  
Fax: (915) 747-7207



# COLLEGE OF NURSING AND HEALTH SCIENCES

## Introduction

A baccalaureate nursing program was established at El Paso in 1970 under the administration of The University of Texas System School of Nursing. In 1976, the School of Nursing became an integral part of The University of Texas at El Paso and was organized as a College of Nursing. The Health Sciences Programs were transferred to the College in 1979, and shortly thereafter, the name was changed to the College of Nursing and Health Sciences. The College offers an undergraduate nursing program leading to the Bachelor of Science in Nursing degree as well as Master of Science in Nursing program at the graduate level. Health Sciences programs are offered which lead to the Bachelor of Science in Health Science, Bachelor of Science in Clinical Laboratory Science, Bachelor of Science in Kinesiology and Sports Studies, and a Master of Science in Speech-Language Pathology.

The nursing programs are fully accredited by the National League for Nursing and are approved by the Texas State Board of Nurse Examiners. The Bachelor of Science in Clinical Laboratory Science is accredited by the National Accrediting Agency for Clinical Laboratory Sciences. The master's degree in Speech-Language Pathology is accredited by the Educational Standards Board of the American Speech, Language, Hearing Association and is required in order to qualify for national certification by the American Speech, Language, Hearing Association and for Texas license to practice as a speech-language pathologist.

The College is located approximately one mile from the main UT El Paso campus, at 1101 North Campbell Street, and is housed in a large, modern building which includes classrooms, laboratories, faculty offices, and lounges for both students and faculty. The Media Center facilitates independent learning by students through the use of audio-visual programs, programmed units, and laboratory computers. The Simulation Laboratory provides an opportunity for students to practice skills before direct contact with patients or clients in clinical settings. The speech, hearing, and language clinic provides a community service as well as the first clinical practicum experience for Speech-Language Pathology students.

The El Paso-Ciudad Juarez international border community, with a population of more than one million, provides a wide variety of clinical experiences for both students and faculty of the College. Hospitals and other health care agencies throughout the area are utilized for student and faculty clinical practice. In addition, the El Paso City-County Health Department and a number of voluntary agencies provide patient care opportunities for learning. Agencies such as the Pan American Health Organization, the U.S. Immigration and Naturalization Service, customs and consular offices on both sides of the border provide the student with unique learning experiences in the control and prevention of disease.

## NURSING

1101 N. Campbell, Room 405  
(915) 747-8217

CHAIRPERSON: Helen M. Castillo

PROFESSOR EMERITA: Eileen M. Jacobi

ASSOCIATE PROFESSORS EMERITI: Dorothy Corona, Betty J. Kinsinger

PROFESSOR: Castiglia

ASSOCIATE PROFESSORS: Amaya, Castillo, Herriage, Lantican, Lara, Lubno, Reynolds

ASSISTANT PROFESSORS: Bass, Beeman, Cummins, Gardner, Rhorer, Salewski, Schaller-Ayers

INSTRUCTOR: Crockett

LECTURERS: Ochsner, Whitaker, Wood

## General Information for Nursing Students

### STUDENT AFFAIRS

It is the responsibility of the student:

1. To become familiar with and comply with regulations of the College of Nursing and Health Sciences;
2. To keep the Dean's office and the Office of Admission and Evaluation informed of his or her current (1) local address, (2) telephone number, or where he or she may be reached, and (3) home address and phone number;
3. To be informed of general and special notices including examination schedules posted on the official bulletin board in the College;
4. To make arrangements for completion of all work and to meet the requirements for removal of incomplete grades; and
5. To assure that official communications, including requests for release of information to other institutions, be submitted in writing.

### SPECIAL EXPENSES

Uniforms, lab coat, name pin, and identification patch are required dress for clinical practicum.

### STUDENT EMPLOYMENT

The College of Nursing and Health Sciences assumes no responsibility for students employed in a health care agency. A student is personally responsible and liable for any activities conducted while employed. Professional liability insurance purchased by a student is valid in the student role, but not in the employment role (check individual policy). An individual who practices nursing illegally may jeopardize his/her future as a licensed professional. A student employed in an agency has the responsibility, personally and professionally, to engage in only those activities which fall within the job description for non-professional workers, and has a responsibility to refuse to participate in activities which he or she has not been legally licensed to perform.

### NURSING STUDENT ORGANIZATION

All nursing students are eligible for membership in the Nursing Student Organization, which is a chapter of the Texas Nursing Students' Association and the National Student Nurse Association. The Nursing Student Organization has goals consistent with those of the National Student Nurses' Association. Its purpose is to aid in the development of the individual student as a future health professional.

Nursing students are represented on campus committees and in campus activities involving the entire UT El Paso student body.

### SIGMA THETA TAU

Delta Kappa Chapter of Sigma Theta Tau was chartered at The University of Texas at El Paso in 1980. The purposes of Sigma Theta Tau are to recognize the achievement of scholarship of superior quality; to recognize the development of leadership qualities, to foster high professional standards; to encourage creative work; and to strengthen commitment on the part of individuals to the ideals and purposes of the profession of nursing. Each year invitations to membership are extended to selected students in either the undergraduate or graduate program who are within the upper one-third of their graduating class.

### FINANCIAL AID

Students enrolled in the College of Nursing and Health Sciences are eligible to apply for all forms of financial assistance available to other majors. Specific information can be obtained from the Office of Student Financial Aid.

## ARMED SERVICES

The United States Armed Services view the Reserve Officers Training Corps (ROTC) as an exceptionally valuable source for officers who have an appreciation of nursing's contribution to the defense of the nation. ROTC offers programs whereby nursing students may earn a commission while they complete their nursing curriculum. Scholarships that provide for tuition, books, and supplies are available. Monthly stipends are offered to advanced students. In addition to financial assistance, ROTC offers leadership/management courses which are valuable assets in a nursing career. A six-week summer training program provides valuable experience for students in health care facilities between the academic years. Interested students should contact the Department of Military Science or the Department of Aerospace Studies on campus.

## ADMISSION

Students seeking admission to the University as freshmen or transfers should consult the section titled Undergraduate Admission in this catalog. Students transferring from other nursing programs must submit a statement from the Dean of the previous program stating that the student is eligible to return to that program.

### UPPER DIVISION ADMISSION

Students interested in the Bachelor of Science in Nursing degree must fill out an upper division admission application after completion of 30 hours of required courses. This form is available through the Office of Admission and Evaluation. Students are considered for admission into the upper division nursing major if they have completed 68 hours of lower division prerequisite courses with an overall grade point average of 2.5 or higher; an overall University grade point average of 2.0 or higher must also be maintained. Selection into the upper division program is based upon the number of applicants, space availability, and academic performance. A "C" or better is required in Biology 3211-1211 and 3213-1213 (Human Anatomy and Physiology) and Microbiology 3230 or other equivalent required courses. Any student who does not satisfy the "C" minimum in the appropriately designated courses will not be admitted to upper-division course work until this requirement is met.

### REQUIREMENTS FOR ENROLLMENT IN UPPER-DIVISION COURSES

Certification in cardiopulmonary resuscitation (CPR) must be presented in order to enroll in each upper-division clinical nursing course. The CPR certification must be valid for the entire semester and must be at Level "C" according to the American Heart Association standards. In addition, evidence of aspects of health assessment and current immunization must be submitted to the College of Nursing and Health Sciences.

### Professional Liability Insurance

All students enrolling in clinical nursing courses will be required to show evidence of current professional liability insurance coverage of at least a minimum amount of \$1,000,000 limit each claim and \$3,000,000 limit in the aggregate per year. This insurance can be purchased at registration.

### Classification of Students

Students are classified as pre-nursing students until they are admitted into the upper division nursing program. Junior and senior students are identified as nursing majors if they meet the requirements and are designated as upper-division students by the College of Nursing and Health Sciences.

## Academic Standards

### ACADEMIC PROGRESS

A grade of "C" or higher must be earned for each nursing course. A grade of "D" or "F" in either the theory or practicum parts of a course constitutes a grade of "D" or "F" for the course. If a student earns a "D" or "F" in a required upper-division nursing course, the

next higher course may not be taken until the prerequisite course is repeated and passed with a "C" or higher. A nursing course may be repeated only once, based on faculty recommendation and space availability. Only two nursing courses may be repeated to continue in the nursing program.

University policy on repetition of courses is described in the "Academic Regulations" section elsewhere in this Catalog. A student who is not recommended to repeat a professional course is no longer eligible to continue in the nursing program. Only freshman level courses may be repeated under the University provisions for recalculation of the grade point average (GPA), and each course may be repeated only once. A student may not repeat a required upper-division clinical nursing course for credit in which a grade of "C" or higher has already been earned.

All nursing students must perform within limits of safe practice. A faculty member may drop a student from a course with an "F" if the student's nursing practice is deemed to be unsafe as defined in the Safe Practice Policy of the College. *A copy of this policy is posted on the Official Bulletin Board in the College.*

### CONFERENCES

The Dean and the Chair of the Nursing Department are prepared to confer with students who are doing unsatisfactory work, particularly at mid-semester and at the end of the semester. Faculty are available to confer with students, according to posted office hours.

### CHALLENGE EXAMINATION—REGISTERED NURSES

In keeping with the College's stated philosophy of learning, the faculty recognizes that many potential avenues for acquisition of the knowledge, attitudes, and skills are available. The faculty believes that experiences in formal education should build on the student's present level of achievement. Therefore, the faculty subscribes to the principle of validation of the candidate's competencies and allows matriculation into the program at the demonstrated level of achievement.

1. To petition for challenging a course, an individual must have met all prerequisite requirements.
2. The candidate should consult the Chair of the Nursing Program regarding application policies and scheduling of challenge examinations.
3. A course may not be challenged if the student was previously enrolled in that course.
4. A candidate for Challenge Examinations may obtain the course materials which are available to all students enrolling in the respective course. Auditing or receiving tutoring by faculty of the College of Nursing and Health Sciences is prohibited.
5. A fee for a challenge examination is assessed.
6. Some courses for which a challenge examination is available have a theoretical and a clinical component. When this occurs, both portions must be passed to receive credit.
7. A challenge examination in any course may be attempted one time only.

### GRADUATION REQUIREMENTS

1. To be eligible for graduation, a student must have attained a minimum of a 2.0 grade point average, both in the lower division and upper division course work in the baccalaureate degree plan.
2. A candidate must successfully complete the prescribed curriculum and must meet all other requirements of the University and the College.

### TESTING PROGRAM

In order to assist faculty with academic advisement of students, as well as providing a means of ongoing evaluation of the College of Nursing and Health Sciences curriculum, nursing students are required to participate in a testing and evaluation program in addition to course examinations. These requirements are posted on the official bulletin board in the College.

## LICENSURE AS A PROFESSIONAL NURSE

Graduates seeking licensure must successfully complete the State Registered Nurse Licensure Examination which is administered by the Board of Nurse Examiners for the State of Texas. The Board issues a temporary permit to practice professional nursing under the direct supervision of a Registered Nurse. The permit must be returned to the Board of Nurse Examiners if the candidate fails the examination.

**Bachelor of Science in Nursing**

This program consists of approximately two years of lower-division courses taken at a regionally-accredited college or university, followed by approximately two years of upper-division nursing courses taken at the College of Nursing and Health Sciences. Upon completion of the program, students are awarded the degree and are eligible to take the State Board Test Pool Examination for licensure as registered nurses.

**Degree Requirements (145 hours)****Lower-Division Requirements (80 semester hours)**

Biology 3105, 1107, 3211, 1211, 3213, 1213	(12 hours)
Chemistry 4107 and 4108, or 3105, 1105, and 3106, 1106	(8 hours)
English 3111, 3112	(6 hours)
Health Science 3202	(3 hours)
History 3101, 3102	(6 hours)
Mathematics 3120	(3 hours)
Microbiology 3230	(3 hours)
Political Science 3210, 3211	(6 hours)
Psychology 3101, 3103, 3210	(9 hours)
Sociology 3101	(3 hours)
Nursing 3200, 3313, 3319	(9 hours)
Economics	Core Menu (3 hours)
Fine Arts	Core Menu (3 hours)
Humanities	Core Menu (3 hours)
Interdisciplinary Technology & Society	(3 hours)

**Upper-Division Requirements (65 semester hours)**

Nursing 3302, 7302, 7303, 7370, 7371, 7410, 7411, 7471, 3470, 7472, and three hours of upper-division nursing elective

**Bachelor of Science in Nursing for Registered Nurses**

The University of Texas at El Paso offers a degree option for registered nurses that allows completion of the Bachelor of Science in Nursing degree in an accelerated program.

Registered nurses must submit their applications for admission, official college transcripts, and proof of licensure to the Office of Admission and Evaluation in the Academic Services Building. After the admission process has been completed, credit earned through transfer or by examination will be applied toward the requirements for the Bachelor of Science in Nursing degree. Students who are licensed registered nurses and who have acquired the body of knowledge and developed the competencies represented by certain professionally-oriented courses on the degree plan will not be required to take them. Courses for which credit has not been allowed through one of the methods mentioned above must then be taken to earn the degree.

Information on the lower division and upper division courses needed to complete the Bachelor of Science in Nursing degree can be obtained from the College or from the Office of Admission and Evaluation. Students are encouraged to earn credit by examination in those lower division courses for which they have adequate academic preparation. Contact the Student Assessment and Testing Center located in the Education Building, room 210 (747-5009), or the College for information concerning testing policies, dates, and times.

**Nursing (NURS)**

## Required Courses

**3200 Conceptual Base for Nursing Practice (3-0)**

The focus of this course is on relationships of the natural and behavioral sciences which form the basis for nursing practice and on nursing history, with emphasis on contemporary and future perspectives.

**3302 Health Assessment (2-2)**

This course focuses on a systematic approach to health assessment of individuals of varied ages. Practicum in the College laboratory. *Prerequisite:* Admission to the upper-division; Co-requisite: NURS 7302. For Majors only. Fees required.

**3313 Human Adaptation to Pathophysiology (3-0)**

Major emphasis of this course is on the study of pathophysiological processes and their impact on the body systems, with special attention to disease or trauma-induced alteration of regulatory mechanisms within the human organism. *Prerequisites:* BIOL 3211, BIOL 1211, BIOL 3213, and BIOL 1213; and departmental approval.

**3319 Cultural Perspectives on Health Care (3-0)**

This course builds upon concepts and issues related to culture and health. Major focus are on values and attitudes about caring, health, illness, and treatment as related to diverse cultural groups. *Prerequisite:* Junior standing.

**7302 Theories, Principles and Skills Basic to Nursing (3-8)**

An introductory course in the art and science of nursing. The opportunity to learn and practice beginning roles and functions of the professional nurse is provided in clinical practicum in the College laboratory and in acute care facilities. For Nursing Majors only. Co-requisite: NURS 3302. *Prerequisite:* Admission to the upper-division. Laboratory fee required.

**7303 Nursing in Promotion and Maintenance of Health (3-8)**

Application of nursing process with emphasis on adaptation and promotion of wellness of individuals throughout the life continuum. Clinical practicum provided in the College laboratory, preschool, senior citizen, and family settings. For Nursing Majors only. *Prerequisite:* NURS 7302 and NURS 3302 or concurrently. Laboratory fee required.

**7370 Nursing Care of Individuals and Families Experiencing Illness and Disability (3-8)**

This course emphasizes application of the nursing process to individuals and their families to protect, restore, maintain, and promote health. Clinical practicum is provided in a variety of health care agencies caring for clients throughout the age continuum. *Prerequisite:* NURS 7303. Laboratory fee required.

**7371 Nursing Care of Women and Families During the Childbearing Period (3-8)**

The focus is on the nursing care of pregnant women, newborns, and multi-cultural family dynamics throughout the childbearing period. Clinical practicum is provided in College laboratory, labor and delivery, post-operative, and newborn units in acute and in community settings. *Prerequisite:* NURS 7370 or concurrently. Fees required.

**3470 Health Care--Nursing Care: Portents and Challenges (3-0)**

This course analyzes facts and beliefs about health, health institutions, and the health delivery system(s). It examines the economic and social impacts of legislation and studies the role of nursing, its quality, its responsibility, and its accountability in today's society and in the future. *Prerequisite:* NURS 7471 or concurrently with NURS 7472.

**4400 Contemporary Professional Nursing (4-0)**

The focus of this course is the study of professional nursing with emphasis on the changing role of the nurse in a contemporary society and in health care delivery. The impact of health legislation, accountability, ethical decision making, and the use of research process are studied. RNS in the RN-BSN program only. *Prerequisite:* NURS 3302 and departmental approval.

**4401 Issues and Problems in Leadership and Management (4-0)**

The course focuses on analysis of health care costs, budgeting problems, quality assurance, and comprehensive nursing/health care. RNS in the RN-BSN program only. *Prerequisite:* Departmental approval.

**7400 Community Health Nursing (3-0-8)**

The focus of the course is an application of nursing process to promote wellness and manage occurrence of health care needs of individual families and community. *Prerequisite:* NURS 3302.

**7401 Multidisciplinary Health Care (3-0-8)**

The focus on the course is on primary health care with emphasis on Multidisciplinary approach with individuals, families, and community problems. Planning for management of varied health problems within the community is emphasized. RNS in the RN-BSN program only. *Prerequisite:* Departmental approval.

**7410 Nursing Care of Individuals and Families Experiencing Multi-System Health Problems (3-8-2)**

The major emphasis of this course is on the application of the nursing process to individuals and their families experiencing multi-system health problems. Clinical practicum is provided in the College laboratory and a variety of specialty care settings in acute care agencies. *Prerequisite:* NURS 7371. Fees required.

**7411 Nursing Care of Clients in Crisis (3-8-2)**

The major focus is application of the nursing process in the care of individuals, families, and groups experiencing potential or actual crisis. Emphasis is on psycho-social concepts related to mental health. Clinical practicum is provided in a variety of settings. *Prerequisite:* NURS 7371. Laboratory fee required.

**7471 Nursing Leadership and Management (3-8)**

Concepts of nursing leadership and management are studied as a part of the health care professional's preparation for practice. Clinical practicum is provided in the care of groups of clients and families in acute care settings. *Prerequisite:* NURS 7411. Fees required.

**7472 Primary Care Nursing (3-8)**

This course is a culminating experience focusing on meeting the health needs of the individual, the family, and the community. Practicum includes the nurse's role in primary care settings. *Prerequisite:* NURS 7471 or concurrently with NURS 7471 and NURS 3470. Laboratory fee required.

## Elective Courses

**1315 Independent Study (0-0-1)**

One credit hour of independent study. *Prerequisite:* NURS 3302 or instructor's approval.

**1380 Selected Topics In Nursing (1-0)**

Selected topics of current interest. May be repeated when topic varies. *Prerequisite:* NURS 3302 and departmental approval.

**2315 Independent Study (0-0-2)**

Two credit hours of independent study. *Prerequisite:* NURS 3302 or instructor's approval.

**2380 Selected Topics In Nursing (2-0)**

Selected topics of current interest. May be repeated when topic varies. *Prerequisite:* NURS 3302 and departmental approval.

**3307 Pharmacodynamics and Nursing Implications (3-0)**

This course emphasizes knowledge of pharmacology which includes the pharmaceutical phase, pharmacokinetics, and pharmacodynamics. Implications for nursing related to the administration of medications is incorporated. *Prerequisites:* NURS 7302 and NURS 7303.

**3310 Nursing Care of Ill Children (3-0)**

This course offers further knowledge of growth and development, family theory, pathophysiology, and skills used in caring for the ill child and his family. *Prerequisite:* NURS 7303 or instructor's approval.

**3315 Independent Study (0-0-3)****3318 Nursing and the Aging Client (3-0)**

This course provides an opportunity to gain increased knowledge and skill in the management of the health and nursing care of the elderly. The focus is on an holistic approach to aging processes as a basis for nursing practice. *Prerequisite:* NURS 7303.

**3330 Contemporary Perspectives on Death and Dying (3-0)**

The design of this course is to focus on personal feelings about one's own death and the death of others. The reactions and responses of dying, death, and bereavement across the age continuum in various cultures are explored. Alternative concepts of care and an interdisciplinary approach are utilized. *Prerequisite:* Junior standing.

**3380 Selected Topics In Nursing (3-0)**

Selected topics of current interest. May be repeated when topic varies.

**6305 Nursing Care of Clients Adapting to Perioperative Stressors (3-6)**

This course provides an opportunity to gain further knowledge and skill in the nursing care of clients who require surgical intervention. Focus is on the complete Perioperative cycle of care. Clinical practicum is provided in pre-operative care and health teaching, participant/observer during the intraoperative phase, and post-operative care. *Prerequisites:* NURS 7370 and NURS 7371 or instructor's approval. Laboratory fee required.

**6306 Health Promotion in Rural Environments (3-6)**

This course explores health care problems of individuals, families, groups, and communities. Clinical practicum focuses on methods for promotion, protection, maintenance, and restoration of health in rural settings. *Prerequisite:* NURS 7370 and 7371. Laboratory fee required.

**3405 Nursing Care In Emergency Settings (3-0)**

This course offers an opportunity to gain further nursing knowledge and skills in the care of patients who have injuries or illnesses of an emergency nature. *Prerequisites:* NURS 7370 and NURS 7371 or instructor's approval.

**3415 Independent Study (0-0-3)**

Directed study with related clinical laboratory experience planned to meet the learning objectives of the student in a special area of interest. *Prerequisite:* Departmental approval.

See the *Graduate Studies Catalog* for graduate programs and courses.

See the *Undergraduate Nursing Student Handbook* for other requirements.

**Continuing Education Program**

Maintaining professional competency in nursing is primarily the responsibility of the individual practitioner who can best establish personal and professional goals and pursue the appropriate learning experiences.

The University of Texas at El Paso College of Nursing and Health Sciences faculty acknowledges its responsibilities to provide such learning experiences for practicing nurses. This is accomplished by developing, implementing, and evaluating a variety of continuing education programs within the locality most accessible to the practitioner. The faculty believes that such continuing education programs, in the form of workshops, conferences, seminars, self-study modules, and short courses, serve as an adjunct to formal study and are not substitutes for further formal education.

# Health Sciences

1101 N. Campbell, Room 701  
(915) 747-8214

CHAIRPERSON: Julie Patten

PROFESSORS EMERITI: Donald Hardin, William H. Harris, James G. Mason

ASSOCIATE PROFESSOR EMERITUS: Ben W. Collins

PROFESSORS: Maud, Middleton, Perozzi

ASSOCIATE PROFESSORS: Ackall, O'Quinn, Patten, Reynolds, Smith

ASSISTANT PROFESSORS: Eyer, Heath, Kelly, Mroz, Reyes

LECTURERS: Bond, Gamboa

## Program in Clinical Laboratory Sciences

PROGRAM COORDINATOR: Richard Mroz

## Bachelor of Science in Clinical Laboratory Sciences

The Clinical Laboratory Science Program (formerly Medical Technology) is designed to prepare graduates to function as professional members of the health care team. Their services are utilized in hospitals, clinics, and private laboratories, as well as in business and industry. Clinical Laboratory Scientists perform a variety of immunological, biochemical, and microbiological procedures that aid in the diagnosis, treatment, and prevention of disease. Computerized data bases, electronic charting, and sophisticated laboratory techniques such as DNA probes and isoelectric focusing help insure the accuracy and precision of their work. The University of Texas at El Paso's Clinical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

Students completing approximately 60 semester hours of prerequisite course work at the University or at a regionally-accredited institution must apply for the upper-division in the spring semester prior to the beginning of the junior year. In addition, students must have their transcripts evaluated by the Office of Admission and Evaluation. An overall GPA of 2.0 in all course work and 2.5 GPA in science prerequisites is required for entry into the upper-division. A limited number of clinical sites are available. If the number of students exceeds the available sites, the GPA will be used to place students.

All lower division course work must be completed prior to enrolling in the professional Clinical Laboratory Science courses. All students beginning the professional courses will be required prior to the clinical practicum to show evidence of professional liability insurance, current CPR certification, a recent physical examination, and current immunizations, including a Hepatitis B vaccination.

A grade of "C" or higher must be earned in each medical technology course. If a student earns less than a "C" in a medical technology course, the next higher course may not be taken until the prerequisite course is repeated and passed with a "C" or better.

All students must perform within limits of safe practice. Students who are deemed unsafe by faculty will be dropped and will receive an "F" in the clinical course. The Safe Practice and Procedure Policy for students is posted on the Official Bulletin Board in the College and in the Clinical Laboratory Science Department. All work performed by students during the clinical practicum is under the direct supervision of clinical faculty and countersigned by them.

As a professional, the student must exhibit a commitment to the welfare of patients. The faculty in the program reserve the right to refuse the opportunity of a student to perform tests or procedures on patients if the student gives evidence of unsafe and/or ineffective laboratory techniques.

Students graduating from The University of Texas at El Paso are eligible for two national certification examinations. One examination is administered by the American Society of Clinical Pathologists from Chicago, IL. and successful candidates may use the initials MT

(ASCP) after their name. A second examination for which students are eligible is administered by the National Certification Agency from Washington, D.C. and if passed, graduates may use CLS (Clinical Laboratory Scientist) after their name.

### Degree Requirements (140 semester hours)

#### Lower-Division Preprofessional Courses (73 hours)

English 3111, 3112	( 6 hours)
History 3101, 3102	( 6 hours)
Political Science 3210, 3211	( 6 hours)
Fine Arts	( 3 hours)
Cultural Diversity	( 3 hours)
Humanities	( 3 hours)
Economics	( 3 hours)
Interdisciplinary Technology and Society	( 3 hours)
Biology 3105-1107, 3211-1211, 3213-1213	(12 hours)
Chemistry 3105-1105, 3106-1106, 3324-1324, 3325-1325	(16 hours)
Mathematics 4110; Statistics 3280, 1282	( 8 hours)
Microbiology 4240	( 4 hours)

#### Upper-Division Professional Courses (67 hours)

Clinical Laboratory Science 1401, 1406, 1414, 2311, 3301, 3303, 3306, 3308, 3400, 3401, 3402, 3404, 3406, 3410, 3414, 3415, 4301, 4406, 4408, 7406, and 7407	
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### Bachelor of Clinical Laboratory Science Degree Plan

#### LOWER-DIVISION PREPROFESSIONAL COURSES

##### FRESHMAN

Fall Semester		Hours
BIOL 3105	General Biology .....	3
BIOL 1107	Topics in the Study of Life .....	1
CHEM 3105	General Chemistry .....	3
CHEM 1105	Laboratory for CHEM 3105 .....	1
ENGL 3111	English Composition .....	3
MATH 4110	Precalculus II .....	4
		<hr/>
		15

##### Spring Semester

BIOL 3211	Human Anatomy and Physiology I .....	3
BIOL 1211	Human Anatomy and Physiology Lab I .....	1
CHEM 3106	General Chemistry .....	3
CHEM 1106	Laboratory for CHEM 3106 .....	1
ENGL 3112	Research and Critical Writing .....	3
ITS 3350	Interdisciplinary Technology and Society .....	3
		<hr/>
		14

##### Summer Semester

HIST 3101	History of the United States to 1865 .....	3
CORE	Humanities .....	3
CORE	Fine Arts .....	3
		<hr/>
		9

##### SOPHOMORE

Fall Semester		Hours
CHEM 3324*	Organic Chemistry .....	3
CHEM 1324*	Laboratory for CHEM 3324 .....	1
BIOL 3213	Human Anatomy and Physiology II .....	3
BIOL 1213	Human Anatomy and Physiology Lab II .....	1
MICR 4240*	General Microbiology .....	4
HIST 3102	History of the United States Since 1865 .....	3
		<hr/>
		15

##### Spring Semester

STAT 3280	Statistical Methods I .....	3
STAT 1282	Computing Lab for STAT 3280 .....	1
CHEM 3325*	Organic Chemistry .....	3
CHEM 1325*	Laboratory for CHEM 3325 .....	1
POLS 3210	Introduction to Politics .....	3
CORE	Economics .....	3
		<hr/>
		14

Summer Semester		
CORE	Cultural Diversity	3
POLS	3211 American Government and Politics	3
		<u>6</u>

FINE ARTS (choose one)	Humanities (choose one)
ART 3100, 3110	ENGL 3211, 3212, 3213, 3214,
ARTH 3105, 3106, 3310	3215, 3216, 3218, 3311, 3312
ENGL 3361	3315
MUSL 3124, 3126, 3127	HIST 3201, 3202
MUST 3111	PHIL 3103
THEA 3113	
CULTURAL DIVERSITY (choose one)	ECONOMICS (choose one)
ANTH 3258, 3259, 3306	ECON 3203, 3204
SOCI 3258, 3259, 3306	
CHIC 3201	
NURS 3319	TECHNOLOGY AND SOCIETY
MUSL 3324	ITS 3350
LING 3220	

Total Preprofessional Courses = 73 hours

### PROFESSIONAL COURSES

#### JUNIOR

Fall Semester		
CLSC 3301	Clinical Immunology	3
CLSC 3308	Body Fluids	3
CLSC 4301	Clinical Chemistry	4
CLSC 3303	Hematology and Coagulation	3
CLSC 2311	Basic Hematology and Coagulation Lab	2
CLSC 3306	Clinical Microbiology I	3
		<u>18</u>
Spring Semester		
CLSC 4406	Clinical Microbiology II	4
CLSC 1406	Clinical Microbiology Lab	1
CLSC 3410	Immunohematology	3
CLSC 1401	Immunohematology Lab	1
CLSC 4408	Advanced Clinical Chemistry	4
CLSC 3406	Topics in Laboratory Medicine	3
		<u>16</u>
Summer		
CLSC 3401	Clinical Laboratory Skills I	3
CLSC 3402	Clinical Laboratory Skills II	3
		<u>6</u>

#### SENIOR

Fall Semester		
CLSC 7406	Preceptorship I	7
CLSC 3400	Clinical Laboratory Management and Supervision	3
CLSC 3414	Clinical Pathology Seminar I	3
CLSC 1414	Clinical Pathology Seminar Lab	1
		<u>14</u>
Spring Semester		
CLSC 7407	Preceptorship II	7
CLSC 3404	Clinical Education and Research	3
CLSC 3415	Clinical Pathology Seminar II	3
		<u>13</u>

Preprofessional hours = 73 hours

Professional hours = 67 hours

Total Hours for CLS degree = 140 hours

TOTAL HOURS - 140 hours including Preprofessional and professional course work; ENGL 3110, and MATH 3011 or 4109 are not counted toward degree requirements.

\* Course work in Organic Chemistry (Biochemistry) and Microbiology must be taken within the last five years.

### Clinical Laboratory Science (CLSC)

*General Prerequisite:* Admission to the Upper-division

#### 2210 Introduction to the Clinical Laboratory (2-0)

Information on the careers available in the clinical laboratory will be presented and tours of hospital, reference, and clinical laboratories will be taken. *Prerequisites:* BIOL 3211 and CHEM 3105.

#### 2311 Basic Hematology/Coagulation Laboratory (0-4)

This course is designed to develop the skills and techniques necessary to recognize and identify normal and abnormal components of the hematopoietic system. *Co-requisite:* CLSC 3303. Laboratory fee required.

#### 3301 Clinical Immunology (3-0)

This course covers basic immunology and its clinical applications. Interactions between various lymphoid cells and their secretions are examined. The role of the immune system in tumor growth, transplantation and rejection, and autoimmune diseases is examined. Various test methods and procedures used in the clinical lab are demonstrated and discussed. *Prerequisites:* MICR 4240.

#### 3303 Hematology and Coagulation (3-0)

This course is designed to provide a basic understanding of the fundamental mechanisms involved in blood cell formation and function and the etiology and treatment of blood disorders. *Prerequisites:* BIOL 3213. *Co-requisite:* CLSC 2311.

#### 3306 Clinical Microbiology I (2-2)

This course will cover the concentration, isolation, and identification of infectious mycological and parasitological specimens. *Prerequisite:* MICR 4240. Laboratory fee required.

#### 3308 Body Fluids (2-2)

This course will cover the chemical, serological, and coagulation procedures performed on body fluids. Laboratory fee required.

#### 4301 Clinical Chemistry (4-0)

Basic concepts of quality control, laboratory mathematics, colorimetry and spectrophotometry, fluorometry and radioimmunoassay are discussed. Chemical laboratory fundamentals and procedures are presented and related to normal and abnormal human physiology and biochemistry. *Prerequisites:* CHEM 3325 and CHEM 1325. *Co-requisite:* CLSC 3301.

#### 1401 Immunohematology Lab (0-2)

This laboratory course is designed to develop and refine skills in performing antigen and antibody identification techniques, compatibility testing, and blood component preparation. *Co-requisite:* CLSC 3410. Laboratory fee required.

#### 1406 Clinical Microbiology Lab (0-2)

This laboratory course develops the basic skills and techniques necessary in the identification of a variety of human pathogens found in the clinical laboratory. *Co-requisite:* CLSC 4406. Laboratory fee required.

#### 1414 Clinical Pathology Seminar (1-0)

Focuses on pathological findings and the role of the clinical laboratory in disease prevention, detection, and treatment. *Co-requisite:* CLSC 7406.

#### 1490 Special Problems (0-0-1)

Independent study in clinical laboratory research. Limit six credits. *Prerequisite:* Admission to the Clinical Laboratory Sciences program and instructor's approval.

#### 2490 Special Problems (0-0-2)

Independent study in clinical laboratory research. Limit six credits. *Prerequisite:* Admission to the Clinical Laboratory Sciences program and instructor's approval.

## 174/COLLEGE OF NURSING AND HEALTH SCIENCES

### 3400 Clinical Laboratory Management and Supervision (3-0)

This course will cover scheduling, workload recording, cost accounting, and instrument and method evaluation.

### 3401 Clinical Laboratory Skills I (0-9)

This course is designed to develop skills in clinical laboratory procedures. Experiences in serological, hematological, and microbiological applications are included. *Prerequisites:* CLSC 2311 and departmental approval. Laboratory fee required.

### 3402 Clinical Laboratory Skills II (0-9)

This course is designed to develop and refine skills in performing clinical laboratory procedures. A clinical practicum emphasizes clinical chemistry, immunohematological, and routine analysis applications in the clinical laboratory. *Prerequisite:* Departmental approval. Laboratory fee required.

### 3404 Clinical Education and Research (3-0)

Course will cover basic teaching techniques, development of continuing education programs, and proposal writing. *Prerequisite:* Departmental approval.

### 3406 Topics in Laboratory Medicine (3-0)

Current trends and changes in the clinical laboratory will be investigated.

### 3410 Immunohematology (3-0)

The immuno-chemical reactivity of blood antigens and antibodies, blood grouping, compatibility testing, and hemolytic disease of the newborn are presented. HLA testing and component therapy are explored. *Prerequisites:* CLSC 3301 and CLSC 3303. *Co-requisite:* CLSC 1401.

### 3414 Clinical Pathology Seminar I (3-0)

Correlation of disease states and changes in laboratory values—a case study approach. *Prerequisite:* Departmental approval.

### 3415 Clinical Pathology Seminar II (3-0)

Students will present current case studies and develop a research proposal. *Prerequisite:* Departmental approval.

### 3490 Special Problems (0-0-3)

Independent study in clinical laboratory research. Limit six credits. *Prerequisite:* Departmental approval.

### 4406 Clinical Microbiology II (4-0)

This course covers the pathogenesis and epidemiology of pathogenic organisms found in the hospital laboratory: bacteria and viruses. The diagnosis of infectious diseases by various cultivation and identification techniques are discussed. *Prerequisites:* CLSC 3306 and departmental approval. *Co-requisite:* CLSC 1406.

### 4408 Advanced Clinical Chemistry (4-0)

A continuation of CLSC 4301 with an emphasis on therapeutic and abused drug monitoring, pharmacokinetics, toxicology, hormones, and methods. *Prerequisites:* CLSC 4301 and departmental approval.

### 7406 Preceptorship I (0-0-21)

Techniques and their applications in routine analysis, clinical microbiology, hematology, and coagulation in the clinical laboratory setting. *Prerequisite:* CLSC 3402. *Co-requisite:* CLSC 1414.

### 7407 Preceptorship II (0-0-21)

Procedures of clinical chemistry, immunohematology, and serological applications in the clinical laboratory. Includes practicum. *Prerequisite:* CLSC 7406 and departmental approval.

### 7408 Preceptorship III (0-0-21)

This elective course will allow Clinical Laboratory Sciences students to practice their skills in a clinic setting.

## Program in Health Science

PROGRAM COORDINATOR: Brenda Smith

## Bachelor of Science In Health Science

The Health Science Degree prepares graduates to function as health professionals in health education and health promotion settings such as community health agencies, public health agencies, private business, and public schools. Students complete a common core of courses in Health Science and then select a minor in either Community Health, Education, or other approved area. The curriculum is designed to provide a broad general educational base as well as the basic skills, experiences, and professional competencies specific to the practice of health education/health promotion. Other professional responsibilities include acting as a resource person in health education and communicating the health and health education needs, concerns, and resources of a community. Graduates of this 134 semester hour program function in planning, implementing, evaluating, and coordinating health education/promotion programs and activities in a variety of settings.

Certified allied health professionals holding associate degrees may also continue their education to obtain a baccalaureate degree in Health Science. All college level courses comparable to the University courses required for this degree and professional foundation courses leading to a certificate in an allied health specialty field may be considered for transfer credit toward the Health Science degree.

### Degree Requirements for Health Science (134 semester hours)\*

#### General Foundations (68 hours)

English 3111, 3112, 3359	( 9 hours)
History 3101-3102	( 6 hours)
Political Science 3210-3211	( 6 hours)
Mathematics 3120 and Psychology 3103 (MATH 4109 or 4110 may be substituted for MATH 3120)	( 6 hours)
Biology 3105-1107, 3211-1211, 3213-1213	(12 hours)
Chemistry 4107-4108 or 3105-1105, 3106-1106	( 8 hours)
Psychology 3101 or Sociology 3101	( 3 hours)
Communication 3101 or 3102	( 3 hours)
Cultural Diversity (recommended: SOCI 3306, SOCI 3327, CHIC 3339, NURS 3319)	( 3 hours)
Economics	( 3 hours)
Fine Arts	( 3 hours)
Humanities	( 3 hours)
Interdisciplinary Technology and Society	( 3 hours)

#### Health Sciences (36 hours)

Required HSCI courses: (24 hours)

3101, 3202, 3301, 3303, 3304 or 3307, 3305, 3403, and 3406

Designated Electives: (Select 12 hours)

(Students completing a Community Health Minor must select HSCI 3308, 3315, and courses not designated for this minor)  
HSCI 3203, 3209, 3302, 3306, 3304 or 3307, 3308, 3310, 3311, 3315, 3320, 3400, 3404, 3407, 3408, 3411

#### Additional Degree Requirements (12 hours)

Electives: 12 hours of upper division courses (300-400 level)

(Biological Sciences recommended for students selecting an Education minor)

#### Minor Field: (18 hours, nine of which must be upper division)

Approved minor fields:

Community Health, Education, others in the areas of Business, Liberal Arts, and Science as approved by the College of Nursing and Health Sciences

Community Health Minor:

Health Science 3311, 3404, 3407, 3411, and 6400



**Education Minor:**

Students selecting health education for elementary and secondary school teaching must confirm general education and professional education requirements with the Coordinator of the Health Science Program and the Certification Office in the College of Education.

**Minor in Health Science: (18 hours)**

Health Science 3101, 3202, 3301, 3303, plus six hours selected from Health Science 3304 or 3307, 3305, 3403, and 3406

- \* Certified Allied Health professionals see Health Science Program coordinator for degree plan. These students may receive transfer credit for up to 66 semester hours earned in the student's associate degree program toward this degree. Professional foundation courses may account for up to 40 semester hours of this total transfer credit.

**Health Sciences (HSCI)****3101 Access to Health and Health Care (3-0)**

A survey course providing scientific information essential to understanding the complex factors that affect health. Personal health behavior of students is emphasized, and factors related to health in our society are explored. Includes exposure to the roles and functions of various members of the interdisciplinary health care team. Visits to community health care sites required.

**3202 Fundamentals of Nutrition (3-0)  
(Common Course Number BIOL 1322)**

Includes a study of the nutrients and their sources, their metabolic functions and effects on well being and health problems; also the components of adequate diets and local, national, and world nutritional problems. *Prerequisite:* BIOL 3105.

**3203 Wellness Dynamics (3-0)**

Study of the concept of wellness and its components; self-assessment of current health status and application of course content to develop an individual lifetime plan for improvement of health and promotion of personal wellness. Course fee required.

**3209 First Aid and Safety Practices (3-0)  
(Common Course Number PHED 1306)**

Current practices in first aid, reaction to life threatening situations, treatment of typical minor injuries in recreational activities, safety practices, and risk management to reduce accidents. Equipment Maintenance fee required.

**1320 Selected Topics in Health Science (1-0)**

Topics not included in or going beyond the regular offerings. *Prerequisite:* Departmental approval.

**2320 Selected Topics in Health Science (2-0)**

Topics not included in or going beyond the regular offering. *Prerequisite:* Departmental approval.

**3301 Community Health (3-0)**

Study of international, national, state, and local health problems and the governmental and voluntary health agencies which deal with these problems. Incidence and prevalence of specific community health problems and diseases; solutions suggested through coordinated efforts of school, health, and welfare organizations. *Prerequisite:* HSCI 3101.

**3302 Computerized Systems for Health Professionals (2-2)**

Provides an opportunity for health professionals to use computerized information systems to enhance professional practice. Analysis of current, future, and potential uses and constraints of computer systems in health science.

**3303 Current Health Issues and Problems (3-0)**

Current scientific findings regarding contemporary health problems and current trends associated with the promotion of health. May include the study of factors related to mental-emotional health; stress; stress management; suicide; development of self-esteem; consumer health and health service; and international health and border health concerns. *Prerequisite:* HSCI 3101.

**3304 Health Perspective In Aging (3-0)**

Examination of the lifelong aging process (physical and emotional) and health factors affecting the elderly. Course content includes theories of aging, health maintenance, and alternatives to institutionalization.

**3305 Substance Abuse (3-0)**

Pharmacological, psychological, and sociological effects of drug abuse on the individual and society. Emphasizes individuals' responsibility in regard to peer pressure, self-esteem, decision-making, and communication. Field trips may be required.

**3306 Environmental Health (3-0)**

Examination of the environment and its relationships to disease causation. Discussions on the physical, chemical, biological, and behavioral-sociological factors of man's environment. Emphasizes the principles and concepts of environmental health and environmental health hazards. *Field trips may be required.*

**3307 Death, Dying and Bereavement (3-0)**

Concepts, attitudes, ethics and lifestyle management related to dying, death, grief, and bereavement. The course provides in-depth knowledge of the medical, financial, physical, legal, and social implications of death and dying as related to health promotion and wellness.

**3308 Disease Characteristics, Prevention and Control (3-0)**

Study of the nature, prevention, treatment, and control of common communicable and non-communicable human diseases; examination of cultural, social, behavioral, biological, and environmental factors involved in promoting health and preventing disease. *Prerequisite:* BIOL 3213.

**3310 Media Development for Health Professionals (1-4)**

Development and use of a variety of multi-media resources to enhance professional practice, teaching, and marketing in diverse health agencies. The course provides an opportunity for students to select, prepare, and effectively use various types of media. *Prerequisite:* ENGL 3112.

**3311 Introduction to Epidemiology (3-0)**

Provides the health care professional with an understanding of the disease process from an epidemiologic and community health point of view. Basic concepts of the science of epidemiology presented with emphasis placed upon preventive health behavior. *Prerequisites:* HSCI 3308 and an undergraduate statistics course.

**3315 Research for the Health Professional (3-0)**

Introduction to basic research concepts and processes which enable health professionals to use and participate in health science research. Includes associated legal, ethical, and moral issues. *Prerequisite:* Undergraduate statistics course.

**3320 Selected Topics In Health Science (3-0)**

Topics not included in or going beyond the regular offerings. *Prerequisite:* Departmental approval.

**3400 Organizational Behavior and Leadership In Health Promotion (3-0)**

Organizational behavior and managerial skills as applied to health promotion in public, private, and commercial enterprises. Leadership, motivation, small group process, problem solving, ethics, interorganizational relationships, and organizational change. May include field trips. *Prerequisite:* HSCI 3301 plus 12 additional hours from Health Science core.

**3401 Teaching Health in Secondary School (3-0)**

Overview of both traditional and innovative teaching methods, materials, and resources in middle and secondary schools. Responsibilities of schools for curriculum development and instruction; adolescent health problems and their relationship to instruction. Practice of effective teaching techniques. *Field experience required. Prerequisite:* HSCI 3406 plus 15 semester hours from Health Science core; passing grade on TASP. Course fee required.

**3403 Family Life and Human Sexuality (3-0)**

The study of sexuality as an aspect of health; examination of society's beliefs and attitudes; the responsibility for sexual behavior as it relates to family values.

**3404 Public Health Administration (3-0)**

Study of basic principles, theories, and practices of public health administration. Emphasizes the development and organization of health programs from voluntary and official agencies to meet community health needs. *Prerequisite:* HSCI 3301.

**3406 Health Concerns of Pre-adolescents and Adolescents (3-0)**

Addresses major health problems, health risks, transitions, and lifestyle choices of pre-adolescents and adolescents. *Prerequisite:* Sophomore standing.

**3407 Planning and Evaluation in Health Science (3-0)**

Introduction to the principles and practices used in planning and evaluating health programs. Emphasizes theory and technical skills needed to plan and evaluate health education and health promotion programs. *Prerequisite:* HSCI 3315 plus 15 hours of Health Science core including HSCI 3301.

**3408 Independent Study in Health (0-0-3)**

Independent study of a designated health problem or health education issue or trend. *Prerequisite:* 12 semester hours from Health Science core and written consent of Health Science Program Coordinator.

**3411 Community Health Education (3-0)**

Emphasizes contemporary theories, methods, and materials used in wellness intervention, health promotion, and health education programs in the community. Field experience required. *Prerequisite:* HSCI 3311 and HSCI 3407. Course fee required.

**6400 Practicum in Community Health (0-0-21)**

Individually arranged practicum planned with official and voluntary community health agencies providing a minimum of 300 hours experience in health education and administration plus 15 hours of seminars. Supervised by University faculty and personnel from the official and/or voluntary health agencies. *Prerequisite:* HSCI 3202, 3303, 3305, 3400, and 3411 plus 12 additional hours of Health Science courses, HSCI GPA of 2.7 or better, and instructor's approval.

**Program in Kinesiology and Sports Studies**

PROGRAM COORDINATOR: Garland O'Quinn, Jr.

**Bachelor of Science in Kinesiology and Sports Studies**

The Bachelor of Science in Kinesiology and Sports Studies requires (1) a General Education Core of 60 hours, (2) 9 hours of upper division electives, (3) an 18 hour minor, and (4) Kinesiology courses of 42-45 hours. Students wishing to obtain a teaching certificate must take the Sports Studies tract and the education minor. Students who wish to pursue a career in adult fitness or who wish to pursue graduate study in exercise science, physical therapy, or similar fields should select the Health Fitness tract. Students wishing to work in sports related administrative offices should take Sports Administration tract.

Students who already have a bachelor's degree in some other field and who wish to pursue a teaching certificate to teach physical education should refer to the College of Education section of the catalog. Students desiring to pursue a Master of Science in Kinesiology should consult the Graduate Catalog.

Those students pursuing a Bachelor of Interdisciplinary Studies degree who wish to specialize in Kinesiology and Sports Studies are referred to the College of Education section of this catalog for specific requirements.

Initial entry into the Kinesiology and Sports Studies program should be as a pre-kinesiology major requiring only a declared interest in the field. Students in this category are restricted, in the major, to Kinesiology and Sports Studies freshman and sophomore level courses and to no more than two of the skills analysis courses (KIN 2301, 2303, 2304, 2305, 2306, 2307, 2309, 2310, 2311) provided that the prerequisite or co-requisites for these courses have been met.

Entry into the program as a Kinesiology major requires:

1. Completion of at least 45 hours with a 2.25 minimum GPA
2. Completion of the following program core of courses:  
BIOL 1107, 1211, 1213, 3105, 3211, and 3213  
MATH 3120 or 4109  
Computer application course  
KIN 3103

**MAJOR IN KINESIOLOGY AND SPORT STUDIES**

**1. General Education Core (60 hours)**

ENGL 3111*	ENGL 3112*	English	6 hours
COMM 3101*		Speech	3 hours
HIST 3101, HIST 3102		History	6 hours
POLS 3210, POLS 3211		Political Science	6 hours
MATH		Core Menu	6 hours
Computer Applications Course			3 hours
BIOL 3105, 1107, 3211, 1211, 3213, 1213		Biology	12 hours
HSCI 3202**		Nutrition	3 hours
FINE ARTS		Core Menu	3 hours
ECONOMICS		Core Menu	3 hours
CULTURAL DIVERSITY#		Core Menu	3 hours
HUMANITIES#		Core Menu	3 hours
TECHNOLOGY & SOCIETY		Core Menu	3 hours

\* Minimum grade of "C" required for teacher certification.

\*\* Kinesiology and Sports Studies majors who are also minoring in Athletic Training should substitute HSCI 3203, Wellness Dynamics.

# Students desiring a teaching certification take upper division English.

**2. Electives (9 hours of upper division courses)**

**3. Minor (18 hours)**

Students may select an approved minor from Liberal Arts, Science, Nursing and Health Sciences, Athletic Training, or Business. Students desiring a teaching certificate must take the Education Minor and must choose RED 3340 or RED 3342 as an elective. Students taking the Sports Administration tract must take the Business Minor.

**4. Kinesiology - Core Requirements (30 hours)**

KIN 3103	Foundations, History, Philosophy of Kinesiology and Sports
KIN 3232	Motor Learning
KIN 3412	Exercise Physiology
KIN 3313	Physical Assessment, Data Acquisition, and Management
KIN 3331	Anatomical Kinesiology
KIN 3409	Sports Activity Injuries, Training, and Emergency Care
KIN 3411	Organization and Administration of Kinesiology and Sports Programs and Legal Issues
KIN 3413	Biomechanics
KIN 3414	Special Populations: Characteristics and Motor Behavior
KIN 3430	Fitness Program and Appraisal

Choose one of the following:

**a. Sports Studies (12 hours)**

KIN 2302	Developmental Gymnastics - Motor Skill Analysis and Development
KIN 2304	Dance - Motor Skill Analysis and Development

Four sports analysis courses including at least one team sport and one individual sport [see list in (5)].

Sports Studies with a minor in Education must be chosen for teacher certification. The sophomore level English courses must be literature courses.

Minor in Education (18 hours):

EDPC	3300	Developmental Variations
KIN	3419	Methods and Materials in Elementary Schools
KIN	3421	Methods and Materials in Secondary Schools
SCED	3317	Multicultural Education in Secondary Schools
TED	6498	Student Teaching in All Levels Physical Education

b. Health Fitness (13 hours)

KIN	2233	Weight Control
KIN	2407	Therapeutic Exercise
KIN	3434	Coronary Intervention Programs

Three skills analysis courses with no more than one team sport [see list in (5)].

c. Sports Administration (15 hours)

KIN	3425	Sports Management
KIN	6450	Internship in Sports Management

Three skills analysis courses with no more than one individual sport [see list in (5)].

Minor in General Business (18 hours)\*

CIS	3200	Business Computer Applications
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and  
15 hours from the following:

ACCT	3309	Survey of Accounting Principles, Techniques and Concepts
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or

ACCT	3201	Principles of Accounting I
BLAW	3301	Legal Environment of Business
CIS	3345	Management Information Systems
ECON	3320	Money and Banking
FIN	3310	Business Finance
MGMT	3303	Introduction to Management and Organizational Behavior
MKT	3300	Principles of Marketing

\* Students electing this minor field must complete ECON 3204 (fulfills Economics requirement of Core) and MATH 3120, 3201, or STAT 3280 (fulfills Mathematics/Statistics requirement of Core).

For students interested in Athletic Training, the Kinesiology Program offers a minor in Athletic Training.

Minor in Athletic Training (18 hours)

HSCI	3202	Fundamentals of Nutrition
KIN	3409	Sports Activity Injuries, Training, and Emergency Care
KIN	3415	Advanced Athletic Training
KIN	3216	Athletic Training Practicum I
KIN	3316	Athletic Training Practicum II
KIN	3416	Athletic Training Practicum III

5. Skills Analysis Courses

Individual Sports

KIN	2301	Skill Analysis of Racquet Sports
KIN	2302	Developmental Gymnastics - Motor Skill Analysis and Development
KIN	2303	Track and Field - Motor Skill Analysis and Development
KIN	2304	Dance - Motor Skill Analysis and Development
KIN	2307	Aquatics - Motor Skill Analysis and Development

Team sports

KIN	2305	Basketball - Motor Skill Analysis and Development
KIN	2306	Football - Motor Skill Analysis and Development
KIN	2309	Soccer - Motor Skill Analysis and Development
KIN	2310	Baseball/Softball - Motor Skill Analysis and Development
KIN	2311	Volleyball - Motor Skill Analysis and Development

6. First Aid and Cardiopulmonary Resuscitation Requirement

Certification in first aid and cardiopulmonary resuscitation is required of all Kinesiology majors. Students should consult with athletic training personnel regarding practicum hours required for state and national certification.

## Kinesiology (KIN)

### 3103 Foundations, History, Philosophy of Kinesiology and Sports (3-0)

Historical and philosophical aspects of kinesiology and sports. Orientation to programs in public and private settings.

### 2233 Weight Control (2-0)

Weight regulating mechanisms, effects of diet and exercise, energy conservation, the setpoint, other theories of weight management, and methods of body composition assessment will be covered.

### 2240 Aquatics I Lifeguarding (1-2)

The program will introduce the student to Lifeguarding techniques, emergency water safety, and first aid techniques.

### 3216 Athletic Training Practicum I (0-0-15)

Supervised experience in athletic training. *Prerequisite:* Instructor's approval.

### 3232 Motor Learning (3-0)

A study of the psychological basis of human performance. Topics include motor skills learning and acquisition, motivation and arousal, modeling, effective behavioral coaching, and social-psychological aspects of sports performance. PSYC 3210 recommended.

### 3241 Aquatics II Water Safety Instruction (2-2)

The program will introduce the student to basic swimming techniques used for instruction, basic and emergency water safety. *Prerequisite:* KIN 2240.

### 3242 Spanish Dance (2-2)

Provides information on the origins, traditions, music, and choreographic styles relating to the dances of Spain and Spanish America.

### 2301 Skill Analysis of Racquet Sports (1-2)

Analysis and evaluation of stroke techniques and strategies. Topics include equipment, facilities, drills, rules, and risk management. Physical Education Course fee required.

### 2302 Developmental Gymnastics - Motor Skill Analysis and Development (1-2)

Analysis review and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

### 2303 Track and Field - Motor Skill Analysis and Development (1-2)

Analysis, review, and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

### 2304 Dance - Motor Skill Analysis and Development (1-2)

Analysis, review, and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

### 2305 Basketball - Motor Skill Analysis and Development (1-2)

Analysis, review, and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

### 2306 Football - Motor Skill Analysis and Development (1-2)

Analysis, review, and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

### 2307 Aquatics - Motor Skill Analysis and Development (1-2)

Analysis, review, and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

**2309 Soccer - Motor Skill Analysis and Development (1-2)**

Analysis, review, and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

**2310 Baseball and Softball - Motor Skill Analysis and Development (1-2)**

Analysis, review, and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

**2311 Volleyball - Motor Skill Analysis and Development (1-2)**

Analysis, review, and development of skills in theory and practice. *Prerequisite:* KIN 3232 or concurrently. Physical Education Course fee required.

**3313 Physical Assessment, Data Acquisition and Management (3-0)**

Measurement and evaluation of physical attributes and performance. *Prerequisite:* MATH 3120 or MATH 4109; and CS 3110.

**3316 Athletic Training Practicum II (0-0-15)**

Supervised experience in athletic training. *Prerequisite:* Instructor's approval.

**3318 Growth, Maturation, Health, Motor Behavior and Movement Experiences in Early Childhood (3-0)**

Physical growth, maturation, and motor development occurring in early childhood; principles of and activities for motor skill development; components of health related fitness for life; health needs of young children. Physical Education Course fee required.

**3320 Growth, Maturation, Health, Motor Behavior in Middle Childhood (3-0)**

Identification of the diverse growth, maturation, and motor behaviors in middle childhood, their life span health-related fitness activities, and motor skill development.

**3331 Anatomical Kinesiology (3-0)**

A study of the science of human movement with special consideration given to anatomical and neuromuscular contributions. *Prerequisite:* BIOL 3211.

**2407 Therapeutic Exercise (2-0)**

The study of anatomically and physiologically-based human movement to effect neuromuscular response in improving motor and systemic function.

**2422 Outdoor Education and Leisure Management (2-0)**

Basic activities and socioeconomic determinants of recreational needs and practices. Emphasis on outdoor skills, intramural sports programs, and recreation centers. Physical Education Course fee required.

**3409 Sports Activity Injuries, Training, and Emergency Care (3-0)**

Recognition and prevention of injuries in sports activities as well as emergency care procedures/provisions for common physical education and playground injuries. *Prerequisite:* Senior standing or departmental approval. Athletic Training fee required.

**3410 Independent Study (0-0-3)**

Independent studies in kinesiology and sports. *Prerequisites:* Senior standing and departmental approval.

**3411 Organization and Administration of Kinesiology and Sports Programs and Legal Issues (3-0)**

Organization and administration of kinesiology and sports programs including leadership styles, administration of personnel (including evaluation), facilities management, finance, purchasing, public relations, risk management, and legal issues.

**3412 Exercise Physiology (2-2)**

Study of the physiological adaptations the body makes to exercise stress, the principles of strength development, and muscular and cardiorespiratory endurance development. *Prerequisites:* BIOL 3211-BIOL 1211 and BIOL 3213-BIOL 1213. Physical Education Course fee required.

**3413 Biomechanics (2-2)**

The study of biomechanics of human movement with concepts for coaching, rehabilitation, injury prevention, and the enhancement of human performance. *Prerequisite:* KIN 3331. Fees required.

**3414 Special Populations: Characteristics and Motor Behavior (3-0)**

Development of an understanding of atypical persons and programs of sports and physical activity adapted to their needs. The nature of physical, mental, emotional, and social disabilities will be discussed with application of corrective, developmental, and remedial physical activities in various social settings. Practical laboratory experiences will be provided.

**3415 Advanced Athletic Training (3-0)**

Provides opportunities for the development of competence in the uses of common techniques for both the prevention and rehabilitation of athletic injuries. Students will be provided opportunities to demonstrate an understanding of bone and soft tissue injury management and an understanding of the differences between female and male athletes, and their implications for conditioning and injury management. *Prerequisites:* BIOL 3211, BIOL 1211, BIOL 3213, BIOL 1213, and KIN 3409. Athletic Training fee required.

**3416 Athletic Training Practicum III (0-0-15)**

Supervised experience in athletic training. *Prerequisite:* Instructor's approval.

**3419 Methods and Materials in Elementary Schools (3-0)**

Curriculum planning, materials selection and evaluation, Texas essential elements, class management, and teaching-learning process for elementary physical education teachers. Field experience required. Physical Education Course fee required.

**3421 Methods and Materials in Secondary Schools (3-0)**

Curriculum planning materials selection and evaluation, Texas essential elements, class management, and teaching-learning process for secondary physical education teachers. Field experience required. Physical Education Course fee required.

**3425 Sports Management (3-0)**

An introductory course in the theory of administrative thought and its implications for sports management. Broad area of administrative development, structure and functions of organizations, managerial styles, staff relationships, and adaptations of organization, functions, and administration of sports organizations will be considered. *Prerequisites:* Junior status, kinesiology major, or departmental approval.

**3430 Fitness Programs and Appraisal (2-3)**

Programs to enhance physical fitness, methods of fitness assessment, and individualized exercise prescription methods are covered. *Prerequisite:* KIN 3412 or concurrently.

**3434 Coronary Intervention Programs (3-0)**

The anatomy and physiology of the cardiovascular system, cardiovascular disease, electrophysiology, exercise tolerance testing, ECG interpretation, risk factor analysis, prevention programs, and cardiac rehabilitation programs will be discussed. *Prerequisite:* KIN 3412 or instructor's approval. Course fee required.

**3490 Independent Study (0-0-3)**

Individual directed study in an area of special interest. *Prerequisite:* Departmental approval.

**6450 Internship in Sports Management (0-0-30)**

A one semester supervised, participatory experience in which the principles and theories of sports management are applied to a sports agency. Minimum 30 hours per week in an agency for a total of 450 hours. *Prerequisite:* KIN 3425, completion of business administration minor, senior status, and departmental approval.

**6498 Student Teaching in All Levels Physical Education (1-0-30)**

Minimum of ten weeks all-day of student teaching (five weeks in an elementary school; five weeks in a secondary school), plus fifteen hours of seminar. Special admission requirements for student teaching. *Prerequisite:* All other professional studies (minor) courses.

## Physical Education Activity Courses (PE)

It should be noted that physical education activity courses often involve strenuous physical activity and/or participation in activities with inherent risk of personal injury. Students are advised to review their physical condition, consulting with a physician if appropriate, before enrollment in such courses. The University is not responsible for illness or injury resulting from participation in these courses.

The following activity courses, all of which are co-educational, are offered by the department. These courses may be repeated for credit and are open to all students. All equipment and use of lockers is provided. There is an extra fee charged for participation in these courses. This fee is used for the provision and maintenance of the equipment used.

- 1101 Activity Course (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1104 Aerobic Dance (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1107 Archery (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1110 Badminton (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1113 Ballroom Dance (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1116 Basketball (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1119 Bowling (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Held off campus. Fee determined at bowling lanes.
- 1120 Walking (0-3)**  
A program of walking designed to increase cardiovascular health and prepare for competition where desired.
- 1122 Conditioning (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1125 Cheerleading (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1128 Beginning Fencing (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1129 Intermediate Fencing (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Beginning Fencing strongly recommended prior to enrollment in this course. Physical Education Course fee required.
- 1130 Advanced Fencing (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Intermediate Fencing strongly recommended prior to enrollment in this course. Physical Education Course fee required.
- 1132 Field Hockey (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1134 Fishing (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1137 Golf (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Fee determined at golf course.
- 1140 Gymnastics (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1143 Handball (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1146 Hispanic Dance (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1147 T'ai Chi Ch'uan (0-3)**  
Stress reduction, increased strength, coordination through a variety of specific exercises and breathing techniques.
- 1149 Judo (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1151 Beginning Karate (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1152 Intermediate Karate (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Beginning Karate strongly recommended prior to enrollment in this course. Physical Education Course fee required.
- 1153 Advanced Karate (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Intermediate Karate strongly recommended prior to enrollment in this course. Physical Education Course fee required.
- 1155 Marksmanship-Rifle and Pistol (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1157 Military Conditioning (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1159 Beginning Modern Dance (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1160 Intermediate Modern Dance (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1161 Advanced Modern Dance (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1164 Beginning Racquetball (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1165 Intermediate Racquetball (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1166 Advanced Racquetball (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1168 Rugby Football (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.
- 1170 Self Defense (0-3)**  
Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

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**1173 Soccer (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1176 Softball (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1178 Beginning Swimming (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1179 Intermediate Swimming (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1180 Advanced Swimming (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1182 Beginning Tennis (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1183 Intermediate Tennis (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1184 Advanced Tennis (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1186 Touch Football (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1188 Volleyball (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1191 Water Polo (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1194 Beginning Weight Training (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1195 Intermediate Weight Training (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

**1196 Advanced Weight Training (0-3)**

Activity course. Co-educational. May be repeated for credit. Open to all students. Physical Education Course fee required.

School. A GPA higher than 3.0 may offset GRE scores lower than the specified minimums and GRE scores higher than the specified minimums may offset a GPA lower than 3.0. Conditional acceptance into graduate school is also possible. A description of the Master of Science program is in the Graduate Studies Catalog.

- 2) Undergraduate students must take the GRE and apply to Graduate School prior to the completion of the prescribed 96 undergraduate hours.
- 3) Students whose grades in SPLP courses do not appear to demonstrate the potential for success in Graduate School should discuss the advisability of continuing in the Speech-Language Pathology Program with their advisor prior to beginning the third year.

**Academic Core Courses (62 semester hours)**

English 3111, 3112	(6 hours)
History 3101, 3102	(6 hours)
Political Science 3210, 3211	(6 hours)
Communication 3101 or 3102	(3 hours)
Psychology 3101, 3103, 3210	(9 hours)
Linguistics 3220, 3357	(6 hours)
Mathematics 3120	(3 hours)
Biology 3105, 1107, 3211, 1211	(8 hours)
Fine Arts	(Core Menu) (3 hours)
Humanity	(Core Menu) (3 hours)
Economics	(Core Menu) (3 hours)
Technology and Society 3350	(3 hours)
Elective	(3 hours)

**Pre-Professional Core Courses (34 semester hours)**

SPLP 1110	General Phonetics Laboratory
SPLP 3110	General Phonetics
SPLP 3210	Survey of Speech, Hearing and Language Disorders
SPLP 3220	Hearing Science
SPLP 3312	Anatomy and Physiology of the Speech Mechanism
SPLP 3313	Articulation Disorders
SPLP 3314	Language Therapy
SPLP 3315	Language Development
SPLP 3318	Principles of Clinical Management
SPLP 3409	Audiology
SPLP 3412	Neural Bases of Speech and Language

One course selected from:

SPLP 3100	Introduction to Sign Language
SPLP 3420	Independent Study in Speech, Hearing and Language Disorders
SPLP 3440	Clinical Practicum in Audiology

TOTAL UNDERGRADUATE: 96 semester hours

**RECOMMENDED SEQUENCE**

Fall	Spring	Summer	Total
FIRST YEAR			
PSYC 3101	MATH 3120		
ENGL 3111	ENGL 3112		
HIST 3101	HIST 3102		
SPLP 3110	SPLP 3210		
SPLP 1110	PSYC 3101		
COMM 3101			
or 3102			
16 hours	15 hours		= 31 hours

**Program in Speech-Language Pathology**

PROGRAM COORDINATOR: Joseph Perozzi

The Program in Speech-Language Pathology offers an innovative five-year plan which culminates with the Master of Science Degree. Students who complete the plan fulfill academic course work and clinical practicum requirements for the Texas License, as well as, the Certificate of Clinical Competence in Speech-Language Pathology. The plan includes 96 semester hours of undergraduate course work and 54 semester hours of graduate course work, all of which may be completed in five years. Undergraduate students selecting this program will be designated as pre-Speech-Language Pathology majors. Since the plan of study culminates with the Master of Science Degree, undergraduates should be aware of the following.

- 1) A GPA of 3.0 in upper-division preparatory SPLP undergraduate courses and GRE scores of 500 Verbal and 500 Analytical are required for unconditional acceptance into the Graduate

Fall	Spring	Summer	Total
<b>SECOND YEAR</b>			
POLS 3210	POLS 3211		
BIOL 3105	BIOL 3211		
BIOL 1107	BIOL 1211		
PSYC 3210	SPLP 3220		
SPLP 3312	SPLP 3314		
SPLP 3315	FINE ART		
16 hours	16 hours		= 32 hours
<b>THIRD YEAR</b>			
LING 3220	SPLP 3318	Elective-3	
SPLP 3313	LING 3357		
SPLP 3409	SPLP 3412		
HUMANITY	SPLP Elective-3		
ECONOMICS	ITS 3350		
15 hours	15 hours	3 hours	= 33 hours
<b>FOURTH YEAR (GRADUATE)</b>			
SPLP 3520	SPLP 3500	SPLP 3530	
SPLP 3563	SPLP 3560	SPLP 3559	
SPLP 3564	SPLP 3562		
SPLP 3569	Elective		
12 hours	12 hours	6 hours	= 30 hours
<b>FIFTH YEAR (GRADUATE)</b>			
SPLP 6579	SPLP 3558	SPLP 6589	
SPLP 3565	Elective-3	Elective-3	
9 hours	6 hours	9 hours	= 24 hours
HOURS	TOTAL		= 150

## Speech-Language Pathology (SPLP)

### 1110 General Phonetics Laboratory (0-2)

Experience using the International Phonetic Alphabet for transcription of the speech of normal and disordered speakers. *Co-requisite:* SPLP 3110.

### 3100 Introduction to Sign Language (3-0)

A beginning course in sign language, including finger spelling and the system of signed English.

### 3110 General Phonetics (3-0)

Principles of speech sound production, their acoustic correlates, and their perception. Instruction in the use of the International Phonetic Alphabet is included with application to communication disorders. *Co-requisite:* SPLP 1110.

### 3210 Survey of Speech, Hearing and Language Disorders (3-0)

A survey of disorders associated with the five parameters of communication: audition, articulation, voice, fluency, and language. Course includes discussion of the professional aspects of speech-language pathology and audiology.

### 3220 Hearing Science (3-0)

Anatomy and physiology of the auditory mechanism and the nature, measurement, and psychoacoustics of sound.

### 3312 Anatomy and Physiology of the Speech Mechanism (3-0)

The anatomical and physiological bases of speech. Emphasis is placed on respiration, phonation, resonance, articulation, and deglutition.

### 3313 Articulation Disorders (3-0)

A study of articulation disorders in children and adults including characteristics, causes, and procedures for diagnosis and management. *Prerequisites:* SPLP 1110, 3110, 3210, 3312.

### 3314 Language Therapy (3-0)

Models of language therapy applicable to language-impaired populations, including limited English proficient children, with emphasis on clinical management. *Prerequisites:* SPLP 1110, 3110, 3210, 3312, 3315.

### 3315 Language Development (3-0)

Theory and chronology of speech and language acquisition with emphasis on the cognitive and physiological correlates of language as related to communication disorders. Cultural impacts on language development and usage are discussed.

### 3318 Principles of Clinical Management (3-0)

Preparation of therapy plans, case summaries, term end reports, and diagnostic reports. Completion of 25 clock hours of supervised clinical observation. *Prerequisites:* SPLP 1110, 3110, 3210, 3312, 3313, 3314, 3315.

### 3409 Audiology (3-0)

Measurement of hearing, audiometric procedures, and review of specialized tests. *Prerequisite:* SPLP 3220.

### 3412 Neural Bases of Speech and Language (3-0)

Study of neuroanatomical and neurophysiological mechanisms related to speech and language. *Prerequisite:* BIOL 3211, BIOL 1211, SPLP 3312 with grades of "C" or better.

### 3420 Independent Study in Speech, Hearing and Language Disorders (0-0-3)

Individual directed study. May be repeated when topic varies. *Prerequisites:* Completion of 12 semester hours of SPLP course work with a GPA of 2.5 and instructor's approval.

### 3440 Clinical Practicum in Audiology (0-0-6)

Supervised practicum in audiology. *Prerequisites:* SPLP 3220, SPLP 3409. Liability insurance required. Course fee required.

**COOPERATIVE BACHELORS IN OCCUPATIONAL THERAPY:** The University of Texas Medical Branch at Galveston in cooperation with UTEP offers the Bachelors in Occupational Therapy degree program. The professional program in occupational therapy requires 26 months and leads to a baccalaureate degree in Occupational Therapy from The University of Texas Medical Branch School of Allied Health Sciences, and eligibility for certification as a registered occupational therapist (O.T.R.). At the end of the didactic course work, the student is scheduled for six months of full-time clinical experiences which are required for graduation, certification, and licensure. Relocation to off-campus facilities is at the student's own expense.

Further information about the program can be obtained from the Program Coordinator who is located in the College of Nursing and Health Sciences (915-747-7270), or from the Department of Occupational Therapy (409-772-4705) at The University of Texas Medical Branch at Galveston. It is anticipated that this program will become a UTEP program beginning in the fall semester, 1997. Persons interested in admission to the program after that date should check with the department for specific prerequisite and program changes.








# College of Science

Biological Sciences  
Chemistry  
Geological Sciences  
Mathematical Sciences  
Physics

Dr. Jack Bristol, Dean  
Dr. Pablo Arenaz, Associate Dean  
Dr. E. Alan Dean, Assistant Dean

Bell Hall, Room 100  
Phone: (915) 747-5536  
Fax: (915) 747-6807



# COLLEGE OF SCIENCE

## Introduction

The College of Science was formed in 1965 when Texas Western College divided the Arts and Sciences College into the Colleges of Liberal Arts and Science. However, the college's academic departments have roots that start at the beginning of the institution. In 1913 the curriculum of the Texas State School of Mines and Metallurgy included physics and mining, engineering, mathematics, chemistry, geology, mineralogy, shop work, and drawing. From these roots the University of Texas at El Paso's College of Science has grown to over 80 faculty in five academic departments--Biological Sciences, Chemistry, Geological Sciences, Mathematical Sciences, and Physics--offering Bachelor of Science degree programs.

The preparation of these students for graduate and professional schools and careers as scientists and teachers is the primary mission of the college. In addition, the college offers basic science and mathematics courses needed by students seeking other careers.

The faculty of the College share a commitment to the idea that teaching and research are critically important in the education of students in science. The College is proud of the large number of undergraduates that participate in research laboratories. Although many of the faculty have achieved international reputations for their research, all, from the Dean of the college to the newest member of the faculty, have classroom teaching responsibilities.

Reflecting the long connection between the arts and sciences, each academic department also offers a Bachelor of Arts degree program through the College of Liberal Arts. The Graduate Studies Catalog describes the Master of Science degree programs offered by each academic department and the Doctor of Philosophy degree programs offered in Geological Sciences. Doctor of Philosophy degrees in the interdisciplinary areas of Materials Science and Engineering and Environmental Science and Engineering are listed in the Interdisciplinary Studies section of the Graduate Studies Catalog.

## Undergraduate Programs

Each department of the College of Science and the Department of Psychology offers the Bachelor of Science (BS) degree subject to the general requirements listed below. Each department also offers the Bachelor of Arts (BA) degree subject to the general requirements listed in the College of Liberal Arts.

A student planning a technical career or graduate work is advised to follow the BS degree route. Either the BS or the BA degree is suitable for professional school admission (see Preprofessional Programs).

BS programs that include course work leading to Secondary Teacher Certification are offered by each department and in three different interdisciplinary programs in science. BA programs leading to Teacher Certification are also available in Chemistry and Mathematics.

## Departmental Honors Programs

The Departments of Biological Sciences, Chemistry, Geological Sciences, Physics, and Psychology have departmental honors programs for qualified undergraduates. Information about these programs are found in each department's section of this catalog.

## Bachelor of Science Degree Requirements

The BS degree in all science disciplines requires a minimum of 135 semester hours of credit including a minimum of 45 upper-division (junior and senior) semester hours. A GPA of 2.0 or greater is required in all courses in the major. In addition, a minimum GPA of 2.0 must be achieved in all course work at UTEP. Individual degree plans may restrict or extend some of the general education requirements, which are:

**English:** Completion of the English composition component of the core curriculum and ENGL 3359 (Technical Writing).

**History:** Completion of the history component of the core curriculum.

**Political Science:** Completion of the political science component of the core curriculum.

**Natural Science:** The natural science component of the core curriculum is satisfied by the major requirements for all degree plans except those offered by the Department of Mathematical Sciences. In the case of mathematics, this component is satisfied by the additional science requirement.

**Mathematics/Statistics:** Completion of MATH 4111 (Calculus I), and either MATH 3112 (Calculus II) or the sequence STAT 3280, 3281, and 1282 (Statistical Methods).

**Fine Arts:** Completion of the fine arts component of the core curriculum.

**Humanities:** Completion of the humanities component of the core curriculum.

**Cultural Diversity:** Completion of the cultural diversity component of the core curriculum.

**Economics:** Completion of the economics component of the core curriculum.

**Technology and Society:** Completion of the technology and society component of the core curriculum.

**Computer Science:** CS 4101 (Introduction to Computer Science) or CS 4120 (Computer Programming for Scientists and Engineers).

**Major:** Completion of a major field concentration of prescribed courses. Specific disciplines have requirements that range from 36 to 43 semester hours. In addition, interdisciplinary majors are also offered; they range from 49 to 59 semester hours. Enrollment in upper-division courses in the major is permitted only after the student has completed all lower-division prerequisites with a minimum GPA of 2.0 in all classes attempted and a grade of "C" or better in all required lower-division courses in the major.

**Minor:** The completion of a minimum of 18 semester hours, at least six of which must be upper-division in an area related to the major. Each department specifies acceptable minors. Interdisciplinary majors do not require a minor.

**Additional Science:** Completion of a minimum of six approved semester hours in a field of science that is not the major or minor.

**Elective Courses:** In addition to the above requirements, elective courses of general interest or relevance to the major field of the student as needed to complete the required 135 semester hours credit and the minimum 45 upper-division semester hours of credit. Courses in which the material is repetitive of, or included within, courses required by the department or college may not be applied as elective credit toward the BS degree.

## Major Fields

The College of Science offers BS degrees in the following disciplines: Applied Mathematics, Biology, Chemistry, Earth Science, Geology, Geophysics, Mathematics, Microbiology, Physics, and Psychology. The specific requirements for these disciplines and various options may be found in the academic department sections of this catalog. In addition, BS degrees are offered in the following interdisciplinary areas: Life/Earth Sciences, Natural Sciences, and Physical Sciences.

Students planning to obtain a degree in the College of Science must major in one of the above fields. Students planning to enter medical or dental schools normally obtain a BS or BA degree in science and for this reason they should declare a major field (pre-medical and pre-dental are not major fields).

Students will be classified as pre-science students until they have earned a grade of "C" or better in MATH 4109 (Precalculus I) or have demonstrated an equivalent mathematical background. Upon satisfying this requirement, students must declare a major in one of the above areas in order to continue to enroll in the college.

**Pre-Science Students** — Pre-Science students must be advised in the Academic Advising Center and must make progress toward declaring their major. This progress is measured by the completion of a minimum of three semester hours of mathematics per semester and a minimum College of Science GPA of 2.0. Pre-Science students who do not complete three semester hours of mathematics per semester or whose college GPA falls below 2.0 after completing a minimum of nine semester hours of College of Science course work may be placed on College probation. Thereafter, without evidence of progress, the student may be suspended from the College (see the College/Major Academic Standing section of this catalog).

**Double majors:** Students may enroll as double majors in all BS degree plans except Earth Science, Life/Earth Science, Natural Science, and Physical Science. Double majors in a single department are not allowed. Geophysics majors are limited in the selection of a second major to Applied Mathematics. All other BS degree plans are limited in the selection of a second major to one of the approved minors for the major degree plan. Double majors must satisfactorily complete all course work required of majors in each department.

**Second baccalaureate degrees:** Students whose first baccalaureate degree was awarded by the College of Science may not obtain a second baccalaureate degree in the same academic department. Students seeking a second BS degree in a different department within the College of Science must complete at least 24 semester hours, specified by the department, following the award of the first BS degree. Students may petition the Dean of Science to reserve up to nine semester hours taken during the last semester of the initial degree work for credit toward the second BS degree.

Students whose first baccalaureate degrees were earned in another College of The University of Texas at El Paso, or at another accredited institution, may enroll as candidates for a second BS degree in the College of Science. This degree will be awarded upon satisfactory completion of all degree requirements of the College of Science and of the academic department of the second major.

**Advising**

All students enrolled in the College of Science must be advised prior to registration. Students who have selected a major field of study will be advised by undergraduate advisors within the student's major department. Students who have selected an interdisciplinary major will be advised in the Dean of Science Office. Pre-science students will be advised in the Academic Advising Center.

Students planning a career in Clinical Laboratory Science, Nursing, Physical Therapy, or other allied health fields are referred to the College of Nursing and Health Sciences section of this catalog and should be advised in that college.

**Preprofessional Programs**

Students planning to enter medical, dental, pharmacy, or veterinary schools normally require a Baccalaureate degree (with a major). Information about entrance requirements to professional schools may be obtained from the Preprofessional Advisor in the Academic Advising Center. Students should seek this advice by the time they have completed 60 semester hours of credit toward a degree.

**Secondary Teacher Certification**

BS degrees with concentrations designed for secondary teacher certification are available in the following disciplines: Biology, Chemistry, Earth Science, Mathematics, and Physics. A second minor in secondary education must be selected for the purpose of teacher certification in these fields. Secondary teacher certification is also available in the following interdisciplinary fields by selecting the secondary education minor: Life/Earth Sciences, Natural Sciences, and Physical Sciences.

**Admission to Secondary Teacher Education:** Student may not enroll in the upper-division courses in the secondary education minor until they are admitted to the secondary teacher education program. This admission requires a minimum of 60 semester hours with a GPA of

2.25 or better including a minimum of nine semester hours in the major with a GPA of 2.5 or better. Additional requirements and procedures are described in the College of Education section of this catalog.

**Secondary Education Minor:** The minor in secondary education consists of 24 semester hours:

COMM	3101	Public Speaking
EDPC	3300	Developmental Variations
RED	3342	Reading and Study in the Content Areas
SCED	3311	Curriculum Planning in the Secondary School
SCED	3317	Multicultural Education in the Secondary School (This course satisfies the cultural diversity component of the core curriculum.)
SCED	6491	Student Teaching in the Secondary School
SCED	3467	Teaching Math in Secondary School
or		
SCED	3468	Teaching Science in Secondary School

In addition, the humanities component of the core curriculum is restricted to English literature courses. Also, single-discipline majors require a science minor of at least 12 semester hours in an approved field (interdisciplinary degrees do not require a science minor). The general College of Science requirement of six approved semester hours in a field of science that is not the major or minor may be waived for the minor in Secondary Education.

**Degree Plans**

Any student who has completed 60 credit hours is required to file for a degree plan. The degree plan, which is a listing of the outstanding requirements for graduation, must be obtained from the Office of the Dean of the College of Science (Dean of the College of Liberal Arts for the BA degree). A copy of the degree plan will also be filed with the student's major department. The degree plan must be updated following the completion of 90 credit hours. Each student is required to obtain confirmation of their standing from the Office of the Dean of the College of Science prior to registering for the semester in which all course work for a degree will be completed.

**First Year Programs**

The prerequisite structure in science programs requires careful attention to course sequences. To assist the student in structuring such a program, typical first year programs are as follows:

**Biological Sciences**

<i>Fall Semester</i>		<i>Hrs.</i>
Mathematics (Pre-Calculus*)	.....	4
General Biology	.....	4
General Chemistry**	.....	4
English	.....	3
History of the U.S. or American Government	.....	3
<i>Spring Semester</i>		<i>Hrs.</i>
General Botany, Microbiology, or Zoology	.....	4
General Chemistry	.....	4
English	.....	3
Mathematics (Calculus)	.....	3/4

**Chemistry**

<i>Fall Semester</i>		<i>Hrs.</i>
General Chemistry**	.....	4
Mathematics (Pre-Calculus*)	.....	4
English	.....	3
History of the U.S. or American Government	.....	3
<i>Spring Semester</i>		<i>Hrs.</i>
General Chemistry	.....	4
Mathematics (Calculus)	.....	3/4
English	.....	3
History of the U.S. or American Government	.....	3

**Geological Sciences****GEOLOGY**

<i>Fall Semester</i>	<i>Hrs.</i>
Geology.....	4
Mathematics (Pre-Calculus*).....	4
English.....	3
History of the U.S. or American Government.....	3

*Spring Semester*

<i>Hrs.</i>	
Geology.....	4
Mathematics (Calculus).....	3/4
English.....	3
General Chemistry.....	4
Electives.....	3

**GEOPHYSICS**

<i>Fall Semester</i>	<i>Hrs.</i>
Geology.....	4
Mathematics (Pre-Calculus*).....	4
English.....	3
History of the U.S. or American Government.....	3

*Spring Semester*

<i>Hrs.</i>	
Geology.....	4
Mathematics (Calculus).....	3/4
Physics***.....	4
Physics Laboratory.....	1
Chemistry.....	4

**Mathematics**

<i>Fall Semester</i>	<i>Hrs.</i>
Mathematics (Pre-Calculus*).....	4
English.....	3
History of the U.S. or American Government.....	3
Electives.....	3/6

*Spring Semester*

<i>Hrs.</i>	
Mathematics (Calculus).....	3/4
English.....	3
History of the U.S. or American Government.....	3
Electives.....	3/6

**Physics**

<i>Fall Semester</i>	<i>Hrs.</i>
Physics Lab I.....	1
Mathematics (Pre-Calculus*).....	4
English.....	3
History of the U.S. or American Government.....	3
Electives.....	3/6

*Spring Semester*

<i>Hrs.</i>	
Physics Lab II.....	1
Physics***.....	4
Mathematics (Calculus).....	3
English.....	3
History of the U.S. or American Government.....	3
Electives.....	3/6

\* A student may enroll in MATH 4111 (Calculus) if he/she has the appropriate prerequisite.

\*\* Prerequisite: MATH 4110, or concurrently.

\*\*\* Prerequisite: MATH 4111, or concurrently.

**Interdisciplinary Degrees**

The major and minor requirements for the BS and BA degrees are listed in respective department sections. The interdisciplinary BS degrees, Life/Earth Sciences, Natural Sciences, and Physical Sciences, do not require a minor unless certification in Secondary Teaching is sought.

**BS in Life/Earth Sciences**

The requirement to obtain the BS in Life/Earth Sciences consists of the general College of Science requirements plus the following specific requirements:

**Interdisciplinary Major** (a minimum of 50 semester hours including 25 semester hours of upper-division course work): BIOL 3105, BIOL 1107, BOT 4210, ZOOL 4206, plus 12 upper-division semester hours in Biological Sciences; GEOL 3101, 1101, 3102, 1102, (or GEOL 3103 and 3104), GEOL 3213, 3305, 4320 or 3380, and courses selected from the following for a minimum of 13 upper-division hours in Geological Sciences: GEOL 2316, 3340, 3350, 3355, 3359, 3360, and GEOG 3306; ASTR 3107 and 1107.

**Additional Science:** The additional science is restricted to CHEM 3105-3106, 1105, and 1106.

**BS in Natural Sciences**

The requirement to obtain the BS in Natural Sciences consists of the general College of Science requirements plus the following specific requirements:

**Interdisciplinary Major** (a minimum of 59 semester hours including 27 semester hours of upper-division course work): BIOL 3105, 1107, and BOT 4210 or ZOOL 4206; CHEM 3105-3106, 1105, and 1106; GEOL 3101, 1101, 3102, and 1102 (or GEOL 3103 and 3104); and PHYS 1120, 1121, 4210, and 4211. In addition, a minimum of 27 semester hours of approved upper-division course work in Biological Sciences, Chemistry, Geological Sciences, and Physics are required. This must include a minimum of three semester hours in each of the disciplines and a minimum of 12 semester hours of upper-division course work must be taken in a single department.

**Additional Science:** The College's additional science requirement is satisfied by the major.

**Other:** MATH 3112 is required.

**BS in Physical Sciences**

The requirement to obtain the BS in Physical Sciences consists of the general College of Science requirements plus the following specific requirements:

**Interdisciplinary Major** (a minimum of 49 semester hours including 25 semester hours of upper-division course work): CHEM 3105-3106, 1105, 1106, 2261, 3324, 1324, 3325, 1325, 3430, and three additional semester hours of upper-division course work in chemistry; PHYS 1120, 1121, 4210, 4211, 3325, and 2343 (taken three times); PSCI 3203 and 3304.

**Additional Science:** The additional science is restricted to a minimum of six hours of approved courses in either Biological Sciences or Geology.

**Other:** MATH 3112 is required.

**Secondary Education Concentration**--This concentration may be selected by students majoring in any of the above interdisciplinary degree programs and requires a minor in Secondary Education.

**Interdisciplinary Courses (SCI)**

The College of Science offers three interdisciplinary courses:

**4101 Explanatory Power of Science (3-2)**

Milestones in the development of science, including science in the Ancient and Medieval Worlds, the scientific revolution in the late Renaissance; the emergence of working models in physics, chemistry, and biology in the period of the Enlightenment through the mid-nineteenth century; the changing view of the Earth's history with the emergence of geology as a new science; evolutionary theory and the founding of genetics. Consideration of such topics as the explanatory power of empirical data and their interpretation, science vs. pseudo-science, science and theology. Laboratory exercises in science as a progress of investigation.  
*Prerequisite:* MATH 3010 or placement into MATH 3011 or higher level mathematics course. Laboratory fee required.

**4102 Science in the Modern World (3-2)**

Further milestones in the development of science in the late nineteenth and twentieth centuries, selected from thermodynamics, relativity and cosmology, the physics of the small, modern genetics and contemporary evolutionary theory, and plate tectonics; consideration of science in its cultural contexts, including such

topics as science and technology, the aesthetics of science, models of scientific development, science and ethics, scientific elitism, and images of science in popular culture. Laboratory exercises elucidating scientific concepts and principles. *Prerequisite:* SCI 4101. Laboratory fee required.

### 9101 Tools of Math and Science (5-12)

Intensive review of basic math, fundamental physics, and elementary chemistry, with introduction to biology, geology, and astronomy. Interdisciplinary treatment of topics, with emphasis on quantitative analysis and written composition. Designed to provide entering math, science, and engineering students with the skills to succeed in subsequent Precalculus, natural science, engineering, and English courses. Five hours of lecture and 12 hours of lab and workshop per week.

## Biological Sciences

Biological Sciences  
226 Biological Sciences, Engineering/Science Complex  
(915) 747-5844

Chairperson: Louis Irwin

PROFESSORS EMERITI: Albert George Canaris, Mary Eleanor Duke, Artie Lou Metcalf, Gordon Wesley Robertstad, Robert Gravem Webb

PROFESSORS: Bristol, Freeman, Goldstein, Harris, Irwin, Jones, Kolitsky, MacKay, Rael

ASSOCIATE PROFESSOR EMERITUS: Peter Stanley Chrapliwy

ASSOCIATE PROFESSORS: Arenaz, Ellzey, Hunter, Lieb, Worthington

ASSISTANT PROFESSORS: Aley, Allchin, Das, Lehker, Redetzke, Walsh, Webb

LECTURER: Mayberry

### Baccalaureate Degrees

The department of Biological Sciences offers both the BA and BS degrees in Biological Sciences and the BS in Microbiology. The BS in Biological Sciences degree includes the opportunity to obtain a concentration in Secondary Teacher Certification.

### BS in Biological Sciences

The requirement to obtain the BS in Biological Sciences consists of the general College of Science requirements plus the following specific requirements:

**Major** (40 semester hours including 18 semester hours of upper-division course work): BIOL 3105, 1107, 3216, 1217, 4314, BIOL 3318, 1319 or ZOOL 3480, 1481, BIOL 3320, 3321, BOT 4210, ZOOL 4206, MICR 4240, and six semester hours (four or more upper-division) of elective courses in Biological Sciences.

**Minor** (18 semester hours including six semester hours of upper-division course work): Acceptable minors are: Anthropology, Chemistry, Computer Science, Geological Sciences, Mathematics, Physics, and Psychology.

**Other:** CHEM 3105-3106, 1105, and 1106 are required. If chemistry is the minor, then a minimum of six semester hours of an approved science must be used to fulfill the additional science requirement.

**Secondary Education Concentration**--This concentration requires a second minor, Secondary Education. In addition:

**Required Replacements:** The six semester hours of elective courses in Biological Sciences are increased to seven semester hours of upper-division electives.

**Additional Requirements:** A minor in Chemistry is strongly recommended and requires CHEM 3105-3106, 1105, 1106, 2261, 3324-3325, 1324, and 1325. The additional science requirement may be fulfilled by either GEOL 3101, 1101, 3102, and 1102; or PHYS 4103 and 4104.

### BS in Microbiology

The requirement to obtain the BS in Microbiology consists of the general College of Science requirements plus the following specific requirements:

**Major** (44 semester hours including 24 semester hours of upper-division course work): BIOL 3105, 1107, 4314, BOT 4210, ZOOL 4206, MICR 4240, 4343, 4345, 4349, 4453; and at least nine semester hours to be selected from MICR 3328-1328, 3451-1452, 3455, or ZOOL 4364.

**Minor** (19 semester hours of Chemistry course work including 11 semester hours of upper-division course work): CHEM 3105-3106, 1105, 1106, 3324-3325, 1324, 1325, and 3430 or 3432 are required. Under exceptional circumstances other acceptable minors are (18 semester hours, including at least 6 semester hours of upper-division course work) in Computer Science, Geological Sciences, Mathematics, Physics, and Psychology.

**Additional Science:** PHYS 4103 and 4104 are required.

**Other:** BIOL 3490 and 3498 are highly recommended.

### BA in Biological Sciences

See the College of Liberal Arts section of this catalog for the general requirements for the BA degree. The specific courses required for the major are (38 semester hours including 18 semester hours of upper-division courses): BIOL 3105, 1107, 3216, 1217, 4314, BIOL 3318, 1319 or ZOOL 3480, 1481, BIOL 3320, 3321, BOT 4210, ZOOL 4206, MICR 4240, and four additional upper-division electives in Biological Sciences. The minor in the College of Liberal Arts requires nine semester hours of upper-division course work.

### Advising/Placement

Biological Sciences and Microbiology majors are required to consult with and have their enrollment forms signed by a departmental advisor.

An entering freshman with at least one year of high school biology may take an advanced placement examination given by the University Counseling Service covering BIOL 3103, 3105, 1103, 1107. It is recommended that students taking the placement examination have an SAT combined score of at least 1000.

### Departmental Honors in Biological Sciences

Any UTEP student having a strong background in Biological Sciences or Microbiology, at least 90 hours of undergraduate credit, and a GPA of at least 3.3 either in Biological Sciences or Microbiology, as well as an overall GPA of at least 3.3, may apply for admission to the program. The Departmental Honors Committee retains the right to accept or not accept a qualified student, taking into consideration the number of applicants, the number of available faculty, and the competence of the individual student. The main requirements for Departmental Honors in Biological Sciences or Microbiology will be the satisfactory completion of an Honors Thesis based upon research in Biological Sciences or Microbiology, maintenance of an overall 3.3 GPA or better until graduation, and the presentation of a seminar on the thesis topic. The student will register for two semesters of BIOL 3498, and the research will be carried out under the direction of a member of the faculty in Biological Sciences. The satisfactory completion of the Honors Thesis will be judged by the thesis-research director and the Departmental Honors Committee. Departmental Honors may be awarded with or without other currently awarded honors.

### Preprofessional Programs

A degree in the Department of Biological Sciences provides excellent preparation for postgraduate study in a number of professions related to biology. While a degree in the Biological Sciences is not required for admission to professional schools and postgraduate programs, the following academic backgrounds are strongly recommended:

1. **Medicine, Dentistry, or Veterinary Medicine** -- A minimum of two years of biology, two years of chemistry through organic chemistry, one year of physics, and a semester of calculus are required for admission to most professional schools. A BS in

Microbiology or Biological Sciences provides an excellent overall preparation.

2. **Physical Therapy** – The Preprofessional curriculum must include a year each of biology, chemistry, and physics, and a semester each of calculus, statistics, vertebrate physiology, and computer sciences. Students are strongly recommended to follow the requirements for a BS in Microbiology or Biological Sciences until they are admitted to the professional program.
3. **Fisheries, Wildlife, Forest, and Range Sciences** – The BS in Biological Sciences is strongly recommended as the best preparation for careers in these fields.

## Biology (BIOL)

For Undergraduates

### 1103 Introductory Biology Methods (0-2)

Elementary aspects of evolution, physiology, development, genetics, and ecology in plants and animals. Concurrent enrollment with BIOL 3103 recommended. Laboratory fee required.

### 1104 Human Biology Laboratory (0-2)

Exercises and computer simulations of development, physiology, and heredity in humans. Concurrent enrollment with BIOL 3104 recommended. Laboratory fee required.

### 1107 Topics In the Study of Life (0-2)

#### (Common Course Number BIOL 1106)

Elementary aspects of cell structure, function, and genetics. Concurrent enrollment with BIOL 3105 recommended. Laboratory fee required.

### 3103 Introductory Biology (3-0)

Evolution and ecology, biotic diversity, and an introduction to principles of cell biology for BIS students and other non-science majors.

### 3104 Human Biology (3-0)

Introduction to the physiology, reproduction, development, and heredity of humans. Recommended for students in social work and other non-science majors.

### 3105 General Biology (3-0)

#### (Common Course Number BIOL 1306)

A molecular approach to the principles of biology emphasizing cell biology and genetics. Prerequisite to upper level biology courses. BIOL 1107 is required of all majors and minors and normally is taken concurrently.

### 1211 Human Anatomy/Physiology Lab I (0-2)

#### (Common Course Number BIOL 2101)

Computer simulations and laboratory exercises in human anatomy and physiology with emphasis on the skeletal, muscular, and nervous systems. Taken concurrently with BIOL 3211. Laboratory fee required.

### 1213 Human Anatomy/Physiology Lab II (0-2)

#### (Common Course Number BIOL 2102)

Computer simulations and laboratory exercises in human anatomy and physiology with emphasis on homeostatic systems. Taken concurrently with BIOL 3213. Laboratory fee required.

### 1217 General Ecology Investigative Techniques (0-3)

Demonstrations and application of ecological concepts with emphasis on field work. Taken concurrently with BIOL 3216. Laboratory fee required.

### 3211 Human Anatomy/Physiology I (3-0)

#### (Common Course Number BIOL 2301)

Biological molecules, body organization, and correlated structure and function of the human skeletal, integumentary, muscular, and nervous systems. Taken concurrently with BIOL 1211. Prerequisites: BIOL 3105 and BIOL 1107 or ZOOL 4206 or equivalent. Normally taught spring semester only.

### 3213 Human Anatomy/Physiology II (3-0)

#### (Common Course Number BIOL 2302)

Correlated structure and function of the human cardiovascular, respiratory, digestive, urinary, reproductive, endocrine, and immune systems. Taken concurrently with BIOL 1213. Prerequisites: BIOL 3105 and BIOL 1107 or ZOOL 4206 or equivalent. Recommended Prerequisite: BIOL 3211. Normally taught fall semester only.

### 3216 General Ecology (3-0)

Relations of biota to the physical and biological environment. Taken concurrently with BIOL 1217. Prerequisites: ZOOL 4206 or BOT 4210.

For Undergraduates and Graduates

### 1319 Experimental Embryology (0-3)

Techniques and observations of development in invertebrates and vertebrates, as well as regulatory patterns of plant hormones. Taken concurrently with BIOL 3318. Laboratory fee required.

### 3318 Developmental Biology (3-0)

A study of growth, differentiation, and developmental patterns in plants and animals. Taken concurrently with BIOL 1319. Prerequisite: BIOL 3105 and BIOL 1107.

### 3320 Genetics (3-0)

The nature and functions of hereditary material with emphasis on the experimental procedures and data that have led to the current concepts in genetics. Prerequisites: BIOL 4314.

### 3321 Evolutionary Theory (3-0)

Development of evolutionary thought, evidences of evolution, and evolutionary processes. Prerequisites: BIOL 3320.

### 3326 Animal Ecology (3-0)

Animal population dynamics, food habits, and nutritional aspects of ecosystem study. Prerequisite: BIOL 3216. Recommended course: GEOG 3106.

### 3330 Histology (2-2)

Survey of tissue structure at the light microscopic level, with emphasis on animal specimens and identification. Not a course in preparative technique. Prerequisite: ZOOL 4206, or BIOL 3211, or BIOL 3213. Laboratory fee required.

### 3341 Plants in Southwest Cultures (3-0)

Study of food, fiber, medicinal and dye plants utilized by Southwest cultures with an emphasis on ethnobotany. Students may be required to take one weekend field trip. Prerequisites: BOT 4210.

### 4314 Molecular Cell Biology (3-3)

Biochemical and ultrastructural study of cells, including gene regulation, cell signalling, membrane transport, conduction, and contraction. Includes experimental techniques of cell and molecular biology. Prerequisites: BIOL 3105 and BIOL 1107; CHEM 3106 and CHEM 1106; MICR 4240 strongly recommended. Laboratory fee required.

### 1498 Special Problems (0-0-2)

Laboratory research conducted by advanced students. No more than 6 hours of 1498-3498 may be counted toward graduation. Prerequisite: Instructor's approval. Laboratory fee required.

### 2423 Transmission Electron Microscopy (0-4)

Techniques of analyzing cell ultrastructure. Taken concurrently with BIOL 3422. Laboratory fee required.

### 2425 Field Biology (0-6)

Collection and study of organisms under field conditions. Variable credit. No more than six hours of Field Biology may be counted toward degree. Prerequisites: ZOOL 4206 and BOT 4210 and instructor's approval. Transportation fee varies according to destination of trip.

### 2498 Special Problems (0-0-4)

Laboratory research conducted by advanced students. No more than 6 hours of 1498-3498 may be counted toward graduation. Prerequisite: Instructor's approval. Laboratory fee required.

**3422 Biological Ultrastructure Interpretation (3-0)**

Explanation of the techniques of electron microscopy and interpretation of the fine structure and correlated biochemistry of viruses, prokaryotes, and eukaryotes. *Prerequisites:* BIOL 4314 and 16 hours of Chemistry or instructor's approval.

**3424 Animal Behavior (3-0)**

Theories and experiments that elucidate the biological basis for the behavior of animals. *Prerequisites:* ZOO 4206.

**3425 Field Biology (0-9)**

Collection and study of organisms under field conditions. Variable credit. No more than six hours of Field Biology may be counted toward degree. *Prerequisites:* ZOO 4206, BOT 4210, and instructor's approval. Transportation fee varies according to destination of trip.

**3426 Bioarchaeology (2-3)**

Recovery, processing, and interpretation of biological material associated with prehistoric and historic humans in the New World. Laboratory fee required.

**3490 Biological Practicum (0-0-6)**

Practical on-the-job experience in federal, state, city-county governmental, and/or private agencies or industries. *Prerequisites:* Senior standing, minimum of 15 advanced hours in designated subject matter areas of biological sciences necessary for job experience and instructor's approval. No more than 6 hours of BIOL 3490 and/or 1498-3498 will count toward graduation.

**3498 Special Problems (0-0-6)**

Laboratory research conducted by advanced students. No more than 6 hours of 1498-3498 may be counted toward graduation. *Prerequisite:* Instructor's approval. Laboratory fee required.

**Botany (BOT)**

For Undergraduates

**4210 General Botany (3-3)**

(Common Course Number BIOL 1411)

A general introduction to the diversity of eukaryotic autotrophs. The structure, growth, physiology, and importance of the flowering plants as the dominant land plants will be emphasized. *Prerequisites:* BIOL 3105 and BIOL 1107; MATH 4109 or concurrently. Laboratory fee required.

For Undergraduates and Graduates

**3330 Comparative Plant Morphology (3-0)**

Life histories, phylogenetic relationships of vascular and non-vascular plants. *Prerequisite:* BOT 4210.

**3332 Economic Botany (3-0)**

Origin and utilization of plants important to humans, with emphasis on nutritional aspects. *Prerequisite:* BOT 4210.

**3340 Plant Physiology (3-0)**

Plant function at the tissue, cell, and molecular level. *Prerequisites:* BOT 4210.

**4337 Plant Taxonomy (2-4)**

Characteristics, classification, and phylogenetic studies of native and ornamental vegetation. *Prerequisite:* BOT 4210. Laboratory fee required.

**Microbiology (MICR)**

For Undergraduates

**3230 Microorganisms and Disease (3-0)**

A survey of microorganisms important to humans with emphasis on pathogens. Diagnostic procedures for pathogenicity of and immune responses to the more common pathogens. A terminal course not to be used as a prerequisite for any other course. A course for non-majors, including those in the nursing program. *Prerequisites:* BIOL 3105 and BIOL 1107.

**4240 General Microbiology (3-3)**

Survey of microorganisms and their characteristics; aspects of biochemical cytology, physiology, and genetics, introduction to applied microbiology. Techniques used in the study of microorganisms. *Prerequisites:* BIOL 3105 and BIOL 1107; CHEM 3106 and CHEM 1106 or concurrently; MATH 4109 or concurrently. Laboratory fee required.

For Undergraduates and Graduates

**1328 Microbial Ecosystems Techniques (0-3)**

Techniques employed in studying microbial ecology and environmental microbiology. Taken concurrently with MICR 3328. Laboratory fee required.

**3328 Microorganisms in Ecosystems (3-0)**

The relationship between microorganisms (viruses, bacteria, fungi, algae, and protozoa) and their environment (air, water and soil microbiology decomposition, and pollution). Taken concurrently with MICR 1328. *Prerequisites:* CHEM 3106 and CHEM 1106. Recommended *Prerequisite:* MICR 4240.

**4343 Pathogenic Microbiology (3-3)**

Epidemiology, pathogenicity, and host response to disease-producing microorganisms. Diagnostic procedures for isolating and identifying pathogens. *Prerequisite:* MICR 4240. Laboratory fee required.

**4345 Microbial Physiology (3-3)**

Biochemical cytology, growth, nutrition, metabolism, and genetics of microorganisms. Techniques for studying physiological activities of microbial cells. *Prerequisites:* MICR 4240, CHEM 3325, and CHEM 1325. Laboratory fee required.

**4349 Prokaryotic Molecular Genetics (3-3)**

Molecular biology of prokaryotes. Transfer of genetic information, structure and organization of the prokaryotic genome, regulation of gene expression, and genetic engineering. *Prerequisites:* BIOL 3320 or MICR 4240. Laboratory fee required.

**1452 General Virology Techniques (0-3)**

Techniques used to study animal and bacterial viruses. Taken concurrently with MICR 3451. Laboratory fee required.

**1456 Medical Mycology Techniques (0-3)**

Identification of saprophytic and pathogenic fungi. Taken concurrently with MICR 3455. Laboratory fee required.

**3451 General Virology (3-0)**

Biochemistry and virus-host interactions of animal, bacterial, insect, and plant viruses. Taken concurrently with MICR 1452. *Prerequisites:* MICR 4240 and BIOL 3320. MICR 4345 also recommended.

**3455 Medical Mycology (3-0)**

A study of the fungi of medical importance. *Prerequisites:* MICR 4240.

**4453 Immunology (3-3)**

Antigens and antibodies, humoral and cellular immunity, transplants, complement, and diseases of the immune system. *Prerequisites:* MICR 4240, CHEM 3325, and CHEM 1325. Laboratory fee required.

**Zoology (ZOO)**

For Undergraduates

**4206 General Zoology (3-3)**

(Common Course Number BIOL 1413)

A survey of basic classification, functional systems, and biology of animals and animal-like organisms. *Prerequisites:* BIOL 3105 and BIOL 1107; MATH 4109 or concurrently. Laboratory fee required.

For Undergraduates and Graduates

**4364 Medical Parasitology (3-3)**

A survey of medically important parasites. *Prerequisite:* ZOO 4206. Laboratory fee required.

**4366 Invertebrate Zoology (3-3)**

Survey and laboratory exercises concerning the invertebrates with emphasis on phylogeny. *Prerequisites:* ZOOL 4206. Laboratory fee required.

**1455 Vertebrate Paleontology Techniques (0-3)**

Collection, preservation, identification, and curation of vertebrate fossils with emphasis on fishes, amphibians, and reptiles. Taken concurrently with ZOOL 3454. Laboratory fee required.

**1457 Advanced Vertebrate Paleontology Techniques (0-3)**

Collection, preservation, identification, and curation of vertebrate fossils. Taken concurrently with ZOOL 3456. Laboratory fee required.

**1481 Vertebrate Physiology Methods (0-3)**

Techniques and instrumentation used in study of vertebrate function. Taken concurrently with ZOOL 3480. Laboratory fee required.

**3454 Paleozoic and Mesozoic Vertebrate Paleontology (3-0)**

Study of evolution, biologic history, biostratigraphy, and classification of the Paleozoic and Mesozoic vertebrates with emphasis on the lower vertebrates and an introduction to early mammalian development. Taken concurrently with ZOOL 1455. *Prerequisites:* GEOL 3102 or ZOOL 4206, or instructor's approval.

**3456 Cenozoic Vertebrate Paleontology (3-0)**

Study of the evolution, biologic history, biostratigraphy, and classification of the Cenozoic vertebrates with major emphasis on the mammals. Taken concurrently with ZOOL 1457. *Prerequisites:* GEOL 3102 or ZOOL 4206, or instructor's approval.

**3480 Vertebrate Physiology (3-0)**

Vertebrate systemic functions emphasizing nerve action and movement, endocrinology and metabolic controls, osmoregulation, cardio-physiology, and respiration. Taken concurrently with ZOOL 1481. *Prerequisites:* BIOL 4314 or ZOOL 4206; CHEM 3106 and CHEM 1106.

**3484 Neurobiology (3-0)**

Neural organization in animals. Evolution of nervous systems in different phyla, with emphasis on network and neurochemical mechanisms for information processing. *Prerequisite:* ZOOL 4206 or ZOOL 3480.

**4476 Fish, Amphibians, and Reptiles (3-3)**

Classification and natural history of fish, amphibians, and reptiles. *Prerequisites:* ZOOL 4206. Laboratory fee required.

**4478 Birds and Mammals (3-3)**

History of the study, literature, and biology of birds and mammals. *Prerequisites:* ZOOL 4206. Laboratory fee required.

See the *Graduate Studies Catalog* for graduate programs and courses.

# Chemistry

201A Physical Science Building  
(915) 747-5701, 5720

Chairperson: Russell Chianelli

PROFESSORS EMERITI: Harold Alexander, James W. Whalen

ASSOCIATE PROFESSOR EMERITI: William R. Cabaness, Joseph Scroggs

PROFESSORS: Chianelli, Davis, Dirk, Ellzey, Herndon, Pannell

ASSOCIATE PROFESSORS: Becvar, Gardea-Torresdey, Lloyd, Ter Haar

ASSISTANT PROFESSORS: Salvador, Smith

**Baccalaureate Degrees**

The Department of Chemistry offers both the BA and BS degrees in Chemistry. Both degrees include the opportunity to obtain a concentration in Secondary Teacher Certification.

**BS in Chemistry**

The requirement to obtain the BS in Chemistry consists of the general College of Science requirements plus the following specific requirements:

**Major** (43 semester hours including 32 semester hours of upper-division courses): CHEM 3105-3106, 1105, 1106, 2261, 1261, 3310, 1310, 3321-3322, 2321-2322, 3351-3352, 1351-1352, 2411, 2412, 3465, plus three semester hours of upper-division chemistry.

**Minor** A Biology minor is recommended (18 semester hours including 10 semester hours of upper-division courses): BIOL 3105, 1107, ZOOL 4206 or BOT 4210, BIOL 4314, 3318, and 3320.

**Additional Science:** PHYS 4210 and 4211 are required. If physics is selected as the minor, then eight semester hours of approved courses in either biology or geology are required for this College requirement.

**Other:** MATH 3112 and 3213 are required.

**Secondary Education Concentration**—This concentration requires a second minor, Secondary Education. In addition:

The required three-semester hours of upper-division chemistry is waived. (This may affect the ACS certification of the BS in chemistry.) The recommended minor for this concentration is Physics, requiring PHYS 4210, 4211, 3325, and three additional upper-division semester hours of physics.

**BA in Chemistry**

See the College of Liberal Arts section of this catalog for the general requirements for the BA degree. Secondary Teaching Certification in chemistry may also be obtained through these Colleges. A minor in the College of Liberal Arts requires nine semester hours of upper-division course work. The major may be selected from two concentrations:

**General**—The specific courses required are (33 semester hours including 25 semester hours of upper-division courses): CHEM 3105-3106, 1105, 1106, 3310, 1310, 3321-3322, 2321-2322, 3351-3352, 1351-1352, plus three semester hours selected from CHEM 2411, 2412, 3428, 3430, 3432, 3462, 3465, 1476, 3476, or 3480.

**Pre-Medical/Pre-Dental**—The specific courses required are (31 semester hours including 23 semester hours of upper-division courses): CHEM 3105, 3106, 1105, 1106, 3310, 1310, 3324, 3325, 1324, 1325; plus nine semester hours selected from CHEM 3351, 3352, 1351-1352, 2411, 2412, 3428, 3430, 3432, 3462, 3465, 1476, 3476, or 3480.

**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 5th year of study in Chemistry. Qualified students should consult their academic advisor about the course of study and regarding various forms of financial assistance obtainable through this program.

**BS Degree with Departmental Honors in Chemistry**—A candidate for Departmental Honors in Chemistry will have demonstrated ability in Chemistry, will have maintained a grade-point average of 3.0 by the end of the junior year, and will maintain this average until graduation. The main requirement for Departmental Honors will be the satisfactory completion of an Honors Thesis based on research in Chemistry. Usually this research will be carried out under the direction of a member of the faculty of the Department of Chemistry or a suitable faculty member from another department of the University. The satisfactory completion of the Honors thesis will be judged by the thesis-research director in conjunction with the Departmental Honors Committee. Other faculty and outside referees may be consulted if it is deemed to be appropriate to do so.

The candidate for Departmental Honors must request approval of candidacy during the second semester of the junior year. The Department of Chemistry reserves the right to accept or not accept a qualified student taking into consideration the number of applicants, the number of available faculty, and the competence of an individual student. The accepted honors candidate will enroll in CHEM 1476 or CHEM 3476 during both semesters of the senior year and will have



accumulated a total of six hours of CHEM 1476 and CHEM 3476 credit on completion of the honors program. Other regulations, procedures, and dates for use by honors candidates are available from the Chairperson, Department of Chemistry.

**Advising/Placement**—All Chemistry majors are required to consult with and have their enrollment forms signed by their department advisor before every enrollment.

All entering freshman students with at least one year of high school chemistry with an "A" or "B" in chemistry and an SAT score of at least 1000 may take an Achievement Examination given by the department. If a student scores 80 or above, he will be given the corresponding grade AND credit for CHEM 3105.

An entering freshman student with two years of high school chemistry with grades of "A" or "B" and an SAT score of at least 1000 may take Achievement Examinations given by the department over CHEM 3105 and 3106. If the score is 80 or above, the corresponding grade and credit for CHEM 3105 and 3106 will be given.

An entering freshman student with the above qualifications and with scores less than 80 on the Achievement Examination may at the discretion of the department be allowed to enter the next higher course without credit granted.

## Chemistry (CHEM)

For Undergraduates

### 1105 Laboratory for Chemistry 3105 (0-3)

(Common Course Number CHEM 1111)

Taken concurrently with CHEM 3105. Laboratory fee required.

### 1106 Laboratory for Chemistry 3106 (0-3)

(Common Course Number CHEM 1112)

Taken concurrently with CHEM 3106. Laboratory fee required.

### 3105 General Chemistry (3-0)

(Common Course Number CHEM 1311)

The basic laws and theories of chemistry: characterization of the elements and their most important compounds. For students who need a foundation for work in advanced chemistry and related sciences. Taken concurrently with CHEM 1105. *Prerequisites:* MATH 4110 (or concurrently) or a Math SAT score of at least 600.

### 3106 General Chemistry (3-0)

(Common Course Number CHEM 1312)

A continuation of CHEM 3105. Includes substantial coverage of chemical kinetics and thermodynamics. Taken concurrently with CHEM 1106. *Prerequisites:* MATH 4110 (or concurrently) or a Math SAT score of at least 600.

### 4107 Introductory Chemistry (3-3)

(Common Course Number CHEM 1406)

Basic concepts relating to composition, structure, and transformation of matter. Satisfies the chemistry requirement for nursing. May be counted toward the science requirement for students in Liberal Arts and Education. Students who need a foundation for work in advanced chemistry and related sciences or engineering fields should take CHEM 3105, CHEM 1105, CHEM 3106, and CHEM 1106. *Prerequisite:* MATH 3011 (Intermediate Algebra) can be taken concurrently. Laboratory fee required.

### 4108 Introductory Chemistry (3-3)

(Common Course Number CHEM 1407)

A continuation of CHEM 4107. Includes surveys of organic chemistry and biochemistry. *Prerequisite:* MATH 3011 (Intermediate Algebra) can be taken concurrently. Laboratory fee required.

### 1261 Laboratory for CHEM 2261 (0-3)

Laboratory fee required.

### 2261 The Periodic Table (2-0)

A survey course that expounds the principles of periodicity in the descriptive chemistry of the elements. Among the areas covered will be the alkali and alkaline earth metals, the carbon/silicon/germanium/tin and lead group, the chemistry of nitrogen, phospho-

rus, and the halogens. Where possible, pertinent technical applications of the elements, and materials derived from them, will be presented, e.g., medicinal, inorganic polymer, and semi-conductor applications. *Prerequisite:* CHEM 3106 and CHEM 1106.

### 1324 Laboratory for Chemistry 3324 (0-3)

Laboratory fee required.

### 1325 Laboratory for Chemistry 3325 (0-3)

Laboratory fee required.

### 3324 Organic Chemistry (3-0)

A study of the fundamental types of carbon compounds. Intended for students not requiring the detailed comprehensive courses specified for the BS degree in Chemistry. May not be counted in addition to CHEM 3321 or 3322. Taken concurrently with CHEM 1324. *Prerequisites:* CHEM 3106 and CHEM 1106.

### 3325 Organic Chemistry (3-0)

A continuation of CHEM 3324 with emphasis on organic compounds and their reactions in living systems. May not be counted in addition to CHEM 3321 or 3322. Taken concurrently with CHEM 1325. *Prerequisites:* CHEM 3324.

For Undergraduates and Graduates

### 1310 Laboratory for Chemistry 3310 (0-4)

Taken concurrently with CHEM 3310. Laboratory fee required.

### 1351 Laboratory for Chemistry 3351 (0-4)

Taken concurrently with CHEM 3351. Laboratory fee required.

### 1352 Laboratory for Chemistry 3352 (0-4)

Taken concurrently with CHEM 3352. Laboratory fee required.

### 2321 Laboratory for Chemistry 3321 (0-6)

Taken concurrently with CHEM 3321. Laboratory fee required.

### 2322 Laboratory for Chemistry 3322 (0-6)

Taken concurrently with CHEM 3322. Laboratory fee required.

### 3310 Analytical Chemistry (3-0)

Quantitative measurements and calculations, chemical equilibrium as applied to analyses and separations. Concurrent enrollment in CHEM 1310, 3351, and 1351 required. *Prerequisites:* CHEM 3322 and MATH 3213 (or concurrently) and PHYS 4211. This course is designed for Chemistry majors.

### 3321 Organic Chemistry (3-0)

A study of chemical bonding and structure in organic molecules, functional group synthesis and reactions, reaction mechanisms, nomenclature, stereochemistry, and isomerism. Intended for Chemistry majors and others requiring a comprehensive approach to organic chemistry. Taken concurrently with CHEM 2321. *Prerequisite:* CHEM 3106 and CHEM 1106. May not be counted in addition to CHEM 3324 and CHEM 3325.

### 3322 Organic Chemistry (3-0)

A continuation of CHEM 3321. Intended for Chemistry majors and others requiring a comprehensive approach to organic chemistry. Taken concurrently with CHEM 2322. *Prerequisite:* CHEM 3321 and CHEM 2321. May not be counted in addition to CHEM 3324 and CHEM 3325.

### 3351 Physical Chemistry (3-0)

Chemical thermodynamics. Taken concurrently with CHEM 1351. *Prerequisites:* CHEM 3106 and CHEM 1106, MATH 3213 (or concurrently) and PHYS 4211.

### 3352 Physical Chemistry (3-0)

A continuation of CHEM 3351. Quantum chemistry and spectroscopy. Taken concurrently with CHEM 1352. *Prerequisites:* CHEM 3351 and CHEM 1351.

### 1465 Laboratory for Inorganic Chemistry (0-4)

Provides laboratory practical exposure for students taking Inorganic Chemistry 3465. Taken concurrently with CHEM 3465. Laboratory fee required.

**1476 Introduction to Research (0-0-3)**

Credit will be granted only upon completion of research in the senior year on the recommendation of the head of the Chemistry Department. May be repeated for credit up to a total of 6 credit hours of CHEM 1476 and CHEM 3476; all credit accrued will be counted as elective hours only. *Prerequisite:* Instructor's approval. Fees required.

**2411 Instrumental Methods of Analytical Chemistry (2-0)**

A study of the more important optical and electrical methods of chemical analysis. *Prerequisite:* CHEM 3352 and CHEM 1352.

**2412 Laboratory for Chemistry 2411 (0-6)**

*Laboratory fee required.*

**3428 Advanced Topics in Organic Chemistry (3-0)**

Selected topics at the undergraduate level which are not usually covered in introductory courses in organic chemistry. Course may be repeated for credit when topics vary. *Prerequisite:* CHEM 3322 or CHEM 3325.

**3430 Topics in Biochemistry (3-0)**

Topics may include protein chemistry, enzyme kinetics, enzyme mechanisms, membrane structure and function, and protein biosynthesis. *Prerequisite:* CHEM 3322 or CHEM 3325.

**3432 Biochemistry (3-0)**

A study of enzyme action, the metabolic pathways, and their inter-relationships, including energy generation, storage, and utilization. *Prerequisites:* CHEM 3322 or CHEM 3325; and CHEM 3351.

**3462 Structure of Matter (3-0)**

Introduction to quantum theory; atomic and molecular structure; atomic and molecular spectra; chemical bonding. *Prerequisites:* PHYS 4211, and CHEM 3352, or instructor's approval.

**3465 Inorganic Chemistry (3-0)**

Principles of molecular structure and chemical reactivity of inorganic compounds; coordination chemistry and introduction to ligand field theory; kinetics and mechanisms of inorganic reactions; organometallic compounds; chemistry of nonmetals and physical methods in inorganic chemistry. *Prerequisites:* CHEM 3322 and CHEM 3352.

**3476 Introduction to Research (0-0-9)**

Credit will be granted only upon completion of research in the senior year on the recommendation of the head of the Chemistry Department. May be repeated for credit up to a total of 6 credit hours of CHEM 1476 and CHEM 3476; all credit accrued will be counted as elective hours only. *Prerequisite:* Instructor's approval. Fees required.

**3480 Polymer Chemistry (3-0)**

A survey of high polymers, including synthesis, characterization, and structure-property relationships. Considers step and chain polymerization, stereochemistry, and copolymerization. Also thermally stable polymers, conducting and photoactive polymers. *Prerequisite:* CHEM 3322 or CHEM 3325.

See the *Graduate Studies Catalog* for graduate programs and courses.

## Geological Sciences

101C Geology Bldg.  
(915) 747-5501

Chairperson: G. Randy Keller, Jr.

PROFESSOR EMERITUS: Robert F. Roy

PROFESSORS: Clark, Groat, Hoffer, Keller, LeMone, Pingitore, Schmidt

ASSOCIATE PROFESSORS: Anthony, Cornell, Doser, Goodell

ASSISTANT PROFESSORS: Miller, Ohmacher

LECTURER: Julian

### Baccalaureate Degrees

The department of Geological Sciences offers both the BA and BS degrees in Geological Sciences and the BS in Geophysics and Earth Science. The BS in Earth Science degree includes the opportunity to obtain a concentration in Secondary Teacher Certification.

### BS in Geological Sciences

The requirement to obtain the BS in Geological Sciences consists of the general College of Science requirements plus the following specific requirements:

**Major** (a minimum of 44 semester hours including 32 semester hours of upper-division course work): GEOL 3101, 1101, 3102, 1102 (or 3103 and 3304), 3213, 3214, 3315, 4320, 4323, 3325, and 6465 plus 12 additional upper-division semester hours in geology or geophysics, at least six of which must be senior-level.

**Minor** (18 semester hours including six semester hours of upper-division course work): Acceptable minors are: Biological Sciences, Chemistry, Computer Science, Mathematical Science, and Physics.

**Other:** CHEM 3105-3106, 1105, 1106, MATH 3112, PHYS 4210, 4211, 1120, and 1121 are required. MATH 3213 is highly recommended.

### BS in Geophysics

The requirement to obtain the BS in Geophysics consists of the general College of Science requirements plus the following specific requirements:

**Major** (a minimum of 40 semester hours including 31 semester hours of upper-division course work): GEOL 3101, 1101, 3102, 1102 (or 3103 and 3104), 3213, 3315, 3325, 4323, GEOP 3432, 3434, GEOL 6465, plus nine semester hours of upper-division course work in Geological Sciences, Physics, Mathematics, Computer Science, or Engineering.

**Minor** (19 semester hours including nine semester hours of upper-division course work): A Physics minor is required, consisting of PHYS 4210, 4211, 1120, 1121, 3351, 3428, and 3441.

**Other:** CHEM 3105-3106, 1105, 1106, MATH 3112, 3213, 3226, and 3436 are required.

### BS in Earth Science

The requirement to obtain the BS in Earth Science consists of the general College of Science requirements plus the following specific requirements:

**Major** (36 semester hours including 21 semester hours of upper-division course work): GEOL 3101, 1101, 3102, 1102 (or 3103 and 3104 plus two additional semester hours in Geological Sciences), 3213, 3305, 2316, 4320, 3355, plus six additional upper-division semester hours in Geological Sciences (GEOL 1466-3466 may not be used to satisfy this requirement); GEOG 3306, and ASTR 3107 and 1107.

**Minor** (18 semester hours including six semester hours of upper-division course work): Acceptable minors are Biological Science, Chemistry, Mathematical Science, or Physics.

**Other:** CHEM 3105-3106, 1105, and 1106 are required. If Chemistry is the minor, then a minimum of six semester hours of Biological Sciences must be used to satisfy the College's additional science requirement.

**Secondary Education Concentration**--This concentration requires a second minor, Secondary Education. The major is the same as above. A minor in Biological Sciences or Chemistry is recommended.

### BA in Geological Sciences

See the College of Liberal Arts section of this catalog for the general requirements for the BA degree. The specific courses required for the major are (a minimum of 29 semester hours including 20 semester hours of upper-division course work): GEOL 3101, 1101, 3102, 1102 (or 3103 and 3104), 3213, 3315, 4320, 4323, 3325, and 6465. Also required are CHEM 3105-3106, 1105, 1106, MATH 4110 and 4111, PHYS 4210 and 4211.

**"C" Rule**--Students must earn a grade of C or better in all courses taken within the Department of Geological Sciences that are used to satisfy the above Geology and Geophysics degree requirements. Continuation in sequence courses (such as GEOL 3214 and 3315) after receiving a "D" in one of these courses is permitted with permission of the instructor. A student receiving a grade of "D" in a required course must repeat the course at its earliest offering. Students receiving consecutive grades of "D" will not be allowed to continue sequence courses until grades of "C" or better have been earned in the appropriate courses. A minimum grade point average of 2.0 must be achieved in required science courses taken outside the Geological Sciences department.

#### Departmental Research

All undergraduate students are encouraged to complete a research experience. The preferred option is completion of a Senior's Thesis (GEOL 3499). However, an appropriate Directed Study (GEOL 1466-3466 or GEOP 1467-3467) or Undergraduate Research (GEOL 1489-3489) course also fulfills this requirement.

#### Departmental Honors In Geology or Geophysics

Departmental honors in Geology or Geophysics will be awarded upon completion and acceptance of a Senior Honors Thesis. The senior thesis will describe original research in the appropriate discipline undertaken by the student in collaboration with one or more faculty members in the Department of Geological Sciences. Policies and procedures of the Honors degree will be administered by the Departmental Honors Committee.

Any UTEP student having a strong background in geology or geophysics, at least 90 hours of undergraduate credit, and a GPA of at least 3.5 in courses in the Geological Sciences, as well as an overall GPA of at least 3.5, may apply for admission to the program. The Departmental Honors Committee retains the right to accept or not accept a qualified student, taking into consideration the number of applicants, the number of available faculty, and the competence of the individual student.

The main requirements for Departmental Honors in Geology or Geophysics will be the satisfactory completion of an Honors Thesis based upon research in geology or geophysics, maintenance of a 3.5 GPA or better until graduation and the presentation of a seminar on the thesis topic. The accepted student will register for two semesters of GEOL 3499. The research will be carried out under the direction of a member of the faculty of the Department of Geological Sciences. The satisfactory completion of the Honors Thesis will be judged by the thesis-research director and the Departmental Honors Committee. Departmental Honors may be awarded with or without other University honors.

### Geography (GEOG)

For Undergraduates

*General prerequisite:* Junior standing for all 3300 and 3400 level courses.

#### 1106 Laboratory for Geography 3106 (0-2)

Required for minors in geography concurrent with 3106 and optional to all other students. Laboratory fee required.

#### 3106 Physical Geography (3-0)

Introduction to features and processes of the atmosphere, hydrosphere, biosphere, and lithosphere, with emphasis on spatial (distribution) patterns, and interactions between the four earth realms and human activities. The course culminates in a discussion of global environmental regions. Required of all minors in geography. Minors should take GEOG 1106 concurrently.

#### 3110 Cultural Geography (3-0)

Introduction to cultural elements, their spatial distribution, and their interrelationship to the physical environment.

#### 3306 Weather and Climate (3-0)

Study of the components of weather, weather processes, and measurement, climate elements and control factors; geographic classification of climates and natural vegetation on the earth's surface. *Prerequisite:* GEOG 3106, or GEOL 3103, or GEOL 3101, or instructor's approval.

#### 3312 Geography of Latin America (3-0)

Study of the physical and cultural features which characterize the economic, social, and political geography of Latin America. *Prerequisites:* GEOG 3106, and GEOG 3110, or instructor's approval.

#### 3407 Geography of Arid Lands (3-0)

A study of the physical complexes of the world's dry regions. Salient factors emphasized include climate, land forms, water, soils, natural vegetation, and various aspects of human occupation. *Prerequisite:* GEOG 3106, or GEOG 3110, or GEOL 3103, or instructor's approval. GEOG 3306 recommended.

### Geology (GEOL)

For Undergraduates

*General prerequisite:* Junior standing for all 3300 or 3400 level courses.

#### 1101 Laboratory for Geology 3101 (0-3)

Concurrent enrollment in GEOL 3101 suggested. Laboratory fee required.

#### 1102 Laboratory for Geology 3102 (0-3)

Concurrent enrollment in GEOL 3102 suggested. Laboratory fee required.

#### 3101 Introduction to Physical Geology (3-0) (Common Course Number GEOL 1403)

An introductory study of the earth's composition, structure, and internal and external processes. Concurrent enrollment in laboratory (1101) suggested but not required.

#### 3102 Introduction to Historical Geology (3-0) (Common Course Number GEOL 1404)

An integrated study of the geologic history of the earth with a consideration of the history of life as documented by the fossil record. Concurrent enrollment in laboratory (1102) suggested but not required.

#### 3103 Principles of Earth Sciences (2-2)

(Common Course Number GEOL 1301)

Study of the earth as a planet. A survey of the physical processes operating in the atmosphere, lithosphere, and biosphere. Includes an introduction to meteorology, physical geology, soils, and vegetation. Laboratory is required. Laboratory fee required.

#### 3104 Principles of Earth Sciences (2-2)

(Common Course Number GEOL 1302)

Study of the earth as a planet. A survey of earth history as interpreted from and exhibited by plants, animals, rocks, and minerals; a study of the earth in space; a survey of the physical processes operating in the hydrosphere. Includes an introduction to historical geology, astronomy, physiography, and oceanography. Laboratory is required. Laboratory fee required.

#### 3213 Mineralogy (2-3)

(Common Course Number GEOL 2309)

Study of the crystallography, physical properties, classification, and identification of rock-forming minerals and ores. *Prerequisites:* CHEM 3105 with a grade of "C" or better. Laboratory fee required.

#### 3214 Geological Microscopy (2-3)

(Common Course Number GEOL 2411)

Study of rock-forming minerals and crystals with the petrographic microscope. *Prerequisite:* GEOL 3213. Laboratory fee required.

**2316 Geology of El Paso (1-3)**

An introduction to the stratigraphy, tectonic history, paleontology, and geomorphology of the El Paso area. Lectures will stress use of basic geologic principles to develop understanding of the geologic processes which have shaped the area. Laboratory will consist of a series of field trips during the semester. Students whose degree plans require GEOL 6465 may use this course for elective credit only. *Prerequisites:* GEOL 3103 and GEOL 3104; or GEOL 3101 and GEOL 3102. Laboratory fee required.

**3305 Rocks and Minerals (2-3)**

Hand specimen study of the common rock-forming minerals, gem and ore minerals, and of igneous, metamorphic, and sedimentary rocks. *Prerequisite:* GEOL 3103, or GEOL 3101, and GEOL 1101, or instructor's approval. Laboratory fee required.

For Undergraduates and Graduates

**3315 Igneous and Metamorphic Petrology (2-3)**

Petrogenesis of igneous and metamorphic rocks, including the thermodynamics and physical properties of minerals and metals and the petrography of samples in thin-section. *Prerequisite:* GEOL 3214 and CHEM 3105; and MATH 4111 or concurrently. Laboratory fee required.

**3316 Geochemistry (3-0)**

The application of chemistry to the investigation of the earth. The composition of the solids, liquids, and gases which comprise the lithosphere, hydrosphere, and atmosphere. Principles of equilibrium, thermodynamics, kinetics, and bonding as guides to investigating and understanding geologic materials and processes. *Prerequisites:* CHEM 3106.

**3321 Geology for Engineers (2-3)**

The principles of physical geology and their practical applications to civil engineering. This course cannot be counted as a required upper-level course in Geology. *Prerequisite:* Junior standing in engineering or instructor's approval. Laboratory fee required.

**3325 Sedimentology (2-3)**

An introduction to sedimentary processes, environments, and deposits. Ancient deposits and modern analogs are examined in the field. Laboratory work will introduce techniques for the study of sediments and sedimentary rocks. *Prerequisites:* GEOL 3101, GEOL 1101, GEOL 3102, and GEOL 1102, or GEOL 3213, or instructor's approval. Laboratory fee required.

**3340 Vulcanology (3-0)**

A study of the origin, eruption patterns, and products of volcanoes. Discussion of thermal energy resources. Students whose degree plans require GEOL 6465 may use this course for elective credit only. *Prerequisite:* GEOL 3101 or GEOL 3103.

**3350 Oceanography (3-0)**

Introduction to submarine geology, physical and chemical oceanography, marine organisms, marine resources, shore processes, and methods of marine technology. Students whose degree plans require GEOL 6465 may use this course for elective credit only. *Prerequisite:* GEOL 3101 or GEOL 3104, or instructor's approval.

**3355 Structure of the Earth (2-3)**

An introduction to geological and geophysical methods employed to study the structure of the earth. Structures at all scales will be studied. The emphasis will be on how plate tectonics operates to form the structures we see at the surface and how we delineate deep structures. Students whose degree plans require GEOL 6465 may use this course for elective credit only. *Prerequisites:* GEOL 3101 or GEOL 3103. Laboratory fee required.

**3359 Mineral Resources and Economics (3-0)**

Geological characteristics and classification of metallic, non-metallic, and fuel resources. Economic factors and problems related to development. Students whose degree plans require GEOL 6465 may use this course for elective credit only. *Prerequisite:* GEOL 3101, or GEOL 3103, or GEOL 3305.

**3360 Geology and the Environment (3-0)**

A study of the applications of the science of geology to the problems of urban development and environmental control. *Prerequisite:* GEOL 3101, or GEOL 3103, or GEOL 3321, or instructor's approval. For non-majors.

**3380 Fossils (2-3)**

Survey of the evolution of ancient life on earth and the consideration of the practical application of fossils as time and environmental indicators as revealed by the rock record. Not open to students whose degree plans require GEOL 6465. *Prerequisite:* GEOL 3102 or GEOL 3104. Laboratory fee required.

**4320 Invertebrate Paleontology (3-3)**

A survey of the classification, paleoecology, and stratigraphic distribution of fossil invertebrates. *Prerequisite:* GEOL 3102, and GEOL 1102, or GEOL 3104, or GEOL 3305, or instructor's approval. Laboratory fee required.

**4323 Structural Geology (3-6)**

An introduction to the recognition, description, and analysis of deformed rocks, spanning the spectrum from microscopic structures to mountain belts and plate tectonics. Geometric and stereographic analysis of map-scale structures. Introduction to stress, strain, and constitutive laws for rocks. Processes of rock deformation including folding, fracturing, and grain-scale processes. Correlation of structural styles with tectonic environments. *Prerequisites:* GEOL 3101, GEOL 1101, GEOL 3102, and GEOL 1102; or GEOL 3103 and GEOL 3104, or instructor's approval. PHYS 4210 recommended. Fees required.

**1425 Sedimentary Petrography (1-2)**

Introduction to the petrographic study of siliciclastic, carbonate, and volcanoclastic sediments and sedimentary rocks. *Prerequisite:* GEOL 3214.

**1455 Vertebrate Paleontology Techniques (0-3)**

Collection, preservation, identification, and curation of vertebrate fossils. Taken concurrently with GEOL 3454. Laboratory fee required.

**1457 Advanced Vertebrate Paleontology Techniques (0-3)**

Collection, preservation, identification, and curation of vertebrate fossils. Taken concurrently with GEOL 3456. Laboratory fee required.

**1466 Directed Study, Geology (0-0-1)**

Directed study problems in geology; hours and subjects to be arranged with each student; for undergraduate students who wish to do special work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. *Prerequisite:* Instructor's approval.

**1489 Research in Geological Sciences (0-0-1)**

This course provides undergraduates with a research experience working with a faculty mentor. It cannot be used to satisfy minimum degree requirements. Grade of S or U. Requires advising from an instructor.

**2466 Directed Study, Geology (0-0-2)**

Directed study problems in geology; hours and subjects to be arranged with each student; for undergraduate students who wish to do special work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. *Prerequisite:* Instructor's approval.

**2489 Research in Geological Sciences (0-0-2)**

This course provides undergraduates with a research experience working with a faculty mentor. It cannot be used to satisfy minimum degree requirements. Grade of S or U. Requires advising from an instructor.

**3415 Topics in Geological Sciences (3-0)**

Study of topics in fields such as structural geology, environmental geosciences, economic geology, paleontology, petrology, and geochemistry. May be repeated when topics vary. *Prerequisite:* Instructor's approval.

**3454 Paleozoic and Mesozoic Vertebrate Paleontology (3-0)**

Study of evolution, biologic history, biostratigraphy, and classification of Paleozoic and Mesozoic vertebrates with emphasis on the lower vertebrates with an introduction to early mammalian development. Taken concurrently with GEOL 1455. *Prerequisites:* BIOL 3105, BIOL 1107, and ZOOL 4206, or GEOL 3102 and GEOL 1102, or GEOL 3104.

**3456 Cenozoic Vertebrate Paleontology (3-0)**

Study of the evolution, biologic history, biostratigraphy, and classification of the Cenozoic vertebrates with major emphasis on the mammals. Taken concurrently with GEOL 1457. *Prerequisites:* BIOL 3105, BIOL 1107, and ZOOL 4206, or GEOL 3102 and GEOL 1102, or GEOL 3104, or instructor's approval.

**3462 Stratigraphy (2-3)**

A study of the fundamental principles of stratigraphy with special emphasis on the stratigraphy of Southwestern United States and Northern Mexico. *Prerequisite:* GEOL 3325, and GEOL 4320, or instructor's approval. Laboratory fee required.

**3466 Directed Study, Geology (0-0-3)**

Directed study problems in geology; hours and subjects to be arranged with each student; for undergraduate students who wish to do special work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. *Prerequisite:* Instructor's approval.

**3480 Environmental Geology (3-0)**

Fundamentals of geology applied to environmental studies with special emphasis on site characterization and evaluation. Subjects covered include surficial geologic processes, general tectonic processes, general hydrogeology, soil classification and development, geologic data collection, instrumentation of soil and rock, and remediation techniques. *Prerequisite:* GEOL 4323, or GEOL 3321, or instructor's approval.

**3484 Nuclear Waste Disposal (3-0)**

Examination of the problems involved in the control of nuclear waste. Characterization, treatment, shipping, and permanent disposal of the nuclear waste will be discussed. The problems of decontamination, decommissioning, and site restoration, as well as quality assurance and control of nuclear waste, will be examined. *Prerequisite:* Upper-division standing in the College of Science or the College of Engineering, or instructor's approval.

**3489 Research in Geological Sciences (0-0-3)**

This course provides undergraduates with a research experience working with a faculty mentor. It cannot be used to satisfy minimum degree requirements. Grade of S or U. Requires advising from an instructor.

**3499 Senior's Thesis (0-0-3)**

Guided program of research culminating in the writing of a senior thesis.

**6465 Field Geology (Summer Field Course) (0-0-32)**

A six-week summer course in field geology. The work will include preparation of topographic and geologic maps, cross-sections, columnar sections, and detailed structural studies of areas embracing both sedimentary and igneous rocks; plane table and aerial photo mapping techniques will be used. A report will be required of each student. Thirty-two hours of field work per week. *Prerequisites:* GEOL 3315, GEOL 4320, and GEOL 4323. Transportation fee varies.

**Geophysics (GEOP)**

For Undergraduates and Graduates

*General Prerequisite:* Junior standing for all 3300-3400 level courses.

**1467 Directed Study, Geophysics (0-0-1)**

Directed study problems in geophysics; hours and subjects to be arranged with each student; for undergraduate students who wish to work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. *Prerequisite:* Instructor's approval.

**2467 Directed Study, Geophysics (0-0-2)**

Directed study problems in geophysics; hours and subjects to be arranged with each student; for undergraduate students who wish to work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. *Prerequisite:* Instructor's approval.

**3432 Exploration Geophysics: Seismic Methods (2-3)**

A detailed treatment of seismic prospecting for oil and minerals, includes principles and current practices in seismic refraction and reflection prospecting, as well as related aspects of acoustic logging and other subsurface techniques. *Prerequisites:* GEOL 3101, and GEOL 1101, or GEOL 3103, or GEOL 3321, MATH 3112, PHYS 4210, and PHYS 4211, or instructor's approval. Laboratory fee required.

**3434 Exploration Geophysics: Non-Seismic Methods (2-3)**

A quantitative treatment of gravity and magnetic fields of the earth as applied to exploration for oil and minerals. Some coverage of nuclear and electrical methods of prospecting. *Prerequisites:* GEOL 3101, and GEOL 1101, or GEOL 3103, or GEOL 3321, MATH 3112, PHYS 4210, and PHYS 4211, or instructor's approval. Laboratory fee required.

**3467 Directed Study, Geophysics (0-0-3)**

Directed study problems in geophysics; hours and subjects to be arranged with each student; for undergraduate students who wish to work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. *Prerequisite:* Instructor's approval.

See the *Graduate Studies Catalog* for graduate programs and courses.

**Mathematical Sciences**

124 Bell Hall  
(915) 747-5761

Chairperson: Joe A. Guthrie

PROFESSORS: Boyer, Guthrie, Kaigh, Leahey, Nymann, Rojo, Schuster, Srinivasan

ASSOCIATE PROFESSOR EMERITUS: Charles Herman Gladman

ASSOCIATE PROFESSORS: Foged, Gray, Gregory, Hall, Khamsi, Liguori, Moschopoulos, Narvarte, Sewell, Staniswalis

ASSISTANT PROFESSORS: Dennis, Duval, Knaust, Lopp, O'Neill, Valdez-Sanchez, Wojciechowski

LECTURER: Marcus

**Baccalaureate Degrees**

The department of Mathematical Sciences offers both the BA and BS degrees in Mathematics and the BS in Applied Mathematics. The

BA in Mathematics allows for a concentration in Teacher Certification. The BS in Mathematics allows for concentrations in Actuarial Sciences and Teacher Certification.

Registration for each course in Mathematical Sciences (with a MATH or STAT prefix) requires a minimum grade of "C" in all prerequisite courses.

### BS In Mathematics

The requirement to obtain the BS in Mathematics consists of the general College of Science requirements plus the following specific requirements:

**Major** (37 semester hours including 24 semester hours of upper-division course work): MATH 4111, 3112, 3213, 3226, 3325, 3341, 3426, 3441, STAT 3330, and nine additional semester hours of upper-division courses in Mathematical Science.

**Minor** 18 semester hours including six semester hours of upper-division courses in any approved minor in the College of Business Administration, College of Science, or the Department of Computer Science in the College of Engineering. The minor discipline and specific courses must be approved by the departmental undergraduate advisor.

**Other:** The course sequence PHYS 1120, 1121, 4210, 4211 is required.

**Additional Science:** The required physics sequence above may be used to satisfy this requirement or toward a Physics minor, but not both. Similarly, the College requirement of Computer Science may be used to satisfy this requirement or may be used toward a Computer Science minor, but not both.

**Actuarial Sciences Concentration**--This concentration requires the following changes:

**Allowed Substitutions:** MATH 3323 for MATH 3426; six semester hours in the College of Science (not in the major or minor) for the required physics sequence.

**Required Replacements:** MATH 3220 for MATH 3441; MATH 3320, 3429, and STAT 3480 for the required nine semester hours of upper-division courses in Mathematical Sciences.

**Additional Requirements:** CS 4120; and as electives, MATH 1499 (two times), CS 4101 or CIS 3235, ECON 3203 and 3204, COMM 3102; and two courses from ACCT 3201 or 3309, FIN 3310, 3416, BLAW 3301, MKT 3300, MGMT 3303 or POM 3321, ECON 3302, 3303, and 3372.

**Secondary Education Concentration**--This concentration requires a second minor in Secondary Education. In addition:

**Allowed Substitutions:** MATH 3323 for MATH 3426; one of the courses MATH 3319, 3327, 3328 (not geometry), 3425, or 3429 for MATH 3441.

**Required Replacements:** MATH 3300, 3328 (geometry), and STAT 3480 for the required nine semester hours of upper-division courses in Mathematical Sciences.

**Additional Requirements:** The first minor must be selected from Biological Sciences, Chemistry, Computer Science, Geological Science, or Physics. A minor in Physics is strongly recommended, in which case the required physics sequence (College of Science additional science requirement) must be replaced by one of the following: BIOL 3105, 1107 and either BOT 4210 or ZOOL 4206; CHEM 3105-3106, 1105, and 1106; or GEOL 3101, 1101, 3102, 1102.

**Statistics Concentration**--This concentration requires the following changes:

**Allowed Substitutions:** MATH 3323 for MATH 3426; Computer Science courses may be used to fulfill the nine hours of upper-division Mathematical Sciences requirement.

**Required Replacements:** MATH 3429, STAT 3381, and STAT 3480 for MATH 3226, MATH 3325, and MATH 3441.

### BS In Applied Mathematics

The requirement to obtain the BS in Applied Mathematics consists of the general College of Science requirements plus the following specific requirements:

**Major** (40 semester hours including 24 semester hours of upper-division course work): MATH 4111, 3112, 3200, 3213, 3226, 3323 or 3426, 3335, 3429, STAT 3330 and 3480, and nine additional semester hours of upper-division courses in Mathematical Sciences.

**Minors** Two minors, each of 18-semester hours including six semester hours of upper-division courses are required. One must be Computer Science with emphasis on computation and one must be in an application area. Minor and courses must be approved by the departmental undergraduate advisor.

**Other:** The course sequence PHYS 1120, 1121, 4210, 4211 is required. This sequence may be used to satisfy the applied minor or the additional science, but not both.

### BA In Mathematical Sciences

See the College of Liberal Arts section of this catalog for the general requirements for the BA degree. The specific courses required for this major are (31 semester hours including 21 semester hours of upper-division course work): MATH 4111, 3112, 3213, 3323 or 3426, 3325, 3341, and nine additional semester hours of upper-division courses in Mathematical Science. A BA with secondary Teaching Certification is also available through the College of Liberal Arts. A minor in this College requires nine semester hours of upper-division course work.

**Advising**--All undergraduate mathematics majors are required to consult with and have their enrollment forms signed by their undergraduate advisor before every enrollment.

**Placement**--Students who intend to register in MATH 4109, 3120, 4110, or 4111 must present an official document at registration showing that they have either an adequate placement examination score or received a grade of "C" or better in the prerequisite course.

**GPA** - Mathematics majors must maintain a 2.0 GPA in all MATH and STAT courses (see the Standards of Academic Performance section of this catalog).

## Mathematics (MATH)

### 3010 Introductory Algebra (2-2)

The course begins with a review of signed numbers, rational numbers, and exponents. Major topics include variables, linear equations and inequalities, word problems, and operations with polynomials. This course is designed as an introduction to MATH 3011. Credit hours received for MATH 3010 may count toward removal of provisional status, but may not be used to satisfy any institutional degree requirements. *Prerequisite:* Placement by examination.

### 3011 Intermediate Algebra (3-0)

The course begins with a review of polynomials. Major topics include rational expressions and equations, radical expressions, rational exponents, complex numbers, quadratic equations, graphing lines, and geometry. The course is designed as an introduction to MATH 4109 or 3120. Credit hours received for MATH 3011 may count toward removal of provisional status, but may not be used to satisfy any institutional degree requirements. *Prerequisite:* MATH 3010 or placement by examination.

### 3112 Calculus II (3-0)

#### (Common Course Number MATH 2314)

Continuation of MATH 4111. Topics include special methods of integration and applications; infinite series. *Prerequisite:* MATH 4111.

### 3120 Mathematics for Social Sciences I (3-0)

#### (Common Course Number MATH 1324)

Topics of college algebra and geometry including the algebra of sets; linear, quadratic, exponential, and logarithmic functions;

systems of linear equations and inequalities; matrix algebra; probability and statistics. *Prerequisites:* Three years of high school mathematics and an adequate score on a placement examination; or MATH 3011.

**4109 Precalculus I (4-0)**

**(Common Course Number MATH 1314)**

Topics include the algebra of real functions, graphs of functions, analytic geometry of first and second degree curves, rational functions, exponential and logarithmic functions, and polynomial equations, sequences, series, and mathematical induction. *Prerequisite:* MATH 3011, or an acceptable score on a placement examination.

**4110 Precalculus II (4-0)**

**(Common Course Number MATH 2412)**

Topics include trigonometry, vectors in two dimensions, rotations of coordinate axes, trigonometric form for complex numbers, polar coordinates, systems of equations, matrices, and analytic geometry of three dimensional space. *Prerequisite:* MATH 4109, or an acceptable score on a placement examination.

**4111 Calculus (4-0)**

**(Common Course Number MATH 2413)**

Topics include limits, continuity, differentiation, and integration of functions of a single variable. *Prerequisites:* Four years of high school mathematics including trigonometry and analytic geometry and an adequate score on a placement examination, or MATH 4110.

**3200 Discrete Mathematics (3-0)**

**(Common Course Number MATH 2305)**

Topics in discrete mathematics including induction and recursion, sets and relations, combinatorics, graph theory, finite automata, and logic. *Prerequisite:* MATH 4111.

**3201 Mathematics for Social Sciences II (3-0)**

**(Common Course Number MATH 1325)**

Topics include linear programming and an introduction to differential and integral calculus with applications to business and the social sciences. *Prerequisite:* MATH 3120 or MATH 4109.

**3203 Properties of the Real Numbers I (3-0)**

A study of the arithmetic structure of the real numbers from an advanced point of view. Relations with concepts from set theory, groups, rings, and fields will be included. *Prerequisites:* MATH 4109 or MATH 3120; or an acceptable score on a placement examination.

**3213 Calculus III (3-0)**

**(Common Course Number MATH 2315)**

Continuation of MATH 3112. Topics include solid analytic geometry, partial differentiation, and multiple integrals. *Prerequisite:* MATH 3112.

**3220 Mathematics of Interest (3-0)**

Mathematical foundations - a calculus based development of the theory of interest with applications including annuities, bonds, depreciation, sinking funds, amortization schedules, insurance and yield rates. *Prerequisite:* MATH 3201 or MATH 3112.

**3226 Differential Equations (3-0)**

**(Common Course Number MATH 2320)**

A study of first order equations, linear equations with constant coefficients; general linear equations, the method of variation of parameters, the Laplace transform, and power series solutions. *Prerequisite:* MATH 3112.

**3300 History of Mathematics to 1650 (3-0)**

A historical development of Precalculus mathematics and the branch of mathematics culminating in the development of the calculus. Mathematical contributions for various cultures and eras from ancient Babylonia to 17th century Europe are reviewed with a special focus on Greek mathematics. The course views the history through the problems of the various epics studied. *Prerequisite:* MATH 4111 or instructor's approval.

**3303 Properties of the Real Numbers II (3-0)**

Additional topics in the structure of the real numbers. Basic number theory including divisibility and congruences. Topics in finite mathematics. *Prerequisite:* MATH 3203.

**3304 Fundamentals of Geometry from an Advanced Standpoint (3-0)**

An axiomatic treatment of Euclidean geometry including some historical perspectives. Informal treatment of other geometries such as distance and hyperbolic geometry. *Prerequisite:* MATH 3203.

**3319 Elementary Number Theory (3-0)**

An introduction to some of the classical topics in number theory including divisibility, congruences, and quadratic reciprocity. Diophantine equations and the distribution of primes. *Prerequisite:* MATH 3112.

**3320 Actuarial Mathematics (3-0)**

Individual and collective risk models. Survival distributions and life contingency tables. Models for life insurance and multiple life functions. *Prerequisite:* STAT 3330.

**3323 Matrix Algebra (3-0)**

Systems of linear equations, matrices, determinants, eigenvalues and eigenvectors, diagonalization, vector spaces, and linear transformations. *Prerequisite:* MATH 3112.

**3325 Principles of Mathematics (3-0)**

Logic and proofs, elements of set theory, relations and functions: application of these ideas. Cardinality, groups and their quotients, and the field of real numbers. *Prerequisite:* MATH 3112.

**3327 Applied Algebra (3-0)**

Study of problems from one of the following subjects: Automata Theory; Formal Languages; Information Theory; Theory of Algorithms, Artificial Intelligence. This course deals with the theoretical components of computer science and is also of interest to students of structural/theoretical features in such disciplines as biology, linguistics, social science, and in learning theory. May be repeated for credit if subjects differ. *Prerequisite:* MATH 3112.

**3328 Foundations of Mathematics (3-0)**

Study of principles of mathematical thinking and of common objects of mathematical thought. Emphasis on one of these aspects: Logic; Set Theory; Geometry; Topology. May be repeated for credit if subjects differ. *Prerequisite:* MATH 3112.

**3335 Applied Analysis I (3-0)**

Line and surface integrals, change of variable in multiple integrals, vector analysis, and an introduction to complex variables. *Prerequisite:* MATH 3213.

**3341 Introduction to Analysis (3-0)**

A theoretical study of the foundations of the calculus of functions of one variable. Includes the real number system, convergence, continuity, differentiability, and elementary integration theory. *Prerequisite:* MATH 3112.

**1499 Individual Studies In Mathematics (0-0-1)**

Studies of topics not included in or going beyond the regular course offerings. May be repeated for credit. *Prerequisite:* Departmental approval.

**3425 Modern Algebra (3-0)**

Groups, rings, integral domains, and fields. *Prerequisite:* MATH 3325.

**3426 Linear Algebra (3-0)**

Vector spaces, linear transformations and matrix representations, canonical forms, eigenvalues, invariant subspaces, orthogonal and unitary transformations, and bilinear and quadratic forms. *Prerequisite:* MATH 3325.

**3429 Numerical Analysis (3-0)**

The course covers numerical algorithms for approximation of functions, quadrature, solution of ordinary differential equations, solution of nonlinear equations, solution of linear systems of equations, computing eigenvalues and eigenvectors. Many computer applications will be required. *Prerequisites:* MATH 3323 and a working knowledge of a high level programming language.

**3436 Applied Analysis II (3-0)**

Series solutions of differential equations. Fourier series and Fourier integrals. Bessel's equation and Bessel functions. Legendre's equation and Legendre polynomials, the Sturm-Liouville problem and eigenfunction expansions, and an introduction to partial differential equations. *Prerequisite:* MATH 3226.

**3441 Real Analysis (3-0)**

Convergence of series of constant terms; convergence of sequences and series of functions; and analysis of functions of several variables to include the differential approximation theorem, the inverse function theorem, and the implicit function theorem. *Prerequisite:* MATH 3341.

**3470 Topics Seminar (3-0)**

Organized lectures in mathematics on topics not represented among the other course offerings. *Prerequisite:* Junior standing; additional prerequisites may be announced as required by the topics. May be repeated for credit.

**3499 Individual Studies In Mathematics (0-0-3)**

Studies of topics not included in or going beyond the regular course offerings. May be repeated for credit. *Prerequisite:* Departmental approval.

**Statistics (STAT)**

**Minor In Statistics:** Students may minor in Statistics by taking 18 hours (six advanced) as follows: CS 4120 or equivalent, MATH 3201 or 4111, plus 12 hours from STAT 3280, 3281, 3330, 3381, 3480, and MATH 3320. Students who plan to pursue graduate studies in statistics-related areas are urged to take STAT 3480.

**3180 Basics of Descriptive and Inferential Statistics (3-0)**

A course in statistical literacy. Emphasis will be on standard descriptive measures of location, spread, and association. Regression, probability and sampling, and binomial distribution. Interpretation of data which occur in daily life (polls, weather forecasting, surveys, quality control, etc.) will be stressed. *Prerequisite:* MATH 3120 or equivalent.

**1282 Computing Laboratory for Statistics 3280 (0-2)**

Practical exercises in the handling of statistical data and experimental sampling as related to the course work in STAT 3280. Includes an introduction to data processing.

**3280 Statistical Methods I (3-0)****(Common Course Number MATH 1342)**

An elementary introduction to statistical concepts and methods. Descriptive statistics, elementary probability, binomial distribution, normal distribution, estimation and hypothesis testing for one- and two-sample problems, simple linear regression, and correlation. Must be taken concurrently with STAT 1282. *Prerequisite:* MATH 3011 or equivalent.

**3281 Statistical Methods II (3-0)**

A continuation of Statistics 3280 with treatment of more advanced statistical methods. Chi-square goodness-of-fit and contingency table analysis, analysis of variance and multiple comparisons, multiple linear regression and correlation and analysis. *Prerequisite:* STAT 3280.

**3330 Probability (3-0)**

Theory and applications of probability models. Sample space, combinatorics, conditional probability, random variables, discrete and continuous probability distributions, expectation, moment generating functions, law of large numbers, and central limit theorem. *Prerequisite:* MATH 3213.

**3381 Nonparametric Statistical Methods (3-0)**

Distribution-free procedures; Nonparametric one- and two-sample tests for location and scale; nonparametric analysis of variance; nonparametric correlation. *Prerequisite:* STAT 3280 or STAT 3480.

**3480 Statistics I (3-0)**

A calculus-based development of statistical concepts and methods. Distribution theory, point and interval estimation and hypothesis testing in parametric statistical models, chi-square goodness-of-fit and contingency table analysis, simple linear regression analysis, and introduction to analysis of variance. *Prerequisite:* STAT 3330.

See the *Graduate Studies Catalog* for graduate programs and courses.

**Physics**

210 Physical Science  
(915) 747-5715

Chairperson: James H. Craig, Jr.

PROFESSORS EMERITI: Thomas G. Barnes, Max C. Bolen, Rufus E. Bruce, C. Sharp Cook, Juan O. Lawson

PROFESSORS: Brient, Craig, Dean

ASSOCIATE PROFESSOR EMERITI: Michael H. Blue, Robert L. Schumaker

ASSOCIATE PROFESSORS: Cooper, Lopez, Russell

ASSISTANT PROFESSORS: Drucker, Fitzgerald, Ravelo, Slusher, Smith, Vandegrift, Wang

**Baccalaureate Degrees**

The Department offers both the BS and BA degrees in Physics. The BS includes the opportunity to obtain concentrations in Applied Physics, Health Physics, or Secondary Teaching Certification.

**BS in Physics**

The requirement to obtain the BS in Physics consists of the general College of Science requirements plus the following specific requirements:

**Major** (43 semester hours including 33 semester hours of upper-division course work): PHYS 1120, 1121, 4210, 4211, 3323, 3325, 2343 (taken three times), 3331, 3351, 3352, 3441, 3442, 3455, and 3456 or 3457

**Minor** (22 semester hours including nine semester hours of upper-division courses): Mathematics is the required minor and consists of MATH 4111, 3112, 3213, 3226, 3335, and two courses selected from MATH 3323, 3429, and 3436.

**Additional Science:** CHEM 3105-3106 and 1105-1106. The substitution of another science for this College requirement must be approved by the Undergraduate Advisor.

The following concentrations require approval of course substitutions. The approval is to be obtained from the departmental Concentration Committee.

**Applied Physics Concentration**--Nine semester hours of approved upper-division courses may be substituted for PHYS 3352, 3442, and 3456 or 3457 in this concentration. This concentration must be requested by the student in a timely fashion and accompanied by a list of substituted courses submitted to the departmental Concentration Committee for approval.

**Health Physics Concentration**--PHYS 3457 is required. In addition, PHYS 3470, 3471, and GEOL 3484 must be substituted for PHYS 3323, 3352, and 3442. An approved upper-division course in biology or chemistry is to be substituted for one of the two upper-division courses in the mathematics minor. Students selecting this option are urged to take relevant elective courses in biology and chemistry.

**Secondary Teacher Certification**--This concentration requires a second minor, Secondary Education. The additional science requirement of chemistry may be waived upon approval of the departmental Concentration Committee. Nine semester hours of approved upper-



division courses may be substituted for PHYS 3352, 3442, and 3456 or 3457, with the provision that a minimum of 36 semester hours must be completed in the Department of Physics.

### BA In Physics

See the College of Liberal Arts section of this catalog for the general requirements for the BA degree. The specific courses required for this major are (28 semester hours including 18 semester hours of upper-division course work): PHYS 1120, 1121, 4210, 4211, 3325, 2343 (taken three times), 3351, 3441, and 3455. Mathematics is the required minor. (A minor in the College of Liberal Arts requires nine semester hours of upper-division course work.)

**Physics Honors Program:** The Physics Honors Program is designed to recognize and enhance the development of talented physics students. The program consists of departmental awards for outstanding achievement and special courses, seminars, and research laboratories for honors students. In addition, Physics Honors Students are also eligible to earn the BS degree with Departmental Honors and to participate in the five year BS/MS Program.

Incoming freshmen or students with fewer than thirty (30) semester hours of credit are eligible to be Physics Honors Students if they graduated in the top 20% of their high school graduating class and their combined SAT score is 1000 or more with at least 600 on the math portion of the SAT (or equivalent for other examinations). Students with thirty (30) or more semester hours credit must have a minimum 3.2 grade point average (with at least 3.2 GPA in all physics and mathematics courses) to be eligible.

### BS Degree with Physics Department Honors

Physics Honors students who satisfactorily complete an undergraduate Honors Thesis based on research in Physics are eligible to receive the BS degree with Departmental Honors in Physics. Usually the research will be carried out under the direction of a member of the faculty of the Department of Physics. The satisfactory completion of the Honors Thesis will be judged by the Thesis research director in conjunction with the Physics Department's Honors Committee. The candidate for Department Honors must request approval of candidacy prior to the beginning of the senior year. Upon acceptance by the department, the candidate shall enroll in PHYS 2477-3477 for successive semesters and must have accumulated a total of six semester hours of PHYS 2477-3477 credit on completion of the Honors Thesis Program.

### Five Year BS-MS Program

The Department of Physics provides an opportunity for qualified students to participate in a five year bachelor/master of science degree program. The program is limited to students who maintain at least a 3.0 grade point average. Freshmen honors students should consult with the departmental undergraduate advisor about the details of this program including course selection and admission to the Graduate School.

## Astronomy (ASTR)

### 1107 Astronomy Laboratory I (0-2) (Common Course Number PHYS 1111)

Basic laboratory exercises in solar system astronomy. An introduction to the concepts and methods employed by astronomers in studying the solar system. *Prerequisite:* ASTR 3107 or concurrently and MATH 3010 or placement into MATH 3011 or higher level mathematics course. Fees required.

### 1108 Astronomy Laboratory II (0-2) (Common Course Number PHYS 1112)

Basic laboratory exercises in stellar and galactic astronomy. *Prerequisite:* ASTR 1107 and ASTR 3108 or concurrently. Fees required.

### 3107 Elementary Astronomy of the Solar System (3-0) (Common Course Number PHYS 1311)

A survey of the solar system. Topics include astronomical history and instruments, the planets and their moons, comets, and meteors. May not be counted toward a major or minor in physics. Students seeking four credit hours are encouraged to take ASTR 1107 concurrently.

### 3108 Elementary Astronomy of Stars and Galaxies (3-0) (Common Course Number PHYS 1312)

Topics include stellar properties, galaxies, and cosmology. May be taken independently of ASTR 3107. May not be counted toward a major or minor in physics. Students seeking four credit hours are encouraged to take ASTR 1108 concurrently. *Prerequisite:* ASTR 3107.

## Physical Science (PSCI)

### 3102 Application of Physical Science In Society (3-0) (Common Course Number PHYS 1317)

The applications of physical science to societal problems with special emphasis on energy, energy resources, and energy utilization. May not be counted toward a major or minor in physics.

### 3203 Physical Science I (2-2)

An introduction to the physical sciences. Selected topics from chemistry and physics. Lectures are coordinated with the laboratory experiences. Applications of elementary algebra are integrated into the course. *Prerequisite:* MATH 3120 or MATH 4109 or concurrently. Laboratory fee required.

### 3304 Physical Science II (2-2)

A continuation of PSCI 3203, treating more advanced topics. Elementary statistical concepts are applied to aid the understanding of uncertainty in measurement. *Prerequisites:* PSCI 3203, MATH 3120; and MATH 3180, or PSYC 3103 or QMB 3201 or SOCI 3212. Laboratory fee required.

## Physics (PHYS)

### 1120 Physics Laboratory I (0-3) (Common Course Number PHYS 2125)

Experiments in mechanics and thermal physics with the gathering and analysis of data aided by computers. *Prerequisite:* MATH 4109 or concurrently. Fees required.

### 1121 Physics Laboratory II (0-3) (Common Course Number PHYS 2126)

Experiments in electric circuit and optics. The emphasis is on understanding physical concepts through discovery -- observation and experimentation. *Prerequisite:* PHYS 1120 and MATH 4110 or concurrently. Fees required.

### 4103 General Physics I (3-2) (Common Course Number PHYS 1401)

A non-calculus treatment of mechanics and heat. Laboratory experience is an essential component of this course. May not be counted toward a major or minor in physics. *Prerequisite:* MATH 4109 or 3120. Fees required.

### 4104 General Physics II (3-2) (Common Course Number PHYS 1402)

A continuation of PHYS 4103, treating topics in electricity, magnetism, sound, and light. May not be counted toward a major or minor in physics. *Prerequisite:* PHYS 4103. Fees required.

### 4210 Mechanics and Thermal Physics (4-1) (Common Course Number PHYS 2425)

Dynamics of particles and rigid bodies using vectors and calculus, conservation of energy and momentum, kinetic theory, and thermal physics. *Prerequisite:* MATH 4111 or concurrently.

**4211 Fields and Waves (4-1)****(Common Course Number PHYS 2426)**

Electric field and potential; current and magnetism; time varying fields and electromagnetic waves, waves in elastic media; interference and theory of waves. *Prerequisites:* PHYS 4210; MATH 3112, or concurrently.

For Undergraduates and Graduates

**2343 Advanced Laboratory Practice (0-6)**

Topics in and practices of experimental physics. May be repeated three times for credit. *Prerequisites:* PHYS 4211. Fees required.

**3323 Physical Optics (3-0)**

Wave propagation, interference, diffraction, absorption, scattering, and polarization. The theory and operation of lasers and optical resonant cavities are introduced. *Prerequisite:* PHYS 4211 and MATH 3226.

**3325 Survey of Modern Physics (3-0)**

Survey of special relativity theory and quantum physics applied to atoms, molecules, nuclei, and the solid state. *Prerequisite:* PHYS 4211.

**3331 Thermal Physics (3-0)**

Introduction to statistical mechanics and thermodynamics. *Prerequisites:* PHYS 4211 and MATH 3213.

**3351 Analytical Mechanics I (3-0)**

Newtonian mechanics of particles and rigid bodies. *Prerequisites:* PHYS 4211; MATH 3226, or concurrently.

**3352 Analytical Mechanics II (3-0)**

Topics in mechanics such as mechanics of deformable bodies and application of Lagrangian and Hamiltonian formulations. *Prerequisite:* PHYS 3351.

For Undergraduates and Graduates

**3359 Astrophysics (3-0)**

The physical basis for stellar radiation, stellar motions, binary and variable stars, stellar interiors, and the formation of energy in stars, interstellar matter, galaxies, and cosmology. *Prerequisites:* PHYS 4211 and MATH 3226.

**2477 Undergraduate Research Problems in Physics (0-0-2)**

Supervised individual research. May be repeated for credit. *Prerequisites:* Permission of the research advisor.

**3428 Theoretical Geophysics (3-0)**

A study of the theory of potential and thermodynamics of the earth and hydrodynamics. Emphasis is on the solving of various problems associated with the natural force fields of the earth. *Prerequisites:* PHYS 4211 and MATH 3226.

**3441 Electromagnetics I (3-0)**

Electromagnetic theory via Maxwell's equations. *Prerequisites:* PHYS 4211 and MATH 3335.

**3442 Electromagnetics II (3-0)**

Advanced topics in electrodynamic theory such as electrodynamic waves and radiation and relativistic electrodynamics. *Prerequisite:* PHYS 3441.

**3448 Fundamentals of Acoustics (3-0)**

The principles underlying the generation, transmission, and reception of acoustic waves. Mathematical analysis of the various types of vibration of solid bodies. Propagation of plane and spherical sound waves through fluids, transmission and absorption phenomena, resonators and filters. *Prerequisites:* PHYS 4211 and MATH 3226.

**3455 Introductory Quantum Mechanics (3-0)**

Wave mechanics fundamentals, one-dimensional eigenvalue problems, angular momentum and spin, the hydrogen atom, and quantum statistics. *Prerequisite:* PHYS 3325 and MATH 3226.

**3456 Atoms, Molecules, and Solids (3-0)**

Multielectron atoms and molecules. Structure of solids, band theory of conduction, and other quantum properties of solids. *Prerequisite:* PHYS 3455.

**3457 Relativity, Nuclei and Particles (3-0)**

Special relativity, nuclear models, nuclear decay and reactions, and an introduction to elementary particles. *Prerequisite:* PHYS 3455.

**3470 Health Physics I (3-0)**

The physics of ionizing radiation; charged particle, neutron, and high-energy photon interactions; natural and man-made sources of radioactivity, their production, and detection. *Prerequisites:* PHYS 3325 and MATH 3226.

**3471 Health Physics II (2-3)**

Topics include radiation quantities and units, detection electronics, statistics, detectors, and dosimeters. Also includes topics in radiation dose evaluation, radiation biophysics, and laboratory experiences in electromagnetic and particulate radiation detection and dosimetric methods. *Prerequisites:* PHYS 3470 and two semesters of PHYS 2343. Laboratory fee required.

**3477 Undergraduate Research Problems in Physics (0-0-3)**

Supervised individual research. May be repeated for credit. Students taking this course to partially fulfill the requirements for the BS degree with departmental honors in Physics must complete six semester hours of 2477 and/or 3477 and submit an undergraduate thesis on the research accomplished. *Prerequisite:* Senior standing with a 3.2 grade point average or better and permission of both the research advisor and the department undergraduate advisor.

See the *Graduate Studies Catalog* for graduate programs and courses.

# The Faculty

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### Doctor of Philosophy in Computer Engineering

### Doctor of Philosophy in Environmental Science and Engineering

### Doctor of Philosophy in Geological Sciences

### Doctor of Philosophy in Materials Sciences and Engineering

### Doctor of Philosophy in Psychology

Psychology and Health  
Human Behavior in Organizations

### Master of Accountancy

### Master of Arts

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

### Master of Arts in Interdisciplinary Studies

### Master of Arts in Teaching

Mathematics

### Master of Business Administration

### Master of Education

Curriculum and Instruction  
Education  
Educational Administration  
Educational Diagnostician  
Educational Supervision  
Guidance and Counseling  
Instructional Specialist  
Reading Education  
Special Education

### Master of Engineering in Environmental Engineering

### Master of Fine Arts

Creative Writing

### Master of Music

Music Education  
Music Performance

### Master in Public Administration

### Master of Science

Biological Sciences  
Chemistry  
Civil Engineering  
Computer Engineering  
Computer Science  
Economics  
Electrical Engineering  
Engineering  
Geological Sciences  
Geophysics  
Health and Physical Education  
Industrial Engineering  
Kinesiology  
Manufacturing Engineering  
Mathematics  
Mechanical Engineering  
Metallurgical and Materials Engineering  
Physics  
Speech-Language Pathology  
Statistics

### Master of Science in Environmental Engineering

### Master of Science in Interdisciplinary Studies

### Master of Science in Nursing

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

### U.T. Austin/UTEP Co-operative Programs

Master of Library and Information Science  
Master of Science in Social Work  
Doctor of Philosophy with concentration in Border Studies

### U.T.H.S.C. Houston/UTEP Co-operative Program

Master of Public Health

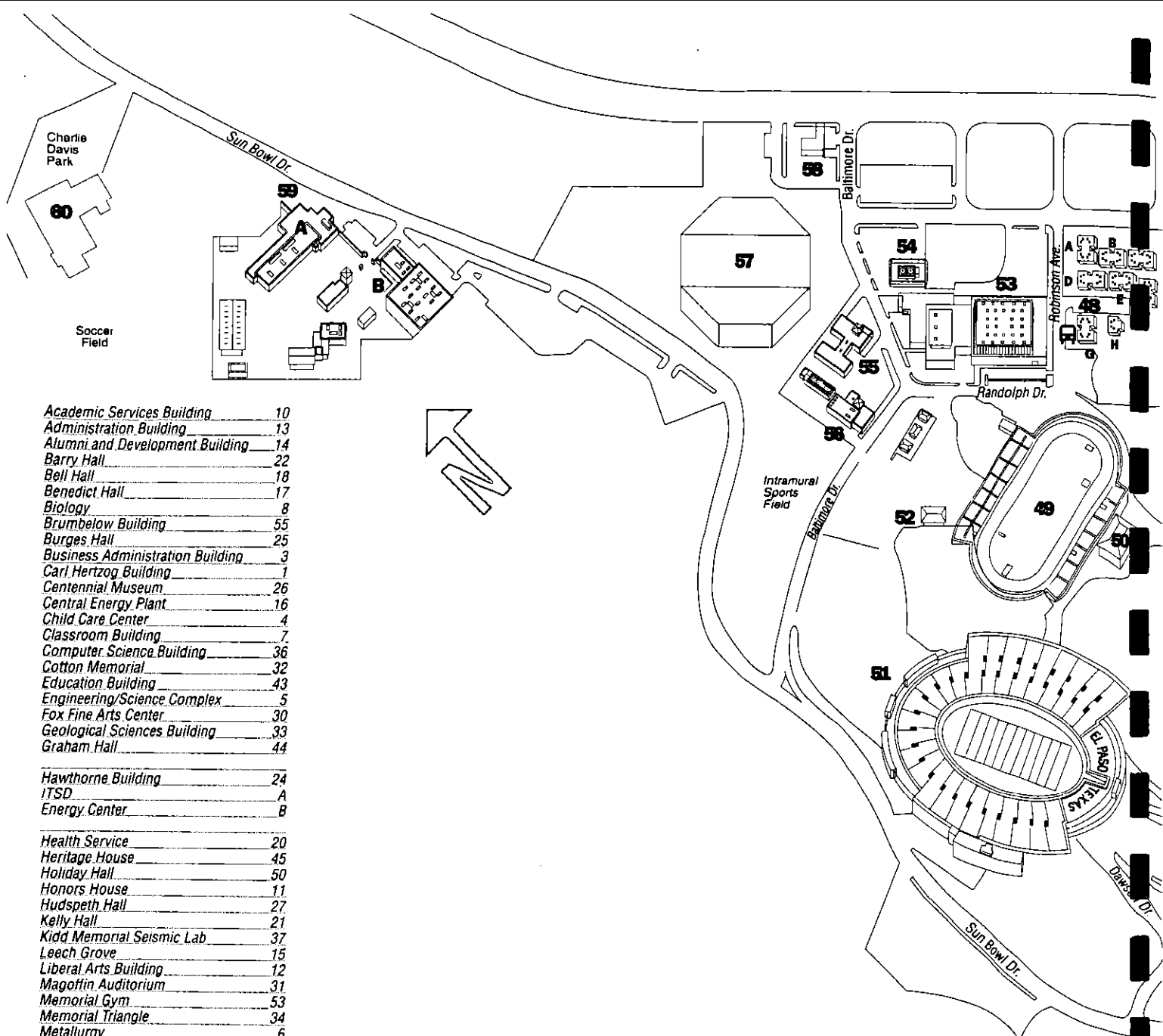
### U.T.M.B. Galveston/UTEP Co-operative Program

Masters in Physical Therapy

### Additional Degree Programs

Doctor of Pharmacy  
UT-Austin offers a portion of their PharmD degree in El Paso. UTEP provides some of the facilities; UT-Austin is responsible for the curriculum and faculty. Preceptorships may be completed in the El Paso area. A significant portion of the coursework must be taken on the Austin campus.

Additional information on graduate degree and non-degree programs is available in the *Graduate Studies Catalog*.

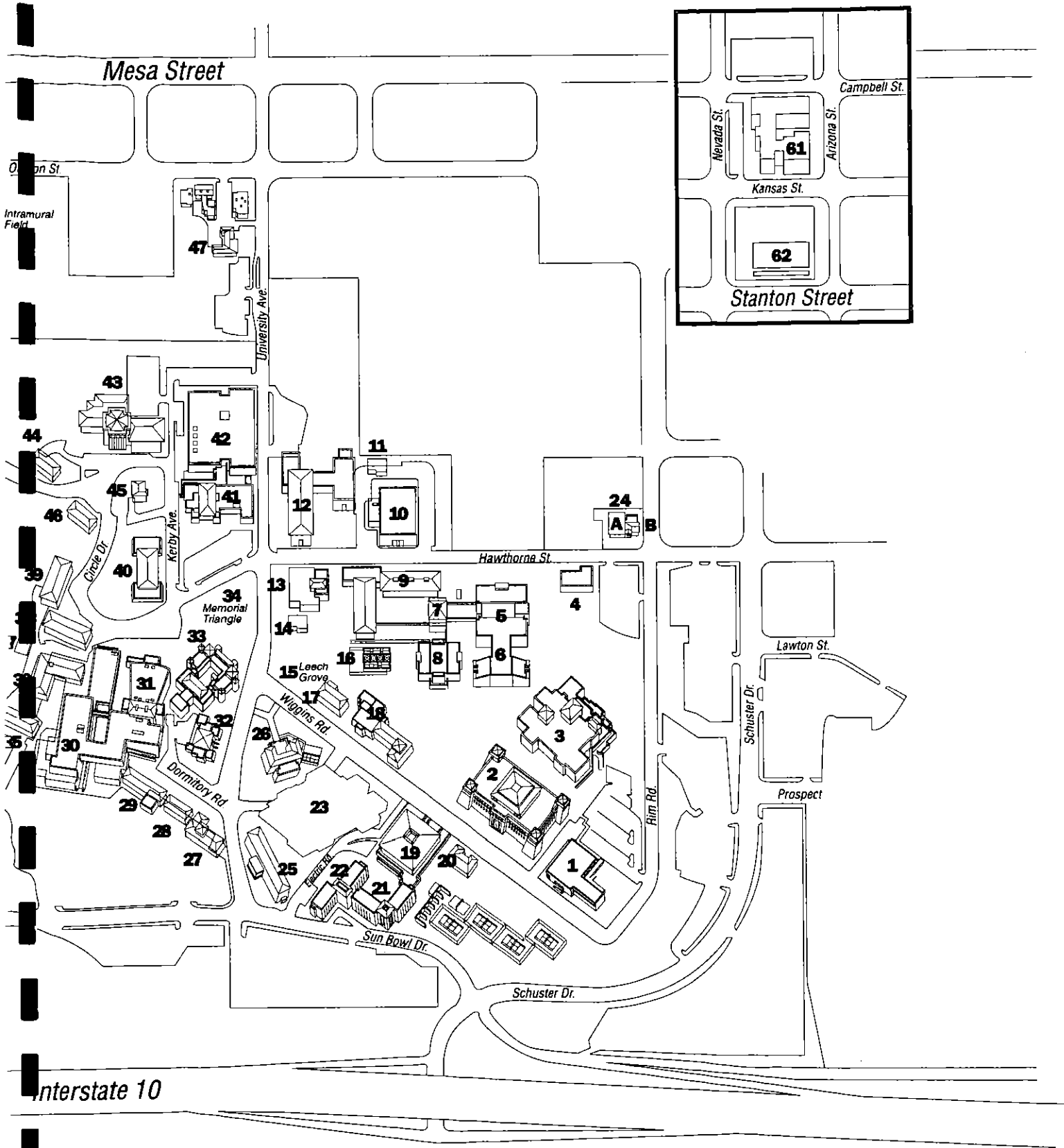


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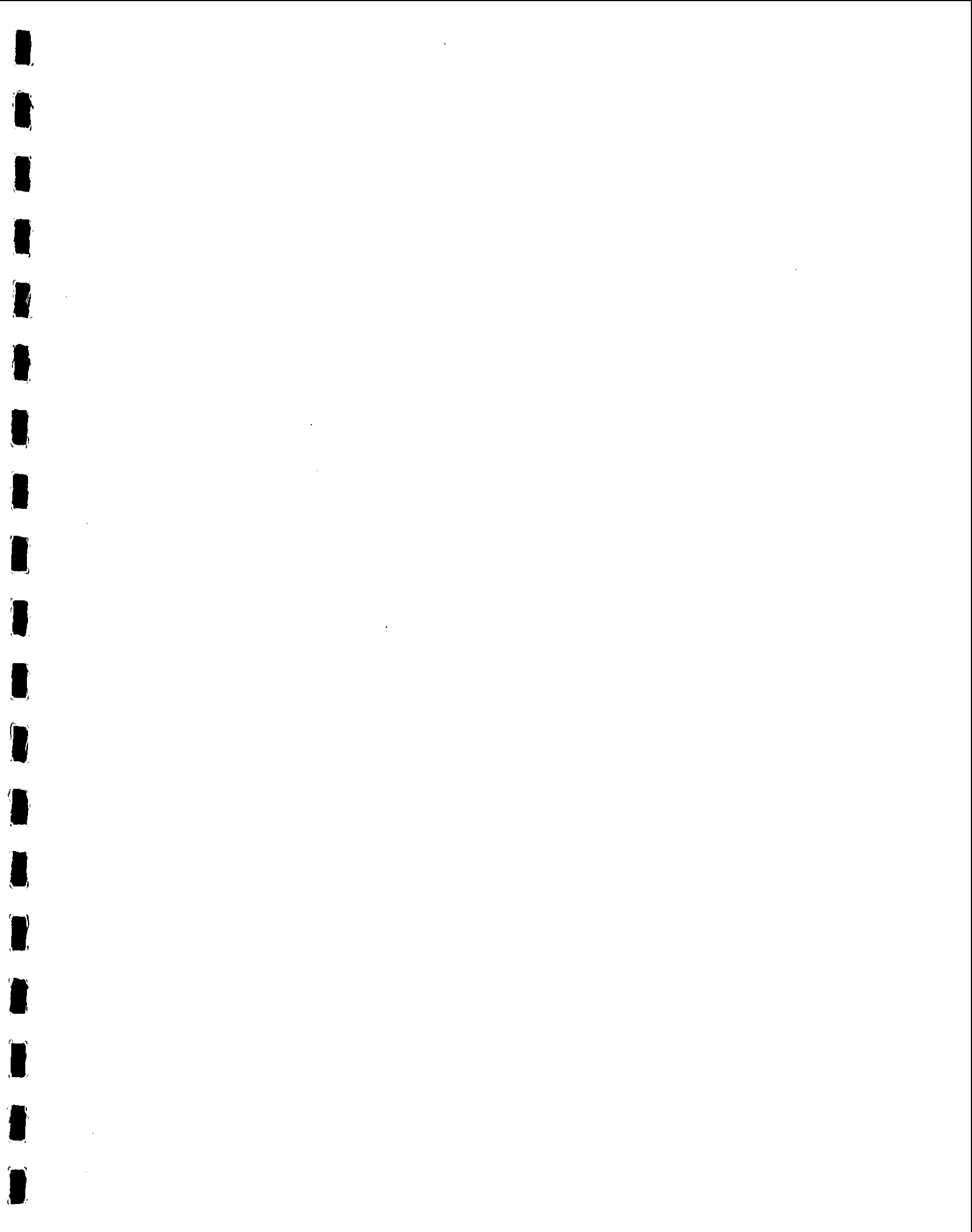
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