Graduate Catalog

LAMAR UNIVERSITY

2002-2004

Member of The Texas State University System

LAMAR UNIVERSITY

A Member of The Texas State University System

COLLEGE OF GRADUATE STUDIES

2002-2004 • Catalog • Volume 47 Number 2

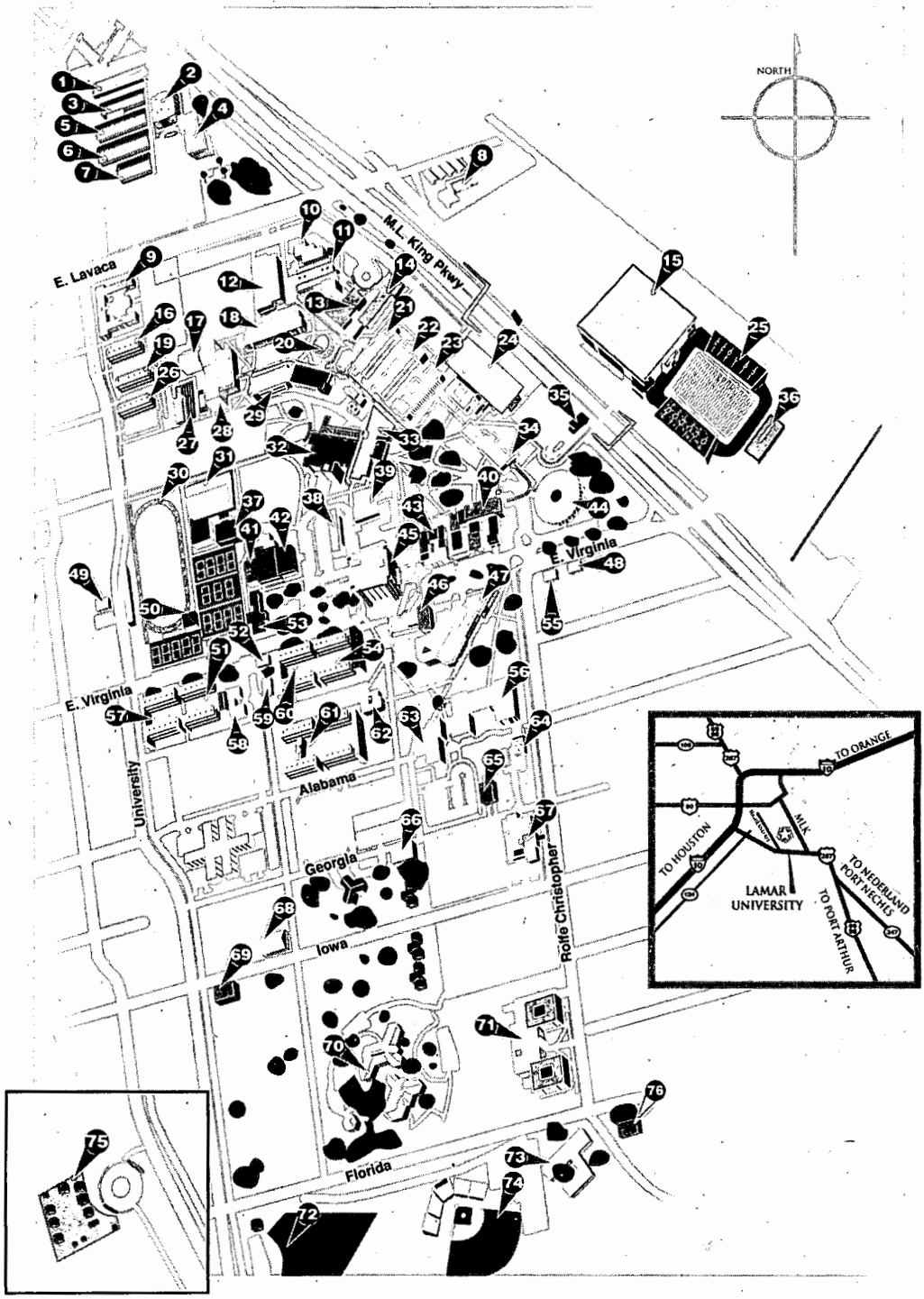
Twenty-seventh catalog issued with announcements for 2002-2004.

Founded in 1923, and established as a four-year coeducational, state-supported college on September 1, 1951.

The provisions of this bulletin do not constitute a contract, expressed or implied, between any applicant, student and faculty member in Lamar University. Lamar University reserves the right to withdraw courses at any time, change fees, calendars, curricula, graduation procedures and any other requirement affecting students. Changes become effective when the proper authorities so determine the application to both prospective students and to the students already enrolled.

Catalog of Lamar University. (USPS 074-420). Third class postage paid at Beaumont, Texas 77710.

LAMAR UNIVERSITY



BUILDING LEGEND — ALPHABETICAL

MAJOR OFFICES

2002-2003 Calendar

Fall Semester – 2002

August 2002

18 Residence Halls open at 1:00 p.m.
Dining Hall opens at 4:30 p.m.
19 Payment Day
20 Registration
21 Classes Begin
Schedule revisions – late registration **with penalty fee**
22 Last day for schedule revisions and/or late registration **with penalty fee**
26 Application for December 2002 graduation begins

September 2002

2 Labor Day – NO CLASSES
6 Twelfth Class Day

October 2002

2 Last day to drop or withdraw without academic penalty
Last day to petition for no grade
7 Last day to apply for December graduation (graduate students only)
Last day to apply for December graduation (undergraduate students)
31 Distribution of Spring 2003 class schedule

November 2002

8 Last day to pay for diploma, cap and gown
Last day to drop and withdraw
Registration for Spring semester begins
27 Thanksgiving recess begins at 10:00 p.m.
Dining and Residence Halls close at 6:00 p.m.
28-29 Thanksgiving Holiday

December 2002

1 Residence Halls open at 1:00 p.m.
Dining Hall opens at 4:30 p.m.
2 Classes resume at 7:00 a.m.
3 Finals preparation day – no classes prior to 5:00 p.m.
Finals begin at 5:00 p.m.
4-10 Final examinations
12 Dining halls close at 9:00 a.m.
Residence halls close at 10:00 a.m.
Winter Mini-Session Begins
Grades for graduating seniors due by 8:30 a.m.
All other grades due by 4:00 p.m.
14 Commencement

AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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Spring Semester – 2003

January 2003

5 Residence halls open at 1: 00 p.m.
Dining hall opens at 4:30 p.m.
6 Payment Day
7 Registration
Winter Mini-Session ends
8 Classes Begin
9 Schedule revisions – late registration **with penalty fee**
Last day for schedule revisions and/or
late registration **with penalty fee**
20 Martin Luther King, Jr. birthday observed – NO CLASSES
Applications for May 2003 graduation begins
24 Twelfth Class Day

February 2003

12 Last day to drop or withdraw without academic penalty
Last day to petition for no grade

March 2003

3 Last day to apply for May graduation
(graduate students only)
7 Spring recess begins at 5:00 p.m.
Dining and Residence Halls close at 6:00 p.m.
10-14 Spring Break
16 Residence Halls open at 1:00 p.m.
Dining Hall opens at 4:30 p.m.
17 Classes resume at 7:00 a.m.
24 Last day to apply for May graduation
(undergraduate students)
31 Distribution of Summer/Fall 2003 class schedule

April 2003

11 Last day to pay for diploma, cap, and gown
Last day to drop or withdraw
18 Good Friday – NO CLASSES
21 Registration for Summer and Fall begins
29 Finals preparation day – no classes prior to 5:00 p.m.
Finals begin, 5:00 p.m.
30-6 Final examinations

May 2003

30-6 Final examinations
8 Dining Hall closes at 9:00 a.m.
Residence Halls close at 10:00 a.m.
Summer Mini-Session Begins
Grades for graduating seniors due by 8:30 a.m.
All other grades due by 4:00 p.m.
10 Commencement
26 Memorial Day – NO CLASSES

JANUARY

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FEBRUARY

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APRIL

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MAY

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Summer Session – 2003
First Term

May 2003

26 Memorial Day – NO CLASSES
29 Registration
Summer Mini-Session Ends

June 2003

1 Residence Halls open at 1:00 p.m.
Dining Hall opens at 4:30 p.m.
2 Classes begin – schedule revisions – late registration **with penalty fee**
Last day to apply for August graduation (graduate students only)
Application for August 2003 graduation begins (undergraduate students)
3 Last day for schedule revisions and/or late registration **with penalty fee**
5 Fourth Class Day
13 Last day to drop or withdraw without academic penalty
Last day to petition for no grade
27 Last day to apply for August graduation (undergraduates)

July 2003

1 Last day to drop or withdraw
4 Independence Day Observed – NO CLASSES
7 Last day to pay for diploma, cap and gown
8 Last class day
10 All grades due by 4:00 p.m.

MAY

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JUNE

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JULY

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Summer Session – 2003
Second Term

July 2003

8 Registration
9 Classes begin – schedule revisions and/or late registration **with penalty fee**
Last day for schedule revisions and/or late registration **with penalty fee**
14 Fourth Class Day
23 Last day to drop or withdraw without academic penalty
Last day to petition for no grade

August 2003

6 Last day to drop or withdraw
13 Last class day
Dining and Residence Halls close at 6:00 p.m.
15 Grades for graduating seniors due by 8:30 a.m.
All other grades due by noon
16 Commencement

AUGUST

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2003-2004 Calendar

Fall Semester – 2003

August 2003

24 Residence Halls open at 1:00 p.m.
Dining Hall opens at 4:30 p.m.
25 Payment Day
26 Registration
27 Classes Begin
Schedule revisions – late registration **with penalty fee**
28 Last day for schedule revisions and/or
late registration **with penalty fee**
Application for December 2003 graduation begins

AUGUST

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September 2003

1 Labor Day – NO CLASSES
12 Twelfth Class Day

SEPTEMBER

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October 2003

6 Last day to drop or withdraw without academic penalty
Last day to petition for no grade
Last day to apply for December graduation
(graduate students only)
31 Distribution of Spring 2004 class schedule
Last day to apply for December graduation
(undergraduate students)

OCTOBER

S	M	T	W	T	F	S
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November 2003

3 Registration for Spring semester begins
14 Last day to drop and withdraw
Last day to pay for diploma, cap and gown
26 Thanksgiving recess begins at 10:00 p.m.
Dining and Residence Halls close at 6:00 p.m.
27-28 Thanksgiving Holiday
30 Residence halls open at 1:00 p.m.
Dining Hall opens at 4:30 p.m.

NOVEMBER

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December 2003

1 Classes resume at 7:00 a.m.
9 Finals preparation day – no classes prior to 5:00 p.m.
Finals begin at 5:00 p.m.
10-16 Final examinations
18 Dining Hall closes at 9:00 a.m.
Residence Halls close at 10:00 a.m.
Winter Mini-Session Begins
Grades for graduating seniors due by 8:30 a.m.
All other grades due by 4:00 p.m.
20 Commencement

DECEMBER

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Spring Semester – 2004

January 2004

11 Residence Halls open at 1:00 p.m.
Dining Hall opens at 4:30 p.m.
12 Payment Day
13 Registration
Winter Mini-Session ends
14 Classes Begin
Schedule revisions – late registration **with penalty fee**
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20 Applications for May 2004 graduation begins
30 Twelfth Class Day

February 2004

27 Last day to drop or withdraw without academic penalty
Last day to petition for no grade

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1 Last day to apply for May graduation
(graduate students only)
5 Spring recess begins at 5:00 p.m.
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Dining Hall opens at 4:30 p.m.
15 Classes resume at 7:00 a.m.
22 Last day to apply for May graduation
(undergraduate students)
31 Distribution of Summer/Fall 2004 class schedule

April 2004

9 Good Friday — NO CLASSES
12 Last day to pay for diploma, cap, and gown
Last day to drop or withdraw
13 Registration for Summer and Fall begins

May 2004

4 Finals preparation day - no classes prior to 5:00 p.m.
Finals begin at 5:00 p.m.
5-11 Final examinations
12 Dining Hall closes at 9:00 a.m.
Residence Halls close at 10:00 a.m.
13 Grades for graduating seniors due by 8:30 a.m.
All other grades due by 4:00 p.m.
Summer Mini-Session begins
15 Commencement
31 Memorial Day – NO CLASSES

JANUARY

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FEBRUARY

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MARCH

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Summer Session – 2004
First Term

May 2004

23 Residence Halls open at 1:00 p.m.
Dining Hall opens at 4:30 p.m.
25 Registration
Summer Mini-Session Ends
26 Classes begin – schedule revisions –
late registration **with penalty fee**
Last day for schedule revisions and/or
late registration **with penalty fee**
Application for August 2004 graduation begins
31 Memorial Day – NO CLASSES

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June 2004

1 Fourth Class Day
7 Last day to apply for August graduation
(graduate students only)
10 Last day to drop or withdraw without academic penalty
Last day to petition for no grade
30 Last day to apply for August graduation
(undergraduates)

JUNE

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July 2004

2 Last day to drop or withdraw
Last day to pay for diploma, cap and gown
5 Independence Day Observed – NO CLASSES
6 Last class day
8 All grades due by 4:00 p.m.

JULY

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18	19	20	21	22	23	24
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Summer Session – 2004
Second Term

July 2004

7 Registration
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and/or late registration **with penalty fee**
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and/or late registration **with penalty fee**
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August 2004

4 Last day to drop or withdraw
11 Last class day
Dining and Residence Halls close at 6:00 p.m.
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Table of Contents

Dean of Graduate Studies: Jerry W. Bradley, Ph.D.
Editor: Cynthia L. Hicks

Students from more than 25 nations study in more than 35 master's-level subject areas at Lamar University.

General Information

Location

The Lamar University campus is located in Beaumont, Texas. With a population of more than 114,000, Beaumont is a diversified city, home not only to the University but also to businesses and industry stemming from a strong petrochemical and agricultural base. World-renowned companies are located in Beaumont to take advantage of the area's resources and its educated workforce.

A host of cultural attractions offer a variety of leisure options from world-class museums and symphony presentations to shopping districts and many spring and fall festivals. A civic center, convention center and coliseum draw professional entertainers and a wide variety of business, social and professional groups to the city. Beaumont is convenient to lake, river and ocean recreation, located only a few miles from the balmy Gulf Coast and little more than an hour from the Big Thicket National Preserve, large lakes and piney woods.

The campus is home to the stately Mary and John Gray Library, Montagne Center coliseum, Setzer Student Center, Gladys City Boomtown, several residence halls and state-of-the-art computing and engineering facilities, including a leading-edge interactive video laboratory. Lamar University welcomes visitors. Information regarding tours may be obtained from the Office of Admission Services, P.O. Box 10009, Beaumont, Texas 77710, phone (409) 880-8888.

History

Lamar University originated on March 8, 1923, when the South Park School District in Beaumont authorized its superintendent to proceed with plans to open "a Junior College of the first class." On September 17, South Park Junior College opened with 125 students and a faculty of fourteen. Located on the third floor of the South Park High School building, the College shared the library and athletic facilities with the high school. In 1932, separate facilities were provided and the name of the institution was changed to Lamar College, to honor Mirabeau B. Lamar, second president of the Republic of Texas and the "Father of Education" in Texas.

On June 8, 1942, as a result of a public campaign, a new campus was purchased and classes were held for the first time on the present-day campus in Beaumont. After World War II, the College grew to 1,079, and the Honorable Jack Brooks introduced a bill in the House of Representatives to make Lamar University a state-supported senior college. The Legislature approved House Bill-52 June 4, 1949, creating Lamar State College of Technology effective September 1, 1951. Lamar was the first junior college in Texas to become a four-year, state-supported college. Lamar continued to grow, building strong programs in engineering, sciences, business, education and the arts.

In 1962, a graduate school was established offering master's degrees in several fields. The Doctorate in Engineering was established in 1971. In the same year, House Bill-590 became law, changing the institution's status from college to university. Lamar State College of Technology, with an enrollment of 10,874, officially became Lamar University on August 23, 1971.

In 1969, an extension center was opened in Orange, and in 1975, the long-standing, private two-year Port Arthur College became Lamar University at Port Arthur. The Lamar University System, of which Lamar University-Beaumont was the primary component, was established in the 68th Session of the Texas Legislature with the passage of SB-620, which took effect in August 1983.

In 1990, the Texas Higher Education Coordinating Board recommended that all two-year programs at Lamar University be combined into the Lamar University Institute of Technology. The programs in the former College of Technical Arts, along with Allied

Health, Office Technology and Restaurant/Institutional Food Management were placed in the new Institute. The Doctorate of Education in Deaf Education was established in 1993.

Lamar's commitment to quality higher education has been steady and progressive, anticipating the evolving needs of its students. To facilitate this commitment, the Texas Legislature approved House Bill-2313 to merge the Lamar University System with The Texas State University System (TSUS). Effective September 1, 1995, Lamar University joined sister institutions Angelo State University, Sam Houston State University, Southwest Texas State University and Sul Ross State University. On June 19, 1999, the Texas Legislature approved House Bill- 1297 to rename Lamar University at Port Arthur, Lamar University at Orange and the Lamar University Institute of Technology. Today, these TSUS institutions are known as Lamar State College at Port Arthur, Lamar State College at Orange and the Lamar Institute of Technology.

As a comprehensive university granting bachelor's, master's and doctoral degrees, Lamar University continues to enhance its instructional, service and research missions. Lamar's growth has produced an economic impact that exceeds $164 million annually, but even more influential is the impact realized by Lamar graduates, who are more than 65,000 strong.

Government

A board of nine regents, appointed by the Governor and approved by the State Senate for terms of six years, governs The Texas State University System. The Board of Regents delegates the direction of university affairs to the presidents, campus administrative officers and faculty.

Mission Statement

Lamar University is a comprehensive senior public university dedicated to providing a learning environment of the highest quality. The University is an educational, scientific, engineering, business, and cultural resource center committed to the three-fold mission of teaching, research and service. The University is committed to providing students with a liberal education in the context of a global and multicultural environment, and seeks partnerships with business, governmental, industrial and other educational organizations to more efficiently accomplish its goals.

Instructional Mission

Lamar University emphasizes quality teaching, student access to faculty, and careful student counseling. The University creates a liberating educational experience for each student which expands knowledge, awakens new intellectual interests, examines values, develops talents, provides new skills, and prepares each student to assume an effective role as a citizen in a democracy.

With historical commitments to quality educational programs in engineering, business, the arts and sciences, health sciences, education, and the visual and performing arts, the University focuses its unique strengths on significant problems of contemporary interest as evidenced by its recent initiatives in environmental science and engineering, gifted education, and deaf education.

Lamar University is strongly committed to the continual enhancement of teaching/learning methodologies and their systematic assessment.

The University's mission in graduate education is broad-based at the master's level, and includes the doctorate in engineering and in deaf education. Other doctoral-level educational opportunities for the region are enhanced through cooperative arrangements between Lamar University and other institutions of higher education. The University's mission in graduate education is characterized by an emphasis on professional fields of study.

Research Mission

As a comprehensive, regional university with extensive educational programs, Lamar University's academic efforts are directed to both applied and basic research, scholarship, and creative activities. Through its emphasis on the teacher-scholar model, the University encourages faculty members to be active in their respective disciplines, to involve both undergraduate and graduate students in research and creative pursuits, and to support the principle that research is inseparable from teaching.

Service Mission

The University's educational mission extends to all residents of the Southeast Texas area and, in special cases, beyond the region. In recognition of that mission, Lamar University provides a diverse outreach program including: credit and non-credit continuing education offerings responsive to the personal, career, and professional development needs of individuals in our region; specialized skills training and human resource development for business and industry on the Gulf Coast; and public service activities that respond to unique regional educational needs and cultural interests.

The University contributes to the cultural life of the region through artistic presentations and events utilizing the talents of faculty, students, and visiting lecturers, artists, and performers.

Students, faculty, and staff are encouraged to be involved in civic, cultural, service, and professional activities. By such voluntary and consultative activities, members of University demonstrate their citizenship within the larger community.

Accreditation and Approval

Lamar University 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 degrees at the Associate, Baccalaureate and Doctoral levels. In addition, Lamar is approved by the Texas Education Agency. The College of Graduate Studies is a member of the Council of Graduate Schools in the United States, the Conference of Southern Graduate Schools and the Texas Association of Graduate Schools.

Programs in the College of Engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. In the College of Business, graduate programs are accredited by the International Association for Management Education.

Other accreditations include Chemistry by the American Chemical Society; Music by the National Association of Schools of Music; the College of Education and Human Development by the Texas Education Agency; programs in Family and Consumer Sciences by the American Dietetic Association; Sociology by the Council on Social Work Education; programs in Speech-Language Pathology and in Audiology by the American Speech-Language-Hearing Association and in Deaf Education by the National Council for Education of the Deaf and the Texas Education Agency. The University is also a member of a number of academic councils, societies and associations.

The Library

The eight-story Mary and John Gray Library dominates the campus from its central location. The Library occupies seven floors with on-line public access catalog to more than 1,000,000 volumes and 3,000 periodicals. Seating accommodates 1,200 students and faculty.

The first floor service areas include circulation, reference and interlibrary loans. The second floor houses reserve reading, current periodicals and government documents. Four floors provide stacks for books and periodicals shelved in Library of Congress classification sequence from class A on the third floor through class Z on the sixth floor.

The seventh floor houses the library administrative offices, the Media Services Department, the Computer Lab and Special Collections.

The spacious and elegant eighth floor, furnished by community donors, serves as a University Reception Center for meetings and conferences.

Expanding library collections support continuously evolving academic programs. In addition to a collection of books, electronic information and periodicals, the Library provides access to state and federal government documents and participates in the library networks which extend access to information resources. The Library coordinates multimedia programs on campus and has a basic collection of equipment and materials for central distribution.

Research Office

The Research Office is administered by the Associate Vice President for Research, who chairs the Research Council. This office promotes and funds internal research; oversees sponsored programs and technology transfer as well as patent, copyright and intellectual property policies; establishes liaison between the university and state and national funding sources; and assures that proposed projects comply with institutional and governmental regulations. This office also provides assistance to faculty in the development and submission of grant/project proposals by locating funding sources and providing editorial assistance in proposal preparation.

Information Systems (Computing Facilities)

The Information Technologies Division is responsible for providing the computing services required by the academic, administrative and research communities of Lamar University.

Central Computing, a department of the division, is located in the Cherry Engineering Building. The facility consists of an ES40 alpha processor running the administrative software for Lamar University, a DS20 server with 512 megabytes of RAM and 54 gigabytes of disk storage running OpenVMS, a DEC 2100 server with 256 megabytes of RAM and 18 gigabytes of disk storage running True64UNIX, the Lamar web server running NT 4.0 and the Lamar Departmental web server running NT 4.0. Languages supported are ADA, BASIC, C, C++, FORTRAN, LISP, PASCAL and JAVA. Software packages include MATLAB, SPSS, SAS and IMSL. Also maintained are a DEC 2100 server for the library running OpenVMS and web/phone registration machines. All computer systems are connected to the University's fiber optic backbone using gigabit ethernet. There are two 1200 lpm printers for student and faculty use.

Central Computing is open 24 hours a day from 7 a.m. on Monday to 7 a.m. on Saturday. Reports and accounts may be picked up from 7:30 a.m. to 7 p.m. Monday through Friday. The machines are available 24 hours a day, except once a week when a full save is performed.

A student entering Lamar University is given a computer account by Central Computing. New student and new faculty accounts are generated by the fourth class day of each semester. In order to activate an account, a student or faculty member must come to the Central Computing window in the Cherry Building and present his/her Lamar ID. Accounts remain active as long as a student is enrolled or a faculty member is employed, unless the Computer Use Policy is violated.

Early Childhood Development Center

Lamar University's Early Childhood Development Center is located at 950 East Florida. The Center provides high quality extended day-care services and pre-school, pre-kindergarten and kindergarten programs designed for children between the ages of 18 months and six years.

The Center is home to a special summer program called "Super Kids." The science-based, interactive program for first- through third-graders is taught in one-week sessions.

The Center is staffed with degreed teachers who create a stimulating environment and provide unlimited opportunities for learning. In addition to providing care for young children, the Center, under the direction of the College of Education and Human Development, provides a site for college students from a number of different disciplines to work with children as part of their course work and training.

The Early Childhood Development Center accepts children on a part-time or full-time basis with the fees based on the number of hours children are in attendance in the day-care program. A set monthly rate for preschool, prekindergarten and kindergarten programs is available. The Center is open to the public with priority given to faculty, staff and Lamar students' children. To learn more about these programs, call (409) 880-8212.

Career Center

Located in 102 Galloway Business Building the Career Center's professional staff assist students with all facets of career preparation, beginning with university entrance and special placement exams, major course of study selection, career choice and planning, part-time employment, resume preparation, interviewing preparation, goal planning and full-time employment after graduation. Students have access to on-line Internet job search and computerized guidance assessment programs.

LamarWork$, the student employment service located in the Career Center, assists students in locating part-time jobs, internships, and on-campus work-study and student assistant opportunities. All services are free to the student. Additional information is available from the LamarWork$ desk by calling (409) 880-1853.

The center has a full-time career counselor on staff to provide personalized assistance. In order to best serve as many students as possible, problems of a long-term, therapeutic nature cannot be addressed; however, initial consultation is available and, when feasible, referral to campus and community resources.

Job fairs are organized annually for the benefit of Lamar University students. The Career Expos are held each semester, and the Education Expo is held in the spring. These expos give students the opportunity to make initial contact with recruiting firms, contacts that may result in interviews on the Lamar campus or at the recruiter's headquarters during the spring (February and March) and fall (October and November). Each March, Lamar University also participates in the Texas Job Fair. Employers recruiting with the Career Center generally plan to fill permanent entry-level jobs, summer jobs, co-ops and internships.

The Career Center's Testing Office offers a full range of testing services for aptitude, achievement and career interest. The center also coordinates testing required by the University; provides individual interest, aptitude and personality assessment; and as a national and state test center administers the following:

- SAT (Scholastic Aptitude Test) for undergraduate admission. The SAT II Subject Area Tests are also given for students who wish to receive college credit.
- ACT (American College Testing Program) may be used instead of the SAT for undergraduate admission.

- TASP (Texas Academic Skills Program) is required of all students for advisement and registration (unless exempted)
- CLEP (College Level Examination Program) may be used to get credit by examination. See detailed description of CLEP elsewhere in this catalog.
- GRE (Graduate Record Exam) subject tests are administered.
- LSAT (Law School Admission Test)
- MCAT (Medical College Admission Test)
- MAT (Miller Analogies Test) required for admission to some graduate programs
- Correspondence Exams

Information and registration forms are available in 102 Galloway Building, (409) 880-8884. Although the GRE general test and GMAT (Graduate Management Admission Test) are administered elsewhere, registration information is available in 102 Galloway.

The Career Center provides seven core services:

1) Career assessment, testing, exploration and decision-making. This is appropriate for all students, and is particularly important for the person who is trying to make a decision concerning a major.
2) Training—seminars on topics of resume writing, interviewing and the job search are taught many times each semester. Internet possibilities and videotapes are also used in training.
3) Part-time job placement, summer jobs and internships.
4) Full-time job placement and on-campus recruiting, plus a resume referral system are available to graduating students and alumni.
5) The teacher career fair is held in April each year and provides students the opportunity to interview with as many as sixty school district recruiters.
6) The Career Fair for all majors is held annually and affords students the opportunity to explore careers and to meet with future employers.
7) The Career library has information about employers and has resources about career planning on video and in print and computer formats.

Health Center

Lamar University maintains a Student Health Center that offers outpatient services for currently enrolled students. A physician and nurse practitioner are available during regular hours to treat students for minor illnesses or injuries that do not require constant supervision. No appointment is needed, and students are charged only for medications and supplies, not for the office visit. Gynecological services are also available and provided by a certified women's health nurse practitioner. Most medications prescribed by Health Center practitioners are available in the clinic pharmacy at a reduced cost. All charges incurred are entered on the student account, thus no payment is required at the time of service. Other available services include laboratory tests; certain minor procedures; health education and short-term psychological counseling.

All services are available to students presenting a validated I.D. during regular hours when the University is in session. After hours, on weekends and when the university is not in session, healthcare becomes the individual student's responsibility. Any expenses incurred for ambulance service or off-campus medical needs are also the responsibility of the student. Students are encouraged to maintain some form of health insurance to cover these expenses, as they can be quite costly.

Veterans Education

Lamar is approved for educational training under all of the Veterans Educational Assistance programs.

Veterans are encouraged to complete admissions and testing requirements 90 to 120 days prior to the period for which they wish to enroll. Veterans and their dependents who are interested in attending Lamar under federal laws which provide educational assistance are directed to secure information by consulting the Office of Veterans' Affairs, Wimberly Student Affairs Building.

This office advises veterans on program and training opportunities, academic assistance and counseling.

Loan Funds and Scholarships

Financial assistance in the form of loans, grants and scholarships is available for qualified students. Details may be obtained on request from the Director of Financial Aid, P.O. Box 10042, Beaumont, TX 77710.

Graduate Assistantships

Teaching and research assistantships are available in the various graduate departments. Additional information may be obtained either from the department chair or from the Dean of the College of Graduate Studies. Assistantships are awarded *only* to those individuals who meet all requirements for admission to a graduate degree program.

Graduate assistantships at the master's and doctoral levels are available in a number of academic departments. All assistantships are intended to be of direct educational benefit to appointees. In order to be approved by the Graduate Dean, an assistantship appointment must relate to the student's academic objective and be supervised by Lamar University faculty.

Graduate assistants are Lamar University employees who are also graduate students. They are employed by a department or college to instruct in classrooms and labs, advise undergraduate students, proctor exams, supervise practica, assist in research and creative activity, or perform other teaching research and creative duties.

Under specified conditions, Texas law permits the waiver of out-of-state tuition status for some classifications of graduate assistants. When these conditions are met, graduate assistants may be allowed to pay tuition at the less expensive in-state or Texas resident rate. Contact the Graduate Office for a copy of applicable regulations.

Teacher Certification

All teacher education programs of the University are approved by the Texas Education Agency and the State Board of Educator Certification. Specific information concerning certification may be found in the College of Education and Human Development section of this catalog or may be obtained from the Director of the Division of Professional Services in the College of Education and Human Development.

Certification in Special Education and in Composite Science

The College of Education and Human Development has been approved by the State Board for Education Certification to offer an alternative certification program in the areas of Generic Special Education K-12 and Composite Science (Secondary, 6-12) and Elementary Bilingual Education (Grades 1-6). Information concerning either of these programs may be obtained from the Division of Professional Services.

Fees and Expenses

Lamar University reserves the right to change fees in keeping with acts of the Texas Legislature and the University's Board of Regents. By registering for classes at the University, the student agrees to abide by all the policies of the University.

Payment of Fees

A student is not registered until all fees have been paid in full or the student has paid the equivalent of a down payment on the installment plan (if available). Payment may be made by check, MasterCard/Visa/Discover/AMEX, money order, currency or any kind of financial aid (exemptions, loans, grants and scholarships). Checks and money orders should be made payable to Lamar University and will be accepted subject to final payment. The University will not accept counter checks, postdated checks, credit card checks or altered checks. Excess payments will be refunded either in cash or check at the discretion of the University. Students on a "cash only" basis will be restricted to paying by MasterCard/Visa/Discover/AMEX, money orders, currency or financial aid. Payments can be made:

(1) All forms of payment at the Cashier's office during working hours.
(2) Credit card payments can be made by phone by calling 839-2000.
(3) Payments may be made on the Internet at WWW.LAMAR.EDU.
(4) Drop box at Wimberly 114 for check (with social security number and campus) in a sealed envelope. These payments will be considered part of the next business day's activity if paid after 5:00 p.m. No cash will be accepted.
(5) Mailed to the Payment Center at P.O. Box 54441, New Orleans, LA 70154-4441.
(6) At Lamar Institute of Technology, Lamar State College-Port Arthur and Lamar State College-Orange, all payments except credit card can be made during regular hours at the cashier offices.

Students who are delinquent on obligations will be prohibited from registering for class until all obligations are paid in full. Also, holds are placed on academic records so that students cannot obtain transcripts until all obligations are paid in full.

Delinquent obligations to the University will be sent to a collection agency (1-800-933-9272) and reported to credit bureaus. All costs of collections are paid by the student which is generally an additional 33.333% of the student's obligations to the University. Delinquent accounts must be paid at the collection agency. Payment cannot be accepted by Lamar if the account has been forwarded to a collection agency.

Installment Payment Program

Students may enter into the installment program of the University upon verbal or written request in a Fall or Spring semester. Students who do not pay in full the tuition and fees will be placed in the installment program if the student has paid at least the amount for the down payment (otherwise classes will be dropped). The installment program generally requires a 50% downpayment with the next 25% due about a month after the semester starts and the final 25% due about two months after the semester starts. A non-refundable service charge of $20 is assessed for the installment program. A late fee of $15 will be assessed beginning the first day after an installment due date for each delinquent installment payment. Reductions of fees for students in the installment program from drops or withdrawals are calculated as a percentage of the total fees assessed, not as a percentage of any partial payments.

Tuition

Tuition has two components to it: the portion set by the State (conventional tuition) and the portion set by the Board of Regents regulated by State statutes (local tuition). By State statute, both of these items must be billed together and called "tuition."

The State portion (conventional tuition) is based upon the number of hours for which the student registers and is determined by the student's classification as a Texas resident or a non-Texas resident. The Admissions Office determines legal residence for tuition purposes on the basis of statutes of the State of Texas. State tuition is remitted to the State by the University. The current state tuition rate is $42 per hour with a minimum $126 ($63 for Summer sessions) moving to $44 per hour in Fall 2002 and increasing by $2 per hour every Fall thereafter.

The local tuition portion is assessed to support University debt service and other University functions that are not supported by state funding. Approximately 70% of this fee is used to finance debt service. Other items supported by this fee include the post office, print shop, supply center, cashiering, and other institutional support functions. The current rate is $30 per hour moving to $34 per hour in Fall 2002 and increasing by $4 per hour every Fall thereafter.

Combined, the current rate is $72 per hour with a minimum $156 ($93 for summer sessions) moving to $78 per hour in Fall 2002 and increasing by $6 per hour every Fall thereafter.

Student Responsibility for Residence Classification

The responsibility of registering under the proper residence classification is that of the student. If there is any possible question of the student's right to classification as a resident of Texas, it is his/her obligation, prior to or at the time of registration, to raise the question with the Director of Admissions and have his/her status officially determined.

Every student who is classified as a resident student but who becomes a nonresident at any time by virtue of a change of legal residence by his/her own action or by the person controlling the student's domicile, is required to notify the Registrar.

Publication of and Public Access to Thesis/Field Study/ Dissertation Abstracts

The Graduate Council requires that thesis, field study, and dissertation abstracts be published by University Microfilms. Fees for this service are included in the binding fees. If copyrighting is desired, the cost is $45. All theses, field studies, and dissertations will be placed in the library if permission to do so is granted by the student.

Refund of Tuition and/or Fees

Students requesting a refund of tuition and/or fees resulting from dropped courses or from withdrawing from the University should direct questions to the Cashiers' Office. Refunds are calculated as a percentage of *total* fees assessed, *not* as a percentage of partial payments on installments. Refunds for dropped classes are generally processed at the end of the second week past the 12th semester day of regular semesters and after the 4th

semester day during summer sessions. Refunds for withdrawals are generally processed at the end of the second week following the 12th semester day for regular semesters and two weeks after the 6th semester day for summer sessions.

Dropped Courses

In order to receive a 100% reduction of tuition and fees for dropped courses, a student must drop according to the schedule below, and remain enrolled in some hours with the University. Questions should be directed to the Cashiers' Office.

Fall or Spring Semester

1. Through the twelfth semester day, 100 percent.
2. After the twelfth semester day, no refund.

Summer Session

1. Through the fourth semester day, 100 percent.
2. After the fourth semester day, no refund.

Withdrawal from the University

Tuition and fees may be reduced when a student withdraws. Depending on the amount of reduction and what the student has paid, the student may receive a refund or may still owe money to the University. Any student who officially withdraws from the University will receive a reduction on tuition and fees according to the following schedule.

Fall or Spring Semester

1. Prior to the first semester day, 100 percent, less a $15 matriculation fee.
2. During the first through fifth semester days, 80 percent.
3. During the sixth through tenth semester days, 70 percent.
4. During the eleventh through fifteenth semester days, 50 percent.
5. During the sixteenth through twentieth semester days, 25 percent.
6. After the twentieth semester day, none.

Summer Session

1. Prior to the first semester day, 100 percent, less a $15 matriculation fee.
2. During the first, second or third semester day, 80 percent.
3. During the fourth, fifth or sixth semester day, 50 percent.
4. Seventh semester day and after, none.

The $10 Property Deposit is refundable upon written request by the student to the Cashiers' Office.

Withdrawing from the University does not relieve the student of any financial obligations under the Installment Payment Program or for any student loans as these are the student's legal financial commitments.

Summaries of Fees

Following are "Summaries of Fees" in effect at press time which can be used in determining total tuition and fee charges. The total amount of these fees are typical of other state universities in Texas though specific fees will vary from university to university. Note that these do not include course fees and it is assumed the student is enrolled only at Lamar University.

Additional fees and charges which are applied on a selective basis are listed following the Summary of Fees.

Lamar University
Summer 2002

No.	Tuition		Stu.	Stu.		Computer	Library	Health	Total	
Sem. Hours	Texas Resident	Non-Texas Resident	Serv. Fee	Center Fee	Property Deposit	Use Fee	Use Fee	Center Fee	Texas Resident	Non-Texas Resident
1	$93	$283	$15	$15	$10	$5	$4	$15	$157	$347
2	144	566	30	15	10	10	8	15	232	654
3	216	855	45	15	10	15	12	15	328	967
4	288	1140	60	15	10	20	16	15	424	1276
5	360	1425	69	15	10	25	20	15	514	1579
6	432	1710	69	15	10	30	24	15	595	1873
7	504	1995	69	15	10	35	28	15	676	2167
8	576	2280	69	15	10	40	32	15	757	2461
9	648	2565	69	15	10	45	36	15	838	2755
10	720	2850	69	15	10	50	40	15	919	3049

Parking: $12; ID: $5; Property Deposit is a one-time fee; Other course and materials fees may apply.
Note: Fees are subject to change by action of the Board of Regents or the Texas State Legislature.

Lamar University
Fall 2002/Spring 2003

No. Sem. Hours	Tuition: Texas Resident	Tuition: Non-Texas Resident	Stu. Serv. Fee	Stu. Center Fee	Property Deposit	Computer Use Fee	Library Use Fee	Health Center Fee	Total: Texas Resident	Total: Non-Texas Resident
1	$160	$283	$15	$30	$10	$5	$4	$30	$254	$377
2	194	566	30	30	10	10	8	30	312	684
3	234	861	45	30	10	15	12	30	376	1003
4	312	1148	60	30	10	20	16	30	478	1314
5	390	1435	75	30	10	25	20	30	580	1625
6	468	1722	90	30	10	30	24	30	682	1936
7	546	2009	105	30	10	35	28	30	784	2247
8	624	2296	120	30	10	40	32	30	886	2558
9	702	2583	135	30	10	45	36	30	988	2869
10	780	2870	138	30	10	50	40	30	1078	3168
11	858	3157	138	30	10	50	40	30	1156	3455
12	936	3444	138	30	10	50	40	30	1234	3742
13	1014	3731	138	30	10	50	40	30	1312	4029
14	1092	4018	138	30	10	50	40	30	1390	4316
15	1170	4305	138	30	10	50	40	30	1468	4603
16	1248	4592	138	30	10	50	40	30	1546	4890
17	1326	4879	138	30	10	50	40	30	1624	5177
18	1404	5166	138	30	10	50	40	30	1702	5464
19	1482	5453	138	30	10	50	40	30	1780	5751
20	1560	5740	138	30	10	50	40	30	1858	6038

Note: Fees are subject to change by action of the Board of Regents or Texas State Legislature.
Parking: $32; ID: $5; Property Deposit is a one-time fee; Other course and materials fees may apply.

Lamar University
Summer 2003

No. Sem. Hours	Tuition: Texas Resident	Tuition: Non-Texas Resident	Stu. Serv. Fee	Stu. Center Fee	Property Deposit	Computer Use Fee	Library Use Fee	Health Center Fee	Total: Texas Resident	Total: Non-Texas Resident
1	$97	$287	$15	$15	$10	$5	$4	$15	$161	$351
2	156	574	30	15	10	10	8	15	244	662
3	234	861	45	15	10	15	12	15	346	973
4	312	1148	60	15	10	20	16	15	448	1284
5	390	1435	69	15	10	25	20	15	544	1589
6	468	1722	69	15	10	30	24	15	631	1885
7	546	2009	69	15	10	35	28	15	718	2181
8	624	2296	69	15	10	40	32	15	805	2477
9	702	2583	69	15	10	45	36	15	892	2773
10	780	2870	69	15	10	50	40	15	979	3069

Parking: $12; ID: $5; Property Deposit is a one-time fee; Other course and materials fees may apply.
Note: Fees are subject to change by action of the Board of Regents or the Texas State Legislature.

Student Service Fee

The student service fee supports student activities such as athletics, recreational sports, the University Press and other student services. The current rate is $15 per hour with a maximum of $138.

Setzer Student Center Fee

This fee supports the Setzer Student Center and its programs. The current rate is $30 per long semester and $15 per summer session.

Course Fees

Various courses have additional fees associated with them. Students should always check with the departments offering the class to see if additional fees will be assessed. What follows is a summary of some fees associated with some classes.

ARTS AND SCIENCES	
BIOL 5101	$24.00
BIOL 5402	$24.00
BIOL 5405	$24.00
BIOL 5406	$24.00
BIOL 5410	$24.00
BIOL 5430	$24.00
BIOL 5440	$24.00
BIOL 5450	$24.00
BIOL 5455	$24.00
BIOL 5460	$24.00
BIOL 5470	$24.00
CHEM 5301	$12.00
CHEM 5411	$24.00
CHEM 5412	$24.00
COSC 5328	$70.00
COSC 5313	$70.00
NURS (all)	$125.00 sem.
PSYC 5120	$24.00
ED. AND HUMAN DEV.	
CNDV 5382	$85.00
EDLD 5398	$25.00
EDLD 5399	$25.00
FCSC 5304	$75.00
FCSC 5305	$75.00
FCSC 5306	$75.00
FCSC 5307	$75.00
FCSC 5320	$2.00
FCSC 5321	$20.00
FCSC 5344	$20.00
FCSC 5347	$20.00
ENGINEERING	
ELEN 2107	$70.00
ELEN 3108	$70.00
ELEN 3108	$2.00
ENGR 5202	$70.00
ENGR 5212	$70.00
ENGR 5301	$70.00
ENGR 5313	$70.00
ENGR 5314	$70.00
ENGR 5322	$70.00
ENGR 5350	$70.00
ENGR 5387	$70.00
ENGR 5388	$70.00
ENGR 5389	$2.00
ENGR 6358	$70.00
MATH 5315	$70.00
MATH 5330	$70.00
FINE ARTS AND COMM.	
MUAP 5210	$50.00/hr
MUAP 5220	$50.00/hr
MUAP 5230	$50.00/hr
MUAP 5410	$50.00/hr
MUAP 5420	$50.00/hr
MUAP 5430	$50.00/hr
ARTS 5305	$75.00
ARTS 5323	$70.00
ARTS 5325	$40.00
ARTS 5326	$32.00
ARTS 5335	$40.00
ARTS 5365	$50.00
ARTS 5385	$75.00
ARTS 5386	$60.00
CMDS 5309	$25.00
CMDS 5311	$25.00
CMDS 5312	$25.00

Computer Use Fee

This fee primarily supports both the administrative mainframe computer and the academic mainframe computer. The current rate is $5 per hour with a maximum of $50.

Library Use Fee

This fee is used to support the library. As every course (including field center courses) are given the mandate to use the library, all students are charged this fee. The current rate is $4 per hour with a maximum of $40.

Distance Learning Fee

A charge up to $50.00 per semester credit hour of instruction will be charged to students enrolled in courses offered by means of distance learning.

Private Lessons in Voice and Instrumental Music

Graduate applied music courses (per semester hour) $50.00
Maximum $150 per course.

Late Registration Fee

A charge of $10 is made for late registration or for paying after the start of the semester (not including the second or third payments under the installment plan).

Parking Fee

Each student who pays the necessary fee is issued a card that permits parking on the campus. This card is numbered and is to be displayed as instructed in official parking and traffic regulations, which are issued when automobiles are registered. Strict observance of traffic and parking regulations is necessary for the safe, orderly flow of vehicles in the campus area.

Charges for parking on campus are made at registration. Automobile registration fees are as follows: Fall Semester, $32; Spring Semester, $22; Summer, $12. Only one registration is required during an academic year, and a student's parking fee is honored until the end of Summer Session II.

Property Deposit

Each student will be required to pay a $10 property deposit. Any unused portion of the $10 will be refunded upon request to the Cashiers' Office after the student graduates or withdraws from the University. If a student attends the university for more than four years, this fee will be charged again.

Health and Accident Insurance

Health and accident insurance coverage is available for purchase at registration for students carrying nine or more semester hours. This or similar insurance is required of all international students. Additional information may be obtained from the Student Affairs Office.

Miscellaneous Fees

Microfilming of abstract and binding of first three copies of thesis	$53.65
Microfilming of abstract and binding of first three copies of field study or dissertation	77.30
Thesis, field study, or dissertation binding (each copy after the first three)	13.65
Diploma fees (with tax)	18.45
Cap, gown and hood (disposable) – Master's (plus tax)	42.83
Cap, gown and hood (rental) – Doctor's (plus tax)	51.00
Copyrighting	45.00
Transcript Fee	5.00
Photo Identification	5.00

Insufficient Funds Fees

Checks written to the University and returned unpaid for any reason will result in a $25 charge plus applicable fees for a delinquent account (e.g. $10 late registration fee, $15 late installment payment fee, etc.). Students with a returned check will be on "cash only" status for the duration of their enrollment at Lamar, subject to appeal. Students on a "cash only" basis are prohibited from paying with a personal check (all other payment methods are acceptable).

Fine and Breakage Loss

All library fines, charges for breakage or loss of equipment or other charges must be paid before a transcript of credit or a permit to re-enter the University will be issued.

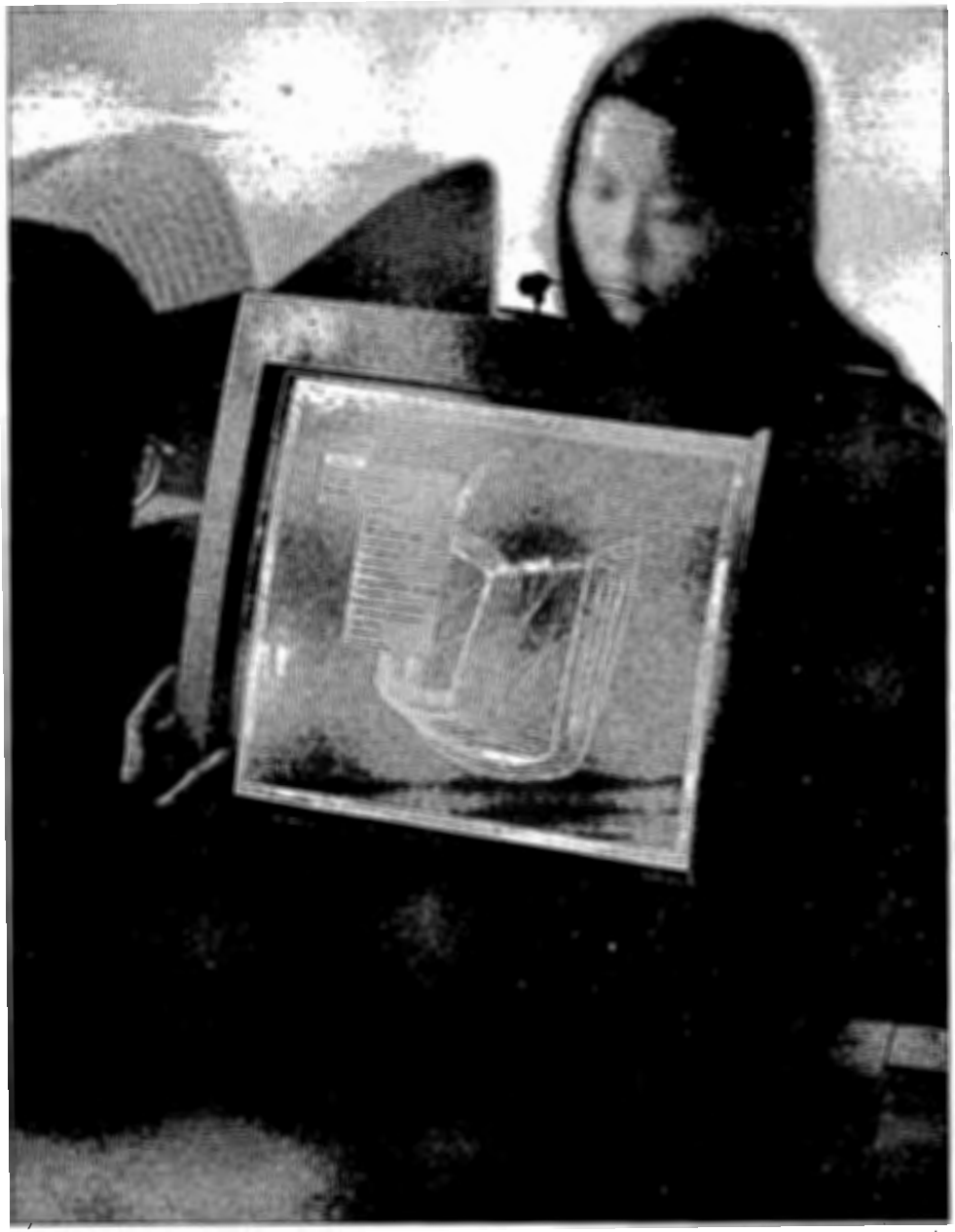
Matriculation Fee

A matriculation fee of $15 will be incurred by students who withdraw prior to the first day of class. This $15 fee will be deducted from refunds.

Housing

The Housing and Residence Life program at Lamar is designed to supplement the academic program by providing opportunities for social and intellectual development and recreation in a pleasant living environment. The University recently completed a multi-million dollar renovation program, making its residence halls among the most modern in Texas. A variety of living styles is available and includes modern furniture, semi-private rooms, carpet, central heating and air conditioning and various color schemes in the dormitories. Apartment accommodations in newly remodeled buildings also are available.

Questions concerning the housing program, its policies, room and board rates, should be directed to the Office of Residence Life, Lamar University, Box 10041, Beaumont, Texas 77710.



Lamar proudly offers doctoral degrees in engineering and in deaf education, both flagship programs of the University with state-of-the-art facilities and expert faculty.

Academic Information

Course Numbering

Lamar University converted to the Texas Common Course Number (TCCN) prefixes and numbers in the fall semester of 1998. A crosswalk from previous numbers to the TCCN number is Appendix A. The TCCN is primarily for freshman and sophomore courses; however, the prefixes have been extended through all levels.

Each course has an alphanumeric code (e.g., ENGL 1301). The alpha portion is an abbreviation of the subject area, while the numeric portion provides specific information about the course. The first digit of the numeric portion indicates the level of the course (1=freshman level, 2=sophomore level, 3=junior level, 4=senior level, and 5 and 6=graduate level). The second digit indicates the number of semester credit hours earned by satisfactorily completing the course. The third digit is a sequencing number, or, if it is a 7, the third digit indicates the course is not in the TCCN. The fourth digit is a sequencing number. Master's level courses are numbered 5000. Doctoral level courses are numbered 5000 and 6000. Students are responsible for registering in the correct level of courses.

In this bulletin, each course title will be followed by three digits separated by colons such as (3:3:1). This code provides the following information: the first number is the semester hours of credit for the course; the second number is the class hours of lecture, recitation or seminar meetings per week; and, the third number is the required laboratory hours per week. The letter "A" indicates that the hours are arranged, usually with the instructor of the course.

Changing Schedules

All section changes, adds and drops must be approved by the department chair of the student's major field. All such changes are initiated by the completion of the proper form available in the department chair's office. Usually, a course may not be added after the first two days of a regular or summer session.

Dropping Courses

After consultation with their advisor and/or department chair, students may drop a course and receive a grade of "Q" during the first six weeks (two weeks in the summer session) of the semester. For drops after this penalty-free period, grades are recorded as "Q" or "F" indicating that the student was passing or failing at the time of the drop. A grade of "Q" may not be assigned unless an official drop has been processed through the Records Office or telephone Voice Response Registration System. A student may not drop a course within 15 class days of the beginning of the final examinations or five class days before the end of a summer term.

Students should check published schedules for specific dates. A written petition to the Dean of the College in which the course is offered is required of students wishing to drop after the official drop date.

Withdrawal from the University

Students wishing to withdraw during a regular semester or summer term should fill out a Withdrawal Petition available in the Records Office. Students must clear all financial obligations and return all uniforms, books, laboratory equipment and other

materials to the point of original issue. However, if the student is unable at the time of withdrawal to clear financial obligations to the University and files with the Records Office an affidavit of inability to pay, the student will be permitted to withdraw with the acknowledgement that transcripts will be withheld and re-entry to Lamar University as a student will not be permitted until all financial obligations are cleared. Copies of the withdrawal form signed by the student and by the department chair must be presented to the Records Office by the student. The student will receive a receipt.

The Finance Office, on application before the end of the regular semester or summer session, will return such fees as are returnable according to the schedule shown under the "Fees" section of this catalog. If a withdrawal is made before the end of the sixth week (second week of a summer term) or if the student is passing at the time of withdrawal after the sixth week, a grade of "W" will be issued for each course affected. A grade of "F" may be issued for all courses not being passed at the time of withdrawal after the penalty-free period.

A student may not withdraw within 15 class days of the beginning of final examinations during a regular semester or five class days before the end of a summer term. A student who leaves without withdrawing officially will receive a grade of "F" in all courses and forfeit all returnable fees. Students should check the published schedule for specific dates. Students wishing to withdraw after the official withdrawal date may submit a written petition to their Dean.

Enforced Withdrawal Due to Illness

The Director of the Health Center and the Vice President for Student Affairs, on the advice of competent medical personnel, may require withdrawal of or deny admission to a student for health reasons (mental or physical).

Academic Records

Academic records are in the permanent custody of the Records Office. Transcripts of academic records may be secured by an individual student personally or will be released on the student's written authorization. College transcripts on file from other colleges will not be duplicated by Lamar University's Records Office.

Students who owe debts to the University or who have not met entrance requirements may have their official transcripts withheld until the debt is paid or credentials are furnished.

Chapter 675, Acts of the 61st Legislature, 1969 Regular Session, provides that "no person may buy, sell, create, duplicate, alter, give or obtain a diploma, certificate, academic record, certificate of enrollment or other instrument which purports to signify merit or achievement conferred by an institution of education in this state with the intent to use fraudulently such document or to allow the fraudulent use of such document."

"A person who violates this Act or who aids another in violating this Act is guilty of a misdemeanor and upon conviction, is punishable by a fine of not more than $1,000 and/or confinement in the county jail for a period not to exceed one year."

Educational Records and Student Rights

The following information concerning student records maintained by Lamar University is published in compliance with the Family Education Rights and Privacy Act of 1974 as amended (PL93-380).

Access to educational records directly related to a student will be granted to him or her unless the type of record is exempt from the provision of the law.

The types, locations and names of custodians of educational records maintained by the University are available from the registrar.

Access to records by persons other than the student will be limited to those persons and agencies specified in the statute. records will be maintained of persons granted such access and the legitimate interest in each case.

The release of information to the public without the consent of the student will be limited to the categories of information which have been designated by the University as directory information and which will be routinely released. The student may request this information be withheld from the public by making written request to the Records Office. Directory information includes name, current and permanent address, telephone listing, date and place of birth, major and minor, semester hour load, classification, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, with dates, and the last educational agency or institution attended.

A student has the right to challenge records and information directly related to him or her if it is considered to be inaccurate, misleading or otherwise inappropriate. Issues may be resolved either through an informal hearing with the official immediately responsible or by requesting a formal hearing. The procedure to be followed in a formal hearing is available in the Records Office.

Prior consent is not required from a student to disclose information to the Comptroller General of the United States, the Attorney General of the United States, the Secretary of State and local educational authorities.

A reasonable attempt will be made by Lamar University to notify a student of a records request to comply with a judicial order or a lawfully issued subpoena.

The right of parental access to student records may be established by either of two methods: first, by the student filing a written consent statement and, second, by the parent validating the student's dependence as defined by the internal Revenue Service.

A student has the right to file a complaint with the U.S. Department of Education concerning alleged failures by Lamar University to comply with the requirements of FERPA.

Summons

An official summons takes precedence over other university activities of the student and should be answered promptly on the day and hour designated. Failure to heed an official summons may subject the student to serious disciplinary action.

Falsification of Records

A student who makes a false statement to any university official or office or on any official form submitted to the University is subject to immediate dismissal.

Student Debts

The University is not responsible for debts contracted by individual students or student organizations and will not act as a collection agency for organizations, firms or individuals to whom students may owe bills.

Students and student organizations are expected to honor contractual obligations promptly.

Penalty for failure to clear up these obligations may be (a) no readmission, (b) withholding of grades and transcripts, (c) withholding of degree.

Parking

At registration, each student who pays the necessary fee is issued a permit which allows parking on the campus. This permit is numbered and is to be attached to the back of the rear-view mirror of the car.

Change of Address or Name

Students are responsible for all communications addressed to them at the address on file in the Office of Student Development, in the Office of the College of Graduate Studies and in the Records Office. Any student who moves during a semester must immediately register the change of address in the above offices. Change of address forms are available in the Records Office.

Change of name due to marriage, or correction of name because of spelling errors, may be made by completing a name change card at the Records Office. All name changes must be accompanied by a copy of the legal document making the name change official. This document will be kept on file in the student's confidential folder. Students are advised that former names will be carried on all official transcripts.

Class Attendance

Regular class attendance is important to the attainment of the educational objectives of the University. Instructors should keep attendance records and should formulate an attendance policy consistent with departmental policies but suited to the needs of the particular course. The instructor's policy is to be explained in detail to the class at the beginning of the semester.

Policy on Student Absences on Religious Holy Days

In accordance with the Texas Education code 51.911, a student who is absent from classes in observance of a religious holy day will be permitted to take an examination or complete an assignment provided the student notifies his/her instructor within 15 days of the beginning of the semester. "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.

Notifications of planned absences must be in writing and must be delivered by the student either (a) 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. Upon review of the request, instructors will sign and date the receipt of the notice, retaining a copy for the instructor and returning one copy to the student.

Instructors may refer any questions regarding the qualification of the absence to the Vice President for Student Affairs. Students may be required to present to the Vice President for Student Affairs a written statement documenting that such absence qualifies under the terms of a religious holy day.

College of Graduate Studies

History

The College of Graduate Studies was instituted in Fall 1960 with the offering of the Master of Arts degree in the fields of history and English.

In 1962, master's degrees were begun in mathematics, engineering and elementary education; in 1965, in business administration, chemistry, special education and secondary education; in 1968, in health and physical education, political science, speech-language pathology, audiology, and guidance and counseling; in 1969, in biology, and in 1970, in educational supervision. Also in 1970, a doctor's degree in engineering was authorized. In 1972, a master's degree in school administration was approved. Master's degrees in public administration and in psychology were authorized in 1974. In 1975, master's degrees in music, music education and home economics were initiated. In 1981 the Master of Science in Deaf Education was approved and the Master of Engineering Management degree was begun in 1983. A Master of Science in Computer Science was added in 1984. Master's degrees in Environmental Science and in Environmental Engineering were added in 1990. A Doctor of Education in Deaf Education was approved beginning in 1993, and a master's degree in nursing was initiated in 2000.

Objectives

The objectives of the College of Graduate Studies are as follows:

1. Advancement of knowledge through research.
2. Intensification within a student's chosen field of specialization and allied areas.
3. Development of the student's skill in the methodology of research.
4. Promotion of the power of independent thought by teaching students to take charge of their own intellectual advancement.
5. Introduction to the profession and its organization and protocols.

Degrees Offered

Master of Arts
English, History, Visual Art

Master of Business Administration

Master of Education
Elementary Education, Counseling and Development, Secondary Education, Special Education, Supervision, Administration

Master of Engineering

Master of Engineering Management

Master of Engineering Science

Master of Music

Master of Music Education

Master of Public Administration

Master of Science

Applied Criminology, Audiology, Biology, Chemistry, Community Psychology, Computer Science, Deaf Education, Environmental Engineering, Environmental Studies, Family and Consumer Sciences, Industrial and Organizational Psychology, Kinesiology, Mathematics, Nursing, Speech-Language Pathology, Theatre

Doctor of Education in Deaf Education

Doctor of Engineering

Regulations

Student Responsibility

It is the responsibility of each student to know the regulations of the Graduate College and the major department, to enroll in the appropriate course work to complete the degree plan, and to maintain the standards of the University, the College of Graduate Studies, and specific departments and programs.

Enrollment

Admission to Graduate Programs

All students seeking admission to a graduate degree program must first meet the minimum standards of the College of Graduate Studies. Applicants must also have the approval of the department in which the degree program is offered. **The admission standards of departments may exceed those of the College of Graduate Studies.**

Applications for admission to graduate programs are processed by the Graduate Admissions Coordinator. The Graduate Admissions Coordinator sends to graduate programs only those applications which meet the minimum standards of the College of Graduate Studies. The graduate departments then select those to be recommended to the Graduate Dean for admission. **NOTE: Meeting the admission standards of the Graduate College does not imply admission to a particular degree program.** The Graduate Dean notifies the Graduate Admissions Coordinator of admission decisions and the Coordinator provides written notification of admission status to the applicants. Statements by other university officers concerning the applicant's admissibility are not valid until confirmed by the Graduate Dean.

Admission to any degree program is valid for one year from the admission date. The applicant who does not enroll during that period will be required to resubmit all application materials and meet the admission standards in force at the time of the second application.

Graduate students wishing to change from one major field to another must make application to the Office of the Graduate Dean and must meet all specific program admission requirements for the new major.

1. **Application Deadlines:** Domestic students (U.S. citizens and permanent residents) must submit all application materials at least 30 days before Fall, Spring, or Summer registration. Deadlines for international students are May 15 for Fall semester, October 1 for Spring, and February 15 for Summer terms.
2. **Application Submission by Domestic Students (U.S. citizens or permanent residents):** Applicants for admission to the College of Graduate Studies must submit the following to the Graduate Admissions Coordinator at least 30 days before registration.

A. **Completed Application Form**

B. **Transcripts.** Submit an official transcript sent directly from each college or university attended to the Graduate Admissions Coordinator. All transcripts submitted to Lamar University become the property of the University and are not returnable.

C. **GRE and GMAT Test Scores.** With two exceptions, all prospective graduate students are required to submit scores on the Graduate Records Examination (GRE). Applicants should have the Educational Testing Service, which administers the GRE, send test scores directly to Lamar University. The two exceptions to the GRE requirement are applicants for the Master of Business Administration (MBA) and deaf applicants. MBA applicants are not required to take the GRE, but *must* submit scores on the Graduate Management Admission Test, GMAT. See the College of Business section of this *Bulletin* for specific requirements. Deaf applicants may substitute performance intelligence and reading ability test scores for the GRE. **GRE and GMAT scores more than five years old will be accepted only with permission of the Graduate Dean.**

3. **Deaf applicants** who have a severe or a profound hearing loss acquired congenitally or prelingually will be considered on an individual basis and need not submit GRE or GMAT scores. In lieu of GRE/GMAT scores, deaf applicants must submit above-average performance intelligence scores (preferably the performance scale of the WAIS-R) and above-average university grades, pass an interview with an admission committee comprised of faculty from the receiving department, and demonstrate adequate literacy and communication skills for graduate training. Literacy in this case includes both the reading and writing of English, but not necessarily equivalent to hearing norms. Communication skill may be demonstrated in sign language and/or speech.

4. **Admission Standards for Domestic Students (U.S. citizens and permanent residents):**

A. **Undergraduate Degree.** A prospective student must have a bachelor's degree from an institution approved by a recognized accrediting agency.

B. **GRE Scores and Grade Point Average (GPA).** All applicants for full admission, except for deaf students and those seeking admission to the MBA program, must meet the institutional GRE and GPA standard according to the formula (GPA X 200) + (GRE V+Q) $\geq$ 1350. The GPA used in the formula may be either the overall undergraduate GPA or the last 60 semester hours of undergraduate work, whichever is higher. The grade point average is calculated by dividing the total number of grade points earned by semester hours considered (either the total number of semester hours attempted or by the last sixty semester hours). For this computation "A" equals 4 grade points, "B" equals 3, "C" equals 2, "D" equals 1, and "F" equals 0. Individual departments may have GRE and GPA standards which exceed the institutional minimum. See the department sections of this catalog for admission standards which vary from the institutional minimum.

C. **GMAT Scores.** Admission to the Master of Business Administration (MBA) program is based in part on a formula which considers both the undergraduate GPA and the GMAT score. See the College of Business section of this catalog for details.

D. **Undergraduate Grade Point Average.** Our admission standard of (GPA X 200) + (GRE V+Q) $\geq$ 1350 is such that lower GPAs require higher GREs. Similarly, for the College of Business, the admission formula considers the GPA in such

a way that the GMAT and GPA are interdependent (the GPA minimum "floats" in relationship to the applicant's GMAT score). See the College of Business section of this catalog for details.

E. **Provisional Admission.** In those departments or programs that have admission standards exceeding the institutional minimum, we allow, at departmental discretion, provisional admission. A student admitted provisionally must complete the first nine semester hours of graduate work with a GPA of at least 3.0. A student who does not meet the 3.0 GPA after nine semester hours is subject to dismissal.

F. **Undergraduate Work in Intended Major Field, Prerequisites and Deficiencies.** The applicant for graduate study ordinarily must have completed no fewer than 24 semester hours of undergraduate work in the intended major field, 12 of which must be at the junior and/or senior level. Applicants who do not meet this requirement may be required to make up such deficiencies as prescribed by the graduate major. A GPA of 3.0 for assigned deficiency/leveling courses must be maintained and grades below "C" will not be accepted. Departments which wish to do so may establish more stringent requirements. MBA students with deficiencies will be required to complete first year MBA courses as determined by the College of Business with a grade of "C" or better and an overall GPA of "B" or better in all course work taken.

5. **Admission Procedures and Standards for International Students.** International students are required to follow the procedures and meet the standards for domestic students as stated above. Additional requirements for international students include the following:

A. **Transcripts.** International students must submit official certified transcripts from all colleges and universities attended. If the transcripts are not in English, the student must provide certified translations.

B. **TOEFL score.** Most international students whose first language is not English must take the Test of English as a Foreign Language (TOEFL) and score better than 525. Lamar University must receive the official TOEFL scores issued directly from the Educational Testing Service (ETS) before admission can be granted. ETS will not issue official scores that are more than two years old. For information about testing dates and places, write to TOEFL, PO Box 899, Princeton, NJ 08540, USA. Except for the Doctor of Engineering degree, which requires a TOEFL score of 530 or better, the TOEFL is not required of those international students who have received an undergraduate or graduate degree from a university where English is the language of instruction (e.g., universities in the United States, Canada, and England). As part of the orientation process, international students with relatively low but passing TOEFL scores will be required to take one or more additional English as a second language (ESL) proficiency examinations and may be required to participate in ESL coursework as part of their graduation requirements.

C. **TWE Score.** International students who are required to take the TOEFL must also submit scores for the Test of Written English (TWE). The TWE is available at the same test centers that administer the TOEFL. The minimum TWE score required by Lamar University is 5. Those scoring less than 5 may be admitted to Lamar University but will be required to enroll in English as a Second Language Courses.

D. **Proof of Financial Resources.** International students must prove that they have the financial resources to attend Lamar University. As part of the

application process, international students must submit an original Confirmation of Financial Resources form which asks for personal, family, and/or sponsor financial information and a bank verification of financial holdings. All international students are required to have health and accident insurance for themselves and all their dependent family members in the United States. Insurance may be purchased at the University during the registration period.

E. Proficiency in spoken English may be required by some graduate programs.

6. **Admission Procedures and Standards for Doctoral Degrees.** Prospective Doctor of Engineering (D.E.) students must send a letter to the Dean, College of Engineering, Box 10057 Lamar University, Beaumont, TX, 77710. The letter should give information on the applicant's engineering experience, current employment and major research interests. For details on GPA, GRE, TOEFL and background requirements, see the College of Engineering section of this catalog.

   Prospective Doctor of Education in Deaf Education (Ed.D.) students must send a letter to the Chair, Department of Communication Disorders (Speech and Hearing), Box 10076 Lamar University, Beaumont, TX 77710. The letter should give information on the applicant's deaf education experience, training, employment history, current employment, and major research interests. Deaf applicants are encouraged and experience as a teacher of the deaf is required. For details on GPA, GRE, TOEFL and background/experience requirements, see the College of Fine Arts and Communication section of this catalog.

7. **Readmission of Former Graduate Students.** A former graduate student who has not maintained continuous enrollment for two semesters (summers excluded), but who is academically eligible to continue in the graduate degree program where he or she was most recently enrolled, may be permitted to return, assuming the program is not at capacity. The procedures are dictated by the period of absence from enrollment as follows:

   1. **Less Than Two Years.** The student must notify the Graduate School and the program coordinator or department chair of his/her plans to return. A new application must be submitted, and official transcripts must be provided if the individual has enrolled in another university since leaving Lamar University.
   2. **Two to Four Years.** A new application must be submitted and endorsed by the department chair or program director and by the Graduate Dean. The application must show any intervening graduate work and he/she must provide official transcripts of such work. The applicable admission standards are those that were in effect when the student originally enrolled.
   3. **Four or More Years.** The student is considered a new applicant and new supporting materials are required. The applicable standards are those in effect when the student applies for readmission. Coursework more than six years old may not be counted toward a graduate degree.

Appeal of Admission Denial

Prospective students who have been denied admission to the College of Graduate Studies have the right of appeal through the Graduate Appeals Committee. The Committee meets once each long semester, and once in the summer unless otherwise indicated. The Committee considers appeals on an individual basis and makes recommendations to the graduate dean. Contact the Office of Graduate Studies (219 Wimberly Building) for complete details on the appeals process.

Admission for Nondegree Students
Post Baccalaureate (PB)

1. **Definition.** The Post Baccalaureate (PB) classification carries undergraduate status, does not culminate in a graduate degree, and should not be considered as a means to enter graduate school. The PB admission category is designed primarily for students who do not intend to earn a graduate degree but wish to enroll in graduate courses. The PB classification may be used by students who are seeking teaching certificates, but it must be understood that PB status does not lead to a master's degree. Except for students classified as Pre Graduate (PG), all students who enroll in graduate courses without meeting admission standards or completing the admission process are given PB status.
2. **Admission.** To receive the PB classification, the applicant must:
   A. Have received a bachelor's degree
   B. Submit an application for admission with PB status to the Graduate Admissions Coordinator
   C. Submit an official transcript from each college previously attended, showing highest degree earned
   D. Be approved for admission with PB status by the University.
3. **Enrolling in Courses as a PB Student.** PB students are not permitted to enroll in graduate courses without the prior consent of the chair of the department offering the course/s desired. PB students are not permitted to enroll in graduate business courses without the prior consent of the Associate Dean of the College of Business. PB students who want to enroll in elective undergraduate courses for personal or professional development are advised through the Center for Adult Studies – 106 Montagne Center.
4. **PB Classification and International Students.** International students will not be admitted with PB status.
5. **Application of PB Credits Toward a Graduate Degree.** If a PB student is eventually admitted to the Graduate College, a maximum of six semester hours earned under PB classification may be applied toward a graduate degree if approved by the department and by the Graduate Dean. In addition to these 6 hours, if a student is admitted to the graduate school during a semester in which the student is taking further graduate hours, those further hours will be counted towards the degree.
6. **Competitive Graduate Scholarships and Assistantships for PB Students.** PB students are not eligible for graduate assistantships and scholarships.

Pre Graduate (PG)

1. **Definition:** The PG admissions category is designed primarily for students who intend to enter a graduate program and earn a graduate degree but have not yet met all admission standards and/or submitted all application materials. The Pre Graduate (PG) classification carries undergraduate status and does not culminate in a graduate degree unless the student is eventually admitted to graduate school. The PG status allows the prospective graduate student to enroll in a limited number of graduate courses while completing the application and acceptance process.
2. **Admission:** To receive the PG classification, the applicant must:
   A. Have received a bachelor's degree.
   B. Submit an application for regular admission to the Lamar University College of Graduate Studies **and** a PG application form to the Graduate Admissions Office.
   C. Be approved for admission with PG status by the University.

3. **Enrolling in Courses as a PG Student:** PG students are not permitted to enroll in graduate courses without the prior consent of the chair of the department offering the course/s desired. PG students are not permitted to enroll in graduate business courses without the prior consent of the Associate Dean of the College of Business.
4. **PG Classification and International Students:** International students will not be admitted with PG status.
5. **Application of PG Credits Toward a Graduate Degree:** If a PG student is eventually admitted to the College of Graduate Studies and to a graduate program, a maximum of six semester hours earned under PG classification plus current enrollment may be applied toward a graduate degree if approved by the department and by the Dean of the College of Graduate Studies.
6. **Competitive Graduate Scholarships and Assistantships for PG Students:** PG students are not eligible for graduate assistantships, fellowships, or scholarships.

Academic Policies of the College of Graduate Studies

All graduate students are expected to be familiar with the policies and regulations of the College of Graduate Studies.

1. **Academic Year.** The University divides the academic year into two long semesters (Fall and Spring) and two summer terms of 6 weeks each.
2. **Time Limit for Degree Completion.** All course work applied toward a given degree, except for doctoral degrees, must be completed within a period of six years. This time limit applies to all work at the graduate level, including work transferred from another institution. Time spent in active military service is not included in the six-year limit. Because of Immigration & Naturalization Service regulations, a shorter period may apply to international students.
3. **Maximum Semester Course Load.** The maximum course load for graduate students during Spring and Fall semesters is 15 hours per term. The maximum course load for graduate students for any one summer term is 6 semester hours, or 7 hours if a lab is taken. These maximums apply even when the graduate student is enrolled in a combination of graduate and undergraduate courses.
4. **Definitions of Full and Part-Time.** A full-time graduate student is defined as a student taking at least nine semester hours of graduate work during Fall or Spring semesters, or both 5390 and 5391 (thesis) during the same semester, or enrolled in ENGR 6601 or 6602 (doctoral field study). After completing the course work for a graduate degree, students who are enrolled in a thesis, dissertation, or field-study course may be considered full-time even though they are enrolled in as little as three semester hours. This may occur for up to two semesters. Additional semesters of thesis, dissertation, or field-study writing require permission of the department chair and of the dean of the Graduate School. In the summer, full-time is 3 hours per term. Students taking fewer than 9 hours in the Fall and Spring semesters and fewer than 3 hours in the summer sessions is considered part-time. Full-time status may be required for certain fellowships and scholarships.
5. **Deferring Graduation.** International students who wish to defer graduation by taking additional course work after their original degree plan has been completed, must meet one of the following conditions: (1) admission to the new program must be granted by the new major department and a new Form I-20 must be issued indicating the new major program of study and the length of time for completion of the second degree; ***or*** (2) student must be enrolled full time (9 hours

in long semesters and 3 hours in each summer semesters), ***and*** permission must be given in writing by the major department as well as the department where additional course work is to be taken stating that said course work is required for the original degree. All additional course work must be taken for credit and a grade must be earned. Students may not petition for "no-grade" (NG).

6. **Permission for an Undergraduate Student to Enroll in Graduate Courses, Reservation of Work by Undergraduates for Graduate Credit.** An undergraduate student who is within 12 semester hours of graduation may take a maximum of six semester hours of graduate courses which may be applied toward a master's degree. Both the chair of the intended graduate program and the graduate dean must approve, and the total academic load may not exceed 15 semester hours. The G-11 form, available in the Graduate Office (219 Wimberly) and in departmental offices, is used to obtain permission.
7. **Dual Degrees.** Graduate students wishing to take dual degrees must apply and be accepted by both major departments. It is not required that completion of both major degree plans occur simultaneously. In addition, international students must comply with all Immigration & Naturalization Service federal regulations governing enrollment and employment opportunities. It is the student's responsibility to keep both major departments appraised of his/her continuing dual degree status and to be aware of how this may effect any financial assistance from one or both of those departments. A dual degree candidate is still subject to all the academic policies listed herein.
8. **Transfer of Graduate Credits to Lamar University.** With the approval of the chair of the major department and the graduate dean, a student may transfer up to six semester hours of graduate work completed at another regionally-accredited institution and these transferred credits may be applied toward a graduate degree at LU. Only courses with grades of "A", "B" or "S" (satisfactory) which were accepted as graduate credit at the institution where the work was taken may be considered for graduate transfer. Transferred credits are not considered in the computation of the graduate grade-point average at Lamar University.
9. **Application of Institute Hours Toward a Degree.** A maximum of six semester hours of work done in institutes may be approved for graduate credit toward a degree. Institutes are defined as graduate courses of less than three weeks duration.
10. **Application of Credits from One Master's Degree Toward a Second Degree.** A maximum of six semester hours taken for one master's degree may be counted toward a second master's degree with the approval of the department in which the second degree is sought.
11. **Use of Advanced Undergraduate Courses Toward a Graduate Degree.** Undergraduate courses, even if senior-level, may not be applied toward a graduate degree.
12. **Correspondence Credit, Credit by Examination, and Course Work Earned Through Distance Learning.** Courses taken by correspondence and credits earned through examination are not accepted toward graduate degrees. Courses completed through Distance Learning may be applied toward a graduate degree if approved by the student's graduate committee.
13. **Course Duplication, Repeating a Course.** With approval of the Chair of the major department, a student may enroll for a course a second or subsequent time and have it counted as part of the semester's load. If a course is repeated, the last grade

recorded will be considered the official grade, but the original grade remains on the student's record as a course taken. A repeated course will be included in the student's cumulative record and in the computation of the GPA. Independent study/special topics courses may have the same course number but are not considered to be the same course if the topics differ. If a student earns a D or F in a course required for his/her graduate degree, the course must be repeated and a passing grade of A, B, or C must be earned.

14. **Change of Major.** Except in the College of Business, changes of major must be approved by the chair and/or the graduate advisor in the new graduate program and by the Graduate Dean. In the College of Business, changes must be approved by the Associate Dean and by the Dean of the College of Graduate Studies. New international students may begin the process of changing majors during their first semester but may not actually make the change until their second term. Obtain forms for changing majors (G-16) at the Graduate Office (219 Wimberly). Caution: Financial assistance provided by an academic department is usually not transferable to other departments. Students who change their major and transfer from one department to another may lose their financial assistance.
15. **Enforced Withdrawal or Course Drop.** A graduate student may be required to drop a course or courses or withdraw from the University temporarily or permanently if the student's academic work is below the standards of the College of Graduate Studies (see discussion of probation/suspension below), or if the student is found (through due process) to have engaged in academic dishonesty or misconduct. In those programs that provide clinical training or student teaching (e.g., audiology, speech-language pathology, nursing, Education and Human Development), a student can be removed from practicum and/or the program if it is found (through due process), that he/she is a threat to the well-being of patients, students, clients, etc.
16. **Academic Dishonesty, Misconduct, Discipline Code.** Student conduct regulations, as found in the Lamar University. *Student Handbook*, apply to all graduate students. These regulations include policies relating to academic dishonesty, plagiarism, University disciplinary code, and student rights and responsibilities. It is the responsibility of all graduate students to read the *Student Handbook* and to abide by all University regulations.
17. **Grading System.** The grading system for graduate students is "A" (superior), "B" (good), "C" (marginal), "D" (poor), "F" (fail), "I" (incomplete), "S" (satisfactory), "U" (unsatisfactory), Drop, and Withdrawal. Credits applicable to graduate degrees are given only for the grades A, B, C, and S. Although C grades earned at Lamar University may be counted toward the requirements for a graduate degree, C grades are not considered acceptable graduate-level performance. Courses in which a student earns only a D or F may not be counted toward a graduate degree, although such grades are calculated in determining the grade-point average. Grades of C, D or F must be compensated for by the necessary hours of A if the student is to have the 3.0 grade-point average required before awarding the degree. In computing grade-point averages, an "A" is valued at four grade points, a "B" three, a "C" two, a "D" one, and an "F" zero. An overall grade point average (GPA) of "B" (3.0) on all graduate work attempted is required for graduation. Thesis grades are not included in the computation of grade point averages. Incomplete work that is not finished during the next long semester (Spring or Fall) will be credited with an "F". With compelling justification, the graduate dean may grant an extension of the time limit for the completion of incomplete work.

18. **Additional Departmental GPA Requirements.** A department or graduate program may impose GPA standards for its majors which exceed those of the Graduate College when approved by the Dean of the academic college.
19. **Admission of Faculty to Graduate Degree Programs.** Lamar University faculty will not be permitted to work toward a graduate degree within their own department. To pursue a graduate degree in another department, faculty must have the approval of the Graduate Dean.
20. **English Proficiency Required of International Students for Graduation.** International students whose first language was not English are required to pass an English proficiency test before they may be admitted to candidacy for a graduate degree. The test is not used as an admissions requirement to the Graduate College and is taken after the student is admitted and arrives on the Beaumont campus. International students who do not pass the test are required to enroll in an English as a Second Language (ESL) course until they pass the test.
21. **Rule Changes.** The University reserves the right to change any of its rules, regulations or course requirements without notice.
22. **Waiver of Regulations.** Graduate students have the right to file a petition for exemption from any academic regulation of the Graduate College. Petitions for exemption are considered by the Graduate Appeals Committee, which makes recommendations to the Graduate Dean. Decisions of the Graduate Dean may be appealed through administrative channels (i.e., to the Executive Vice President for Academic Affairs, then to the University President, the Chancellor, and, finally, to the Board of Regents).
23. **Open Records Policy.** Student records, which generally include information concerning the student and the student's individual relationship to the educational institution, are available on request to Lamar University personnel who have an educational interest in the records. Individual records are also accessible to the student in question. Without written consent of the student, records are not released except as noted above.

Quality of Work Required, Probation/Suspension Regulations

The graduate student must maintain a 3.0 grade point average on all courses that receive graduate credit, whether or not they are to be applied toward a graduate degree. Leveling and elective courses taken for graduate credit are included in the computation of the grade point average. A student whose GPA in graduate work falls below 3.0 must make up the deficit, either by repeating courses in which the grades are low, or by completing other graduate courses with grades high enough to bring the GPA up to 3.0.

Graduate students who do not meet the academic standards of the Graduate College will be placed on probation or suspended. Students on probation may enroll in graduate courses but may not apply for graduation. Suspended students may be temporarily or permanently denied permission to enroll in graduate courses. In computing graduate academic status, all graduate work taken during the previous six years except thesis and field study courses apply. Graduate work taken at another institution will be included in the computation of semester hours toward a degree only when that work is applied toward a degree in progress at Lamar University. Transferred credits will not be used in the computation of the graduate grade point average at LU.

1. **Minimum Academic Performance**. Graduate students with grade point averages of 3.0 or better are in good standing. Students with GPAs below 3.0 will be placed on probation or suspended.
2. **Probation**. Students with full graduate admission status who fail to achieve and maintain an overall grade-point average of 3.0 after the completion of 12 semester hours of graduate enrollment will be placed on academic probation. Students on probation who fail to raise their GPA above 3.0 within 12 semester hours of graduate work will be suspended. Students on probation may enroll in courses but may not apply for admission to candidacy or for graduation. The probationary status applies whether or not the student receives a letter of notification from the Graduate Office.
3. **Suspension**. A graduate student who has been placed on probation and who fails to raise his/her GPA to at least 3.0 within 12 semester hours of graduate enrollment will be suspended. Suspended students may enroll in summer graduate courses and they may enroll in undergraduate courses during spring, fall, or summer semesters. Undergraduate grades earned while on suspension will not be used in the computation of the graduate GPA. Suspension for the fall semester may be removed if the student raises the graduate GPA to at least 3.0 during summer terms. The first academic suspension shall be for one long semester (fall or spring) and the second suspension will be for two long semesters. The third suspension will be permanent.
4. **Transfers to New Major Departments by Students on Probation/Suspension**. Suspended students may be admitted to another department only after they have completed their suspension, provided that they meet the admission standards of the new graduate major. Students on probation may transfer to a different graduate program with the approval of the chair of the new program, but will remain on probation until their GPA is 3.0 or better.
5. **PB and PG Students and Probation/Suspension**. Post baccalaureate students taking graduate course work are not subject to probation or suspension until they have been admitted to the graduate college and a graduate degree program.
6. **Grades Earned in Deficiency, Leveling, or Background Courses**. A GPA of 3.0 must be maintained for all undergraduate and graduate courses assigned as deficiency, leveling, or background work by the student's major department. Such courses must be repeated if grades of "D" or less are received.
7. **Additional Departmental Regulations**. A department, with approval from the appropriate academic dean, may require its majors to meet additional standards with regard to probation, suspension, and dismissal. These may be found in the appropriate departmental section of this catalog.

General Degree Requirements

1. Students must earn the number of semester hours of graduate credit specified by their major departments. Specific details may be found in the departmental section of this Bulletin.
2. Any student who writes a thesis must defend it orally before his/her committee. Students who do not write theses must pass a comprehensive examination, which may be oral, written, or a combination of both. Please consult the departmental section of this catalog for specific details.
3. The student must meet the specific requirements as set forth in this catalog for a particular degree program.

Master of Arts

1. Meet all general degree requirements.
2. If writing a thesis, complete 30 semester hours of graduate work: 18 in the major field, six in thesis, six in an approved minor or six additional hours in the major.
3. If not writing a thesis, complete 36 semester hours of graduate work approved by the graduate committee.
4. Except for the non-thesis option in history, candidates for the M.A. degree must present evidence of a reading knowledge of at least one foreign language. This requirement may be satisfied by examination or by submitting college credit equivalent to that required for the degree of Bachelor of Arts in this institution.

Master of Business Administration

1. Meet all general degree requirements.
2. Complete 30 hours of second year MBA courses specified under College of Business degree requirements if a thesis is written, plus any first year MBA courses required.
3. If a thesis is not written, complete 36 hours of second year MBA courses as specified under College of Business degree requirements, plus any first year MBA courses required.

Master of Education

1. Meet all general degree requirements.
2. Complete 30 semester hours of graduate work if a thesis is written or 36 semester hours if a nonthesis program is selected.
3. Meet the specific requirements listed in the College of Education section of this catalog for each degree program.

Master of Engineering

1. Meet all general degree requirements.
2. Complete 36 semester hours of graduate work or complete 30 hours of graduate work plus a three-hour design project.

Master of Engineering Science

1. Meet all general degree requirements.
2. Complete 30 semester hours of graduate work, including six semester hours in thesis.
3. Meet the specific requirements listed in the College of Engineering section of this catalog.

Master of Music (Performance)

1. Meet all general degree requirements.
2. Complete 30 semester hours of graduate work: 12 hours in the Applied Major, six in Music Literature, six in Music Theory and six in Music Education.
3. Special requirements in addition to the above: a formal public recital and a research paper OR a lecture recital.

Master of Music Education

1. Meet all general degree requirements.
2. Complete 36 semester hours of graduate work: 18 in Music Education, six in Music Literature, six in Music Theory, and six in Thesis.
3. Exceptions: six additional hours in Music Education may be substituted for the Thesis, and six hours in Applied Music may be substituted for Music Education courses.

Master of Science in Nursing

1. Meet all general degree requirements.
2. Complete 42 semesters hours of graduate work: 12 hours in the General Nursing Core, 15 hours in the Nursing Major; and 15 hours in the minor field.
3. Complete at least 4 hours of Advanced Practice Practicum within the Nursing Major.
4. Meet the specific requirements listed in the College of Arts and Sciences, Department of Nursing section of this catalog.

Master of Public Administration

1. Meet all general degree requirements.
2. Complete 36 semester hours of graduate work as specified for the degree in the Department of Political Science section of this catalog.
3. Pass both oral and written comprehensive final examinations.

Master of Science

1. Meet all general degree requirements.
2. Complete 30 semester hours of graduate work: 15 to 18 semester hours in the major field, six in thesis and six to nine semester hours in the minor field. With the approval of the head of the major department, a student may elect to take all work in the major field.
3. If a thesis is not required, complete 36 hours of approved course work.
4. The graduate degree in psychology requires 36 hours in approved course work and six hours in thesis.
5. Students applying to the Computer Science program must satisfy the depth and breadth requirements as defined by the Graduate Faculty of the Computer Science Department.

Doctor of Education in Deaf Education

1. Obtain credit for all courses required by the student's doctoral committee. The number of these courses will depend upon the student's pre-doctorate educational preparation, previous experience and specialization emphasis during the program. In general, a 30 semester hour core curriculum and a minimum of 30 semester hours of electives/cognates for a total of 60 semester hours beyond the Master's degree.
2. Satisfactorily pass preliminary written and oral examinations after the completion of 18 semester hours.
3. Complete a four semester (1 calendar year) residency requirement.
4. Obtain admission to candidacy by completing all coursework required for the degree, complete 12 hours of dissertation credit following admission to candidacy, and successfully defend the dissertation prior to graduation.

Doctor of Engineering

1. Obtain credit for all courses required by the student's doctoral committee. The number and extent of these courses will depend upon the student's diagnostic examination, engineering experience and educational objectives. In general a minimum of 30 semester hours of 5000 and 6000 level course work, excluding ENGR 6601 and ENGR 6602, beyond the equivalent of a master's degree will be required.
2. The student shall complete a residency of one year.
3. Satisfactorily pass candidacy examinations as required by the student's doctoral committee.

4. Complete a field study, normally 30 semester hours, involving some technological innovation.
5. Submit and defend a formal engineering report on the field study.

Advisement and Admission to Candidacy

New graduate students do not have an advisory committee and are advised by the chair of the major department or a member of the graduate faculty designated as the initial advisor.

Graduate students are not considered to be candidates for a degree until they have completed a specified set of graduate courses and have proven their academic capability. In some programs, students must pass a qualifying exam before being admitted to candidacy. Students who have been admitted to candidacy are assigned an advisory committee, and the committee establishes a graduation plan.

1. **Initial Advisement.** For the first 12 hours of graduate work, students are advised by the chair of the major department or a member of the graduate faculty who has been designated by the chair as the initial advisor. In the College of Business, all graduate students are advised each semester by the Associate Dean.
2. **Timing of Admission to Candidacy.** Admission to the Graduate School does not imply admission to candidacy for a graduate degree. Students seeking a graduate degree must be admitted to candidacy **after** completing a minimum of 12 semester hours of graduate study and **before** their last 9 semester hours.
3. **Restrictions and Prohibitions to Admission to Candidacy.** Graduate students may not be admitted to candidacy if they a) are on probation, b) are suspended, c) have not removed all undergraduate deficiencies, and/or d) have not completed at least 12 hours of recommended graduate courses. International students required to pass the Michigan Test to indicate English proficiency must do so before they can be admitted to candidacy.
4. **Procedure for Applying for Admission to Candidacy.** The student is responsible for initiating the process for admission to candidacy by submitting the "Application for Admission to Candidacy for Master's Degree" form (G2) to the chair of the major department. The form is available in the Graduate Office (219 Wimberly Building) and departmental offices. Students should submit the form after completing 12 graduate hours but before enrolling in their final 9 hours.
5. **Recommendation of Advisory Committee and Degree Plan.** After receiving the "Application for Admission to Candidacy for Master's Degree" form (G2), the departmental chair or the designated graduate advisor submits a recommended degree plan and suggested graduate committee to the Graduate Dean by filing a "Recommendation for Admission to Candidacy for Master's Degree" form (G3). If these recommendations are approved, the student is admitted to candidacy. The graduate dean has the option of appointing additional members to an advisory committee.
6. **Composition and Roles of the Advisory Committee.** The advisory committee will include a member of the graduate faculty designated as the supervising professor along with at least two other members of the graduate faculty. The committee will assist in monitoring/supervising the remainder of the student's program, including revision of the degree plan; supervision of research; writing and approval of the thesis, field study report, or dissertation; and administration and evaluation of the final comprehensive examination.
7. **Candidacy Examinations.** Departments may require passing examination scores in the admission to candidacy process.

Summary of Graduate School Master's Degree Requirements

Language requirement	M.A. only
Minimum GPA for good standing	3.00
Minimum TOEFL (international students)	525
Probation	less than a 3.00 GPA
Suspension	less than a 3.00 GPA for more than 12 hours
Maximum transfer	6 semester hours
Maximum PB credits toward degree	6 semester hours
Minimum thesis credits	6
Time limit for degree	6 years
Maximum age of GRE scores	5 years
Minimum credit hours, most degrees	36 semester hours
Minimum credit hours, second degree	30 semester hours
Maximum registration, long semester	15 semester hours
Maximum registration, summer term	6-7 semester hours
File for candidacy	after 12 hours and before final 9 hours

Doctor of Engineering

A student will be admitted to candidacy for the Doctor of Engineering degree only upon the recommendations of his/her doctoral committee. In general this committee will require the following:

1. Satisfactory progress in all course work.
2. Continuous pursuit of the degree by earning at least three semester hours credit in two consecutive semesters. Any student who does not do so must apply to the graduate engineering faculty for permission to continue in the program.
3. Prepare a proposal for a field study involving a technological innovation and defend this proposal to a doctoral committee as part of the candidacy examinations.
4. Satisfactorily pass other examinations designed to determine whether the student is ready to do the field study.

A student who fails to be admitted to candidacy on the first attempt may take additional courses or otherwise prepare for an additional attempt as may be recommended by the doctoral committee. Any student who does not meet the minimum requirements as established by the student's doctoral committee may be required to withdraw from the doctoral program.

Doctor of Education in Deaf Education

A student will be admitted to candidacy for the Doctor of Education in Deaf Education degree only upon the recommendations of his/her doctoral committee. In general, this committee will require the following:

1. Satisfactory progress in all course work.

2. Continuous pursuit of the degree by earning at least three semester hours credit in a two consecutive semester period. Any student who does not do so must apply to the graduate faculty in deaf education for permission to continue in the program.
3. Preparation of a proposal for a research study involving deaf studies/education issues and defense of this proposal to a doctoral committee as part of the candidacy examinations.
4. Passing satisfactorily other examinations designed to determine whether the student is ready to do the dissertation.

A student who fails to be admitted to candidacy on the first attempt may take additional courses or otherwise prepare for an additional attempt as may be recommended by the doctoral committee. Any student who does not meet the minimum requirements as established by the student's doctoral committee may be required to withdraw from the doctoral program.

Advisory Committees

Members of a student's advisory committee are appointed by the Graduate Dean upon recommendation by the Chair of the student's major department at the time the student is admitted to candidacy. After admission to candidacy, but before the date of the final examination or the oral defense, the student may request a change in the committee composition with the approval of the student's department chair. If the department Chair does not approve a request for a committee change, the student may request the Graduate Dean to appoint a three member Review Committee. In the event the Review Committee fails to effect an agreement between the student and the original committee, a new committee may be selected for the student by the Graduate Dean, the Dean of the student's academic college and two members of the graduate faculty of the student's academic college chosen by the Graduate Dean. The time period should not exceed 10 class days from the date of receipt by the Graduate Dean of a written request for review and arbitration by the student and the appointment of a new committee, should one be necessary.

Thesis Requirements

A thesis is required for the Master of Science degrees in biology, chemistry, and psychology, and for the Master of Engineering Science degree. It is not available in programs leading to the Master of Public Administration and Master of Music degrees, or the Master of Education degrees in Guidance and Counseling or in School Administration. A thesis is optional in all other degree programs. Students who write theses are expected to follow the procedure below.

1. Register for the departmental thesis course with the approval of the student's graduate advisor. The first registration is for Thesis 5390; all subsequent registrations are for Thesis 5391. All students are expected to register for Thesis 5391 until the thesis has been completed, and all students must be registered for Thesis 5391 at the time of their graduation. NOTE: No academic credit is given for thesis courses until the thesis has been approved by the major department and accepted by the College of Graduate Studies. At that time, six semester hours credit will be awarded with a grade.
2. Write a thesis under the direction of the supervising professor. The form and style of the thesis must follow the thesis guidelines which are available from the College of Graduate Studies.

3. Submit a single, unbound copy of the thesis in final form to the Dean of the College of Graduate Studies at least 10 days before the oral defense and at least 30 days before the date of graduation.
4. Defend the thesis orally at least 10 days before the date of graduation at a time and place specified by the supervising professor. The defense must be scheduled in the Graduate College at least 10 days before the defense is to be held. The supervising professor will report the results of the defense to the College of Graduate Studies within two working days.
5. Submit three official final copies of the thesis on rag content paper to the Graduate College at least 10 days before graduation. Additional copies may be turned in for binding at the same time if desired or if required by the student's major department. All copies must be signed by the student's supervising professor and committee members, department head, and academic dean.
6. Submit two extra copies of the thesis abstract and a completed University Microfilms form at least 10 days before graduation.
7. Pay all binding and abstract publication fees in the University Bookstore at least 10 days before graduation.

Non-Thesis Requirements

1. Each candidate for a graduate degree who does not write a thesis must pass a comprehensive final examination which must be taken during the last semester of attendance and at least 10 days before the conferral of the degree. The form of this examination is determined by the student's major department, and may be oral, written, or a combination of both. An exception to this rule exists for Audiology/Speech-Language Pathology: those students who pass the ASHA national boards may be exempt from master's oral and/or written comprehensive examinations.
2. A student registers for the comprehensive examination by applying for graduation in the Graduate College. Applications must be filed **before** the deadline established by the Graduate College. Those deadlines are:

For December graduation	First Monday in October
For May graduation	First Monday in March
For August graduation	First Monday of Summer Term I

Specific dates will be found in the calendar at the front of this Bulletin.

3. If all requirements for graduation except the comprehensive examination have been completed, the student may take the examination during a later semester without being enrolled in the College of Graduate Studies.
4. All oral examinations must be scheduled in the Office of the Graduate Dean at least 10 days prior to the date of the examination. The Dean may attend or may send a representative to attend.
5. Written comprehensive examinations will be administered in accordance with the following schedule.

Fall Term	First Thursday in November
Spring Term	First Thursday in April

NOTE: Written comprehensive examinations will be given only once during the summer: on the last Monday of the first summer term. If this date conflicts with the July 4 holiday, the examinations will be given on the last Monday in June. For specific dates, please consult the official calendar in the front of this Bulletin or call the Graduate College for details.

6. Failure to pass a comprehensive examination in three attempts will result in a student being permanently suspended from that degree program. The examination may be taken only once each term. Students suspended under this provision may be admitted to another degree program if they meet the required standards and are accepted by the new degree program.

   A department may prescribe additional academic requirements for its majors with the approval of the Dean of the College of Graduate Studies.

Graduation Procedure

Students who intend to graduate at the end of a particular semester must apply for graduation in the office of the Graduate Dean on or before the official deadline for application as established by The College of Graduate Studies.

Participation in commencement exercises is not required for the receipt of a graduate degree, though participation is strongly recommended. Graduating students who elect not to attend graduation exercises should notify the Graduate Dean.

College of Arts and Sciences

The College of Arts and Sciences offers programs of study leading to the Master of Arts degree in the fields of English and history; the Master of Science degree in the fields of applied criminology, biology, chemistry, nursing and psychology; and the Master of Public Administration degree. In addition, graduate study is available in geology and sociology as areas of support or specialization in other advanced degree programs.

Persons seeking admission to these programs must meet the requirements specified by the College of Graduate Studies and the individual department. Admission to a degree program is not an admission to candidacy.

Department of Biology

The Department of Biology offers a program of study leading to the Master of Science in biology degree. It is designed to enhance the professional competence of graduates in biology or closely related disciplines who are presently engaged in or planning to enter secondary school or college teaching, or who expect to be employed by private or governmental agencies in biologically oriented fields.

Applicants must 1) have completed a minimum of 24 semester hours in the biological sciences, 2) have completed a minimum of one semester of organic chemistry and one semester of statistics, 3) remove any deficiencies as provided in the section on admission, 4) score a total of 950 (Verbal plus Quantitative Sections) on the Graduate Record Examination, or if V + Q score falls between the Graduate College minimum score and 949, receive a majority vote of the biology graduate faculty, 5) have an undergraduate grade point average of at least 2.50/4.0 overall or 2.75 on the last 60 hours of undergraduate work.

Degree Requirements

The candidate for the M.S. in biology must meet all the College of Graduate Studies general requirements as listed in this catalog. Additional specific requirements are

1. Submit a written proposal for the thesis. After the thesis proposal is written, pass an oral examination before the biology graduate faculty on the experimental design of the proposed thesis and related disciplines. Note: This requirement is a prerequisite to achieving candidacy and should be completed during the first year of enrollment and **must** be completed by the end of the second year of the program.
2. For their professional development, students will enroll in BIOL 5110 Graduate Seminar each Fall and Spring semester. A maximum of two semesters credit will be counted toward the Master's degree; subsequent enrollments will be for a grade but will not count toward the degree. Exceptions must be approved by the biology graduate faculty.
3. Thirty-three hours of graduate credit which may include a maximum of 16 hours in approved 400 level courses with augmented requirements. All course work will be in biology. Exceptions must be approved by major advisor and by the Chair, Department of Biology.

Graduate Faculty

Assistant Professor Ana B. Christensen
Physiology, comparative and environmental physiology, respiratory pigments
Professor Richard C. Harrel
Limnology, ecology, invertebrate zoology
Professor Madelyn D. Hunt
Medical microbiology, epidemiology
Assistant Professor Paul F. Nicoletto
Biology and zoology
Assistant Professor Randall G. Terry
Botany, systematics, molecular biology
Professor Michael E. Warren
Entomology, mosquito biology
Assistant Professor Randall H. Yoder
Parasitology, parasite ecology

Biology Courses (BIOL)

5100 Materials and Techniques of Research 1:1:0
Survey of laboratory and library research techniques, instrumentation and materials requisite to scientific investigation. Required of all entering graduate students.

5110 Graduate Seminar 1:1:0
Current topics in biological research. See requirement 3 under Degree Requirements.

5301, 5401 Special Topics 3-4:A:0
Research in areas other than thesis.
Prerequisite: Approval of graduate advisor. May be repeated when topic changes.

5305 Systematic and Evolutionary Biology 5:3:0
A snrvey of evolutionary mechanisms from molecular to population levels. Consideration of speciation, adaptation and historical geology.

5390-5391 Thesis 3:A:0
Prerequisite: Approval of graduate advisor. Must complete both for required 6 credits.

5405 Immunology 4:3:3
Organs, tissues, cells, and molecules of the immune response and their interactions.
Prerequisite: Microbiology, BIOL 2420.

5406 Parasitology 4:3:3
A graduate level study of the morphology, life history and host-parasite relationships of parasites of man and other animals.
Prerequisites: General Biology, BIOL 1406 and 1407.

5410 Animal Behavior 4:3:3
An analysis of the development and significance of various behavior patterns in animals from an evolutionary point of view.

5430 Limnology 4:3:3
A graduate level study of fauna, flora, ecology and productivity of fresh water.

5431 Ichthyology 4:3:3
Natural history, taxonomy and ecology of freshwater and marine fishes. Required field trip.

5440 Vertebrate Natural History 4:3:3
Collection, identification and natural history of area fish, amphibians, reptiles, birds and mammals. (Offered Spring semester)

5445 Herpetology 4:3:3
Natural history, taxonomy and ecology of amphibians and reptiles. Required field trip.

5450 Mammalogy 4:3:3
Natural history, taxonomy and ecology of mammals. Required field trip.

5455 Marine Biology 4:3:3
A graduate level field study and identification of area species; current research. Required field trips.
Prerequisite: Invertebrate Zoology, BIOL 3460, or Marine Biology, BIOL 4450.

5460 Ecology 4:3:3
A graduate level quantitative approach to both field and experimental studies. Interrelationships of organisms and their environment.
Prerequisites: General Biology, BIOL 1406 and 1407.

5470 Ecology of Polluted Waters 4:3:3
Analyses of effects of water pollutants on aquatic ecosystems.
Prerequisite: Bio 443.

5475 Cell Biology/Histology 4:3:3
A graduate level study of structural and physiological functions of cells at the biochemical and molecular level. Laboratory emphasis on structure and function of mammalian cells and tissues.
Prerequisites: Organic Chemistry, CHEM 3411, General Biology II, BIOL 1407;
Recommended: BioChemistry, CHEM 4411.

5480 Aquatic Entomology 4:3:3
Biology morphology, life history and classification of aquatic insects. Field trips and personal collection required.

5485 Epidemiology 4:3:3
A graduate level study of the distribution and determinants of diseases and injuries in human populations. Laboratory utilizes a case history approach.
Prerequisites: Microbiology, BIOL 2420; Statistics, PSYC 2471 recommended.

5490 Comparative Physiology 4:3:3
Fundamental physiological processes in animals from the Phylogenetic viewpoint.
Prerequisites: Advanced Physiology, BIOL 3440, or Anatomy and Physiology, 2401-2402, Organic Chemistry, CHEM 3412 and math through Calculus.

5495 Molecular Genetics 4:3:3
Genomic architecture and function, applications of recombinant technology, gene regulation, and genomic evolution. Laboratory includes exposure to basic methods of DNA isolation, purification, use of restriction enzymes, electrophoretic analyses, recombinant methodology, PCR, southern blotting.

Department of Chemistry and Physics

The Department of Chemistry and Physics offers a program of study leading to the Master of Science degree in Chemistry. Those seeking admission to this program must meet the general requirements as set forth in this catalog for admission to the College of Graduate Studies and must have a minimum grade point average of 2.75 on the last 60 hours of undergraduate work or 2.50 on all undergraduate work. In addition, the applicant must offer the substantial equivalent of the course in general chemistry, inorganic chemistry, analytical chemistry, organic chemistry and physical chemistry required of undergraduate students in the chemistry curriculum. The applicant also must have completed one year of college physics and mathematics through integral calculus.

Degree Requirements

The candidate for the M.S. degree in Chemistry must meet all the College of Graduate Studies general degree requirements as listed in the catalog. Additional specific degree requirements are as follows:

1. Fifteen to 18 semester hours of course work in Chemistry which must include CHEM 5310, 5330, 5350, 5370 and at least one 5000 level Selected Topics course in Chemistry with a grade point average of "B" (3.0) in these courses.
2. Presentation of a thesis.
3. Six to nine additional semester hours of 5000 level courses in an approved field of study.

Graduate Faculty

Professor Hugh A. Akers
Biochemistry
Assistant Professor Shawn B. Allin
Polymers chemistry, physical chemistry
Professor David L. Cocke
Analytical chemistry, environmental chemistry
Associate Professor Kenneth Dorris
Physical chemistry, environmental chemistry
Assistant Professor Stephen Fearnley
Organic chemistry
Associate Professor Richard Lumpkin
Inorganic chemistry
Professor J. Dale Ortego
Inorganic chemistry
Associate Professor Shyam S. Shukla
Analytical chemistry, environmental chemistry

Chemistry Courses (CHEM)

5310 Advanced Analytical 3:3:0
Prerequisite: Graduate standing or consent of instructor.

5330 Advanced Inorganic 3:3:0
Prerequisite: Graduate standing or consent of instructor.

5350 Advanced Organic 3:3:0
Prerequisite: Graduate standing or consent of instructor.

5370 Advanced Physical 3:3:0
Prerequisite: Graduate standing or consent of instructor.

5301 Special Topics 1-6:1-6:0-6
The course is designed to meet special needs of students. Each topic is offered on an irregular schedule as the demand requires.
Prerequisite: Departmental approval.

5390-5391 Thesis 3:A:0
Prerequisite: Appraval of graduate advisor. Must complete both for required 6 credits.

Department of English and Foreign Languages

The graduate program of the Department of English and Foreign Languages offers opportunity for intensive study of language and literature. Scholarly interests of members of the department include old and middle English, the Renaissance, Shakespeare, eighteenth century studies, English and American romanticism, the Victorian age, modern English and American literature, African American and Carribean literatures, and comparative literature. In addition to the study of literature through courses organized by genre, period and individual author, the student may explore the history and structure of language and language acquisition and the crafts of both creative and technical writing.

Degree Requirements

The degree of Master of Arts in English requires the completion of 30 semester hours of graduate work: 24 in English (or 18 with an approved six-hour minor), and six in thesis. In general, students are encouraged to emphasize graduate seminars (courses numbered 5000 or above) in their graduate coursework. In the non-thesis alternative, 12 semester hours of coursework may be substituted for the thesis. The creative thesis, as well as the traditional critical thesis, is an option.

All students must have a minimum undergraduate grade point average of 2.5/4.0 overall or on the last 60 hours of undergraduate courses. In addition, international students must score at least 550 on the TOEFL before admission. Students interested in pursuing an M.A. degree in English whose undergraduate major was not English should consult the English department chair.

Depending on the student's undergraduate course work, the graduate program in English will ordinarily include English 5330, 5385, and two courses from 5350, 5360, 5370, 5380 or 5311.

Graduate Faculty

Professor Jerry W. Bradley
Modern American and British literature
Professor Lloyd M. Daigrepont
American literature before 1900
Assistant Professor Paul A. Griffith
African American and Carribean literature
Professor R.S. Gwynn
Creative writing and post-modernism
Assistant Professor Emma Hawkins
Old and Middle English language and literature
Associate Professor Max Loges
Technical Writing
Associate Professor Joseph E. Nordgren
Modern British Literature
Professor Dale G. Priest
English Renaissance, Eighteenth century
Professor James Sanderson
Creative writing, American literature
Professor Pamela S. Saur
German literature, the drama
Professor Sallye J. Sheppeard
Medieval and Renaissance literature and rhetoric, women's literature
Associate Professor Stephenie Yearwood
Writing, English education, seventeenth century
Assistant Professor Steven Zani
British Romanticism, comparative literature, critical theory

English Courses (ENGL)

5110 Composition Practicum 1:1:0
Practicum in the teaching of writing. Involves classroom experience, peer discussion and mentor consultation. Graded on S-U basis.
Prerequisite: Graduate teaching fellow standing.

5300 History of the English Language 3:3:0
Theory and nature of language. Studies in the growth of English and American forms.

5305* The Teaching of Writing to Young Children (Pending Approval) 3:3:0
An introduction to major theories of composition, to research in the teaching of composition and to pedagogical techniques for teaching writing to young children up to age 10.

5310 The Teaching of Writing and Research Techniques 3:3:0
An introduction to major theories of composition, to research in the teaching of composition and to pedogogical techniques for teaching writing.

5311 Special Topics in Comparative Literature 3:3:0
Intensive study of an author or authors, genre or period selected from the range of world literature. Emphasis on analysis and literary method. Course may be repeated for a maximum of six semester hours credit when the topic varies.
Prerequisite: Graduate standing.

5312 Studies in Language and Linguistics 3:3:0
Special problems in linguistics, such as the history of American English, regional dialects, new grammars. May be taken for credit more than once if the topic varies.

5313 Special Topics in English Instruction 3:3:0
Intensive study of theory and pedagogy of language for secondary teachers.
Prerequisite: Graduate standing.

5314 Special Topics in English Instruction 3:3:0
Intensive study of theory and pedagogy of literature for secondary teachers.

5315 Studies in Women's Literature 3:3:0
Poetry, prose, and/or drama by women from classical times to the present. May be taken for credit more than once if the topic varies.

5316 Studies in Victorian Literature 3:3:0
Poetry and prose of the Victorian period. May be taken for credit more than once if the topic varies.

5317 Modern Drama 3:3:0
Dramatic trends and representative plays from Ibsen to the present.

5318 Modern Poetry 3:3:0
Poetic developments in England and America with emphasis on representative poets from Hardy to the present.

5319 Modern Fiction 3:3:0
Prose fiction representative of modern ideas and trends, with emphasis on English and Continental authors.

5320 The Teaching of English as a Second Language 3:3:0
Techniques for teaching basic English skills and literature to non-native speakers. Socio-cultural aspects of second language learning.

5321 Cross-Cultural Communication 3:3:0
A study of cross-cultural communication with a focus on non-verbal and cultural differences that may influence communication in a second language.

5322 Psycholinguistics 3:3:0
Current research and theory of first and second language acquisition and development as a base for teaching English to non-native speakers.

5323 Introduction to Linguistics 3:3:0
Background in the nature of language and linguistic changes as a basis for describing and comparing language systems; focuses on a description of the phonological, morphological and syntactic features of English in contrast to features of other languages.
(Note: Doctoral students in Speech and Hearing may enroll in ENGL 5320, 5321, 5322 and 5323 for doctoral credit as ENGL 6320, 6321, 6322 and 6323, provided they complete additional requirements appropriate to the doctoral level of study.)

5324 Studies in 16th Century Literature 3:3:0
Poetry, prose and drama of the age. May be taken for credit more than once if the topic varies.

5326 Studies in Rhetoric 3:3:0
Advanced study of the relationship between form and content in various aims/modes of media and discourse, and extensive practice in diverse forms of written expression.

5328 Early American Literature 3:3:0
Significant writers from the beginning of Colonial America to 1828.

5329 Modern American Literature 3:3:0
Major American writers of the 20th century.

5330 Special Topics in Old and Middle English Languages and Literature 3:3:0
Intensive study of the languages necessary for reading literature of the period. Course may be repeated for a maximum of six semester hours credit when the topic varies.
Prerequisite: Graduate standing.

5333 Studies in a Particular Author 3:3:0
Major writer such as Chaucer, Milton, Hawthorne, Faulkner. May be taken for credit more than once when the topic varies.

5334 Critical Studies in Literature 3:3:0
A particular genre or theme in comparative literature or criticism. May be taken more than once for credit when the topic varies.

5336 Directed Studies 3:3:0
Study in American literature in an area of mutual interest. May be taken for credit more than once if topic varies.
Prerequisite: Junior standing.

5340 Shakespeare 3:3:0
Selected major plays. May be taken for credit more than once if the topic varies.

5345 Writing Seminar
Intensive study in writing, focusing on specific topics, with either a technical or creative emphasis. May be taken more than once for credit if the topic varies.
Prerequisite: ENGL 3350 or permission of the instructor (for any creative writing seminar).

5350 Special Topics in Renaissance and Seventeenth Century English Literature 3:3:0
An intensive study of an author or related authors selected from the period. Course may be repeated for a maximum of six semester hours credit when the topic varies.
Prerequisite: Graduate standing.

5351 Studies in 17th Century Literature 3:3:0
Poetry, prose and drama of the period 1600-1660. May be taken for credit more than once if the topic varies.

5355 Editing Technical Communications
Editing technical communications for clarity, conciseness, and form. Emphasis on affective communications within and between organizations and organizational levels including reports, proposals, manuals, memoranda, and news releases.
Prerequisite: Either ENGL 2301, 3310, 4326, or 4345 (when technically oriented) or permission of the instructor.

5360 Special Topics in Restoration and Eighteenth Century English Literature **3:3:0**
An intensive study of an author or related authors selected from the period. Course may be repeated for a maximum of six semester hours credit when the topic varies.
Prerequisite: Graduate standing.

5361 Documentation Design **3:3:0**
A technical writing course that focuses on preparing, writing and documenting instructional information.

5365 Internship **3:3:0**
Opportunity to work in 'real world' work setting in activities related to professional communication and technical writing.
Prerequisites: At least two courses from *ENGL 2301, 3310, 4355.*

5370 Special Topics in Nineteenth Century English Literature **3:3:0**
An intensive study of an author or related authors selected from the period. Course may be repeated for a maximum of six semester hours credit when the topic varies.
Prerequisite: Graduate standing

5380 Special Topics in Twentieth Century Literature **3:3:0**
An intensive study of an author or related authors selected from the period. Course may be repeated for a maximum of six semester hours credit when the topic varies.
Prerequisite: Graduate standing.

5381 Studies in 18th Century Literature **3:3:0**
Poetry, prose and drama of the period 1660-1800. May be taken for credit more than once if the topic varies.

5385 Special Topics in American Literature **3:3:0**
An intensive study of an author or related authors selected from the period. Course may be repeated for a maximum of six semester hours credit when the topic varies.
Prerequisite: Graduate standing.

5390-5391 Thesis **3:A:0**
Prerequisite: Approval of graduate advisor. Must complete both for required 6 credits.

5392 Studies in Romantic Literature **3:3:0**
Poetry, prose and drama of the Romantic period. May be taken for credit more than once if the topic varies.

**Pending approval of the Texas Higher Education Coordinating Board*

Department of Geology

The Department of Geology offers the following graduate courses to be used primarily as a support to other advanced degree programs.

Graduate Faculty

Professor James W. Westgate
Vertebrate paleontology, paleoecology

Geology Courses (GEOL)

5101 Institute in Earth Science **1:1:0**
Summer, in-service, or other institutes for earth science teachers. Credit varies with duration.
The description of the area of study of each institute will appear on the printed schedule. May be repeated for credit when nature of institute differs sufficiently from those taken previously.

5301 Institute in Earth Science **3:3:0**
Summer, in-service, or other institutes for earth science teachers. Credit varies with duration.
The description of the area of study of each institute will appear on the printed schedule. May be repeated for credit when nature of institute differs sufficiently from those taken previously.

5320 Environmental Geology 3:3:0
The geological aspects of the environment. The environmental significance of man's use of natural resources. Field and laboratory studies of the local environment. Field trip required. Term paper based on laboratory, library, or field studies.

Department of History

It is the purpose of the Department of History to impart a knowledge and understanding of the past to the students enrolled in the University. This objective is based upon the belief that such knowledge and understanding improves the quality of life for individuals and contributes to the welfare of our society. The Department seeks to accomplish this objective through a program of continued study and research by its members and students. Research interests of the Department focus on both American and European history.

Admission Requirements

Applicants for the Master of Arts in History must meet all Graduate College entrance requirements. Their background in history must include two semesters of American History, two semesters of world or western civilization, one advanced course in each area and a course in historical research and writing. Students may be admitted and begin taking graduate courses while completing these requirements.

Degree Requirements

I. THESIS OPTION. The thesis option is strongly recommended for those who plan to continue graduate study beyond the masters. The thesis program requires completion of 24 semester hours of class-work; 18 hours must be taken in Seminar, Readings or Directed Readings courses. The student may take 6 graduate hours (class or seminar) in a supporting (minor) field or may take those hours in history. Six additional hours credit will be given for completion of the thesis.

Thesis students must also demonstrate a reading knowledge of one classical or modern foreign language. This requirement may be satisfied by completing the 2312 course in a language, OR by passing a nationally recognized standardized language proficiency test, OR by completing a reading project administered jointly by faculty members in the Departments of History and of English and Foreign Languages.

II. NON-THESIS OPTION. The non-thesis option is intended to provide a strong foundation in a wide range of historical areas and periods. It is designed for those who do not intend to seek a higher degree. Non-thesis students must complete 36 hours in history, of which 21 hours must be in Seminar, Readings, or Directed Readings courses. The student may take six hours in an approved minor field or may take six additional hours in history. After completing their classwork, students must take a comprehensive examination which may be oral, written, or a combination of both. A foreign language is not required for the non-thesis Master of Arts in History.

Graduate Faculty

Professor Adrian N. Anderson
United States history, revolution, early national
Professor John M. Carroll
United States history, diplomatic, the South
Professor Howell H. Gwin, Jr.
European history, ancient, classical, medieval
Professor John W. Storey
United States history, urban, social intellectual
Professor Walter A. Sutton
United States history, diplomatic
Assistant Professor J. Lee Thompson
British Empire, modern Britain, modern Europe, 19th and 20th century US
Professor Ralph A. Wooster
United States history, Civil War, the South

History Courses (HIST)

5320 Readings in American History 3:3:0
Course may be repeated when topic varies.
Prerequisite: Graduate standing.

5340 Readings in European History Since 1815 3:3:0
Course may be repeated when the topic varies.
Prerequisite: Graduate standing.

5370 Seminar in United States History 3:3:0
Course may be repeated when the topic varies.
Prerequisite: Graduate standing.

5311 Seminar in European History 3:3:0
Course may be repeated when the topic varies.
Prerequisite: Graduate standing.

5312 Directed Readings in History 3:A:0
Directed readings to be arranged by student in consultation with faculty member in area of mutual interest. Course may be applied to 5000 level course requirement for a **maximum** of 6 hours in the thesis program and 9 hours in the non-thesis option.

5390-5391 Thesis 3:A:0
Prerequisite: Approval of graduate advisor. Must complete both for required 6 credits.

Department of Nursing

The Department of Nursing offers a program of study leading to the Master of Science in Nursing degree. Persons seeking admission must meet the general requirements for admission as outlined in the graduate catalog and must present an undergraduate grade point average of 3.0/4.0 overall. In addition, the student may substitute an acceptable grade in the Miller Analogies Test for the Graduate Record Examination (GRE) requirement.

Nursing Administration Track

The Nursing Administration track prepares registered nurses for advanced practice in Nursing Administration. Primary focus is placed on advanced knowledge central to organization, management, leadership and health care policy and economics. Research and theory supports the program's core. With a substantive nursing administration and business cognates in finance, economics, and marketing, the program will prepare leaders in a rapidly changing health care system.

Admission Requirements

The Student seeking a MSN degree must fulfill the following admission requirements:

1. Bachelor of Science in Nursing degree from a nationally accredited undergraduate program;
2. Overall GPA of 3.0 or higher for all undergraduate and graduate coursework;
3. Acceptable scores in the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) taken within the last five years;
4. Current licensure as a Registered Nurse in the State of Texas;
5. At least two years' experience as a Registered Nurse;
6. College statistics course taken within the last ten years.
7. Three letters of recommendation from professional and academic sources.

Degree Requirements

1. Meet all general degree requirements.
2. Complete 42 semester hours of graduate work: 12 hours in the General Nursing Core, 15 hours in the Nursing Major, and 15 hours in the minor field.
3. Complete at least 4 hours of Advanced Practice Practicum within the Nursing Major.
4. Meet the specific requirements listed in the College of Arts and Sciences, Department of Nursing section of this catalog.

General Nursing Core

MSNA 5300 Nursing Research
MSNA 5310 Theoretical Foundations
MSNA 5324 Nursing Informatics
MSNA 5312 Public Health Policy

Nursing Major Core

MSNA 5320 Nursing Administration I
MSNA 5221 Practicum I
MSNA 5331 Nursing Administration II
MSNA 5232 Practicum II
* MSNA 5222 Case Management
* MSNA 5341 Advanced Case Management

Required Courses in the College of Business

ECON 5300 Foundations of Economics
MKTG 5300 Marketing Concepts
MGMT 5390 Financial Accounting
* FINC 5300 Foundations of Finance
Restricted Business Elective

**Pending approval by the Texas Higher Education Coordinating Board.*

Academic Standards

1. Must have a "B" in all major core courses.
2. No nursing course may be repeated more than once. The student will have only one opportunity to repeat any two different nursing courses. A third failure will constitute program failure.
   a. Students dropping or failing a nursing course need to be aware that future readmission to a clinical course is based on space availability as well as student performance in the current and any previous clinical nursing courses.
   b. Students are allowed to repeat a course only when space is available *and* upon recommendation by the Graduate Program Committee to the Graduate Program Director.
3. Once admitted into the Department of Nursing Graduate Program, the student will adhere to all applicable policies and procedures as outlined under the Department of Nursing Student Information Guide.

Graduate Faculty

Assistant Professor Anita Carroll
Nursing Research, Public Health Policy
Assistant Professor Jennie Godkin
Case Management
Assistant Professor Iva Hall
Professor and Dean Brenda Nichols
Theoretical Foundations
Assistant Professor Dianna Rivers
Nursing Administration I, Practicum I, Nursing Administration II, Practicum II Advanced Case Management
Instructor Sheila Smith
Nursing Informatics
Assistant Professor Faith Wallace
Nursing Informatics

Nursing Administration Courses (MSNA)

5300 Nursing Research and Scientific Inquiry **3:3:0**
Lectures are used to present information on research design and analysis, focusing on formulating a practice-related research problem, searching the literature, research design, sampling, and evaluation of research instruments, data collection strategies and analysis of data. Students are expected to analyze and critique research literature for scientific merit, and to discuss the practicums application of scientific findings for advanced practice. Numerous examples of research conducted by nursing scholars, including Lamar nursing faculty, are used to illustrate applied practice principles.

5310 Theoretical Foundations for Advanced Nursing Practice **3:3:0**
Theoretical foundations for nursing as an art and a science will be presented. Students will acquire knowledge and skills for understanding the evolution of nursing as a profession, conceptual frameworks underlying advanced practice in nursing, and the dynamic health care environment. A model for advanced practice using recognized as well as created concepts will be developed and articulated by the students as a requirement for course completion. The role of the advanced practice nurse as a leader and motivator of people is highlighted.

5312 Public Health Policy **3:3:0**
Using theoretical models, this course explores the continuum of the public health policy process, from the policy analysis, formulation, implementation, evaluation, and advocacy perspectives. Through course and field assignments, the students will be given the opportunity to analyze public health policies that influence a high-risk and /or underserved population that they have chosen, and develop strategies for influencing policy changes at the state level that could affect the financing and delivery of health services to those populations. Activities such as visits to their state representatives, participation in legislative hearings, public forums, and involvement in the political negotiations that occur within the political action committees of organized nursing groups will be highly encouraged.

5320 Leadership and Management in Nursing Administration I **3:3:0**
This course provides a foundation for nursing administration by examining motivation, power, change, and other related behavioral theories. Examines and analyzes organizational behavior at the micro- and macro- level to illustrate the effects of environmental, technological, and professional influences on nursing administration. Through selected case studies, leadership behaviors are analyzed, within the context of individual behavior, social interactions and group dynamics, intergroup behavior and the effects of the total institutional system on behavior. Students will develop and articulate their own philosophy of leadership and management.
Pre-requisites: MSNA 5300, 5310, 5222, ECON 5300
Co-requisite: MSNA 5221

5221 Practicum in Nursing Adminstration I **2:0:6**
By practicums experience through an approved preceptorship in a health care organization, the student will submit a completed practice intervention project proposal that will focus on a specified health care administration problem, and duly approved by the student's practicum preceptor and faculty advisor.
Pre-requisites: MSNA 5300, 5310, 5222, ECON 5300
Co-requisites: MSNA 5320

5222 Case Management in Nursing and Health Care **2:2:0**
Using conceptual and historical frameworks, this course provides a foundation for the practice of case management in health care. Evolution of the concept is reconstructed, providing as context the forces and conditions that gave rise to the practice. Models of case management are presented, and specific concepts and principles that differentiate these models explored.

5324 Nursing Informatics in Leadership and Management **3:3:0**
Applies information technology to health care management, by providing a foundation for information management to support data, information, and knowledge needs in nursing administration, focusing particularly on health care information systems, nursing and health care languages and minimum data sets, and computer-mediated decision support in nursing management, education and research.

5331 Leadership and Management in Nursing Administration II **3:3:0**
Organizational structure and administrative process are used as context for discussing the roles and responsibilities of the nurse leader/manager in health care systems. Structures of current health care systems are explored and analyzed within historical and sociological perspectives to understand the forces that are influencing the environment of the nurse leader, and which affect the strategic thinking of health care administrators. The role of top managers in welding functional areas such as marketing, management and finance to fulfill strategic institutional aims will be examined.
Pre-requisites: MSNA 5320, 5221
Co-requisites: MSNA 5232

5232 Practicum in Nursing Administration II **2:0:6**
By the end of this course, the student will be ready to present results of the completed practice intervention project, and report to a committee consisting of the student's practicum preceptor, faculty advisor and one other graduate nursing program faculty.
Pre-requisites: MSNA 5320, 5221
Co-requisites: MSNA 5331

5341 Advanced Health Care Case Management **3:3:0**
Role of the nurse case manager is explored in detail. Synthesis of concepts and principles to develop a nursing model which purports to effect delivery of quality health care through management of outcomes, rational control of costs, use of evidence based clinical pathways, and effective marketing strategies. Ethical and legal issues relating to case management will be analyzed.
Pre-requisites: MSNA 5331, 5232 or departmental consent

Department of Political Science

The Department of Political Science offers a program of study leading to the Master of Public Administration degree. It is designed to prepare students for administrative positions in local, state, and federal agencies. Persons seeking admission must meet the general requirements for admission as outlined in the graduate catalog and must meet the institutional GRE and GPA standard according to the formula (GPA X 200) + (GRE V + Q) $\geq$ 1350.

Degree Requirements

The degree of Master of Public Administration requires the completion of 36 semester hours of graduate work: 21 in the core curriculum and 15 from an approved list of elective courses. An internship (POLS 5358) with local agencies is also available. Students will complete the following courses if they have not taken them, or their equivalents, as undergraduates: introduction to public administration (three semester hours); urban politics (three semester hours); and statistics for social scientists (three semester hours). Students must pass both written and oral comprehensive final examinations.

Graduate Faculty

Professor David S. Castle
American politics, methodology

Assistant Professor Terri B. Davis
Judicial process, administrative law

Professor Bruce R. Drury
Comparative politics, Latin American politics

Associate Professor Elbert T. Dubose
Public administration

Assistant Professor James L. True
Public administration, public policy

Professor Glenn H. Utter
Political philosophy, American political thought

Professor James M. Vanderleeuw
Urban politics, public policy

Political Science Courses (POLS)

5320 Directed Reading 3:3:0
Graduate students may study individually with an instructor in an area of mutual interest to the student and the instructor.
Prerequisite: Graduate standing and approval of Chair, Department of Political Science.

5350 Administrative Theory 3:3:0
An examination of major theories dealing with organizations and their characteristics, scope and effect on public administration and executive behavior. Emphasis will be placed on the relationships between theories and supporting empirical research.
Prerequisite: Graduate standing.

5351 Human Resource Management 3:3:0
Personnel theory and practice in the public setting. The basic methods and functions of personnel administration in the context of public organizations, employee motivation, employee relations and collective bargaining will be emphasized.
Prerequisite: Graduate standing.

5352 Fiscal Administration 3:3:0
The study of formulation and administration of federal, state, and local government budgeting, including the role of the budget in the policy process, approaches to budget formulation and analysis, and other basic concepts and practices in government budget and finance administration.
Prerequisite: Graduate standing.

5353 Public Policy Formulation 3:3:0
The process of policy-making within governmental agencies and within the total political process. Emphasis will be placed on decision-making, public policy analysis and policy implementation.
Prerequisite: Graduate standing.

5354 Special Studies in Public Administration 3:3:0
Analysis of selected problems in public administration: urban and regional planning and management, administrative reorganization, the environment and related problems. Course may be repeated as topics vary.
Prerequisite: Graduate standing.

5358 Internship 3:A:0
Practical administrative experience in a local, state, regional or federal office or agency that is the equivalent of one-half time for one semester, full-time in a summer semester. Examinations and reports on practices and problems in agencies are required. This course may be waived for students already employed in an administrative capacity in a government agency if they elect three additional hours from the approved program courses.
Prerequisite: Graduate standing.

Department of Psychology

The Department of Psychology offers a program of study leading to the Master of Science degree in applied psychology. It is designed to prepare professional personnel for employment in business, industry or community mental health. Students may elect to take their primary coursework in industrial/organizational psychology or in community/counseling psychology. Those seeking admission to this program must meet the general requirements as set forth in the catalog for admission to the College of Graduate Studies and must offer the substantial equivalent of a bachelor's degree in psychology (24 semester hours) including courses in statistics and research methods. The department has flexible admission criteria which will allow the faculty to review applicants individually. However, students with GRE scores less than 1000 (V + Q) are not usually accepted. International students must present a minimum TOEFL score of 600. All students must also have a 2.5/4.0 undergraduate grade point average overall or 2.75/4.0 on the last 60 hours of undergraduate course work. Post Baccalaureate students are not permitted to enroll in psychology graduate courses without special permission from the department chair.

Degree Requirements

The candidate for the Master of Science degree in Psychology must meet all of the College of Graduate Studies general degree requirements. Additional specific degree requirements are as follows:

1. Forty-two semester hours of course work in psychology which must include 23 semester hours in Psychology 5300, 5301, 5311, 5302, 5320, 5323, 5350 and two semester hours in Psychology 5120. For the Community Psychology Program, an additional 9 semester hours in Psychology 5310, 5312 and 5313 is required. In the Industrial Psychology Program, an additional 6 semester hours is required in Psychology 5321 and 5322.
2. Candidacy examinations devised by the Psychology Department graduate faculty. A student may petition to be administered the candidacy (qualifying) examination during the semester in which the appropriate course work listed in No.1 above is to be completed provided the student is in good academic standing. Dates to sit for the examination will be announced each year. A student must have satisfactorily passed candidacy examinations prior to enrolling in Psychology 5330, 5390, 5310 or 5313.
3. One to three additional semester hours of 5000 level courses in an approved field of study.
4. Practicum: Six semester hours in Psychology 5330 and 5331 for I/O students; three semester hours in Psychology 5330 for community students.
5. Thesis: Submission of an acceptable thesis and satisfactory performance on a final oral examination with a minimum of six semester hours in Psychology 5390 and 5391.

Departmental Policies

Special attention is called to the following departmental policies:

1. Graduate students are prohibited from providing psychological services except when supervised by a faculty member as part of a course requirement or when regularly employed by a licensed psychologist, an exempt agency as defined by the *Psychologist's Licensing Act or a departmental approved nonexempt agency.*

Students in training are expected to be aware of and abide by the *Psychologist's Licensing Act and the Ethical Principles of Psychologists.* A violation of this policy will result in the student's dismissal from the program.

2. More than six hours of "C" level work will result in the student's dismissal from the program.
3. Students may not enroll in the same course more than twice.
4. Qualifying and/or final examinations may be repeated once if failure occurs. In general, a student repeating any portion of the examinations must do so at the next administration of the examination.
5. After admission to candidacy, a student must be enrolled in a thesis course each regular semester until requirements for the degree are completed. In addition a student must be registered for a thesis course each session of the summer term if the student is to receive the degree in August or is involved in research or writing.

Under unusual circumstances and with the approval of the department chair and the student's supervising professor, a student may postpone registration for the thesis course for one or more semesters. Unless special permission has been granted, a student who is not continuously enrolled in a thesis course must repeat the candidacy examinations and apply for re-admission to candidacy.

Graduate Faculty

Assistant Professor Brock A. Boekhout
Clinical psychology, relationships, community psychology

Professor James K. Esser
Social, industrial-organizational psychology

Associate Professor Oney D. Fitzpatrick
Developmental psychology, health psychology, medical compliance

Associate Professor Joanne S. Lindoerfer
Clinical psychology, community psychology

Assistant Professor Judith R. Mann
School psychology, psychological measurement, developmental psychology, community psychology

Professor Richard G. Marriott
Behavioral neuroscience, learning-cognition, methodology

Assistant Professor Martha A. Rinker
Sensation/perception, behavioral neuroscience, methodology

Psychology Courses (PSYC)

5120 Professional Orientation **1:1:0**
An orientation to the discipline and professional activities. Includes ethics, legalities, training standards, and professional roles. Assignments supplement other course work including research, teaching and field projects. Required of all graduate students for two semesters with a maximum of three semester hours allowed.
Prerequisite: Consent of instructor.

5140 Special Topics **1:A:0**
Course work, library and/or laboratory work, and conferences with faculty member. A description of the particular area of study will be indicated. May be repeated for credit when topic varies.
Prerequisite: Consent of instructor.

5300 Advanced General Psychology I **3:3:0**
A comprehensive overview of the history of psychology, systems of psychological thought, and the areas of behavioral neuroscience, sensation and perception, learning, motivation, and cognition. Emphasis will be placed on both background material and current research. May be taken out of sequence.
Prerequisite: Consent of instructor.

5301 Advanced General Psychology II 3:3:0
A comprehensive overview of the following areas of psychology: personality, developmental, social and abnormal. Emphasis will be placed on both background material and current research. In addition, the influence of lifestyle on health and wellness and the role of the professional psychologist in the process is considered. May be taken out of sequence.
Prerequisite: Consent of instructor.

5302 Experimental Design 3:3:0
A study of the research procedures and statistical techniques commonly used by the applied and theoretical psychologist in the design, execution, control and evaluation of experiments.
Prerequisite: Consent of instructor.

5303 Individual Study 3:A:0
Independent study of special topics or problems in industrial/organizational or community psychology. May be repeated for credit.
Prerequisite: Consent of instructor.

5340 Special Topics in Psychology 3:A:0
Includes coursework, library and/or laboratory work and conferences with a faculty member. A description of the particular area of study will be indicated. A student may repeat the course for credit when the area of study varies.
Prerequisite: Consent of instructor.

5350 Multivariate Research Techniques 3:3:0
Topics include multiple regression, factor analysis and the relationship of multiple regression to analysis of variance and covariance. The linear algebra necessary to deal with these topics is developed. Extensive practice with microcomputers is emphasized.
Prerequisite: Psy 532 or consent of instructor.

5310 Introduction to Psychological Assessment 3:3:0
An introduction to intellectual assessment. Includes principles of psychological testing, test statistics, and critical evaluation of a variety of intellectual and achievement measures. Practicum in administration, scoring, interpretation, and formal psychological report writing for all Wechsler measures and the Stanford-Binet.
Prerequisite: Admission to candidacy and Psy 5320.

5311 Community Psychology: Introduction to Psychotherapy 3:3:0
Specific psychotherapy skills, therapeutic communication and therapeutic practices are introduced using didactic techniques and role-playing. Includes models of individual, family and multimodal therapy, ethical principles in therapy, DSM-IV and diagnosis of psychopathology, Employee Assistance Programs, consultation and referral to other agencies. Other topics include professional orientation of the therapist, obtaining supervision and continuing education, and evaluating the effectiveness of therapy.
Prerequisite: Consent of instructor.

5312 Advanced Psychological Assessment 3:3:0
An introduction to the broad area of personality assessment including DSM-IV classifications. Practicum in administration, scoring, interpretation, and formal psychological report writing with the MMPI-2, Rorschach, TAT, SCII, KOIS, and other objective and projective assessment devices. Includes coverage of lifestyles and career/vocational choices.
Prerequisite: Psy 5310.

5313 Community Psychology: Advanced Psychotherapy 3:3:0
An in-depth study of psychotherapy theories and intervention strategies for individuals and groups. Distinctions will be made between normal human growth and abnormal human behavior. Includes ethics, legal/cultural considerations, and lifestyles.
Prerequisite: Psy 5311 and admission to candidacy.

5320 Theory and Techniques of Psychological Measurement 3:3:0
A study of procedures used in the development, evaluation, and application of psychological measuring instruments. Topics include bivariate linear correlation, nonlinear correlation, multiple and partial correlation, classical true score theory, validation techniques, and test construction techniques.
Prerequisite: Consent of instructor.

5321 Advanced Industrial Psychology I 3:3:0
Social and organizational factors in the work place. Emphasis on theories of organizational/group dynamics, social foundations of influence, leadership and growth/development.
Prerequisite: Consent of instructor.

5322 Advanced Industrial Psychology II 3:3:0
Psychological principles and techniques applied to human resources management. Techniques include job analysis, personnel selection, placement and training, performance appraisal, compensation and career development.
Prerequisite: Psy 5320 or consent of instructor.

5323 Advanced Experimental Psychology **3:3:0**
Theory and application of experimental design in psychological research. Students will have an opportunity to design and conduct an original research study.
Prerequisite: Psy 532 or consent of instructor.

5330 Practicum I **3:A:0**
Supervised training and experience in a local, state or regional agency, institution or employment setting. The specific nature of the practicum depends on the professional background and goals of the candidate and will be determined by the candidate, his/her faculty advisor and a member of the cooperating agency/organization. For Community Psychology students, practicum involves a minimum of 300 hours of work in a mental health setting, including a minimum of 100 hours of direct client contact, and one hour a week of individual supervision from a licensed professional.

5331 Practicum II **3:A:0**
Supervised work in an area of interest to the student, Includes supervision by both a faculty member and a member of the cooperating agency/organization.
Prerequisite: Psy 5330.

5390-5391 Thesis **3:A:0**
Prerequisite: Admission to candidacy. Must complete both for required 6 credits.

Department of Sociology, Social Work and Criminal Justice

The Master of Science degree in Applied Criminology is designed to prepare students for upper level staff, administrative, management, treatment and planning positions in criminal/juvenile justice agencies. The 36-semester hour program has an applied focus, teaching practical skills as well as theoretical knowledge.

Admission Requirements

1. A bachelor's degree from a regionally accredited college or university in criminal justice, criminology, sociology, or the equivalent. Students with undergraduate degrees in other fields but with substantial work experience in criminal/juvenile justice may be admitted with special approval. Those without substantial work experience and with undergraduate degrees in other fields may be admitted after taking specified undergraduate courses.
2. Undergraduate grade point average (GPA) and Graduate Record Examination (GRE) scores according to the formula [GPA X 200] + [GRE V+Q] 1350.
3. Proficiency in the use of personal computers, including word processing, spreadsheets, databases and Internet search engines.
4. Satisfactory completion of at least one statistics course and one social science research course.

Applicants who do not meet all admission requirements may enter as Pre Graduate, pending full admission. Under Pre Graduate status, the student must make up all deficiencies and earn at least a "B" average. No more than six hours of graduate credit may be earned prior to full admission.

Degree Requirements

Core Courses - 12 hours

CRIJ 5310 - Criminal Justice System and Policy
CRIJ 5320 - Theoretical Foundations of Crime Control
CRIJ 5330 - Planning and Evaluation
CRIJ 5340 - Special Studies in Applied Criminology (this course may be repeated for credit as an elective when the area of study varies)

Elective Courses - 12 hours

Four courses chosen from different CRIJ 5340 topics and/or selected graduate courses in business, counseling, education, political science, public administration, psychology, or other fields related to the student's needs and interests.

Professional Projects - 12 hours

CRIJ 5601 - Applied Project in Criminology I (6 hours)
CRIJ 5602 - Applied Project in Criminology II (6 hours)

Graduate Faculty

Professor J. R. Altemose
Conflict management, correctional counseling, race/gender issues

Professor Robert L. Frazier
Corrections, planning and evaluation, comparative criminal justice systems

Professor Jennifer D. Frisbie
Theory, juvenile delinquency, computer applications

Professor Stuart A. Wright
Drug policy, militias, hate crimes and domestic terrorism

Criminal Justice Courses (CRIJ)

5310 Criminal Justice System and Policy **3:3:0**
A critical review and analysis of the role of governmental and non-governmental organizations in the prevention, control and punishment of crime and delinquency. An emphasis is placed on policy analysis and recommendations for change.

5320 Theoretical Foundations of Crime Control **3:3:0**
A comprehensive overview of various theoretical approaches to the understanding of crime and delinquency, including selected biological, psychological, sociological, legal and/or political theories.

5330 Planning and Evaluation **3:3:0**
An in-depth examination of information gathering and analysis; planning and evaluation. Emphasis on the analytical tools useful in criminal justice agencies.
Prerequisite: an undergraduate course in research methods, an undergraduate course in statistics, and competence in the use of personal computers.

5340 Special Studies in Applied Criminology **3:3:0**
Includes an analysis of contemporary issues in the understanding, prevention, and control of crime and delinquency both domestically and globally. A student may repeat the course for credit as an elective when the area of study varies.

5601 Applied Project in Criminology I - 6 hours **6:A:0**
A major practical project integrating the student's course work, previous experience and professional goals. May take the form of a supervised internship, applied research or professional project.
Prerequisite: Approval of graduate advisor

5602 Applied Project in Criminology II - 6 hours **6:A:0**
A second major practical project.
Prerequisite: Approval of graduate advisor

College of Business

The College of Business offers a program of study leading to the Master of Business Administration degree (MBA). *This program is designed for working professionals.* The MBA program is fully accredited by the AACSB - The International Association for Management Education. The objective of the MBA Program at Lamar University is to provide a *quality* educational experience that will produce managerial professionals with a thorough understanding of functional areas of business in a diverse, global economy. The MBA Program provides instruction in the economic, legal, and ethical environment of public and private sector organizations. The curriculum emphasizes developing competencies applicable to *problem solving, decision making, and leadership* in a broad range of situations in one or more functional areas.

Students with degrees in **non-business** fields as well as business undergraduates are *encouraged* to earn the Master of Business Administration degree. Students are encouraged to make an appointment with the Associate Dean **30-45 days in advance** of the semester in which they wish to enroll, and to take the GMAT in the semester *prior* to the desired date of enrollment.

Admission

Persons seeking admission to this program must meet the general requirements for admission outlined elsewhere in this Bulletin, with the following exceptions:

1. The student is *required* to take the Graduate Management Admission Test, GMAT.
2. The applicant's undergraduate grade point average and GMAT scores must equal or exceed the minimum standards. The student must meet at least one of the following standards:
   A. A total of at least 950 points based on the formula: 200 times the overall undergraduate GPA for the first baccalaureate degree (4.0 system) plus the GMAT score. (See Note below)
   B. A total of at least 1,000 points based on the formula: 200 times the GPA (4.0 system) of the last 60 hours of undergraduate work for the first baccalaureate degree, plus the GMAT score. (See Note below).

   Note: Students must make a minimum score of 450 on the GMAT for unconditional acceptance regardless of GPA. Students who make 400-450 and meet either standard "A" or "B" above will be admitted conditionally pending satisfactory completion of nine hours with a "B" (3.0) average. A student who makes less than 400 on the GMAT will **not** be admitted regardless of GPA.
3. A student whose native language is not English is expected to score over 525 on the TOEFL.
4. Post Baccalaureate or Post Graduate students are not permitted to enroll in Business courses for graduate credit without the *prior* consent of the Associate Dean.

Degree Requirements

First Year Courses (Designed primarily for students whose undergraduate degree is *not* Business).

ECON	5300	Foundations of Economics
BULW	5300	Legal Environment of Business
BUAL	5300	Statistical Analysis for Decision Making
MGMT	5310	Foundations of Organization Behavior

MGMT 5320 Operations Management
ACCT 5300 Financial Accounting Foundations
OFAD 5300 Administrative Communications
MKTG 5300 Marketing Concepts
FINC 5300 Foundations of Finance

Note:

1. Please see course descriptions for prerequisites for each course.
2. Students with previously approved academic training may have some or all of the first year courses waived. (See the Associate Dean, College of Business, prior to enrollment.)
3. Students must have met the entrance requirements for the MBA Program to enroll in first year courses. All exceptions must have the **prior** approval of the Associate Dean, College of Business.
4. First year courses may not be taken as second year course electives.
5. All students must to be advised by the Associate Dean **prior** to each semester.

Second Year Courses

Note:

1. All first year courses must normally be completed before beginning the second year courses.
2. The candidate for the MBA degree may follow either of the two plans described below.

Plan I: Thesis Route

ACCT 5370 Managerial Accounting
MGMT 5340 Seminar in Management
ECON 5370 Managerial Economics
FINC 5310 Financial Management
MKTG 5310 Seminar in Marketing
BUAL 5380 Business Research and Quantitative Analysis
MGMT 5380 Strategic Management
ECON 5380 Environment of Business
Three semester hours of approved electives in the College of Business
BUSI 5390 Thesis
BUSI 5391 Thesis

Note: Once enrolled in thesis, a student must be continually enrolled in the thesis course each Fall, Spring, and once in the summer, until the thesis is completed.

Plan II: Non-Thesis Route

ACCT 5370 Managerial Accounting
MGMT 5340 Seminar in Management
ECON 5370 Managerial Economics
FINC 5310 Financial Management
MKTG 5310 Seminar in Marketing
ECON 5380 Environment of Business
MGMT 5380 Strategic Management
BUAL 5380 Business Research and Quantitative Analysis
Twelve semester hours of approved electives in the College of Business is required. An Integrative Case Study (ICS) will be completed in the final semester of course work.

The MBA degree with an accounting emphasis is available for students that have an undergraduate degree in Accounting who wish to meet the requirements for the 150 hour program required to sit for the CPA Examination in Texas. This program requires the student to follow Plan II (non-thesis route). For those under the accounting emphasis, ACCT 5330 (Advanced Auditing) and ACCT 5340 (Tax Research) are substituted for six of the twelve hours of electives in Plan II.

The MBA degree with a Management Information Systems (MIS) concentration is designed so that students can supplement a general business background with courses that emphasize information technology and practice. Students who concentrate in MIS in the MBA program are not required to have an undergraduate degree in MIS; however, they should be computer literate and must be able to effectively use a personal computer. These courses will provide students with "hands on" experience in applying information system methods and practices currently used in the business environment. Nine hours of MIS courses are to be taken, in lieu of general electives, in the Plan II, non thesis route.

Graduate Faculty

Assistant Professor Kakoli Bandyopadyay
Management Information Systems
Associate Professor Soumava Bandyopadhyay
Marketing
Professor Cynthia Barnes
Office Administration
Professor Melvin F. Brust
Finance
Professor Jai-Young Choi
Economics
Professor Richard A. Drapeau
Business Statistics
Professor Lynn Godkin
Management
Professor Charles Hawkins
Economics
Professor D. L. Jordan
Management Information Systems
Associate Professor Howell Lynch, Jr.
Accounting
Associate Professor Bradley Mayer
Management
Professor Carl B. Montano
Economics
Professor Jimmy D. Moss
Finance
Assistant Professor Nhung Thanh Nguyen
Management
Professor Donald Price
Economics
Associate Professor Kabir C. Sen
Marketing
Professor Larry W. Spradley
Business Statistics
Professor Robert A. Swerdlow
Marketing
Assistant Professor Nicholas W. Twigg
Management
Assistant Professor Celia B. Varick
Accounting

Business Courses

Accounting (ACCT) and Business Law (BULW) courses must be selected from the following list:

5300 Financial Accounting Foundations **3:3:0**
An introduction to financial accounting and reporting for graduate students who do not have a background in accounting. The course concentrates on conceptual financial accounting issues that users of accounting information need to understand. Students learn to access and analyze published financial reports. The course does not focus on computational and mechanical details.
Prerequisite: Graduate standing.

5330* Advanced Auditing **3:3:0**
Advanced study of the role of auditors as a profession. In depth discussion of professional ethics and liability to clients and other third parties. Study of audit failures, employing the case method. Also, the use of statistical sampling methods in auditing.
Prerequisite: Graduate standing and ACCT 4300.

5340* Tax Research **3:3:0**
An extensive examination of the methods employed to determine defensible solutions to problems in federal taxation. Emphasis is placed upon research methodology, proper documentation of research findings and effective communication of research findings to interested parties. The text is supplemented with outside readings and case studies. Significant oral and written reports are required.
Prerequisite: Graduate standing with a minimum of eighteen semester hours of accounting that include ACCT 3380 and ACCT 3390 or their equivalent and six semester hours of Intermediate.

5370 Managerial Accounting **3:3:0**
Application of accounting data in decision making: cost analysis as applied in the development of budgets and standards; accounting as a tool for cost control and pricing; case problems, using the micro-computer as a decision-making tool, which require students to interpret and discuss their analysis in the context of managerial decision-making.
Prerequisite: Graduate standing and ACCT 5300 or equivalent.

*These classes are intended for MBA students pursuing the MBA degree with accounting emphasis.

BULW 5300 The Legal Environment of Business **3:3:0**
A survey of the legal environment of business including concepts of legal rules, the legal framework to resolve disputes, a study of the concept of property rights, contracts, commercial paper, agency and employment laws, government regulations of business through administrative agencies, and introduction to international law.
Prerequisite: Graduate standing.

BULW 5350 Estate Planning Fundamentals **3:3:0**
A survey of the federal and state laws dealing with the estates of individuals, including living trusts, estate tax-saving trusts, charitable trusts, spendthrift trusts, providing for children, avoiding probate, minimizing estate taxes, second marriages, protecting businesses at death, gifts, wills, and living wills.
Prerequisite: Graduate standing.

BULW 5390 Special Topics in Business Law **3:3:0**
Intensive investigation of topics in business law. Library and/or laboratory work and conferences with supervising faculty member. May be repeated when area of study differs.
Prerequisite: Graduate standing and approval of advisor.

Economics (ECON) courses must be selected from the following list:

5300 Foundations of Economics **3:3:0**
This is a fast-paced course which discusses both macro and micro economic theory and international economic issues. Macroeconomic topics covered include: inflation, unemployment, fiscal and monetary policy. Microeconomic topics include: demand theory, production and cost theory, price and output determination in markets, demand for and pricing of society's scarce resources.
Prerequisite: Graduate standing.

5370 Managerial Economics **3:3:0**
A study in the depth of the principles and techniques of economic analysis applicable to the problems of business management.
Prerequisite: Graduate standing, Eco 5300.

5380 The Environment of Business **3:3:0**
A study of business, government, and consumer interaction in the economy. Efficiency concepts for both the private and public sectors; government activities in antitrust, traditional regulation, and new wave regulation; issues in business ethics; and international topics are analyzed.
Prerequisite: Graduate standing, Eco 5300.

Finance (FINC) courses must be selected from the following list:

5300 Foundations of Finance **3:3:0**
A survey of the financial management function in private business firms, with emphasis on major financial policy decision issues and the analytical techniques used to assist management in making those decisions.
Prerequisite: Acc 5300, Eco 5300.

5310 Financial Management 3:3:0
A study of the financial policy of business firms along with the theory supporting that policy. Topics include capital budgeting, capital structure, cost of capital, dividend policy, and management of working capital, as well as the unique international dimensions of the financial policy of multinational firms.
Prerequisite: Graduate standing, Fin 5300 or equivalent.

5320 Seminar in Finance 3:3:0
Study of selected topics reflecting contemporary trends and problems in the field of Finance. The course may be repeated for a maximum of six semester hours when the topic varies.
Prerequisite: Graduate standing, Fin 5310 or consent of instructor.

Management (MGMT) courses must be selected from the following list:

5310 Foundations of Organization Behavior 3:3:0
A study of organizational behavior and management concepts. The course will examine the development of management thought, with special emphasis on motivation, leadership and organizational theories. Topics will include awareness of individual behavior, social interaction, the dynamics of group and intergroup behavior and the effects of the total system of behavior observed with the organization.
Prerequisite: Graduate standing, ECON 5300, ACCT 5300.

5320 Operations Management 3:3:0
This course examines the use of manufacturing and operations as competitive weapons. Production/Operations function and its relationship to marketing, finance, and accounting are described Global operations, forecasting demand, aggregate planning, inventory planning and control, and scheduling provide the basis for linking strategic plans to the production plan.
Prerequisite: Graduate standing, BUAL 5300, or equivalent.

5340 Seminar in Management 3:3:0
A course designed to give students an integrated approach to management through the application of theory to problem solving situations. Students perform in consulting roles applying management as both science and art. Emphasis is placed on national and international problems and a synergistic effect made to provide positive and applied solutions to actual managerial decisions making.
Prerequisite: Graduate standing, MGMT 5310.

5380 Strategic Management 3:3:0
The capstone course for the MBA. The course assumes that the company success depends upon formulation of an astute "game plan" and the ability to implement and execute that game plan proficiently. The purpose of the class is to enable students to "think strategically," consider the total enterprise, and to make long-term decisions in a global market environment. A prerequisite for the Integrative Case Study.
Prerequisite: Must be in last semester of course work and have approval of advisor.

5390 Special Topics in Management 3:3:0
Investigation into special areas in management under the direction of a faculty member.
Prerequisite: Graduate Standing and approval of the instructar, department chair, and Associate Dean.

Marketing (MKTG) courses must be selected from the following list:

5300 Marketing Concepts 3:3:0
Marketing orientation and concepts; marketing programs of domestic and global perspectives in the formulation and development of strategies with regard to price, product, channels of distribution, and promotion of goods and services within an ever-changing environment.
Prerequisite: Graduate standing, ECON 5300, ACCT 5300.

5310 Seminar in Marketing 3:3:0
An intensive study of specific marketing concepts and theories. Marketing strategies for the national and multinational firms are surveyed. Emphasis is placed on reading from current journals and other related publications.
Prerequisite: Graduate standing, MKTG 5300.

5340 International Marketing 3:3:0
Analysis and planning of marketing mix on an international scale. The course focuses on the aspects of international marketing such as the international market, the identification of global opportunities and threats, the formulation of international marketing strategy, and the organizations and control of global marketing.
Prerequisite: Graduate standing, MKTG 5300.

Information Systems and Analysis courses must be selected from the following list:

BUAL 5300 Statistical Analysis for Decision Making 3:3:0
Theory and applications of presenting and utilizing data for decision making in business situations. Topics include methods of gathering, presenting, and analyzing quantitative data; probability theory; probability distributions; sampling theory; estimation and tests of hypotheses; simple linear regression/correlation analysis; classical time series; and other statistical procedures commonly used in business analysis.
Prerequisite: Graduate standing.

BUAL 5380 Business Research and Quantitative Analysis 3:3:0
The course focuses on the application of quantitative techniques to business problems. Topics include problem definition, research design, sampling theory, survey techniques, data collection methods and statistical models. Students are responsible for writing and presenting a report employing statistical software.
Prerequisite: BUAL 5300 and approval of advisor.

MISY 5340 Networking and Telecommunications 3:3:0
Advanced concepts in networking. Telecommunications devices, media, systems; network hardware and software; network configuration; network applications; coding of data; cost/benefit analysis; distributed vs centralized systems; architectures, topologies, protocols; installation and operation of bridges, routers and gateways; network performance analysis; privacy, security, reliability; installation and configuration of LAN and WAN networks; management of telecommunications, and communications standards. Intranet and Internet.
Prerequisite: Graduate standing and approval of advisor.

MISY 5350 Systems Analysis and Design 3:3:0
Life cycle phases: requirements determination, logical design, physical design, test planning, implementation planning, and performance evaluation; communication, interpersonal skills, interviewing, presentation skills; group dynamics; risk and feasibility analysis; group-based approaches; project management, joint application development (JAD), structured walkthroughs; object oriented design; software production and reviews; prototyping; database design; software quality metrics; application categories; software package evaluation and acquisition; professional code of ethics.
Prerequisite: Graduate standing and approval of advisor.

MISY 5360 Database Management Systems 3:3:0
Advanced topics in database design. The client-server architecture. Database servers such as Oracle and SQL. Query languages and applications. Distributed databases. Object oriented databases. The Relational and non-relational data models. Commercial mainframe database systems such as DB2 and RDB. PC-based database products such as Access, FoxPro and Paradox, Development of graphical user interfaces for database manipulation is stressed.
Prerequisite: Graduate standing and approval of advisor.

MISY 5390 Current Topics in MIS 3:3:0
This course is designed to cover new technologies and current trends in the design, development and implementation of Information Systems in a business environment.
Prerequisite: Graduate standing and approval of advisor.

OFAD 5300 Administrative Communication 3:3:0
Communication theory and practice with emphasis on variables affecting organizational communication. Intrapersonal, organization, and technological dimensions of communications. Specific areas include cultural and international differences in communication; one-to-one, small group and large group communications; formal and informal networks; electronic transmission; business letters and memoranda; and research papers and formal reports.
Prerequisite: Graduate standing.

OFAD 5390 Special Topics in Office Administration 3:3:0
Intensive investigation of topics in office administration. Library and/or laboratory work and conferences with supervising faculty member. May be repeated when area of study differs.
Prerequisite: Graduate standing and approval of advisor.

Thesis courses necessary for graduation under Plan I.

BUSI 5390-5391 Thesis
Students must be continually enrolled in Thesis each Fall, Spring, and at least once in the Summer, until the thesis is completed.
Prerequisite: Approval of Associate Dean, College of Business. Must complete both for required 6 credits.

College of Education and Human Development

The College of Education and Human Development offers graduate programs of study leading to the Master of Education degree in six different areas and to the Master of Science degree in Kinesiology and in Family and Consumer Sciences.

Persons seeking admission to these programs must meet the general admission requirements of the College of Graduate Studies and of the individual department in which they plan to enroll. Admission to a degree program does not imply admission to candidacy for a degree.

Degrees Offered

Master of Education in Counseling and Development
Master of Education in Educational Administration
Master of Education in Elementary Education
Master of Education in Secondary Education
Master of Education in Special Education
Master of Education in Supervision
Master of Science in Kinesiology
Master of Science in Family and Consumer Sciences

Professional Certificates Available

Counselor
Educational Diagnostician
Elementary Education
Principal
Reading Specialist
School Superintendent
Secondary Education

General Information Concerning Professional Certificates

The Professional Certificate is now a five-year renewable certificate. It gives the holder legal authority to perform duties in the specialized areas designated on the face of the certificate. Information about requirements for a particular certificate can be obtained from the department offering the certification program. Once all requirements for a certificate are completed it is the responsibility of the student to go to the Office of Professional Services in the College of Education and Human Development and make application for the certificate to be awarded by the State Board for Educator Certification.

Department of Educational Leadership

Department Chair: Dr. Carolyn Crawford **204 Education Bldg.**
Program Advisors: **Phone: 880-8689**

Counseling and Development: Dr. Carolyn Crawford, Dr. William Holmes, Dr. George McLaughlin

Educational Administration: Dr. Janiece Buck, Dr. Dorman Moore, Dr. Elvis Arterbury

Supervision: Dr. Elvis Arterbury and Dr. Carolyn Crawford

Educational Technology: Dr. Paula Nichols, Dr. Desmond Rice

The Department of Educational Leadership offers graduate programs leading to the Master of Education (M.Ed.) degree in Educational Administration, Supervision, and Counseling and Development. For students already holding a master's degree and teacher certification, the Department offers course work leading to certification as a Superintendent, Principal, and School Counselor. An Endorsement in Information Processing Technology is also available.

Course prerequisites for the state examination for Licensed Professional Counselor certification are also offered by this department.

Admission

Admission to a master's degree program or a post-master's "certificate only" program is required of all students taking courses in the Educational Leadership Department. A maximum of six semester hours may be taken prior to admission. Non-admitted students wishing to transfer courses to another department or another university must have permission of the department chair before registering.

Admission to a Master's Degree Program

To be admitted to a program leading to a Master's degree in Educational Administration, Counseling and Development, or Supervision, students must fulfill the general requirements for admission to the Graduate College as stated elsewhere in this bulletin plus the departmental requirements. The Educational Leadership Department requires a minimum score of 400 on the Verbal and Quantitative sections of the Graduate Record Exam with a minimum combined Verbal and Quantitative score of 800. Test of English as a Foreign Language (TOEFL) is not accepted as a substitute for minimum scores on the Graduate Record Exam. If a student has applied for admission to a degree program and has not received notification of acceptance (or non-acceptance) within 30 days after application the student should check with the Graduate Admissions Office.

Admission to Candidacy for Master's Degree

After completing at least 12 semester hours of course work on the master's degree with a minimum of 6 semester hours in his/her major field, the student should apply for Admission to Degree Candidacy. Forms for admission to candidacy should be obtained from the Educational Leadership Department Office and returned there upon completion. (NOTE: University regulations require the student be admitted to candidacy prior to beginning the last nine hours of course work). If a student does not have a letter certifying admission to candidacy within 30 days after making application the student should check with the department office.

Step by step procedure for admission to a Master's degree program

1. Apply for Admission to the Graduate College of Lamar University.
   A. Obtain application packet from the Graduate Admissions Office in Room 118 of the Wimberly Building or call (409) 880-8356.
   B. Successfully complete the Graduate Record Examination and have scores sent to Graduate Admissions, Lamar University, P.O. Box 10078, Beaumont, TX 77710.
   C. Have all transcripts sent to Graduate Admissions as in B above.
2. Meet with program advisor to develop a degree plan. **NOTE:** No deviations from the degree plan will be permitted without prior written permission of advisor or department head.
3. In consultation with graduate advisor, select members of graduate committee. (The program advisor will chair this committee.)
4. Complete at least 12 hours of course work from their degree plan (at least six semester hours must be from courses in their major) and apply for Admission to Candidacy. **NOTE:** A Student must be admitted to candidacy **prior to beginning** the last nine hours of course work.
5. Complete remaining course work.
6. Complete requirements for graduation.
   A. Apply for graduation in the Graduate College office (219 Wimberly).
   B. Take and pass comprehensive examination during the last semester of attendance. To take the comprehensive examination a student must be in his/her last semester of coursework, have no incompletes ("I" grade) or unsatisfactory ("D" or "F" grades) on their transcripts and have met all other requirements for graduation.
7. Graduate.

   NOTE: Completion of some Master's programs also includes completion of all course requirements for an additional certification. Student desiring the additional certificate must apply to take the appropriate ExCET Exam at the Office of Professional Services and Admissions. After successfully passing the exam, the student should apply at the Certification Office for the certificate.

Admission to a "Certification Only"

The Educational Leadership Department offers post master's certification programs leading to certification as a Superintendent, Principal, and School Counselor. Students who hold a master's degree and teacher certification and seek an additional certification offered by this department should apply to the Educational Leadership department for admission to the appropriate certification program. Upon completion of the application and receipt of an official transcript, a program advisor will be assigned. The advisor will develop a certification plan for the student. After completion of the certification plan requirements the student must apply for and pass the ExCET examination and file for the certificate at the Certification Office. Students seeking a program leading to examination for certification as a Licensed Professional Counselor should follow the process designated above and then contact the State Board of Examiners for Professional Counselors in Austin, Texas to apply for licensure and take the licensure exam.

Master's Degree in Counseling and Development

The Master's Degree in Counseling and Development requires the successful completion of a comprehensive 45-semester-hour program of study. Students interested in pursuing a degree in Counseling and Development can secure an up-to-date degree plan from the Department of Educational Leadership, in the Education Building or by writing to the Department of Educational Leadership, P.O. Box 10034, Lamar University, Beaumont, Texas 77710.

Certification In Counseling and Development

Professional School Counselor's Certificate

A student who completes requirements for a Master of Education degree in Counseling and Development will have fulfilled all curriculum requirements for a Professional School Counselor's Certificate.

Students already holding a Master's degree from an accredited university may enter the "Certification Only" program by making application in the office of the Department of Educational Leadership and providing an official transcript of all applicable graduate work. Once admitted, students will be assigned an advisor who will develop a certification plan for the student.

After completion of the certification plan the student must take and pass the ExCET examination and apply for the certificate at the Office of Professional Services in the Education Building. Prerequisites for the certificate include Texas teacher certification and three years of acceptable classroom teaching experience. Approval to take the ExCET is normally granted in the last semester of student's course work.

Licensed Professional Counselor's Certificate

The Texas State Board of Examiners of Professional Counselors regulates licensing requirements for counselors to render services in the state of Texas through private practice, group practice, institutions, organizations and similar types of arrangements. Students who need additional information or wish to complete academic work toward licensure as a Licensed Professional Counselor (LPC) should see the Counseling and Development faculty in the Department of Educational Leadership or contact the Texas State Board of Examiners of Professional Counselors in Austin, Texas.

Master's Degree in Educational Administration

The Master's degree in Educational Administration requires successful completion of a 36 semester hour program of study. Certification as a Principal requires the 36 hour masters plus 12 additional semester hours of prescribed course work.

Certification in Educational Administration

Professional Principal Certification

A student who completes requirements for a Master of Education degree in Educational Administration will have fulfilled the first 36 semester hours of the 48 semester hours required for a Principal certificate. An additional twelve semester hours are required. The student's degree plan will include the additional courses required for certification.

Students already holding a Masters Degree from an accredited university may enter the "Certification Only" program for Principal certification by making application in the Graduate College and office of the Department of Educational Leadership and providing an official transcript of all applicable graduate work. Once admitted, students will be assigned an advisor who will develop a certification plan.

To receive the Principal certificate a student must complete all requirements for Master's Degree in Educational Administration, complete the additional twelve semester hours of course work, hold a valid Texas Teacher certificate, have 2 years of classroom teaching experience, take and pass the ExCET examination, and apply for the certificate at the Office of Professional Services in the Education Building. Students normally register for the ExCET in their last semester of course work.

Professional Superintendent Certificate

Prerequisites for the Professional Superintendent Certificate include a Master's degree and Professional Mid-Management Administrator or Principal certification. Students who meet these prerequisites and wish to seek certification as a school superintendent should apply to the Department of Educational Leadership. Upon completion of the application and receipt of an official transcript of graduate work an advisor will be assigned to develop a certification plan for the student. Students meeting the prerequisites can usually obtain certification as a superintendent by completing twelve to fifteen additional semester hours plus a year-long internship. After completion of the certification plan the student must take and pass the ExCET examination and apply for the certificate at the Office of Professional Services in the Education Building. Students normally register for the ExCET in their last semester of course work.

Master's Degree in Supervision

Students interested in pursuing a master's degree in Supervision can secure an up-to-date degree plan from the Department of Educational Leadership in the Education Building or request a copy by writing to the Department of Educational Leadership, P.O. Box 10034, Lamar University, Beaumont, Texas 77710.

Endorsements in Technology

A nine semester hour, Level I Endorsement in Information Processing Technology and a 15 semester hour, Level II endorsement in Information Processing Technology are available to educators holding a teaching certificate. Contact the Department of Educational Leadership for a list of requirements and courses.

Graduate Faculty

Professor Elvis Arterbury
Educational administration and supervision
Associate Professor Janiece Buck
Educational administration
Associate Professor Carolyn Crawford
Counseling and development
Associate Professor William R. Holmes
Counseling and development
Professor George McLaughlin
Counseling and development
Associate Professor Dorman Moore
Educational administration
Professor Bob Thompson
Educational administration
Associate Professor Curtis E. Wills
Counseling and development
Associate Professor Paula Nichols
Educational technology
Associate Professor Desmond Rice
Educational technology and reading
Associate Professor Brandt Pryor

Counseling and Development Courses (CNDV)

5301 Human Growth and Development 3:3:0
A study of normal human development and the stages of physical intellectual, social and emotional growth from prenatal origins through old age.

5310 Individual and Group Facilitation Skills 3:3:0
An introduction of facilitation skills and theory. Indepth analysis and demonstration of various facilitation techniques for use with both individuals and groups. (This is a pre-practicum course.)
Prerequisite: CNDV 5311 or CNDV 5312 or permission of instructor.

5311 Individual Counseling Theories and Techniques 3:3:0
Theories of individual counseling with an emphasis on techniques and applications.

5312 Group Counseling Theories and Techniques 3:3:0
An analysis of group counseling theories, processes and techniques.
Prerequisite: CNDV 5311 or permission of instructor.

5320 Cross Cultural Counseling 3:3:0
Studies in human diversity and cultural issues. Identifies the implications for counseling and learning and strategies for cross cultural effectiveness in various settings.

5321 Test Administration and Interpretation 3:3:0
Theoretical and practical study emphasizing the administration, scoring and basic interpretation of individual psychological tests. Students will be trained to administer the Wechsler tests, the Stanford-Binet or other individual assessment instruments.
Prerequisites: EDLD 5334 or permission of instructor.

5322 Program Development, Administration, Ethics and the Law 3:3:0
Organizing and implementing a counseling program or practice with an emphasis on legal issues, ethical principles and professional standards of conduct.

5323 Career Development 3:3:0
A focus on theories of vocational choice, vocational assessment, sources of occupational and educational information and the career decision process.
Prerequisites: CNDV 5301 or permission of instructor.

5350 Abnormal Human Behavior 3:3:0
A study of various symptom categories in psychopathology. The course will include an analysis of the diagnostic categories as well as the research concerning etiology and treatment.
Prerequisites: Approval of instructor and 18 semester hours of CNDV coursework.

5351 Consultation 3:3:0
This course has an emphasis on developing consultation skills for the counselor. Methods and techniques to assist the counselor in implementing appropriate consultation skills for problem management, intervention or prevention.
Prerequisite: EDLD 5301.

5380 Seminar in Counseling and Development 3:3:0
Designed to advance the professional competence of participants. For each seminar, a description of the particular area of study will be indicated. May be repeated for credit when nature of seminar differs sufficiently from one previously taken.
Prerequisites: CNDV 5311 or approval of instructor.

5381 Advanced Seminar in Social and Family Relations 3:3:0
An intensive exploration of the dynamics of interpersonal relationships, including family and social issues. A critical analysis of various techniques and approaches will be established. Development of personal counseling skills will be of major concern.
Prerequisites: CNDV 5322, CNDV 5311.

5382 Selected Instruction Topics 3:3:0
Significant topics in Counseling and Development. The description of the particular area of study will appear on the printed schedules of Lamar University each semester. With permission of advisor in student's major field, course may be repeated when topic varies.

5390/5391 School Counseling Practicum 3:3:0
A field-based course with supervised observation and practice of guidance and counseling in a school setting during the school day.
Prerequisite: Must be within 6 semester hours (excluding practicum) of completing program requirements before beginning internship. A maximum of one oddditional course may be taken any semester in which a student is enrolled in a procticum.

5392/5393 Community Counseling Practicum 3:3:0
A field-based course of supervised observation and practice of guidance and counseling in an agency setting.
Prerequisite: Must be within 6 semester hours (excluding practicum) of completing program requirements before beginning internship. A maximum of one additional course may be taken any semester in which a student is enrolled in a procticum.

Educational Leadership Courses (EDLD)

5301 Research Methods 3:3:0
Introduction to skills and techniques necessary for descriptive research in education problems. Emphasis on planning, designing, and methodology. One-third time in laboratory exercises and writing a research proposal and report.

5306 Educational Technology Foundations 3:3:0
Functional knowledge of educational computing and technology with an emphasis on productivity tools for professional use.

5311 Fundamentals of Administration 3:3:0
A study of the relationships between and among human behavior, belief systems and administrative style.

5326 School-Community Relations 3:3:0
Developing personal and mass media communication skills with emphasis on improving school-community relationships through effective communication techniques.
Prerequisites: EDLD 5311, EDLD 5339 and admission to the program.

5332 School Organization and Management Issues 3:3:0
Study of the administrative proficiencies necessary in the organization and administration of an effective school. Should be the last course before or in conjunction with an Internship.

5333 Campus Planning and Problem Solving 3:3:0
A study of short and long-range planning and problem solving techniques of effective school leaders. Special emphasis will be given to applications in an individual campus and the relationship to district planning processes.

5334 Tests, Measurement, and Evaluation 3:3:0
Analysis and evaluation of types of tests and measurement devices will be conducted. Methods of determining the reliability and validity of tests are investigated. Designs for testing programs and selection of appropriate tests will be included. Evaluation systems of individuals and programs will be discussed.

5335 Curriculum Management 3:3:0
Models of curriculum development and evaluation with particular emphasis on the management of these functions.
Prerequisites: EDLD 5311, EDLD 5352 and admission to the program.

5339 Organizational Behavior 3:3:0
Study of school as an organization and how individuals behave in organizations. Students will assess and compare their own personal competencies to the administrative needs of a selected school.
Prerequisite: EDLD 5311

5342 School Finance 3:3:0
Analysis of principles of school finance to include problems of budgeting, accounting, and administration of funds.
Prerequisites: EDLD 5311, EDLD 5339 and admission to the program.

5343 Educational Facilities Planning 3:3:0
Evaluation and administration of school facilities and the relationship of facilities to the achievement of educational objectives.
Prerequisites: EDLD 5311, EDLD 5339 and admission to the program.

5344 School Law 3:3:0
Interpretation and implementation of school law including a study of the Texas Education Code and the Handbook for Public School Law.
Prerequisites: EDLD 5311, EDLD 5339 and admission to the program.

5345 Personnel Administration 3:3:0
Fundamentals of human relations and organizational behavior in developing programs of recruitment, selection, assignment, evaluation, promotion and termination of personnel. Prerequisites: EDLD 5311, EDLD 5339 and admission to the program.

5352 Instructional Leadership 3:3:0
Techniques of improving instruction through application of research on effective schools and models of instruction.

5354 Team Facilitation 3:3:0
Role of peers in school evaluation and improvement initiatives. Emphasis on team approaches, team leadership, and models to improve group processes.
Prerequisite: Advisor's approval.

5356 Educator Evaluation 3:3:0
Study of techniques of effective educator evaluations with emphasis on appraisal as a component of professional development. All requirements for PDAS training are included as are requirements for other administrative assessments.
Prerequisites: EDLD 5352 and EDLD 5339.

5361 Distance Learning/Telecommunications 3:3:0
Study of distance learning methodologies and the implementation and application of current and emerging telecommunications for teaching and learning.
Prerequisite: EDLD 5306. (approval pending)

5362 Educational Informational Systems 3:3:0
Introduction to the development, utilization, and assessment of technology at both the campus and district levels. Topics studied include long range planning, decision-making processes, and use of records management tools.
Prerequisite: EDLD 5306.

5363 Multimedia in Education 3:3:0
A survey of the principles of multimedia design and production, including hardware and software tools for multimedia presentations of instruction.
Prerequisite: EDLD 5306.

5364 Teaching with Technology 3:3:0
This course focuses on the design, development, and integration of educational technology for teaching, learning, and personal productivity, including access networks, intranets/internet.
Prerequisite: EDLD 5306.

5371 The School Superintendent 3:3:0
Role and responsibilities of the superintendent as chief administrative officer of the district.
Prerequisite: Certification in Mid-Management and admission to the program.

5381 Independent Study 3:3:0
Supervised investigation into special areas of education under the direction of a graduate faculty member. May be repeated for credit when topic of investigation varies.
Prerequisite: Consent of department chair.

5387 Seminar in School Administration 3:3:0
Study of concepts and principles of school administration as applied to selected topics. Special attention will be given to new and developing programs and to administrators' roles in these programs.
Prerequisites: Permission of instructor/admission to program.

5388 Selected Instructional Topics 3-6:3:0
Study of significant topics related to administration and supervision of schools. The description of the particular area of study will appear on the printed schedules of Lamar University each semester. Contact hours are the same as those required by a formal instructional course. With permission of advisor in the student's major field, course may be repeated when topic varies.
Prerequisites: Permission of advisor.

5396 Internship in Administration **3:3:0**
Designed to develop administrator proficiencies and skills specific to a job title under the joint supervision of a school administrator and faculty of Lamar University.

5397 Internship for Supervision **3:A:0**
Designed to give the prospective supervisor job-related experience under the joint supervision of a school district supervisor and faculty of Lamar University.
Prerequisite: Must have completed all courses in the major and be within 3 semester hours (excluding internship) of completing certification requirements.

5398 Internship for School Principal **3:3:0**
Designed to give the prospective principal or middle level administrator job-related experience under the joint supervision of a school administrator and faculty of Lamar University. (Must be taken in 2 consecutive semesters or 1 long term and 1 summer term.) May be repeated once for credit.
Prerequisites: Masters Degree in Educational Administration and within 3 semester hours (excluding internship) of completing mid-management certification.

5399 Internship for School Superintendent **6:A:0**
Designed to give the prospective superintendent job-related experience under the joint supervision of a school superintendent and faculty of Lamar University. Must be completed in consecutive semesters (Fall & Spring) in the same academic year.
Prerequisites: Certification in Mid-Management or Principal and within 6 semester hours (excluding internship) of completing superintendency certification. A maximum of one additional course may be taken in any semester in which a student is enrolled in an internship.

Department of Professional Pedagogy

Department Chair: Dr. Charles Burke **202 Education Building**
Phone: 880-8673

Graduate Coordinator: Dr. Charles Burke

The Department of Professional Pedagogy offers programs leading to the Master of Education (M.Ed.) degree in Elementary Education, Secondary Education, and Special Education. In addition, the Department offers course work leading to six different Professional Certificates. It is the goal of the Master of Education and the Professional Certificate programs to provide the academic climate and practical experience necessary to produce teachers and other specialists of superior competence in their chosen areas of specialization.

Students who wish to pursue a Master of Education and/or a Professional Certificate should contact the Graduate Coordinator well before the beginning of the semester in which they plan to enroll.

Master of Education (M.Ed.)

General Requirements

To be accepted into a program leading to a Master's Degree in Education the student must:

1. Fulfill the general requirements for admission and the general degree requirements as stated elsewhere in this bulletin.
2. Meet the undergraduate prerequisites appropriate to the chosen program of study. These requirements include:
   A. The applicant in elementary education must have completed 18 semester hours in education, including 6 semester hours in elementary education methods and materials courses.

B. The applicant in secondary education must have completed a minimum of 18 semester hours in education. At least 12 of the 18 hours must be at the 300 level or higher.

3. The student may elect to write a thesis. If so, the student is required to complete a minimum of 30 hours plus the thesis.
4. The student who does not write a thesis must earn a minimum of 36 hours of graduate credit and is required to pass a written comprehensive examination administered during the last semester of attendance.

Step by Step Procedure

1. Apply for Admission to the Graduate College of Lamar University.
   A. Obtain application packet from the Graduate Admissions Office in Room 118 of the Wimberly Building or call (409) 880-8356.
   B. Take the Graduate Record Examination and have scores sent to: Graduate Admissions, Lamar University, P.O. Box 10078, Beaumont, Texas 77710.
   C. Have all transcripts sent to Graduate Admissions as in B above.
2. Meet with Graduate Coordinator to develop a degree plan. **NOTE:** No deviations from the degree plan will be permitted without written permission of the Graduate Coordinator.
3. In consultation with the Graduate Coordinator, select members of graduate committee. (The program advisor will chair this committee.)
4. Complete at least 12 hours of graduate-level course work in the department and apply for Admission to Candidacy. **NOTE:** Students must be admitted to candidacy before beginning their last nine hours of course work.
5. Complete remaining course work.
6. Complete requirements for graduation
   A. Apply for graduation in the Graduate College office (219 Wimberly).
   B. Pass comprehensive examination
7. Graduate

Degree Plan in Elementary Education

To meet individual needs, considerable flexibility is allowed in planning the student's program; however, the usual pattern of course work is as follows:

1. **Professional Development.** Six semester hours must be selected from the following courses:
   PEDG 5310 Research for Teachers (Req)
   PEDG 5340 Advanced Study in Human Development
   PEDG 5350 Psychology of Pedagogy
   PEDG 5370 Public School Curriculum
2. **Resource Area.** 12 semester hours must be selected from the following courses (nine semester hours if the student elects to write a thesis):
   PEDG 5306 Problems in Teaching Science and Social Studies in the Elementary School
   PEDG 5380 Modern Mathematics in the Elementary School
   PEDG 5387 Teaching of Reading in the Elementary School
   PEDG 5389 Diagnostic/Prescriptive Procedures in Reading

3. **Specialization Area.** Six semester hours of courses must be taken for graduate credit from one or a combination of the following disciplines: history, English, foreign languages, mathematics, science, art, music, speech or health and physical education.
4. **Electives.** 12 semester hours (nine semester hours if student elects to write a thesis) from any of courses listed below or in a concentrated area.
   A. **Reading Specialist**
      PEDG 5387 Teaching of Reading in the Elementary School
      PEDG 5385 Literature: Pre K-12
      PEDG 5389 Diagnostic/Prescriptive Procedures in Reading
   B. **Early Childhood Education**
      PEDG 5351 Advanced Study in Early Childhood Curriculum
      PEDG 5352 Creative Activities in Early Childhood Education
      PEDG 5355 Analysis of Program Implementation in Early Education
   C. **Supervision**
      PEDG 5334 Tests Measurements & Evaluation
      PEDG 5353 Leadership and Evaluation of Instruction
   D. **Special Education**
      PEDG 5361 Survey of Learning Potentials of Exceptional Children
      PEDG 5364 Behavior Modification and Contingency Management of Disabled Learners
      PEDG 5365 Instructional Processes With Exceptional Children
      PEDG 5366 Modification of Curriculum and Instruction for the Atypical Learner
   E. **Gifted/Talented Endorsement**
      PEDG 5356 The Gifted Learner
      PEDG 5357 Creativity and the Gifted Learner
      PEDG 5358 Identification and Assessment of Gifted/Talented Learner
      PEDG 5359 Gifted/Talented Curriculum
      PEDG 5360 Practicum

NOTE: To fulfill requirements concurrently for a Master's degree and for a Professional Certificate, a student may complete 12 additional graduate hours in an area of undergraduate specialization and substitute these hours for 12 hours in the elective area.

Degree Plan in Elementary Education With Professional Certification in Reading

1. To fulfill requirements concurrently for a Master's degree and Professional Certification in Reading, the student:
   A. Must meet general requirements for a Master of Education degree.
   B. Must hold a valid Texas Provisional Elementary or Secondary Certificate.
   C. Must have completed a minimum of three years of creditable classroom teaching.
2. A. **Professional Development Area:** Six semester hours.
      PEDG 5310 Research for Teachers (Req)
      PEDG 5340 Normal Human Growth and Development
      PEDG 5350 Psychology of Pedagogy
      PEDG 5370 Public School Curriculum

B. **Resource Area:** Six semester hours.
PEDG 5367 Cross Cultural Counseling
C. **Reading Specialization Requirements:** Eighteen semester hours
PEDG 5387 Teaching of Reading in the Elementary School (Req)
PEDG 5389 Diagnostic/Prescriptive Procedures in Reading (Req)
PEDG 5385 Literature: Pre K-12 (Req)
PEDG 5306 Problems in Teaching Science and Social Studies in the Elementary School
PEDG 5380 Modern Mathematics in the Elementary School
D. **Professional Secondary: Six semester hours**
PEDG 5321 Adolescent Development

Professional Certificates in Elementary Education

The applicant should hold or be eligible for a Provisional Certificate before admission into a professional program and have three years of teaching experience before being recommended for the Professional Certificate.

Requirements for the Professional Certificate follow an outline prescribed by the Texas Education Agency, consequently, the format for the certificate and the format for the degree are not identical. By selecting a program and with careful planning, a student may fulfill concurrently requirements for the Master's degree and requirements for a Professional Certificate in Elementary Education or the Reading Specialist Certificate. Specific information concerning these certificates may be obtained from the College of Education and Human Development Director of Professional Services and Admissions.

Certificates in Elementary Education

It is possible for students to complete part or all of the requirements for a standard five-year renewable Teaching Certificate or an endorsement to such a certificate while working on a Master of Education degree in Elementary Education. Specific information concerning these certificates may be obtained from the Graduate Coordinator.

Degree Plan in Secondary Education

To meet individual needs, considerable flexibility is allowed in developing the student's plan for a nonthesis or a thesis program; however, the usual pattern of course work is as follows:

1. **Professional Development.** 18 semester hours must be taken as follows:
Required: Six semester hours
PEDG 5310 Research for Teachers (Req)
PEDG 5321 Adolescent Development
Electives: 12 semester hours should be in one of the following areas:

Classroom Specialist	Reading Specialist
Foundations of Education	Gifted/Talented
	Supervision

A list of specific courses required or recommended in each of the concentrations is available from the Director of Professional Services and Admissions.

2. **Specialization Area.** For the nonthesis route to the degree, 12-18 semester hours of graduate work must be completed in one of the approved disciplines. A minimum of 12 hours must be taken at the 5000 level for the 18-hour specialization. If the student elects to write a thesis or chooses the route leading to the Professional Teaching Certificate which requires a six-hour resource area exclusive of professional education and the specialization, the specialization requirement is reduced to 12 semester hours with at least six at the 5000 level.

A plan listing the specific courses required to recommended is available through the Director of Professional Services and Admissions. Specialization areas are available in the following disciplines:

Biology	Kinesiology
Chemistry	History
Earth Science	Mathematics
Physics	English
Speech	Political Science

Degree in Secondary Education With Professional Certification in Reading

With a valid junior high school or high school teaching certificate and three years of classroom teaching experience, a student, may fulfill requirements for a Professional Reading Specialist Certificate (all levels) by completing the program below in lieu of content specialization.

1. **Professional Development:** Nine semester hours.
   PEDG 5310 Research for Teachers (Req)
   PEDG 5350 Psychology of Pedagogy
   PEDG 5340 Normal Human Growth and Development
   PEDG 5370 Public School Curriculum
2. **Resource Area:** Six semester hours.
   PEDG 5367 Cross Cultural Counseling
3. **Reading Specialization Requirements:** Eighteen semester hours
   PEDG 5387 Teaching of Reading in the Elementary School
   PEDG 5385 Literature: Pre K-12
   PEDG 5389 Diagnostic/Prescriptive Procedures in Reading
4. **Professional Secondary:** Three semester hours
   PEDG 5321 Adolescent Development

Program Leading to Professional Teaching Certificate – Secondary

The Texas Education Agency issues a Professional Teaching Certificate to the candidate recommended by the college when he/she has completed an approved 30 semester hour program of credit beyond the bachelor's degree. This program must include work in professional development, in a teaching specialization area and in a resource area. Requirements also indicate that the candidate must hold a Provisional Teaching Certificate and have three years of teaching experience. Specific requirements for the certificate may be obtained from the Director of Professional Services and Admissions.

Degree Plans in Special Education

To meet individual needs, some flexibility is allowed in planning the student's program; however, the usual pattern of course work is indicated below. If a student desires, he/she may complete requirements for a standard five-year renewable Certificate as an Educational Diagnostician or in Mental Retardation or in Supervision. In addition, the student may complete requirements for a Certificate in Special Education-Generic as part of the degree plan. This degree, if the student is pursuing one of the described certifications, is planned as a 36 semester hour non-thesis program. A student not seeking a certificate within the degree hours may complete a degree with a minimum of 30 semester hours plus a thesis.

To fulfill requirements concurrently for a Master's degree and Professional Certification in Supervision, the student also must have or complete a special education endorsement. The student should secure information concerning requirements for certification from the Graduate Coordinator. General information concerning Professional Certificates is presented in another portion of the College of Education and Human Development section of this bulletin.

A. **M.Ed. in Special Education-Generic Certification**
   1. **Professional Development Area:** Nine semester hours required
      PEDG 5310 Research for Teachers (Req)
      PEDG 5340 Normal Human Growth and Development
      PEDG 5350 The Learning Process
      PEDG 5370 Public School Curriculum
   2. **Resource Area:** (12 hours)
      PEDG 5334 Tests, Measurements and Evaluation (required)
      PEDG 5361 Survey of Learning Potentials of Exceptional Children (required)
   3. **Specialization Area:** (15 hours)
      PEDG 5388 Reading and Language Arts for the Exceptional Child
      PEDG 5362 Psychoeducational Evaluation of Exceptional Children
      PEDG 5364 Behavior Modification and Contingency Management of Disabled Learners
      PEDG 5365 Instructional Processes with Exceptional Children
      PEDG 5366 Modifications of Curriculum and Instruction for the Atypical Learner

B. **M.Ed. in Special Education-Mental Retardation Certification**
   1. **Professional Development Area:** Nine semester hours required
      PEDG 5310 Research for Teachers (Req)
      PEDG 5340 Normal Human Growth and Development
      PEDG 5350 The Learning Process
      PEDG 5370 Public School Curriculum
   2. **Resource Area.** (12 hours)
      PEDG 5334 Interpretation and Analysis of Tests and Measurements (required)
      Select three courses from those listed below:
      PEDG 5341 Microcomputers for Educators
      PEDG 5351 Advanced Study in Early Childhood Curriculum
      PEDG 5367 Psycho-Social Foundations of Educating the Culturally Different

PEDG 5362 Psychoeducational Evaluation of Exceptional Children
PEDG 5363 Practicum in Psychoeducational Procedures
PEDG 5365 Instructional Processes with Exceptional Children
PEDG 5366 Modifications of Curriculum and Instruction for the Atypical Learner

* Other selections must be approved by the chairperson of the student's committee and by the Director of Admissions and Advisement

3. **Specialization Area:** (15 hours)
Must be selected from the following courses or in concentrated area when attaining a specific certification.
PEDG 5361 Survey of Learning Potentials of Exceptional Children
PEDG 5364 Behavior Modification and Contingency Management of Disabled Learners
4. **Student must select six additional hours from courses listed below:**
PEDG 5362 Psychoeducational Evaluation of Exceptional Children
PEDG 5363 Practicum in Psychoeducational Procedures
PEDG 5365 Instructional Processes with Exceptional Children
PEDG 5366 Modifications of Curriculum and Instruction for the Atypical Learner

C. **M.Ed. in Special Education-Educational Diagnostician Certification**
1. **Professional Development Area.** Nine semester hours required
PEDG 5310 Research for Teachers (Req)
PEDG 5340 Normal Human Growth and Development (Req)
PEDG 5350 The Learning Process
PEDG 5370 Public School Curriculum
2. **Resource Area.** (12 hours)
PEDG 5334 Interpretation and Analysis of Tests and Measurements (required)
Select two courses from those listed below:
PEDG 5341 Microcomputers for Educators
PEDG 5351 Advanced Study in Early Childhood Curriculum
PEDG 5367 Psycho-Social Foundations of Educating the Culturally Different.

* Other selections must be approved by the chairperson of the student's committee and by the Director of Admissions and Advisement

3. **Specialization Area** (15 hours)
PEDG 5362 Psychoeducational Evaluation of Exceptional Children
PEDG 5363 Practicum in Psychoeducational Procedures
PEDG 5364 Behavior Modification and Contingency Management of Disabled Learners
PEDG 5365 Instructional Processes with Exceptional Children
PEDG 5366 Modification of Curriculum and Instruction for the Atypical Learner

Professional Certification in Special Education

Educational Diagnostician
Generic Special Education

Specific information concerning these certificates may be obtained from the Director of Professional Services and Admissions.

Post-Baccalaureate Master's Degree and Initial Certification

The College of Education and Human Development offers a master's degree and initial certification in general elementary (1-6, elementary (1-8) and secondary (6-12). Applicants for this program must have earned a bachelor's degree from an accredited college or university and must have earned at least an overall 2.5 GPA based on a four-point system on all undergraduate coursework or 2.75 GPA on last 60 hours. Students must have an acceptable score on the GRE to meet the 1350 score requirement. The program must be completed in three (3) years. Students must be continuously enrolled. The required score on the GRE must be evidenced before the end of the first fall or spring semester after the student applies for the program. All policies and procedures established by the College of Graduate Studies must be followed. For more information, contact the office of Professional Services, 206 Education Building.

General Information Concerning Professional Certificates

The Professional Certificate is a standard five-year renewable certificate, and gives the holder legal authority to perform duties in the public schools of Texas in the specialized areas designated on the face of the certificate. It is the responsibility of the student to initiate the process of applying for certification by contacting the College Director of Professional Services.

Graduate Faculty

Assistant Professor Vicky Farrow
Educational Psychology

Assistant Professor Kimberly Griffith
Special Education, Educational Psychology

Professor Andrea Karlin
Reading

Assistant Professor Fara Goulas
Special Education

Professor Dorothy Sisk
Gifted and Talented

Assistant Professor Linda Weeks
Early Childhood and Elementary Education

Assistant Professor Zhigang Zhang
Reading

Professional Pedagogy Courses (PEDG)

5310 Research for Teachers 3:3:0
Introduction to skills and techniques necessary for descriptive research as applied to teacher education, with an emphasis on planning, designing and methodology. Research proposal required.

5320 Current Issues in Education 3:3:0
Current controversies and trends in public education.

5330 Effective Teaching 3:3:0
The course is designed for Post-Baccalaureate students to receive in depth study of elementary and secondary classroom practices.

5340 Normal Human Growth and Development 3:3:0
A study of development and nature of the human personality. Emphasis on recent psychological and biological experiments.

5345 Instruction Design and Assessment of Academic Achievement 3:3:0
The structure and organization of the curriculum, materials and methods used and types of evaluation in K-12 classrooms.
Prerequisite: PEDG 5330

5350 The Learning Process 3:3:0
History and systems of learning which have application to the classroom. Current theories and research in pedagogy.

5353 Seminar in Language Arts 3:3:0
Application of research findings and modern theory to teaching and organizing the language arts in the elementary school. Examination of the relationships between language and cognitive development.

5354 Trends and Issues in Early Childhood Education 3:3:0
An analysis of trends and issues in early childhood education.

5360 Problems in Teaching Science and Social Studies in the Elementary School 3:3:0
A study of current developments, recent trends and innovative methods of teaching science and social studies in the elementary school, with emphasis upon individual teaching problems and research.

5370 The Public School Curriculum 3:3:0
Analysis of the objectives, organization and content of the different areas of the public school curriculum in grades K-12. Emphasis is given to models of curriculum development and to techniques for curriculum improvement.

5375 Content Area Reading 3:3:0
This course is designed to provide concepts and procedures incorporating reading instructional techniques effectively in the content areas. Emphasis on current teaching practices within the content area classroom.
Prerequisite: PEDG 5330

5380 Modern Mathematics in the Elementary School 3:3:0
Problems, research and innovative methods in elementary mathematics. This course is designed for elementary teachers who wish to pursue individual problems. Research and recent methods and trends of teaching elementary mathematics.

5383 Internship 3:3:0
A semester of teaching under the guidance of a university professor. The professor will provide mentoring and supervision during the semester.
Prerequisite: PEDG 5330, 5345, 5375, 5383

5387 Teaching of Reading in the Elementary School 3:3:0
Overview of reading: techniques, methods, approaches, materials, classroom management and organization.

5388, 5490 Selected Instructional Topics 3-4:3-4:0
Significant topics in Elementary, Secondary, Special Education, Supervision, Counseling, and Educational Administration. The description of the particular area of study will appear on the printed schedules of Lamar University each semester. Contact hours must be the same as those required by a formal instructional course. With permission of advisor in the student's major field, course may be repeated when topic varies.

5311 Individual Study in Education 3:A:0
Supervised investigation into special areas of education under the direction of a graduate faculty member. May be repeated for credit when topic of investigation differs.
Prerequisite: Consent of department head.

5320 Adolescent Development 3:3:0
Physical, mental, social and emotional characteristics of the adolescent; interests and problems; family and community relationships.

5334 Tests, Measurement and Evaluation 3:3:0
Analysis and evaluation types of tests and measurement devices will be conducted. Methods of determining the reliability and validity of tests are investigated. Designs for testing programs and selection of appropriate test will be included. Evaluation systems of individuals and programs will be discussed.

5341 Microcomputers for Educators 3:3:0
Designed to give teachers an awareness level of computer literacy and allow them to use the computer as an additional tool in the classroom.

5351 Advanced Study in Early Childhood Curriculum 3:3:0
A comprehensive study of the organization, methods and materials used for instruction in Kindergarten and other programs for young children.

5352 Creative Activities in Early Childhood Education 3:3:0
Teaching methods and materials for releasing creative expression with music, art and literature. Workshop approach with demonstration of art and music processes.

5355 Analysis of Program Implementation in Early Education 3:3:0
The inductive analysis and application of specific program and program implementation strategies to the development of cognitive, psychomotor and affective behaviors among young children.

5356 The Gifted Learner 3:3:0
In-depth study of the characteristics and unique needs of gifted/talented students as they relate to both school and family settings. Understanding of the educational and psychological demands of giftedness and the role of counseling and counselors.

5357 Creativity and the Gifted Learner 3:3:0
Introduction to theoretical constructs related to creative behavior. Emphasis on the development of competence in identifying the student's creative potential through the administration and interpretation of tests of creative behaviors and on strategies for enhancing the learner's creative behavior.

5358 Identification and Assessment of Gifted/Talented Students 3:3:0
Theoretical and practical study emphasizing the selection, administration, and interpretation of tests related to identification and curricular planning for gifted and talented students. Attention to state/federal identification mandates and the design of an identification matrix and guidelines for its use in specific educational settings.

5359 Gifted and Talented: Curriculum 3:3:0
Survey of models of gifted/talented education with attention to the development of appropriate goals and objectives for curriculum differentiation. Understanding of appropriate evaluation criteria at state/district/classroom levels.

5360 Practicum in Gifted Education 3:3:0
Supervised internship in gifted/talented education providing the intern with an opportunity to demonstrate competence in program planning and instructional delivery in classroom/district settings. May not be taken until all four courses (12 semester hours) are completed.

5361 Survey of Learning Potentials of Exceptional Children 3:3:0
General survey of the learning potentials of those children deficient in basic integrities which can be categorized into central peripheral nervous system dysfunction and/or behavioral disorder.

5362 Psychoeducational Evaluation of Exceptional Children 3:3:0
Simulated experiences in the use of formal and informal methods of appraising and communicating pupils' educational status and progress.

5363 Practicum in Psychoeducational Procedures 3:3:0
Practicum experience in the use of formal and informal instruments in the evaluation of the psychoeducational and social development of children and the utilization of education and clinical data in individual teaching plans.
Prerequisite: PEDG 5362.

5364 Behavior Modification and Contingency Management of Disabled Learners 3:3:0
The description of specific types of learning, the sequence in learning school-related tasks and the competencies to manipulate events to effect desired learning.

5365 Instructional Processes with Exceptional Children 3:3:0
Competency in developing educational strategies for the remediation, amelioration or compensation of exceptionality as it interferes with achievement or adjustment in school.

5366 Modification of Curriculum and Instruction for the Atypical Learner 3:3:0
Information and familiarity with instructional materials necessary for meeting the special needs of exceptional learners. Utilization of Special Educational Instructional Materials Centers.

5367 Cross Cultural Counseling 3:3:0
Studies delineating personal psychological characteristics and the affective domain of the culturally different. Identifies educational strategies applicable to the teaching process as well as other supportive pupil service.

5385 Literature: Pre K-12 3:3:0
Emphasis on the selection of literature for children and adolescents, and the development of methods for using literature to develop skills in reading. Provision of experiences which will enable teachers to locate and select age level appropriate literature and to incorporate literacy studies in the curriculum at all grade levels.

5389 Diagnostic/Prescriptive Procedures in Reading 3:3:0
Study of the nature and causes of reading problems including observations, demonstrations, and supervised practice in the techniques of diagnosis; attention is given to interview procedures, standard and informal diagnostic instruments, the interpretation and utilization of standardized test data, and report writing.
Prerequisites: PEDG 5387.

5390-5391 Thesis 6:A:0
Prerequisite: Approval of graduate advisor. Must complete both for required 6 credits.

Graduate Resource Courses

These courses are not offered by the College of Education and Human Development but are required or suggested for certain degree plans.

Department of Health and Kinesiology

The Department of Health and Kinesiology offers a program of study leading to the Master of Science degree in Kinesiology. It is designed to prepare professional personnel for employment in school and community settings and to prepare students for further graduate study at the doctoral level. Candidates seeking admission to the program must meet the general catalog requirements for admission to the College of Graduate Studies. They must also have a 2.5/4.0 overall undergraduate grade point average or, 2.75 grade point average on the last 60 hours of undergraduate course work). They must also satisfy the necessary undergraduate prerequisites as prescribed for a particular area of specialization.

A teaching and research specialization is offered for those graduate students who are interested in advanced preparation for teaching in school and university settings, research opportunities, doctoral-level work and administrative responsibilities. Two options toward the M.S. degree are available; (1) Thesis option – 30 cr. hrs.; (2) Non-thesis option – 36 cr. hrs.

Degree Requirements

The candidates for the Master of Science degree in Kinesiology must meet all of the College of Graduate Studies general degree requirements as listed in the Graduate catalog. To be sure that requirements are met, students are encouraged to contact the graduate coordinator. Additional specific degree requirements are as follows:

1. Nine semester hours to include Kint 5340 (Scientific Basis of Exercise), and Kint 5350 (Trends and Issues), Kint 5360 (Research Methods).
2. The thesis is optional for specialization areas of teaching and research.

Graduate Faculty

Professor Joel E. Barton III
Health

Professor Douglas Boatwright
Kinesiology

Assistant Professor Daniel Chilek
Health

Associate Professor Barbara Hernandez
Health

Professor Sonny Jolly
Kinesiology

Associate Professor Charles Nix
Kinesiology

Assistant Professor George Strickland
Health

Kinesiology Courses (KINT)

5300 Problems **3:A:0**
Biological, physiological, social, psychological and other purposes and outcomes; selection and distribution of activities; facilities; teacher preparation; literature; research problems. Course may be repeated for a maximum of nine semester hours as the topic varies.
Prerequisite: Permission must be obtained from an active teaching member of the graduate faculty.

5310 Sport in Society **3:3:0**
An analysis of sport in American society. The study of the sociological processes that affect the individual as an active participant in sport and physical activity.

5311 Curriculum Development **3:3:0**
Emphasis given to models of curriculum development and to techniques for curriculum improvement. Analysis of objectives, organization and content.

5312 Independent Study **3:A:0**
Intensive study in an area of special interest. Course may be repeated for a maximum of six semester hours as the topic varies.
Prerequisite: Demonstrated competence for independent work and research methods, and consent of active teaching member of the graduate faculty.

5320 Seminar **3:3:0**
Designed to develop abilities in location and evaluating literature and research in Kinesiology and in allied fields. Course may be repeated for a maximum of nine semester hours as the topic varies.

5330 Sport Administration **3:3:0**
Developing analytical skills and attitudes of top management in administering the organization as a whole and the interrelationships of all problems in the organization. Establishment of strategic objectives, analysis of changing environments, developing strategies, formulating policies, decision making and problem analysis, personnel resource management.

5340 Scientific Basis of Exercise **3:3:0**
A study of professional literature and laboratory experimentation on the role of physical activities and their effects on the human organism.

5350 Trends and Issues **3:3:0**
Designed to assist the student to become knowledgeable on current trends and issues in the area of Kinesiology. Study will include historical, analytical and projective approaches. Course may be repeated for a maximum of six semester hours as the topic varies.

5360 Research Methods **3:3:0**
Familiarity with types of research in Kinesiology with emphasis on tools and techniques of research and research design.

5370 Basis of Sports Medicine **3:3:0**
Human environmental factors and their interrelationship in sports injury and their control; accident prevention and injury control in sports activities; philosophy of sports safety; contributions of sports medicine to safety and current trends and issues in sports medicine.

5380 Motor Learning **3:3:0**
A formalized and scientific study of learning, performance and related factors as applied to gross motor skills.

5390-5391 Thesis **6:A:0**
Prerequisite: Approval of Graduate advisor. Must complete both for required 6 hours.

Department of Family and Consumer Sciences

The Master of Science Degree in Family and Consumer Sciences (FCSC) allows students to choose courses in foods and nutrition, family studies, child development and other areas within the field. An Approved Preprofessional Practice Program in Dietetics (AP4) is available at Lamar. Twelve of the eighteen credit hours required in the AP4 may be applied toward the M.S. Degree. Workshops and travel/study tours, along with daytime, evening and weekend classes are offered.

The Department of FCSC has adopted the minimum admission requirements of the Lamar University College of Graduate Studies outlined elsewhere in this catalog.

A limited number of scholarships and graduate assistantships are available. Contact the Department for details.

If a student's undergraduate degree is in a discipline other than FCSC or one of its subject matter areas, the student is required to complete undergraduate course work. The graduate advisor works closely with the student to determine any undergraduate deficiences. No more than 15 undergraduate credit hours will be required.

Degree Requirements

All graduate students in the Department are required to complete FCSC 5300 and FCSC 5314. The remainder of each student's program of study is developed according to the student's professional goals and interests.

Thesis route: This option consists of 30 credit hours. The thesis counts for six hours and the course work comprises 24 hours. Six credit hours may be taken in other departments.

Non-thesis route: A student electing this option will complete 36 hours of course work, 12 of which may be taken in other departments. Non-thesis students are required to pass a comprehensive written and oral exam covering all course work completed during the graduate program.

Graduate Faculty in Family and Consumer Sciences

Associate Professor Amy Pemberton, R.D.
Foods, nutrition/dietetics

Associate Professor Connie Ruiz, R.D.
Foods, nutrition/dietetics

Assistant Professor Kim Wallet
Family Studies

Assistant Professor Frances Droddy
Child Development,
FCS Education

Family and Consumer Sciences Courses (FCSC)

5101, 5201, 5301 Workshop in Family and Consumer Sciences
Workshops designed to strengthen professional competence needed for addressing societal issues related to family and consumer sciences. May be repeated for credit when topic of interest varies. Credit: one to three hours.

5300 Research Methods in Family and Consumer Sciences **3:3:0**
Introduction to skills and techniques necessary for conducting research in family and consumer sciences subject matter areas. Emphasis on research strategies, data preparation and analysis and research reporting. Research proposal required.

5304 Dietetic Seminar **3:3:0**
Study of the delivery of nutritional services and consultation for individuals, families, and institutions. Students complete projects in menu analysis, client education, clinical nutrition, public health, food service management and related activities.
Prerequisite: Acceptance into Approved Preprofessional Practice Program in Dietetics.

5306 Dietetic Practicum 3:3:0
Supervised practice which includes an average of 32 hours per week field experience in the areas of clinical nutrition, community nutrition, and food service management. Rotations include hospitals and other health care facilities, community nutrition sites, and food service facilities. May not be applied toward a graduate degree. *Prerequisite: Acceptance into Approved Preprofessional Practice Program in Dietetics.*

5308 World of Work in Family and Consumer Sciences 3:3:0
A study of occupational home economics education within the secondary curriculum focusing on development and supervision of occupational programs. (Credit for course applied to six hours required for teaching in occupational home economics programs.)

5310 Recent Advances in Foods and Nutrition 3:3:0
Readings in and discussion of selected studies and recent developments in the field of nutrition and foods. Implications for dietitians, nutritionists, teachers, extension workers and others. May be repeated for credit when topic varies.

5311 Advanced Textiles 3:3:0
Analysis and comparison of recent scientific textile trends with reference to fiber content, yarn, fabrication, color and finish.

5312 Resources in Family and Consumer Sciences Education 3:3:0
Creative development, selection and evaluation of instructional materials including preparation, selection and use of visual materials.

5313 Current Topics in Family and Consumer Sciences 3:3:0
Intensive study of a current problem of professional interest in family and consumer sciences. The description of the particular area of study will appear on the printed semester schedule. May be repeated for credit when topic of investigation varies.

5314 Statistical Theory and Analysis 3:3:0
A study of statistical theory with application of quantitative techniques commonly used in family and consumer sciences research.

5315 Independent Study 3:3:0
Independent study in an area of interest; review of current literature and research related to individual problems; selection and/or design of instruments used in collecting data. May be repeated for credit when topic of investigation varies.

5316 Family Violence and Therapeutic Intervention 3:3:0
Exploration of interpersonal violence throughout the life cycle from immediate and extended family members. Topics will include physical abuse, sexual abuse, and neglect perpetrated against children, spouses, and the elderly. The perspectives of law enforcement and treatment strategies will be explored.

5317 Lifespan Human Development 3:3:0
Advanced study of human development across the lifespan from the prenatal period through senescence. Social, emotional, physical, and cognitive development are addressed.

5318 Parenting 3:3:0
Contemporary issues facing both parents and professionals who work with them; specific study of parenting skills, parenting in families with special needs and parent-school relationships.

5319 Single Parent Families 3:3:0
Exploration of the formation of single-parent families with their varied memberships. Topics will include divorce, widowhood, economics, and support resources. The perspectives of law enforcement, social service agencies, and financial experts will be invited.

5320 Clothing Design and Merchandising 3:2:3
An application of couture costume design principles and techniques related to construction and merchandising.

5321 Medical Nutritional Therapy 3:3:0
Diets and nutritional support for selected diseases, surgery, and trauma. Diet counseling, medical terminology, calculation of nutrient needs for specific diseases, case studies.

5323 Nutrition Thru Life 3:3:0
Physiological, biochemical and sociological factors that affect nutrient requirements and recommendations over the life cycle.

5324 Prenatal/Infant Development 3:3:0
Study of physical, social, emotional and cognitive development from conception to age two.

5325 Community Nutrition 3:3:0
Effects of social, economic, environmental, and political factors on the health and nutritional status of population groups. Students learn instructional techniques appropriate for conducting nutrition education with various groups.

5326 Fashion History **3:3:0**
A survey of the development of Western dress with emphasis on the interrelationship of clothing and society.

5327 Fashion Production & Distribution **3:3:0**
A study of the textile and apparel industry with emphasis on the production, distribution and marketing of products. Includes off campus experiences through field trips.

5328 Consumer Housing **3:3:0**
A study of the home as the environment that shapes human lives. Designed to create an awareness of the social responsibilities related to housing and to provide experiences associated with planning and selecting suitable homes. Includes public housing.

5329 Family Resource Management **3:3:0**
A conceptual study of philosophies and principles of the systems approach to family management. Practical applications through individual and group approaches to problem solving.
Prerequisite: 24 hrs in FCS or consent of instructor.

5330 Heritage of Dress **3:3:0**
A survey of costume history and customs which have affected garment styles. An analysis of historic costume and its contribution of civilization.

5340 Problems in Clothing and Textiles **3:3:0**
Individual and group investigations and discussions of special problems in the various phases of clothing and textiles.

5350 Cultural Foods **3:3:0**
An overview of cultural influences on primitive and modern human dietary practices. Emphasis on how humans use culture to adapt to the physical, social and supernatural environments.

5351 Weight Management **3:3:0**
Diagnosis, etiology, classification, and treatment of weight problems.

5357 Operation Analysis-Hospitality Manager **3:3:0**
Use of the microcomputer and the electronic spreadsheet for hospitality industry financial recordkeeping and reporting. Emphasis on the practical use of spreadsheets, report analysis, and the planning and control functions of budgets. Designed to develop and/or refine those competencies needed to solve practical management problems utilizing a structured approach to decision-making.

5359 Sports Nutrition **3:3:0**
The role of nutrition is discussed as it relates to athletic performance and physical activity.

5360 Organizational Behavior and Management in the Service Industry **3:3:0**
Understanding the conceptual theories related to the management process. The impact of individual and group behavior on management decisions and actions in the service industry.

5370 Resource Management Across the Lifespan **3:3:0**
Socio-economic changes, public policies and programs and management practices related to individual and family well-being through the various life cycle stages.

5380 Occupational Family and Consumer Sciences **3:3:0**
Philosophy and development of vocational family and consumer sciences education for secondary schools, colleges or universities with emphasis on occupational family and consumer sciences careers and jobs, curriculum trends and developments. Credit for course applied to six hours required for teaching in occupational family and consumer sciences programs.
Prerequisite: FCSC 5308.

5390-5391 Thesis **6:A:0**
Prerequisite: Approval of graduate advisor. Must complete both for required 6 credits.

College of Engineering

The objectives of the graduate programs in Engineering, Computer Science, Mathematics, Environmental Science and Studies, and Technical Management are to:

1. Advance the state of art of the practice of engineering, computer science and mathematics.
2. Advance the state of art of the teaching/learning process in engineering, computer science and mathematics.
3. Contribute to the economic well being of the residents of Southeast Texas, the entire state and nation.
4. Improve the safety, health and environment of Southeast Texas, the entire state and nation.

The requirements of the various graduate programs in the College of Engineering are described below.

The College of Engineering offers graduate degrees at the master's and doctoral levels. At the master's level, both non-thesis and thesis degrees are available from each of five engineering departments. Non-thesis degrees offered are the Master of Engineering (M.E.) and the Master of Engineering Management (M.E.M.). The Master of Engineering Science (M.E.S.) offered by each engineering department requires a thesis as does the Master of Science (M.S.) in Computer Science, the Master of Science in Mathematics, the Master of Science in Environmental Engineering and the Master of Science in Environmental Studies.

The Doctor of Engineering (D.E.) degree is offered through each of the five engineering departments. This degree requires a written field study documenting the findings of an advanced engineering design completed by the degree candidate.

Graduate degree programs are offered as follows:

Master of Engineering Management (M.E.M.)
Master of Engineering Science (M.E.S.)
Master of Engineering (M.E.)
Doctor of Engineering (D.E.)
Master of Science in Computer Science (M.S.)
Master of Science in Environmental Engineering (M.S.)
Master of Science in Environmental Studies (M.S.)
Master of Science in Mathematics (M.S.)

Master of Engineering Management (M.E.M.)

The Master of Engineering Management is a non-thesis degree program with all courses offered after 4 p.m. Course work is designed to build onto the education received while completing an accredited bachelor's degree in engineering and the individual's professional experience. Hence, practicing engineers generally will not require undergraduate prerequisites.

A total of 36 credit hours are required at the graduate level. Included among these 36 credit hours are 15 hours of core courses required of all M.E.M. students. Course work in addition to the required core courses is tailored specifically to the needs of the student, but generally has approximately one-third of the courses in the general area of technical management, one-third in Business Administration, and one-third in the student's technical discipline such as Civil Engineering, Chemical Engineering, Electrical Engineering, Industrial Engineering or Mechanical Engineering.

Admission Requirements

Admission standards are designed to ensure that all enrolled students are qualified professionals serving in a leadership role in their engineering discipline. The four primary requirements are as follows:

1. B.S. in Engineering or Equivalent.
2. Graduate Record Examination (GRE) Scores (Verbal + Quantitative) = 1000 or more.
3. Two-to-five years of engineering experience in a leadership role.
4. Letter of recommendation for the program from someone in direct supervision over the applicant in his/her primary employment.

Degree Requirements

1. All of the College of Graduate Studies general degree requirements.
2. Completion of a core program of 15 semester hours of specified courses.
3. Completion of a minimum of at least 36 semester from an approved list of courses. (See typical programs)

Step by Step Procedure

1. Obtain a Bachelor of Science Degree in Engineering.
2. Complete two-to-five years of professional practice in a position of leadership.
3. Apply for Admission to the Graduate College of Lamar University
   a. Complete Graduate application, obtainable by calling (409) 880-8356 or online at http://www.lamar.edu
   b. Take GRE and have scores sent to: Graduate Admissions, Lamar University, P.O. Box 10078, Beaumont, Texas 77710.
   c. Have all undergraduate transcripts sent to Graduate Admissions.
   d. Have letter of recommendation from supervisor sent to: Coordinator of Engineering Graduate Programs, P.O. Box 10032, Beaumont, Texas 77710.
4. In consultation with Coordinator of Engineering Graduate Programs, select graduate committee.
5. Complete 12 hours of course work including at least three core courses and apply for admission to candidacy.
6. Complete remaining course work specified in candidacy application
   a. Apply for Graduation
   b. Obtain copy of Comprehensive Examination policy from Industrial Engineering Department.
   c. Request and schedule Comprehensive Examination.
   d. Pass Comprehensive Examination
7. Graduate

Core Courses

1.	ENGR 5369	Engineering Management
2.	ENGR 5336	Statistical Decision-Making for Engineers
		or
	ENGR 5372	Operations Research
3.	ENGR 5316	Industrial Management
		or
	ENGR 6359	Computer Methods in SQC
4.	ENGR 5366	Advanced Engineering Economics
5.	ECON 5300	Foundations of Economics

Typical Program Options

Each student in consultation with an advisor should design a program tailored to meet his or her own specific educational objectives. The following typical program options are suggested. Substitutions and/or modifications to these programs can be accomplished with the approval of the student's advisor.

I. Manufacturing Management Concentration

Technical Discipline

ENGR 5372 Operation Research
ENGR 5349 Production and Inventory Control
ENGR 5345 Computer Integrated Manufacturing (CIM)
ENGR 6349 A/I Expert Systems

Business Administration

ECON 5300 Foundations of Economics
ACCT 5300 Financial Accounting
ACCT 5370 Managerial Accounting
MKTG 5300 Marketing Concepts

Technical Management

ENGR 5369 Engineering Management
ENGR 5366 Advanced Engineering Economics
ENGR 5336 Statistical Decision Making for Engineers
ENGR 5316 Industrial Management

II. Quality Management

Technical Discipline

ENGR 6359 Computer Methods in SQC
ENGR 5303 Regression Analysis
ENGR 5319 Design of Experiments
ENGR 5312 Quality Improvement

Technical Management

Same as Option I

Business Administration

Same as Option I

III. Construction Project Management (CVEN)

Technical Discipline

ENGR 6388 Project Management
ENGR 6389 Comp. Aided Software Engineering
ENGR 5308 Cost Optimization & Scheduling Engineering
ENGR 5328 Theory of Structures

Technical Management

Same as Option I

Business Administration

Same as Option I

IV. Environment Management (CVEN)

Technical Discipline

ENGR 5331 Biological Waste Water
ENGR 5325 Fundamentals of Air Pollution
ENGR 5329 Water Supply and Treatment
ENGR 6387 Hydraulics of Environmental Systems

Technical Management

Same as Option I

Business Administration

Same as Option I

V. Construction Project Management (CHEN)

Technical Discipline

ENGR 5330 Computer Methods
ENGR 5341 Mass Transfer
ENGR 5344 Process Modeling
ENGR 5360 Thermodynamics

Technical Management

Same as Option I

Business Administration

Same as Option I

VI. Electrical Engineering Management (ELEN)

Technical Discipline
ENGR 5383 Instrumentation
ENGR 5380 Discrete Control Systems
ENGR 5344 Power Systems I
ENGR 5352 Advanced Process Control

Technical Management
Same as Option I

Business Administration
Same as Option I

VII. Construction Project Management (INEN)

Technical Discipline
ENGR 6388 Project Management
ENGR 5303 Regression Analysis
ENGR 5374 Human Factors Engineering
ENGR 5305 Reliability

Technical Management
Same as Option I

Business Administration
Same as Option I

VIII. Construction Project Management (MEEN)

Technical Discipline
ENGR 5318 Stress Analysis
ENGR 5311 Heat Transfer
ENGR 5370 Thermodynamics - Energy Conversion
ENGR 5313 Fluid Mechanics

Technical Management
Same as Option I

Business Administration
Same as Option I

Master of Engineering Science (M.E.S.), Master of Engineering (M.E.), and Doctor of Engineering (D.E.)

The Master of Engineering Science, Master of Engineering and Doctor of Engineering programs are administered by the Graduate Steering Committee. Students entering these programs are responsible to this committee until a permanent graduate committee including a chairman is selected and approved. The student should select an advisor and a permanent graduate committee must be formed before the student has completed 15 semester hours of graduate work. No credit toward a graduate degree will be granted unless approved by either the Graduate Steering Committee or the student's permanent graduate committee.

Core Course Categories for the M.E.S., M.E. and D.E. Programs:

Category	Course Number and Title
1.	Mathematics/Statistics
	ENGR 5301-07 Sp. Topics: Process Modeling – Neural Networks
	ENGR 5388 Special Topics: Engineering Systems Analysis
	ENGR 5336 Statistical Decision Making for Engineers
	ENGR 5301-61 Special Topics: Engineering Analysis
	ENGR 5303 Regression Analysis
	ENGR 5305 Reliability
	ENGR 5319 Design of Experiments
	ENGR 6314 Computer Control and Instrumentation
2.	Optimization/Management
	ENGR 5301-05 Sp. Topics: Optimization of Chemical Processes
	ENGR 6349 Engineering Applications of AI and Expert Systems
	ENGR 6388 Comp. Mtds. of Engr. Project Management
	ENGR 5372 Operations Research
	ENGR 5301-64 Sp. Topics: Optimization of Thermal/Mechanical Systems

3. Simulation/Control
   - ENGR 5357 Process Simulation
   - ENGR 5324 Models in Hydrological Systems
   - ENGR 6358 Industrial Automation and Process Control
   - ENGR 5375 Simulation of Industrial Systems
   - ENGR 5301-62 Special Topics: Control of Mechanical Systems

Master of Engineering Science (M.E.S.)

The Master of Engineering Science Degree requires the completion of 30 semester hours of graduate course work, including thesis.

Admission Requirements

For admission to the program, the student must meet the following requirements:

1. The general requirements for admission to the College of Graduate Studies.
2. Hold a bachelor's degree in a field of engineering or related discipline with credit substantially equivalent to that required for bachelor's degrees at Lamar University.
3. These are minimum admission requirements and may be more selective for individual departments.

Degree Requirements

1. All of the College of Graduate Studies general degree requirements.
2. A minimum of 3 semester hours (one course) from those courses listed above as core courses.
3. A minimum of 21 semester hours (seven courses) of electives. Additional core courses may satisfy part of this requirement.
4. Satisfactory completion and defense of thesis (ENGR 5390 and ENGR 5391).

Master of Engineering (M.E.)

The Master of Engineering Degree is a non-thesis 36 semester hour* program designed to suit the needs of the practicing engineer.

Admission Requirements

For admission to the program, the student must meet the following requirements:

1. The general requirements for admission to the College of Graduate Studies.
2. Hold a bachelor's degree in a field of engineering or related discipline with credit substantially equivalent to that required for bachelor's degrees at Lamar University.
3. These are minimum admission requirements and may be more selective for individual departments.

Degree Requirements

1. All of the College of Graduate Studies general degree requirements.
2. Completion of one course from each of the three categories of core courses for a total of 9 semester hours of core course work. The core course categories and core courses are listed above.
3. A minimum of 27 semester hours* (nine courses) of electives. Additional core courses may satisfy part of this requirement.
4. Satisfactory completion of a final comprehensive examination.

*A graduate student who has passed the Fundamentals of Engineering Examination or a graduate student who is a Professional Engineer registered in the State of Texas (or registered in another state where requirements do not conflict with the provisions of the Texas Engineering Practice Act and are of a standard not lower than those specified in Section 12 of that Act) may satisfy course requirements by completing 24 semester hours of electives toward a total of 33 semester hours provided ENGR 6310 (Design Project) is included.

Master of Science in Environmental Engineering

Until recently, environmental engineers were primarily concerned with municipal water systems and sewage treatment facilities. The bulk of the course work dealt with the application of engineering solutions to human health problems. Today, the field includes the study of water quality, air quality and methods for disposing of toxic/hazardous wastes. Overall, environmental engineers are engaged in solving the large and complex environmental problems threatening the natural ecosystem.

The Master of Science in Environmental Engineering program is designed to provide engineers with the highly specialized chemical/civil engineering background needed by industry and by regulatory agencies on the federal, state and municipal levels.

Admission Requirements

For admission to the program, the student must meet the following requirements:

1. The general requirements for admission to the College of Graduate Studies.
2. Hold a bachelor's degree in a field of engineering which is equivalent to a bachelor's degree at Lamar University.
3. Because of the diversity of the scientific disciplines which are admitted to the environmental studies program, some students may be lacking in certain fundamental subject areas, usually undergraduate level courses in engineering, microbiology, basic chemistry, geology, and/or mathematics. These courses must be taken in addition to the curriculum required for the master's degree program.

Degree Requirements

1. All of the College of Graduate Studies general degree requirements.
2. A minimum of 12 semester hours (4 core courses) from those listed below:

CHEM	5301	Special Topics in Environmental Chemistry[1]
ENGR	5325	Fundamentals of Air Pollution
ENGR	5329	Water Supply and Treatment
ENGR	5331	Biological Wastewater Treatment
ENGR	6344	Multimedia Transport of Pollutants
ENGR	6387	Hydraulics of Environmental Systems[2]

[1]with committee approval, an equivalent chemistry course may be substituted.
[2]with committee approval, Hazardous Waste Management (ENGR 6339) may be substituted.

3. A minimum of 15 semester hours (five courses) of designated electives from the list below or other approved electives:

BIOL	5301	Special Topic: Microbiology
BIOL	5430	Limnology
BIOL	5470	Ecology of Polluted Waters
CHEM	5411	Biochemistry I
ENGR	5324	Models in Hydrological Systems (HEC-HMS, HEC-RAS)
ENGR	5326	Coastal and Hydrodynamic Processes (Hydrology)
ENGR	5334	Waste Minimization
ENGR	5337	Incineration
ENGR	5338	Solid Waste Management
ENGR	5342	Reactor Design for Environmental Systems
ENGR	5343	Industrial Waste Treatment
ENGR	5351	Unit Operation in Environmental Engineering
GEOL	5301	Special Topic: Hydrogeology
ENGR	6339	Hazardous Waste Management
ENGR	6389	Computer-Aided Software Engineering (Geographic Information System)

4. Satisfactory completion and defense of thesis*

*with committee approval, 12 credit hours of Environmental Electives may be substituted.

Master of Science In Environmental Studies

The environmental studies program is designed for students who wish to continue to work in their scientific specialty but as it relates to environmental affairs. The degree is especially intended for individuals who wish to work in the evaluation, operations and/or regulatory aspects of the field as opposed to the design or engineering areas. Consequently, the program will provide an understanding of environmental problems and processes from the point of view of the chemist, biologist or geologist and provide the interdisciplinary perspective needed to cope with various environmental issues.

Admission Requirements

For admission to the program, the student must meet the following requirements:

1. The general requirements for admission to the College of Graduate Studies.
2. Hold a bachelor's degree in chemistry, biology, geology, the subdivisions of those fields e.g. microbiology, organic chemistry, hydrogeology, etc. or other closely related fields with credit substantially equivalent to that required for bachelors' degrees at Lamar University.
3. Some applicants to this program may be required to take undergraduate level courses in engineering, geology, microbiology, basic chemistry and/or mathematics. These courses must be taken **in addition to** those required for the masters program and will be selected in consultation with the advisor early in a student's graduate career.

Degree Requirements

1. All of the College of Graduate Studies general degree requirements.
2. A minimum of 6 semester hours (two graduate courses) in the student's science specialty.
3. A minimum of 12 semester hours (four core courses) from those listed below:

CHEM	5301	Special Topics in Environmental Chemistry[1]
ENGR	5325	Fundamentals of Air Pollution
ENGR	5329	Water Supply and Treatment
ENGR	5331	Biological Wastewater Treatment
ENGR	6344	Multimedia Transport of Pollutants
ENGR	6387	Hydraulics of Environmental Systems[2]

[1]with committee approval, an equivalent chemistry course may be substituted.
[2]with committee approval, Hazardous Waste Management (ENGR 6339) may be substituted.

4. A minimum of 9 semester hours (three courses) of designated electives from the list below or other approved electives:

BIOL	5301	Special Topic: Microbiology
BIOL	5430	Limnology
BIOL	5470	Ecology of Polluted Waters
CHEM	5411	Biochemistry I
ENGR	5324	Models in Hydrological Systems (HEC-HMS, HEC-RAS)
ENGR	5326	Coastal and Hydrodynamic Processes (Hydrology)
ENGR	5334	Waste Minimization
ENGR	5337	Incineration
ENGR	5338	Solid Waste Management
ENGR	5342	Reactor Design for Environmental Systems
ENGR	5343	Industrial Waste Treatment
ENGR	5351	Unit Operation in Environmental Engineering

GEOL	5301	Special Topic: Hydrogeology
ENGR	6339	Hazardous Waste Management
ENGR	6389	Computer-Aided Software Engineering (Geographic Information System)

5. Satisfactory completion and defense of thesis*

*with committee approval, 12 credit hours of Environmental Electives may be substituted

Doctor of Engineering (D.E.)

The Doctor of Engineering Degree is designed to permit the practicing engineer to study practical engineering problems of a complex nature.

Admission Requirements

For admission to the program, the following requirements must be met:

1. The general requirements of the College of Graduate Studies.
2. The applicant must hold a Bachelor of Science degree in a field of engineering. The applicant must have an overall GPA and quantitative section of the GRE score which meets the following criteria: (50*GPA + GRE) 800. International students must have a minimum TOEFL score of 530.
3. The applicant must hold a Master's degree or have completed at least 30 semester hours of course work at the graduate level in a field of engineering or a closely related discipline.
4. These are minimum admission requirements and may be more selective for individual departments.

Degree Requirements

1. All of the College of Graduate Studies general degree requirements.
2. The student shall complete a residency of one year.
3. The student shall register for ENGR 6110, Professional Seminar, each semester in which the student is registered for more than six hours or in which the student is registered for field study. A minimum of 4 hours is required.
4. Completion of one course from each of the three categories of core courses for a total of 9 semester hours of core course work. The core course categories and core courses are listed above. Exceptions to this rule must be approved by the Director of Engineering Graduate Studies.
5. Completion of the diagnostic examination. This examination has the objectives of determining the student's qualifications for a doctoral program and to provide guidance for the selection of a study program. This examination must be completed before the student has earned 15 semester hours of course credit after admission to the program.
6. Completion of a minimum of 15 credit hours of field study preparatory courses in a concentration designed to form a cohesive degree plan and must be approved by the student's advisory committee. The field study preparation includes completion of one semester of ENGR 6320, Justification of Engineering Project.
7. Completion of candidacy examination. The purposes of this examination are to test the ability of the student to comprehensively relate the subjects of the study program and to ascertain the student's qualifications to perform the field study.

8. Completion of the field study. After the student is admitted to candidacy a formal engineering proposal format must be presented to the doctoral committee. Upon committee approval of the proposed field study the work is initiated. Normally, 30 semester hours of field study is required.
9. Defense of field study. Upon completion of the field study a formal engineering report with a standard format shall be submitted to the committee and defended in an oral examination.

Graduate Faculty

Assistant Professor Valentin V. Andreev
Complex analysis
Assistant Professor Kyaw (Ken) Aung
Combustion, propulsion, energy systems, sprays, mixing
Professor Wendell C. Bean
Control systems, biomedical signal processing
Assistant Professor Robert E. Benton, Jr.
Reduced-order control systems, linear matrix inequalities, combustion control, robotics
Professor Daniel H. Chen
Process control, process simulation, air pollution control
Professor Hsing-wei Chu
Operations research statistical decision analysis, networks
Professor Paul Chiou
Statistics, reliability theory
Professor David L. Cocke
Analytical and environmental chemistry, catalysis
Professor Paul Corder
Mechanical systems design; stress analysis; finite element models
Assistant Professor Brian N. Craig
Ergonomics, human factors
Assistant Professor Paul Dawkins
Numerical Analysis, approximation theory
Research Professor Richard A. Dobbs
Biotechnologies, hazardous waste management
Associate Professor Peggy Israel Doerschuk
Neural networks, parallel processing, genetic algorithms, optimization
Associate Professor Xing Fang
Water quality management and modeling, environmental hydraulics, hydrodynamics, water resources engineering
Assistant Professor John L. Gossage
Reaction kinetics, reactor design, polymerization
Associate Professor John B. Harvill
Computer architecture, microcomputer systems, database systems, programming languages, computer science education
Professor Tho-Ching Ho
Fluidization, heat transfer, optimization
Professor Jack R. Hopper
Reaction kinetics, catalysis, pollution prevention
Assistant Professor Mien Jao
Geotechnical Engineering
Professor Enno Koehn
Construction, planning, scheduling and productivity. Design and analysis
Professor Hikyoo Koh
Artificial intelligence, software testing, language translation, computational complexity analysis
Professor Ku-Yen Li
Mass transfer, gas-liquid reactions, unit operations in environmental engineering
Assistant Professor Che-Jen (Jerry) Lin
Environmental Engineering
Assistant Professor Helen Lou
Process modeling, simulation and optimization; pollution prevention
Associate Professor Mohsen Maesumi
Numerical analysis, applied mathematics
Professor Alec L. Matheson
Spaces of analytic functions, functional analysis
Professor Bernard J. Maxum
Electromagnetics, antennas and propagation, rf, microwave, mm waves, optics

Professor Harley R. Myler
Image and signal processing, digital video, video communications and networks, control systems
Professor Lawrence Osborne
Parallel processing, operating systems, distributive systems, algorithms
Professor David Read
Computer networks, operating systems, natural language processing
Associate Professor G.N. Reddy
Computer engineering, artificial neural networks & fuzzy logic, digital signal processing, Industrial automation, Instrumentation, Virtual systems, Computer networks
Professor Malur Srinivasan
Advanced materials processing, modeling of microstructure evolution in manufactured products, development of new nondestructive evaluation techniques
Associate Professor James L. Thomas
Computer-aided manufacturing
Computer-aided design
Assistant Professor Quoc-Nam Tran,
Symbolic computation, computer aided geometric design, computer algebra, Groebner bases
Assistant Professor Ryan Underdown
Enterprise Engineering
Engineering Management
Assistant Professor Christopher Winfield
Partial differential equations, scattering theory
Professor Carl L. Yaws
Physical and thermodynamic properties, distillation
Professor Fred M. Young
Fluid dynamics, heat transfer
Professor Victor Zaloom
Engineering economics, manufacturing productivity, computer applications, statistical quality control

Engineering Courses (ENGR)

5101, 5201, 5301 Special Topics 3:1-3:0
An investigation into specialized study in advanced areas of engineering under guidance of a faculty member. This course may be repeated for credit when topics of investigation differ.

5110 Seminar 1:1:0
Discussion of ethical, professional, and technical topics related to the practice of civil engineering. Presentation of oral and written reports.

5212 Civil Engineering Systems Design Project 2:0:6
Planning, design, and analysis of a civil engineering system or project; an integrated and realistic group project is utilized which involves numerous major aspects of the civil engineering profession. Presentation of oral and written design reports.

5290 Civil Engineering Systems II 2:2:0
Principles of systems analysis utilized for solving civil engineering problems. Application of probability and statistics, numerical methods, linear programming, dynamic programming, optimization, finite elements and finite differences to the engineering design process.

5300 Structural Analysis/Graphical Design 3:3:0
Basic principles of structural analysis and design based upon the requirements of equilibrium and continuity. A consideration of graphical computer aided techniques to describe various systems or a study of matrix methods and the application of strain energy, slope deflection, and moment distribution procedures for the analysis of frames, trusses, and beams. May be repeated for credit when topics vary.

5303 Regression Analysis 3:3:0
Review of regression analysis; theory of least squares; multivariate analysis; theory of the general linear hypothesis model.

5305 Reliability 3:3:0
Statistical theories pertinent to solution of engineering problems in reliability; distribution and failure theory including failure rate and mean time to failure for the exponential, log normal, gamma and Weibull distributions.

5308 Cost Optimization and Scheduling Engineering 3:3:0
Includes the mathematics of cost comparisons, profitability, productivity, and optimization with emphasis on engineering project scheduling, cost estimation, and control. May be repeated for credit when the subject matter varies.

5309 Problems in Design and Finite Analysis 3:3:0
Advanced techniques and analysis involving microcomputers, finite elements, finite differences. May be repeated for credit when the subject matter varies.

5310 Advanced Concrete Design 3:3:0
Analysis and design of concrete members based upon working stress and strength design methods. Consideration given to pre-stressing or post-stressing of beams and structural components. May be repeated for credit when the subject matter varies.

5311 Heat Transfer Analysis 3:3:0
Fundamental principles of heat transfer by conduction, convection and radiation. Emphasis will be given to the analysis of problems combining the various heat transfer mechanisms.

5312 Quality Improvement 3:3:0
Statistical methods and other Industrial Engineering analysis and design tools are used to control and improve quality and assure requirements are met.
Prerequisite: INEN 3320

5313 Fluid Mechanics 3:3:0
Fluid statics, fundamentals of fluid motion, systems and control volumes, basic laws, irrotational flow, similitude and dimensional analysis, incompressible viscous flow, boundary layer theory and an introduction to compressible flow. Vector methods will be employed.

5314 Hydraulic Engineering 3:3:0
Design considerations of hydraulic systems including closed and open channel flow together with related hydraulic accessories. May be repeated for credit when the subject matter varies.

5315 Theory of Elasticity
General analysis of stress and strain, equations of equilibrium and compatibility, stress and strain relations, two dimensional stress problems, elastic energy principles, thermoelastic problems. May be repeated for credit when the subject matter varies.

5316 Industrial Management 3:3:0
Provides a foundation for becoming a manager in an industrial organization. Topics include: Strategic planning, culture change, organizational analysis and technology management. Students will apply decision making methodologies to hypothetical situations.
Prerequisite: Graduate Standing.

5318 Stress Analysis and Material Systems 3:3:0
A study of solid mechanics and/or building/hydraulic systems related to the performance of different materials such as soils, metals, timber, masonry, and composites under various loading conditions. Consideration of construction and environmental effects. Topics may include, if applicable, unsymmetrical sections, shear center, curved beams, torsion of noncircular cross sections, strain energy, virtual work, plasticity, fatigue, and introduction to the theory of elasticity. May be repeated for credit.

5319 Design of Experiments 3:3:0
Experimental design and analysis of experiments are developed as tools of the manufacturing and process industries. Exploratory and evolutionary EVOP designs, analysis of variance ANOVA, error and regression are treated in some detail.
Prerequisite: Course in statistics or equivalent.

5320 Engineering Project Management 3:3:0
Principles governing the effective and efficient management of engineering projects including the application of comprehensive planning, scheduling, and cost estimation procedures. Presentation of oral and written design reports.

5321 Quality Control Systems 3:3:0
Application of statistical methods to industrial problems; regression and correlation theory; analysis of variance; use of control charts for control of manufacturing operations.

5322 Computer Aided Manufacturing 3:3:0
Design problems in the areas of computer numerical control, robotics and computer vision as presented. Manufacturing Control Systems are discussed as they relate to a Computer Integrated Manufacturing (CIM) environment.
Additional project on expert systems applications in manufacturing.

5323 Advanced Steel Design 3:3:0
Analysis and design of structural members using steel. Consideration is given to elastic and inelastic buckling in beams and columns due to local, flexural, torsional and torsional flexural action. May be repeated for credit when the subject matter varies.

5324 Wave Mechanics And/Or Models In Hydrological Systems 3:3:0
Introduction to wave mechanics and hydrological transport processes including water quality simulation in hydrodynamic systems (oceans, estuaries, lakes/reservoirs, rivers/streams, stormwater control facilities); flow and treatment of hazardous waste in groundwater and soils; water quality dynamics; advection, turbulent diffusion and dispersion in one- and two-dimensional aquatic systems; analysis of basin hydrology, streamflow frequency, and water surface profiles. May be repeated for credit when subject matter varies.

5325 Fundamentals of Air Pollution 3:3:0
Pollutant sources, emissions and transport. Air pollution control methods. Particulate collection theory, gaseous pollutant removal theory. Atmospheric sampling and analysis methods. May be repeated for credit when the subject matter varies.

5326 Coastal and Hydrodynamic Processes 3:3:0
Overview of hydrological models for coastal and hydrodynamic processes in bodies of water (rivers/streams, oceans, estuaries, inland lakes, and reservoirs); energy and momentum transfer through a water surface; standing or progressive waves; salt water and fresh water interaction; wind effects of stratification and circulations; analysis of stratified flow and density currents; selective withdrawal; turbulent wind mixing. Consideration of environmental effects. May be repeated for credit when the subject matter varies.

5327 Numerical and Computer Methods In Structures 3:3:0
Matrix and computer methods applied to analysis and design of trusses, beams, and frames. Consideration of CAD techniques. May be repeated for credit when subject matter varies.

5328 Theory of Structures 3:3:0
Investigation and design of facilities under static, hydraulic, dynamic, and/or hazardous loading conditions. Principles of ultimate strength and plastic design theories. Consideration of environmental effects and safety factors for various temporary and/or permanent loading situations. May be repeated for credit when the subject matter varies.

5329 Water Supply and Treatment 3:3:0
An investigation of the chemistry of water treatment processes including the study of treatment process selection and associated design parameters.

5330 Computer Methods in Engineering Analysis 3:3:0
Computer techniques will be introduced and employed. Numerical methods for solving transcendental equations, polynomials, simultaneous linear algebraic equations and partial differential equations. Monte Carlo method, random numbers and simulation of engineering systems will be introduced.
May be repeated one time for graduate credit with prior approval where course content varies.

5331 Biological Wastewater Treatment 3:3:0
Principles of treatment for domestic and industrial wastewaters with emphasis on process kinetics and biological action.

5332 Similitude or Model Design 3:3:0
Dimensional analysis, data processes, prediction equations or model design. Possible models studied include structural facilities, fluid flow under ground and/or surface conditions, landfill/building/foundation design/construction, and lechate collection/tide gauge systems. Consideration of environmental effects. May be repeated for credit when subject matter varies.

5333 Operations Research II 3:3:0
Advanced topics in operations research-linear programming, non-linear programming, advanced topics in queuing and inventory theories, sensitivity analysis and dynamic programming.
Prerequisite: ENGR 5316 or equivalent.

5334 Waste Minimization 3:3:0
Waste minimization of hazardous waste includes any source reduction or recycling activity that results in volume reduction of hazardous waste or toxicity reduction. Waste minimization practices by major streams are reviewed. Technology and concepts that promote strategies by which waste minimization can be increased are identified.

5335 Mechanical Vibrations 3:3:0
Topics in mechanical vibrations including an introduction to the theory of vibrations, mechanical vibration analysis methods using simulation-based design, mechanical vibration measurement and monitoring, interpretation of vibration measurements data and other mechanical vibration topics as appropriate.

5336 Statistical Decision Making for Engineers 3:3:0
Analysis of data to help the engineer/executive make decisions. Evaluations of performance claims, probability distributions, hypothesis testing, ANOV, design of experiments.

5337 Incineration 3:3:0
An overall view of the incineration principles, equipment and facility design, basic concepts, stoichiometric and thermodynamic considerations for incinerators, air pollution control equipment and economic considerations.

5338 Solid Waste Management 3:3:0
A study of solid waste collection, transfer and disposal systems. Investigation of the reclamation of resources by multiple use, reuse and improvement of existing sources to meet quality requirements.

5340 Foundation Engineering 3:2:3
The practice of geotechnical engineering: subsurface explorations; geotechnical analysis and design of shallow footings, deep foundations, and retaining structures; stability of earth slopes, and soil improvement.

5341 Mass-Transfer Operations 3:3:0
The principles of diffusion and mass transfer are considered. The study of gas-liquid operations includes humidification and design of equipment. Solid-fluid studies include absorption, ion exchange, drying and leaching operations. Less conventional mass-transfer operations are also considered.

5342 Reactor Design for Environmental Systems 3:3:0
Development of the fundamentals for the rate of chemical reactions and biological reactions in homogeneous and heterogeneous systems. Analysis of ideal chemical reactors and their design with application to environmental reactions in the air, water and soil. An introduction to the basic concepts of mathematics modeling. The subject matter is directed toward chemical and petroleum engineering design and operation. Development of models which form the framework of a quantitative and scientific approach to technical problems will be followed by analytical and/or numerical solutions to optimize output and profitability.

5343 Industrial Waste Treatment 3:3:0
Procedures for analysis of the industrial waste problem, methods of collecting experimental data and process design for required treatment. Case studies and special laboratory problems for translating experimental data to prototype design. May be repeated for credit when the subject matter varies.

5344 Electric Power Systems Analysis I 3:3:0
A three-semester sequence, selected from: symmetrical components, impedance and fault-current calculations, load-flow studies, economic operation, stability and control, system modeling, non-fossil fuel energy conversion. Both analytical and digital-computer methods may be employed as appropriate.

5345 Computer Integrated Manufacturing (CIM) 3:3:0
Advanced concepts in computer-aided design and manufacturing to include geometric modeling in a 3D solids environment, analysis of engineering design problems, robotics, computer numerical control, and manufacturing control systems. Course includes a design project.

5346 Digital Signal Processing 3:3:0
Sampling/reconstruction, quantization, discrete-time systems, digital filtering, Z-transforms, transfer functions, digital filter realizations, discrete Fourier transform (DFT) and fast Fourier transform (FFT), finite impulse response (FIR) and infinite impulse response (IIR) filter design, and digital signal processing (DSP) applications.

5348 Advanced Air Pollution Control 3:3:0
Air pollution control and design principles; VOC incineration; gas absorption; air pollution and atmospheric dispersion modeling; particulate matter; cyclones, electrostatic precipitators; fabric filters and scrubbers; control of nitrogen oxides and sulfur oxides.

5349 Production and Inventory Control 3:3:0
Techniques for planning and controlling production and inventories. Forecasting, aggregate planning, materials requirements planning, scheduling, project management.

5350 Hydraulics II 3:2:3
Continuation of CVEN 3350-Hydraulics I emphasizing practical design applications of basic fluid mechanics principles in fluid measurement, machinery, closed conduit flow, open channel flow and hydraulic transients. Presentation of oral and written design reports.

5351 Unit Operations of Environmental Engineering 3:3:0
Theory of fluid and slurry movement under gravity and pressure systems, mixing processes, coagulation and flocculation of chemical treatment, separatory processes including flotation and sedimentation, and gas transfer and absorption of the biological systems. Selected laboratory assignments for model studies of these unit operations.

5352 Advanced Process Control 3:3:0.
Modern control theory concerning state-space formulation, multivariable control, optimal control, and discrete control for lumped/distributed parameter systems is addressed. Applications of control theory and the implementation of control strategies for the chemical processing industries are demonstrated.

5355 Environmental Engineering Systems II 3:3:0
Advanced topics in environmental engineering. Typical topics may include the management of solid waste, flood control systems, and the hydraulic or biological design of municipal and/or industrial treatment facilities. The effects of safety during construction and operations may also be considered. Presentation of oral and written design reports. May be repeated for credit when topics vary.

5357 Process Simulation
Steady state chemical and refining processes simulation using state-of-the-art computer software.

5358 Advanced Process Simulation
In depth coverage of chemical and refining processes using state-of-the-art steady-state computer simulation software. Advanced topics and fundamentals are emphasized.

5359 Dynamic Simulation
Chemical and refining process dynamic simulation using state-of-the-art computer software. Controller installation and central schemes are discussed.

5360 Thermodynamics-Process Industry **3:3:0**
Thermodynamic laws are derived and applied to physical chemical phenomena. Ideal and non-ideal gas, liquid and solid solution behavior are developed for physical and chemical equilibria. Course credit in chemistry is optional.
May be repeated one time for graduate credit, with prior approval, where course content varies.

5362 Remote Sensing **3:2:3**
Design of systems which gather and share data over geographically scattered remote locations. Real-time access, monitoring, diagnosis, and control of remote locations. Communication systems design using radio-telemetry, satellite, and dial-up networks. Data interface to the Internet. Information sharing through dynamic-web site design.

5366 Advanced Engineering Economy **3:3:0**
Special economic analyses based on risk, uncertainty and other probabilistic considerations. Bayesian attacks, influence of perfect information, competitive decisions and decisions under pressure.

5369 Engineering Management **3:3:0**
Prepares students for a transition from engineering to management. Topics include: proposal writing, project negotiations, ethics, project management, teams and culture.

5370 Thermodynamics-Energy Conversion **3:3:0**
The basic laws of thermodynamics are derived and applied in the analysis of power cycles, energy conversion and specific processes. Basic principles of irreversible thermodynamics and phenomenological relations are presented. An elementary statistical approach is presented with simple examples of the calculation of the transport properties of gases, liquids and solid.
May be repeated one time for graduate credit, with prior approval, where course content varies.

5371 Transportation and Urban Engineering **3:3:0**
History and development of transportation and/or urban facilities including, if applicable, the utilization of GIS and/or CAD computer systems. Fundamentals of urban systems, including, if applicable, drainage requirements and the location, design, construction, and maintenance of highways and pavements. May be repeated for credit when subject matter varies.
Prerequisite: Senior standing.

5372 Operations Research **3:3:0**
An introduction to the construction of mathematical models for organizational systems to aid executives in making decisions. Linear programming, network flow programming, dynamic programming, queuing theory.

5373 Advanced Electromagnetics **3:3:0**
Graduate-level topics in electromagnetic theory and applications. Assumes a grounding in electromagnetic fields and waves and methods for the solution of boundary value problems.
Prerequisite: ELEN 3371 or equivalent.

5374 Human Factors Engineering **3:3:0**
Convey human factors considerations in design and research. Applications include control panels, audio and video displays, computer work stations, special accommodations.

5375 Simulation of I.E. Systems **3:3:0**
Introduction to concepts of simulation modeling and analysis with application to manufacturing and service systems. Students will apply problem solving and process analysis techniques to an industrial engineering problem and propose an improved systems design.
Prerequisite: Work Design, Probability and Statistics

5376 Occupational Ergonomics **3:3:0**
Application of ergonomics to the design and/or redesign of jobs, manufacturing workstations, and other work environments to achieve increased profitability and reductions in injury/illness.

5380 Discrete Control Systems **3:3:0**
Principles of digital and sampled-data control systems. Analysis of response, and stability. Analytical compensation by Z-transform and other methods. Extensive use of computers.
Prerequisite: EGR 5306.

5381 Building Design/Construction **3:3:0**
Advanced topics in Building and/or Construction Systems. Topics may include the treatment of contaminated soils, and the effects of various static, dynamic, hydraulic, and wind loads on structural frames and foundations. Environmental, social, and safety requirements may be taken under consideration. Presentation of oral and written design reports. May be repeated for credit when topics vary.

5382 Computer Networks Design 3:2:3
Study of network hardware and transmission media, design of computer networks, simulation of local area networks, wireless computer networks. Study of Internet architecture and digital transmission hierarchy, such as ISDN, DSL, T1-T4 networks and SONET.

5383 Instrumentation 3:3:0
Unified methods for the design of signal conditioning circuits between sensors and computers. Accepted practice for sensor-based microprocessor and microcomputer data acquisition and processing systems instrumentation amplifier circuits.

5384 Virtual Systems Design 3:2:3
Design of virtual systems that replace complex hardware systems such as measurement systems, analyzers, and controllers. Object-oriented-programming (OOP) tecbniques that realize true representations of hardware. Design of Windows engineering applications.

5385 I.E. Design 3:1:6
Students design systems to solve a problem or problems typical of those encountered by practicing industrial engineers. Students work in teams to formulate issues, propose solutions, and communicate results in formal written and oral presentations.

5386 Industrial and Product Safety 3:3:0
Convey an appreciation of the social and economic impact of industrial accidents. Provide general rules and checklist to help design and maintain a safe work place. Introduces the role of government and voluntary standards in process and product design safety.
Prerequisite: Work Design

5387 Special Topics 3:3:0
The course is designed to meet special needs of students. Each topic is offered on an irregular schedule as the demand requires. Sample topics include: (1) Kinetic theory of gases; (2) Transients in compressible flow; (3) Non-linear vibrations; (4) Protective construction; (5) Transients in engineering systems; (6) Stagewise mass transfer; (7) Nuclear engineering; (8) Hybrid and analog computers; (9) Adaptive control; (10) Optimization techniques; (11) Sampling techniques.

5388 Special Topics 3:3:0
The course is designed to meet special needs of students. Each topic is offered on an irregular schedule as the demand requires. Sample topics include: (1) Kinetic theory of gases; (2) Transients in compressible flow; (3) Non-linear vibrations; (4) Protective construction; (5) Transients in engineering systems; (6) Stagewise mass transfer; (7) Nuclear engineering; (8) Hybrid and analog computers (9) Adaptive control; (10) Optimization techniques; (11) Sampling techniques.

5389 Computer Aided Design 3:2:0
Course stresses three-dimensional parametric solids modeling applications. Elementary and advanced solids modeling techniques, including assembly of multi-component parts, are introduced.

5389 CAD 3:3:0
The analysis and the utilization of state of the art computer hardware and software to solve the problems associated with the utilization of computers in both graphics and engineering design problems.
Prerequisite: Graduate standing in the College of Engineering and consent of the instructor.

5390-5391 Thesis 6:A:0
Prerequisite: Approval of graduate advisor. Must complete both for required 6 credits.

5393 Introduction to VLSI Design 3:3:0
Study of the principles of basic microchip design. Use of several CAD tools, with hands-on experience in implementing Very Large Scale Integration (VLSI) circuits. Detailed study and computer simulation of MOS-capacitance models.

5395 Computer Hardware Description Languages 3:3:0
A CAD method of design of digital hardware using Computer Hardware Description Languages (CHDLs). Implementation of combinational logic units, microprocessors and microprogrammed processors.

5397 Fault Diagnosis & Fault Tolerant Design 3:3:0
Study of several test generation algorithms for combinational circuits such as Boolean Difference, D, PODEM, and FAN Algorithms. Test generation techniques for RAMS and microprocessors. Various methods for Design for testability and Fault Tolerant Design.

5398 Reinforced Concrete Design 3:2:3
The design of structural concrete members based upon working stress and strength design methods. Study of standard specifications. Introduction to pre-stressed concrete.

5399 Structural Steel Design 3:2:3
The design of buildings and bridge components according to standard specifications. Application of load and resistance factor and allowable stress design methods. Introduction to plastic design of steel structures.

6110 Professional Seminar 1:1:0
Advanced topics suitable for research along with research procedures will be discussed. Field study organization and content together with doctoral research problems and progress will be presented. Topics will vary each semester and course may be repeated for credit. Registration and completion for three semesters is required of all doctoral candidates.

6310 Design Projects 3:A:0
May be repeated for credit when the subject matter varies.
Prerequisite: Admission to candidacy.

6313 Digital Filters 3:3:0
Introduction to digital filtering. Recursive, non-recursive filters and their design. Butterworth, chebysbev filters.
Prerequisite: Proficiency in computer programming.

6314 Computer Control and Instrumentation 3:3:0
Basic Instrumentation principles. Signal acquisition and conditioning. Computer control using digital signal processing techniques in time and frequency domains. Programming project assignments involving implementation of basic instrumentation and computer control methods.

6320 Justification of Engineering Projects 3:3:0
The preparation of proposals for advanced engineering work. The student will be given individual assistance in preparing a proposal for his field study.
Prerequisite: Approval of advisory committee.

6339 Hazardous Waste Management 3:3:0
The design, operation and applicability of standard destruction and detoxification technologies will be presented. The various types of incineration, thermal, biological, physical and chemical treatment methods will be included, as well as the technologies now in the later stages of research and development. Emphasis will be on applicability and functional design as opposed to detailed design.

6340 Distillation 3:3:0
Material and energy-balance relationships are reviewed for multicomponent fractionation equipment and for batch stills. Various plate designs are presented from the standpoint of two-phase hydraulics and mass-transfer efficiency.

6343 Reactor Design 3:3:0
Emphasis is placed on complex reactor design. Attention is devoted to chemical kinetics and catalysis as well as to the engineering aspects of both homogeneous and heterogeneous reactors. Mixing problems are discussed in terms of residence time distribution. The importance of temperature effects is stressed.

6344 Multimedia Transport of Pollutants 3:3:0
Chemical transfer rates between air and water, water and soil/sediment, as well as air and soil. Intraphase pollutant processes in atmosphere, surface water, and ground water. Description of the dispersion model and the meterological effects on pollutant transport. Discussion of partition to biomass and exposure pathways.

6349 Engineering Applications of AI/Expert Systems 3:3:0
An in-depth study of the effective utilization of Artificial Intelligence/Expert Systems as applied to engineering problems. Projects assigned will involve the design and development of software systems to solve discipline-specific problems using available AI languages and expert system shells.

6358 Industrial Automation and Process Control 3:2:3
Design and develop industrial automation and process control (IAPC) systems and processes. Distributed control system design, implementation of real-time process databases and man-machine interface. Study of modern techniques for process control and management. This is a graduate engineering Core course available to all engineering graduate students.

6359 Computer Methods in Statistical Quality Control
Methods of dealing with Statistical Quality Control problems such as control charts, test, tests of hypothesis, analysis of variance, regression analysis and design of experiments will be employed using one or more software packages. Emphasis will be placed on problem definition, model selection and interpretation of output for decision making and process improvements.
Prerequisite: A course in probability and statistics

6368 Artificial Neural Networks & Fuzzy Logic 3:3:0
Study of various Artificial Neural Network architectures for real-world applications. Massive parallel computation, fault tolerance and adaptation characteristics. Emphasis on computer simulation of ANN-architectures and their applications.

6369 Computer Methods of Engineering Optimization 3:3:0
Formulation, solution and implementation of optimization models such as linear programming, dynamic programming, integer programming, quadratic programming, convex programming, geometric programming and unconstrained optimization for analyzing complex systems problems in industry. One or more software packages will be used to execute the algorithms presented throughout the course.
Prerequisite: A graduate course in operations research.

6387 Hydraulics of Environmental Systems 3:3:0
Hydraulic design of municipal utilities including storm water and waste water collections systems, water distribution networks and treatment plant facilities.

6388 Computer Methods of Engineering Project Management 3:3:0
Principles governing the effective and efficient management of engineering projects including the application of comprehensive planning, scheduling and cost estimation procedures. Utilization of various computer methods and systems will be emphasized.

6389 Computer-Aided Software Engineering 3:3:0
Analysis and utilization of computer software to solve engineering design problems. Applications on the CAD/CAE and various other systems will be emphasized.

6394 CAD Tools for VLSI Design
Study of the principles involved in the development of a variety of Computer Aided Tools used in the design of Very Large Scale Integrated circuits. Implementation of the tools with programming assignments.

6601 Engineering Practice 6:A:0
An internship period under personal supervision. Approval must be obtained from the student's graduate committee. Usually, a formal proposal will be required. May be taken for either six or 12 hours credit per semester. Must be repeated for credit until field study is completed. Total credit: six semester hours per section.

6602 Engineering Practice 6:A:0
An internship period under personal supervision. Approval must be obtained from the student's graduate committee. Usually, a formal proposal will be required. May be taken for either six or 12 hours credit per semester. Must be repeated for credit until field study is completed. Total credit: six semester hours per section.

Department of Computer Science

The Department of Computer Science offers a program of study leading to the Master of Science degree in Computer Science. Both thesis and non-thesis options are available.

The objective of the master's degree is to produce professional computer scientists capable of contributing technically to the basic core areas of computer science as well as to application areas. A mixture of courses, laboratory, and research work in the program is designed to place graduates at the forefront of technical excellence.

Research

The department has a broad-based research program. Current faculty research interests include parallel and distributed processing, artificial intelligence, data and knowledge bases, computational complexity, image processing, operating systems and graphics.

Computing Laboratories

The Department has six laboratories as well as one room of terminals remotely attached to the campus mainframe computers (two DEC Alpha machines running OPENVMS and UNIX) housed in the Cherry Building. The labs operate on Ethernet networks. Included in the equipment are 90 Pentiums, four multimedia Pentium IIIs, a network of Sun workstations, three Intergraph machines for video editing, and four Silicon Graphics workstations. The Pentiums are attached to two NT servers, and two switches provide 10 Megabit/second transmissions to each desktop and to the server on the campus backbone. Direct access to the Internet and the World Wide Web is available from nearly all of the machines. Equipment and facilities offer students experience using OPENVMS, UNIX, Linux and Windows NT as well as several programming languages. A rich variety of application software packages such as Maple, Matlab, and Oracle are located on our servers for student use in classes and research. The labs are open to all students on campus.

The department enjoys a friendly working relationship with local and national companies. The department's Industrial Advisory Council is composed of representatives from regional/state industries and high-tech firms.

Admission to the Graduate Program

Students seeking admission to this program must meet all general requirements of the College of Graduate Studies as listed in the Bulletin of the College. Additional requirements are as follows:

1. In most cases, a student must have a minimum combined score of 1000 on the Verbal and Quantitative sections of the GRE and a minimum grade point average of 3.0 on the last 60 hours of undergraduate course work.
2. A ranking in the 34th percentile of the verbal portion of the GRE; for applicants whose native language is not English, a TOEFL score of at least 550 also is required;
3. Completion of a sufficient amount of prior work in the field of computer science including courses such as COSC 2371, COSC 3306, ELEN 3331, COSC 4310, COSC 4302, COSC 4307 or COSC 3302 or equivalents; undergraduate and graduate leveling sequences are available (COSC 5341 and COSC 5342 have been designed for students who satisfy conditions 1 and 2 but are deficient in computer science course background);
4. Students with minor deficiencies may be admitted to the program if these deficiencies can be removed within approximately one long semester. However, major deficiencies must be removed before a student is admitted to the degree program; and
5. At least 15 hours of mathematics including differential and integral calculus, discrete mathematics and two other courses selected from statistics, linear algebra, abstract algebra, numerical analysis and differential equations.

Students not satisfying both conditions 1 and 2 will not be admitted to the computer science program. Those students who satisfy both conditions 1 and 2 but who are deficient in other areas may be provisionally admitted to the program and may enroll in graduate-level courses.

Admission to Candidacy

After removal of all deficiencies and upon completion of an additional 12 hours of graduate credit, the student is required to submit a formal degree plan to the Computer Science Graduate Adviser and the Dean of the Graduate School. Every student must submit a G-3 form to the GRADUATE STUDIES office before she/he completes the final nine hours of graduate credit in the degree plan.

Admission to candidacy is granted by the Dean of the Graduate School after the degree plan has been approved.

Degree Requirements

A. Core Course Requirement (6 courses; 16 semester hours)

Students in the master's program in Computer Science are required to establish competence in several areas considered basic to the field of Computer Science. At least 28 hours of graduate work in computer science, and the thesis or project, are required for a master's degree in Computer Science. The degree includes two specialization areas in computing (6 to 9 hours per specialization) chosen by the student together with the academic adviser. (Specialization Areas are listed below). One of these areas of specialization may be an area of computer applica-

tions outside of the department. In order to qualify for the master's degree, the student must earn a grade of B or better in each of the core courses. The Core Requirement consists of the indicated number of courses in each field listed below.

Number of Courses	Area of Computer Science	Courses
1	Graduate Seminar	COSC 5100
1	Analysis of Algorithms	COSC 5313
1	Advanced Operating Systems	COSC 5302
1	Computer Networks	COSC 5328
2	Languages & Computation Theory	COSC 5319 or COSC 5320 or COSC 5330

B. Option I (Thesis)
   1. Completion of the core requirements.
   2. Completion of two areas of computer specialization. Specializations outside of the area of computer science are chosen by the student under the guidance of the student adviser from the restricted list of courses at the end of the computer science course listings in the catalog. At least a "B" (3.0) average must be maintained in the specialization areas. One "C" is permitted in these areas combined if it is balanced by an "A" in one other graduate level course.
   3. Completion of COSC 5390 and 5391 and submission of an acceptable thesis.
   4. Completion of a total of 34 graduate semester hours.
   5. Successful oral defense of the thesis. If failure occurs, the defense may be repeated. A second failure will cause the student to be dropped from the degree program in Computer Science.

C. Option II (Non-thesis)
   1. Completion of the core requirement.
   2. Completion of two areas of computer specialization. Specializations outside of the area of computer science are chosen by the student under the guidance of the student adviser from the restricted list of courses at the end of the course listings in the catalog. At least a "B" (3.0) average must be maintained in the specialization areas. One "C" is permitted in these areas combined if it is balanced by an "A" in one other graduate level course.
   3. All non-thesis students must take and satisfactorily complete COSC 5369. This course consists primarily of a significant research project and the submission of a written professional report.
   4. Completion of a total of 37 hours in graduate level courses.
   5. Successful completion of an eight hour comprehensive examination, which may be written, oral, or a combination of both upon determination of the Computer Science faculty. This comprehensive exam will cover the four core areas and may also include a programming component. Materials to help the student prepare for the comprehensive examination will be posted in the departmental office at least one month prior to the scheduled testing time. Failure to pass this examination in two attempts will result in the student being dropped from the degree program in Computer Science.

COMPUTER SCIENCE SPECIALIZATION AREAS:

Area	Courses
Artificial Intelligence	CPSC 5370, COSC 5312, COSC 5318
Graphics	COSC 4319, CPSC 4330*, COSC 5321, COSC 5335, COSC 5339
Simulation/Modeling	COSC 5309, COSC 5336, COSC 5402
Software Engineering	CPSC 5360, COSC 5331
Database	CPSC 5340, COSC 5311, COSC 5332, COSC 5333
Architecture/Algorithms	COSC 5308, COSC 5310, COSC 5350, COSC 5313

*Course numbers beginning with 4 are not graduate courses.

Graduate Record Exam (GRE) – Advanced Computer Science Section:

Students are expected to submit scores from the advanced Computer Science section of the Graduate Record Examination during their last semester of course work toward the degree.

Academic Standards

If a student's GPA on all graduate and/or deficiency courses falls below 3.0, the student will be placed on probation the following semester. Students who cannot raise their GPA above 3.0 during that semester will be dropped from the program.

Alternate Work/Study

An enrolled student may alternate between study and employment as a formal part of her/his training. While working, the student might perform research and collect data for his/her thesis at a facility that offers technology not available at Lamar University. A letter from the student's academic advisor explaining why he or she is unable to conduct research on campus and must go to another research facility is required. Only students doing a thesis are eligible for alternate work/study.

Computer Science Courses (COSC)

5100 Graduate Seminar **1:1:0**
Topics include the scientific method and research process, library utilization and components and organization of various types of research papers. Writing exercises on the latter topics. Preparation, formal written report and presentation on a research topic.
Prerequisite: Admission to the M.S. program in Computer Science.

5302 Advanced Topics in Operating System **3:3:0**
Current research issues and advanced topics involving both the principles and pragmatics of operating systems specification, design and implementation. Study of concurrent processes, support structures for modular programming, resource allocation and protection, telecommunications, networks and distributed processing.
Prerequisite: CS 4302 or equivalent.

5310 Advanced Topics in Computer Architecture **3:3:0**
Advanced topics in computer architecture such as RISC vs CISC, pipelined processors, vector processors, HDLs, language directed architectures and neural nets.
Prerequisite: CS 4310 or equivalent.

5311 Advanced Topics in Database Design **3:3:0**
Data models, distributed databases, special databases, statistical databases, database machines, knowledge bases, database design theory and self-documenting databases.
Prerequisite: CPSC 4340/CPSC 5340 or equivalent.

5312 Advanced Topics in Artificial Intelligence **3:3:0**
Topics include, but are not limited to, knowledge representation, distributed cooperative AI, intelligent tutoring systems and semantic representation in natural language processing.
Prerequisite: CPSC 5370 or equivalent.

5313 Analysis of Algorithms 3:3:3
Topics on what can and cannot be proven about computational complexity including algorithm design methodologies.
Prerequisite: COSC 2371 or COSC 4307 or equivalent.

5318 Design and Implementation of Expert Systems 3:3:0
Problems in knowledge acquisition, knowledge representation issues, representation of meta-knowledge, use of statistical measures to limit search of the knowledge base, and knowledge verification.
Prerequisite: CPSC 2371 or equivalent.

5319 Advanced Topics in Compiler Construction 3:3:0
An introduction to the major methods used in compiler implementation. The parsing methods of LL(k) and LR(k) are covered as well as finite state methods for lexical analysis, symbol table construction, internal forms for a program, run time storage management for block structured languages and an introduction to code optimization.
Prerequisite: COSC 4307 or COSC 3302 or equivalent.

5320 Formal Methods in Programming Languages 3:3:0
Data and control abstractions are considered. Advanced control constructs including backtracking and non-determinism are covered. The affects of formal methods for program description are explained. The major methods for proving programs correct are described.
Prerequisite: COSC 4307 or COSC 3302 or equivalent.

5328 Computer Networks 3:3:0
A study of networks of interacting computers. The problems, rationales and possible solutions for distributed databases will be examined. Major national and international protocols including SNA, S.21 and X.25 will be presented.
Prerequisite: (CPSC 3310 or ELEN 3331), COSC 5341, and COSC 4302 or equivalent.

5330 Advanced Topics in the Theory of Computation 3:3:0
A survey of formal models for computation. Includes Turing Machines, partial recursive functions, recursive and recursively enumerable sets, and the recursive theorem, abstract complexity theory, program schemes and concrete complexity.
Prerequisite: COSC 3302 or COSC 4307 or equivalent.

5331 Advanced Software Engineering 3:3:0
Topics not limited to software development methodology, verification and reliability, software quality assurance and productivity, software engineering economics, models and metrics for software management and engineering, human performance engineering and software configuration management and control.
Prerequisite: CPSC 5360.

5332 Object Oriented Database Management Systems 3:3:0
Introduction to object oriented databases. Topics including introduction to object oriented programming via SMALLTALK, the object-oriented data model, interface for defining and manipulating object oriented databases and other databases. Semantics and changes to the schema, query model, authorization model, architecture and implementation issues. Survey of current object oriented database systems.
Prerequisite: CPSC 5340.

5333 Distributed Computer Systems 3:3:0
The study of the characteristics of a collection of autonomous computers linked by a network, with software designed to produce an integrated computing facility that intends to present a transparent virtual machine to application programmers.
Prerequisite: COSC 5328 and CPSC 5340 or equivalent or advisor approval.

5335 Advanced Topics in Computer Graphics 3:3:0
The course focuses on topics current to the field and includes, but is not limited to, areas such as design and construction of computer graphics systems, both software and hardware, the theory and use of color and shading, and algorithms for solid object modeling.
Prerequisite: COSC 5321 or equivalent.

5336 Advanced Simulation and Modeling 3:3:0
Current topics in both simulation methodology and applications. Distributed simulation, simulation support tools, object oriented simulation and artificial intelligence and simulation.
Prerequisite: COSC 4309, (MATH 1342 or MATH 3370), and MATH 2414 or equivalent.

5339 Visual Languages 3:3:0
Languages for indexing and retrieving images such a motion pictures, satellites, video images, etc. Iconic representation, pattern matching algoritbms, visualization of images, object oriented databases, semantic data modeling, icon systems query processing, image compression and architecture for query processing.
Prerequisite: CPSC 4330.

5340 Special Topics 3:3:0
Special topics in all areas of Computer Science with emphasis on topics not covered in other courses. May be repeated for credit when topics vary.
Prerequisite: consent of department chair.

5341 Problem Solving in High-Level Language **3:3:0**
Algorithms, pseudocode, structured techniques of problem solving and program design using high-level programming languages. Data sorting and searching techniques. Object-oriented design.
Prerequisite: A first programming language, MTH 1345, and MTH 234 or MTH 3370. Leveling course not for graduate credit in MSCS degree.

5342 System Design and Programming **3:3:0**
Principles of computer systems analysis and design, system hardware and software characteristics. Data representation and programming in assembly language. Computer storage structures, storage allocation and management. Design of typical system programs such as assemblers, compilers and operating systems, addressing techniques and core management, file system design and management.
Prerequisite: COSC 5341. Leveling course not for graduate credit in MSCS degree.

5350 Parallel Programming and Algorithms **3:3:0**
Taxonomy of parallel computers, shared-memory vs. message-passing architectures, theoretical models, parallel algorithm design strategies, parallel data structures, automatic parallelization of sequential programs, communication, synchronization and granularity.
Prerequisite: COSC 5313 or equivalent.

5360 Internship I **3:3:0**
This course provides practical experience with a company engaged in work related to a career in computer science. The purpose is career development before graduation. The course requires that the student obtain permission for Curricular Practical Training (CPT) from the International Student Office.
Prerequisite: Approval of department chair.

5361 Internship II **3:3:0**
A continuation of COSC 5360 for a second semester.
Prerequisite: Approval of department chair.

5369 Graduate Project **3:3:0**
Independent study and research of a specific problem in a field of computer science or its application. A report is required defining the problem and developing a solution. The work may be supervised by any member of the graduate faculty.
Prerequisite: 10 hours of graduate computer science credit including COSC 5100 with grades of A or B; prior approval of written plan by the faculty supervisor and by the computer science department chair. May not be repeated for credit.

5402 Pattern Recognition and Image Processing **4:3:3**
Principles and pragmatics of pattern recognition, digital image processing and analysis. Statistical pattern recognition: complete vs. incomplete approach (via supervised vs. unsupervised learning). Structural pattern recognition. Image processing: image acquisition and digitization, making decisions based upon the available features. Image segmentation (by clustering, textured images, range images and multispectral images) and registration.
Prerequisite: CPSC 5370 and advanced statistics.

5390-5391 Thesis **3:3:0**
Independent research of a specific problem in a field of computer science. The work will be supervised by a member of the graduate faculty of the Computer Science Department. To be scheduled only with the consent of the department. Six hours credit required. No credit assigned until thesis has been completed and filed with the graduate dean. Continuous enrollment required once work on thesis has begun.
Prerequisite: Consent of Department Chair.

Computer Information Sciences (CPSC)

5320 Communication and Computer Networks **3:3:0**
Study of problems and limitations associated with interconnecting computers by communication networks. Quality of service, message and packet switching networks, network topology, routing, flow control, capacity assignment, protocols, wireless technology.
Prerequisite: COSC 5341 and COSC 4302.

5330 Advanced Topics in Multimedia Processing **3:3:0**
Television style viewing and sound interfacing to computer systems. Software and architectural interconnection requirements of digital interactive video and audio technology. Graphical user interface. Definition, examples, application, review of major implementations, and architecture of multimedia systems. Voice technology: synthesis, recognition and response. Student projects.
Prerequisite: A high level programming language.

5350 Advanced Topics in Applications of Expert Systems 3:3:0
Theory and programming of expert systems. Introduction to expert systems. Introduction to a particular expert system, pattern matching, control techniques, efficiency in rule-based language, and expert system examples. A student term project is assigned.
Prerequisite: A high level programming language.

5360 Topics in Software Engineering 3:3:0
Systems analysis, software requirements analysis and definition, specification techniques, software design methodologies, performance measurement, validation and verification and quality assurance techniques. Programming in an object oriented language.
Prerequisite: A high level programming language.

5370 Introduction to Artificial Intelligence 3:3:0
Introduction to concepts and ideas in artificial intelligence. Topics include search techniques, knowledge representation, control strategies and advanced problem-solving architecture.
Prerequisite: A high level programming language and COSC 2371.

Department of Mathematics

The Department of Mathematics offers a program of study leading to the Master of Science degree in Mathematics. It is designed to train students either for a professionally oriented career in industry or in government, for further graduate work in mathematics or to provide depth and breadth in Mathematics Education.

Opportunities in the areas listed above, for students with a Master of Science in Mathematics, are numerous. Such opportunities exist in all areas of applied mathematics including computer science, statistics, operations research, numerical analysis, mathematical physics, administration/management science, engineering, secondary and elementary school teaching. These supporting areas are just a sample of excellent job opportunities for the graduate.

The department spends considerable time advising students in the Master's program. Once a student is admitted, the student's advisor will individually tailor the student's program to meet the needs of the supporting areas mentioned above or other areas of interest to the student. Consequently, students with a Bachelor's degree in Mathematics, Computer Science, Engineering, any of the sciences or Secondary Education will find appropriate opportunities in this M.S. program. Students will find a wide variety of courses listed in the program to make the above supporting areas available to them.

Those seeking admission to this program must satisfy the requirements as indicated below:

Admission to the Program

In order to be admitted to the Graduate Degree Program, a student must

1. Meet the general requirements as set forth in this catalog for admission to the College of Graduate Studies.
2. Successfully complete 27 semester hours of undergraduate mathematics including courses equivalent or comparable to the following: linear algebra, differential equations, advanced calculus, modern algebra and statistics.

Final approval as to what course work is acceptable toward admission to the graduate degree program lies with the graduate advisor and the department head. A student may be admitted conditionally to the graduate degree program, but is required to remove any deficiencies in undergraduate mathematics.

Admission to Candidacy

In order to be admitted to candidacy a student must

1. Successfully complete 12 semester hours of approved graduate work in mathematics.
2. Remove all deficiencies in mathematics designated by the Graduate Advisor and the Department Chair.
3. Satisfy the general Admission to Candidacy requirements as set forth in this catalog.

Completion of the Program

In order to complete the M.S. program a student must

1. Take the Advanced Mathematics section of the Graduate Record Examination and have the score reported to the Graduate Advisor.
2. Complete one of the two following programs:
   a. Complete at least 24 hours of graduate course work, write a thesis acceptable to the student's graduate committee, and satisfactorily defend the thesis orally before the graduate committee.
   b. Complete at least 36 hours of graduate course work and satisfactorily complete an examination over the course work before the student's graduate committee.
3. Include at least three courses from among the following:

MATH	5310	Theory of Functions of Real Variables
MATH	5320	Modern Algebra
MATH	5340	Topology
MATH	5312	Complex Variables **or** 5350 Complex Variables

Mathematics Courses (MATH)

5301 Foundations and Logic for Teachers 3:3:0
Introduction to logic, review of set operations, relations and functions, proof techniques.
Prerequisite: Graduate standing.

5302 Higher Geometry for Teachers 3:3:0
An axiomatic and set-theoretic treatments of geometry and coordinate geometry.
Prerequisite: MATH 2414 or its equivalent.

5303 Modeling Theory 3:3:0
Study of techniques of building and applying mathematical models, applications in biology, ecology, economics and sociology.
Prerequisite: Graduate standing and Mathematics 3401.

5304 Functional Analysis 3:3:0
Study of linear topological spaces, convexity, Hilbert spaces, Banach spaces, applications.
Prerequisite: Graduate standing and Mathematics 3380.

5306 Advanced Problem Solving for Teachers 3:3:0
Study of the role of problem solving techniques in solution and posing of problems and the role of technology in problem solving, mathematical modeling.
Prerequisite: MATH 2414 or its equivalent.

5307 Linear Algebra and Higher Algebra for Teachers 3:3:0
Vectors, matrices, determinants and their applications, introduction to groups and rings.
Prerequisite: MATH 2414 or its equivalent.

5308 Fourier Analysis 3:3:0
Expansion of functions in Fourier series, orthogonal sets of functions, orthonormality, Fourier integrals, approximations.
Prerequisite: MATH 3401.

5309 Advanced Calculus and Analysis for Teachers 3:3:0
Intensive review of theory of sequences and series, study of differentiation and the Riemann integral.
Prerequisite: MATH 2414 or its equivalent.

5310 Theory of Functions of Real Variables 3:3:0
Analytical functions, pathological functions, set functions, Riemann integral, measure theory, Lebesgue integral, Riemann-Stieltjes and Lebesgue-Stieltjes integral.
Prerequisite: Graduate standing and Mathematics 3380.

5311 Numerical Analysis 3:3:0
Solutions of ordinary and partial differential equations, approximation of functions, quadrature, and splines.
Prerequisite: Graduate standing, Mathematics 4315 or its equivalent, and some knowledge of computer programming.

5312 Complex Variables 3:3:0
Conformal mapping and analytic continuation, calculus of residues, and applications.
Prerequisite: Graduate standing and Mathematics 4310 or its equivalent.

5315 Numerical Analysis 3:3:0
Algorithms for solving linear and non-linear equations and systems thereof. Interpolating polynomials, finite difference approximations of derivatives, techniques of numerical integration. One-step and multi-step methods for solving ordinary differential equations and systems thereof.
Prerequisite: MATH 2415 and COSC 1373, or its equivalent.

5316 Linear Programming 3:3:0
Linear programming, unconstrained and constrained optimization, Lagrange multipliers, Newton's method, steepest descent, convex programming.
Prerequisite: MATH 2414 and MATH 2318 or MATH 3401.

5320 Modern Algebra 3:3:0
Groups, rings and the theory of fields. The theory of fields includes the study of subfields, prime fields, algebraic fields extensions and Galois fields.
Prerequisite: Graduate standing and Mathematics 3350 or its equivalent.

5330 Linear Algebra II 3:3:0
Vector-spaces, linear transformations, matrices, determinants, Eigenvalues, Eigenvectors, canonical forms, bi-linear mappings and quadratic forms.
Prerequisite: MATH 2414 and MATH 2318.

5331 Special Topics 3:3:0
Advanced topics in mathematics to suit the needs of individual students. Course may be repeated for a maximum of six semester hours credit when the topic varies.
Prerequisite: Graduate standing and consent of instructor.

5335 Topics in Mathematics 3:3:0
Topics include mathematical logic, group theory, field theory, approximation and interpolation, game theory and calculus of variations.
Prerequisite: Graduate standing and consent of instructor.

5340 Topology 3:3:0
Topological spaces, metric spaces, compact spaces, embedding, Urysohn's lemma and homotopy.
Prerequisite: Graduate standing and Mathematics 3380.

5350 Complex Variables 3:3:0
Complex numbers, analytic functions, complex line integrals, Cauchy integral formula and applications.
Prerequisite: MATH 2415.

5370 Methods of Applied Mathematics 3:3:0
The Dirichlet problem, solution of boundary value problems, the Bergman Kernel function, method of the minimum integral, applications of conformal mapping.
Prerequisite: Graduate standing and Mathematics 4310 or 5350.

5390-5391 Thesis 6:A:0
Prerequisite: Approval of graduate advisor. Must complete both for required 6 credits.

The following 5000 level engineering courses are also applicable to the Master of Science degree in Mathematics when approved by the departmental graduate advisor.

ENGR 5303 Regression Analysis
ENGR 5305 Reliability
ENGR 5319 Design of Experiments

College of Fine Arts and Communication

The College of Fine Arts and Communication offers programs of study leading to the Master of Arts degree in Visual Art, with either a Studio Art or Art History emphasis; a Master of Science Degree in Audiology and in Speech-Language Pathology; a Master of Science Degree in Deaf Studies/Habilitation; a Master of Music Degree; a Master of Music Education Degree; and a Doctor of Education Degree in Deaf Education. The college also supports some Master of Education degrees with courses from the Department of Art. Persons seeking admissions to these programs must meet the requirements specified by the College of Graduate Studies and the individual department. Admission to a degree program is not an admission to candidacy. Each master's degree program is designed to help students deepen and expand their knowledge and provide them with the opportunity to develop skills and concepts which may be applied to the professional objectives associated with their fields of study. The Doctor of Education in Deaf Education degree program is designed to prepare professionals to serve in leadership positions in the administration of schools and service programs for the deaf/hearing impaired and/or as faculty for universities with Deaf Education training programs.

Department of Art

The Department of Art offers a Master of Arts in Visual Art with an emphasis in either Studio Art or Art History. The Studio Art emphasis offers focused study opportunities in one of eight studio areas: Graduate studios are available. Of particular note, the Art History emphasis offers hands-on research opportunities working with the 19th-century academic paintings housed in the Eisenstadt collection. Part of the permanent holdings of the Dishman Art Gallery, the Eisenstadt collection features works by the American landscapist Thomas Moran and the English portraitist Sir Thomas Lawrence. Both study options provide students with the opportunity to focus and develop skills and abilities in a selected area of study.

Students seeking admission to the degree program must meet the general requirements for admission outlined in this bulletin.

Degree Requirements

Studio Art Emphasis

The Master of Arts degree in Visual Art with a studio art emphasis requires 36 semester hours including 15 hours in the area of specialization, 9 hours of core courses, 6 hours of electives, and 6 hours of thesis. Specialization may be in Fibers, Ceramics, Drawing, Painting, Photography, Printmaking, Sculpture, or Visual Design and Electronic Media. The core program for studio art includes 3 hours of Art History, 3 hours of Seminar in Art Criticism and Aesthetics (5318), and 3 hours of Current Issues and Trends (5301).

Applicants to the degree program in studio art must submit a slide portfolio of 15 works, three letters of recommendation from undergraduate professors, and a letter of intent stating professional objectives to the Department of Art. The slide portfolio should demonstrate competency in the medium of specialization they intend to pursue for the degree. A graduate faculty committee will review applications and portfolios. Applicants will be accepted according to the quality and maturity of the submitted work. Undergraduate course work may be required if the applicant has not earned a Bachelor of Fine Arts degree and/or the entrance portfolio does not demonstrate the knowledge, skills and abilities prerequisite to successful graduate study.

Art History Emphasis

The Master of Arts degree in Visual Art with an art history emphasis requires 36 semester hours of graduate study including 15 hours in art history, 9 hours of core

courses, 6 hours of electives, and 6 hours for writing and defending a thesis. All graduate study must be within the areas of specialization offered by the program. The core program for art history includes 3 hours of Current Issues and Trends (5301), 3 hours of Seminar in Art Criticism and Aesthetics (5318), and 3 hours of Methodology in Art History (ARTS 5308). Reading competency in an approved foreign language to be determined by examination or course work will be required. Graduate courses in the literature of a foreign language, history, or English can be taken as electives and may be required.

Applicants to the degree program with an art history emphasis must submit undergraduate transcripts, a term paper indicating research and writing skills, and three letters of recommendation from undergraduate professors. A graduate faculty committee will review applications and may require undergraduate foundation courses in art history or research methods before admitting the applicant.

Graduate Faculty

Professor Lynne Lokensgard
Art History
Assistant Professor Kurt Dyrhaug
Visual Media/Studio Art
Professor Donna M. Meeks
Studio Art
Associate Professor Steve Hodges
Studio Art
Professor Jerry Newman
Studio Art
Professor Meredith Jack
Studio Art
Professor Keith Carter
Walles Chair, Visual and Performing Arts
Photography
Assistant Professor Prince Thomas
Visual Media/Photography
Assistant Professor Ann Matlock
Art Education/Fibers

Art Courses (ARTS)

The following graduate courses may also be taken to satisfy the specialization area requirements of some Master of Education degree programs.

5301 Issues and Trends in Contemporary Art 3:3:0
A paradigm study of current values, practices and beliefs of the art profession. Exploration of the origins and directions of artistic thought in the 20th century with emphasis on the interaction between the artist and society, the effects of that contact on artistic expression and the nature of the imagery that results from that contact.

5305 Problems in Photography 3:3:3
Advanced research in photographic techniqne and photography as an art medium. May be repeated for credit.

5308 Methodology in Art History 3:3:0
Introduction to methods of art historical research. Special research projects will be required.

5318 Seminar in Art Criticism and Aesthetics 3:3:0
An historical survey of significant written works in the areas of aesthetics and art criticism that have reflected and/or shaped artistic practice of a given period.

5323 Problems in Visual Media 3:3:3
Experimental research in the uses of computers as image making tools. Development of personal imagery through electronic media. May be repeated for credit.

5325 Problems in Drawing 3:3:3
Independent directed study in drawing. May be repeated for credit.

5326 Problems in Painting 3:3:3
Directed independent research leading to the development of a personal direction and statement within painting. May be repeated for credit.

5328 Study in 19th Century Symbolist Art 3:3:0
A study of the Symbolist Movement in European art from 1885-1910. A graduate research project or paper will be required.

5335 Problems in Fiber Crafts 3:3:0
Directed independent research and experiment in the area of fiber crafts. Topics vary by semester. May be repeated for credit.

5338 Study in Renaissance Art 3:3:0
A study of Renaissance art in Europe from the 14th through the 16th centuries. A graduate research project or paper will be required.

5348 Nineteenth Century European Art 3:3:0
A study of the foundations of abstractionism from Neo-Classicism through Post-Impressionism. A graduate research project or paper will be required.

5358 Research in Art History 3:3:0
Directed research in selected topics in Art History. May be repeated for credit.

5365 Problems in Printmaking 3:3:3
Directed independent research and experimentation in methods of printmaking. May be repeated for credit.

5368 Contemporary Art 3:3:0
A critical and historical analysis of painting from 1900 to the present. A graduate research project or paper will be required.

5378 Primitive Art 3:3:0
A study of pre-historic and contemporary tribal art. A graduate research project or paper will be required.

5385 Problems in Sculpture 3:3:3
Directed independent research and experimentation towards the development of a personal direction and statement in sculpture. May be repeated for credit.

5386 Problems in Ceramics 3:3:3
Directed independent research and experimentation with technical and aesthetic issues in ceramics. May be repeated for credit.

5388 Modern Architecture and Sculpture 3:3:0
A study of the development of modern architecture and sculpture from the late nineteenth century to the present. A graduate research project or paper will be required.

5395 Directed Individual Study in Studio Art 3:3:3
Individual study at the graduate level of a specific area within the visual arts field. May be repeated for credit when the subject varies.
Prerequisite: Permission of instructor.

5398 History of Photography 3:3:0
A study of the development and evolution of photography from its invention in 1839 to the present. A graduate research project or paper will be required.

5390-5391 Thesis
Course requirements listed under Thesis Requirements in this catalog. Must complete both for required 6 credits.

Department of Communication Disorders & Deaf Education

The Department of Communication Disorders offers training and Master of Science degrees in three disciplines: audiology, deaf education and speech-language pathology. In addition, a Doctor of Education degree is offered in deaf studies/education.

Master of Science Degree in Audiology and Speech-Language Pathology

Lamar University programs in audiology and in speech-language pathology hold national certification by the American Speech, Language, Hearing Association (ASHA). Students completing master's degrees in audiology or speech-language pathology typically meet the national certification standards of ASHA as well as requirements for state license. Speech-language pathology graduates who meet ASHA and state certification standards are also considered eligible for employment as speech-language pathologists in public schools. Depending on the student's undergraduate program of study, the typical 36-semester-hour master's degree may need to be expanded to accommodate ASHA certification and state licensing requirements. Audiology and speech-language pathology students must complete a minimum of 375 hours of supervised clinical practicum, part of which may be accumulated at the undergraduate level.

Graduates may apply to ASHA for the Certificate of Clinical Competence (CCC) in speech-language pathology or in audiology. These national certifications require the completion of specified course work and clinical practice. Students seeking ASHA certification should obtain a copy of ASHA regulations from a faculty advisor early in their training program.

ASHA standards mandate the passing of national qualifying board examinations for prospective audiologists and speech-language pathologists. Master's students typically take these examinations during their final semester. With the approval of their graduate committee, students who pass the ASHA national boards may be exempt from master's oral and/or written comprehensive examinations.

Master of Science Degree in Deaf Education

Our deaf education program is certified by the national Council on Education of the Deaf (CED) and our graduates are eligible for professional certification through that accrediting agency. In addition, graduates may apply for state license as a teacher of deaf children. The program welcomes deaf graduate students and many of our faculty are themselves deaf. Program graduates are expected to be skilled in sign language and must complete a minimum of 300 hours of supervised practicum with deaf children.

Doctor of Education Degree in Deaf Studies/Education

Lamar University is one of only nine universities in the U.S. offering a doctoral degree in deaf studies/education and addresses a critical national and international shortage of doctoral-trained educators of the deaf. Graduates of the doctoral program will take leadership positions in schools for deaf children or become teacher trainers in university settings. Both deaf and hearing applicants are accepted.

Admission

Applicants for admission to master's degree programs in the Department of Communication Disorders (CMDS), except for students who are deaf (see below), are ranked for admission based on the following criteria.

1. A formula established by the Graduate Council. This formula is calculated based on (GPA x 200) + Verbal GRE score + Quantitative GRE score. The formula score must be greater than or equal to 1350
2. relevance of the undergraduate training, and
3. letters of support

In addition, applicants for the deaf education program must submit an essay which includes their philosophy of education and professional goals. The essay will be used to identify writing ability required for successful completion of their graduate program.

Applicants for the doctoral program in deaf studies/education must have a master's degree in deaf education or a related field and have completed three years of professional experience with deaf or hearing-impaired children and/or adults. Hearing applicants must have a GRE minimum combined (verbal + quantitative) score of 1000 with a 500 minimum score for each section (verbal + quantitative). Applicants must submit an essay including their philosophy of education and professional goals. The essay will be used to identify writing ability required for successful completion of the doctoral program.

Deaf applicants for the master's and doctoral degrees in deaf studies/education who have a severe to profound hearing loss acquired congenitally or prelingually will be considered on an individual basis and need not submit GRE scores. In lieu of the GRE score these deaf applicants must submit above-average performance intelligence scores (preferably the performance scale of the WAIS-R) and university grades, pass an interview with our deaf education faculty, and demonstrate adequate literacy and communication skills for graduate training. Literacy in this case includes both the reading and writing of English, but not necessarily equivalent to hearing norms. Communication skill may be demonstrated in sign and/or speech.

Graduate Faculty

Professor Jean Andrews
Deaf Education
Assistant Professor Connie Barker
Audiology
Assistant Professor Tressa Friend
Speech-Language Pathology
Assistant Professor Mary Ann Gentry
Deaf Education
Instructor Kimberly Lunato
Speech-Language Pathology
Assistant Professor Sumalai Maroonroge
Audiology
Professor Gabriel A. Martin
Deaf Education
Assistant Professor Zanthia Smith
Deaf Education
Instructor Jeri Sullivan
Speech-Language Pathology

Communication Disorders and Deaf Education Courses (CMDS)

5250 Seminar in Communication Disorders Research
Provides direct contact with research faculty during the research project development.

5301 Aphasia and Neurogenic Disorders 3:3:0
Theory and treatment for organic speech disorders of neurologic origin.

5302 Stuttering 3:3:0
Nature, evaluation and treatment of fluency disorders.

5304 Language Disorders of Adolescents 3:3:0
Assessment and intervention procedures for pre-adolescents and adolescents with language disorders.

5305 Diagnostics and Counseling 3:3:0
Evaluation and counseling procedures in communication disorders.

5306 Language Disorders of Children 3:3:0
Assessment and intervention procedures for preschool and school age children with language disorders.

5307 Articulation Disorders 3:3:0
Nature, evaluation, and treatment of articulation disorders.

5308 Neuropathologies II 3:3:0
The diagnosis and treatment of disarthria, apraxia, and dysphagia.

5309 Advanced Clinical Practicum 3:3:10
Advanced classroom practicum, diagnostics and therapy. May be repeated and must be taken each semester.

5310 Multicultural Issues and Deafness
To provide theory and practical techniques for identifying and teaching minority-deaf children and their parents.

5311 American Sign Language V 3:3:0
Advanced linguistic study of American Sign Language.
Prerequisites: ASL I, II, III, and IV, or by Department Chair approval.

5312 American Sign Language IV 3:3:0
Advanced linguistical studies of American Sign Language.

5313 Speech Development in the Hearing Impaired 3:3:0
Speech for the young hearing impaired child, home training and therapy. Development of communication skills.

5316 Language for the Deaf 3:3:0
Language development theories applied to deaf children.

5317 Modern Math and Science Instruction for the Deaf 3:3:0
Provide current theory and practical techniques for teaching math and science to deaf children.

5318 Special Audiological Tests 3:3:0
Test batteries for peripheral vs. Central site of lesion, non-organic, electrophysiological assessment.

5320 Pediatric Audiology 3:3:0
Hearing evaluation in the young patient, method and theory.

5321 Research in Communication Disorders
Research design data analysis, and report writing pertinent to basic science and behaviors in communication disorders.

5322 Medical Audiology 3:3:0
Study of otologic pathology and influence upon auditory/vestibular systems.

5323 Electrophysiology I 3:3:0
Current electrophysiological auditory assessment: includes theory, instrument, techniques and procedures.

5324 Hearing Aids 3:3:0
Pros and cons of amplification theory and practicum.

5325 Audiology and Deafness
Provides development in anatomy or the ear, sound and its measurement, testing and listening devices for teachers of the deaf in classroom settings.

5326 Psychology of the Deaf 3:3:0
Psychological, emotional, and social impact of deafness.

5327 Advanced Aural Rehabilitation 3:3:0
Speechreading, auditory training, amplification and counseling for the aurally impaired.

5328 The Multidisabled with Hearing Problems 3:3:0
Prevalence, demographics and etiologies of hearing disorders with other disabilities (blindness, motor, emotional, mental, or orthopedic). Includes methods, curricula, and materials.

5329 Law and the Deaf 3:3:0
Legislative and judicial decisions that influence educational programs for the hearing impaired/deaf.

5332 Industrial Audiology
Interpretation and role of the audiologist in the OSHA Hearing Conservation Act with emphasis on noise level assessment and abatement.

5336 Electrophysiology II
Clinical assessment and rehabilitation of vestibular disorders including but limited to ENG, rotary chair, dynamic posturography.

5337 Special Audiology Tests II
Techniques in assessment procedures and data interpretation in the diagnosis of central auditory processing disorders and associated areas to include theory and practice.

5338 Hearing Aids II
Operation and selection criteria for programmable and digital amplification will be addressed. Practicum in real ear measurements and assistive listening devices and cochlear implants is provided.

5350 Individual Study 3:A:0
Independent study of special problems in communication disorders.

5351 Individual Study
Independent study of special problems in communication disorders.

5390-3391 Thesis 3:A:0
Prerequisite: Approval of Graduate Advisor. Must complete both for required 6 credits.

5403 Voice Disorders and Cleft Palate
Nature, etiology and treatment of disordered phonation and resonance imbalance secondary to laryngeal malfunction and craniofacial anomaly.

Doctoral Core Courses

6301 History & Sociology of Deaf Culture 3:3:0
Life/culture of deaf people via history, art, literature, mythology, and performance. Using an anthropological definition of "culture", the course examines the linguistic variations and modes of cultural transmission across generations and the demographics and characteristics of the community.

6302 Law and Deafness 3:3:0
Legislative and judicial decisions that influence educational programs for the hearing-impaired/deaf.

6303 Vocational Rehabilitation and Deafness 3:3:0
The vocational & rehabilitative needs of deaf/hard-of-hearing persons and successful programming models with emphasis on federal & state laws for rights & services for deaf/hard-of-hearing individuals.

6304 Curriculum, Pedagogy, Computers and Deafness 3:3:0
Comparative analysis, design, and implementation of educational curricula for deaf/hard-of-hearing students, the curricular relation to current pedagogical theories, and the utilization of computer technologies for the deaf education classroom.

6305 Psycholinguistics and Deafness 3:3:0
The psycholinguistics and linguistic development of deaf children of various linguistic and cultural backgrounds and the effects of communication modality differences upon development. Emphasis upon the bilingual/bicultural nature of these acquisition patterns will be included.

6307 Deaf Education Administration 3:3:0
Professional placement of the doctoral candidate in educational/administrative locations for field experience and a seminar including problem-project discussion on issues of deaf education program management.

6308 Cognitive, Psycho-social Development and Deafness 3:3:0
Historical review of the way intellectual abilities of the deaf were viewed, current data on cognitive and intellectual abilities, psycho-social development of deaf persons and appropriate assessment tools will be covered.

6309 Aural Rehabilitation & The Deaf 3:3:0
Amplification, acoustics, and habilitative techniques and procedures applicable to deaf educational settings and the deaf/hard-of-hearing.

6350 Seminar
Special study of a contemporary issue. Complement to Doctoral course requirements.

6351 Individual Study
Independent study of special problems in Deaf Studies/education.

6390 Doctoral Disseration – Deaf Education
Prerequisite: Approval of doctoral advisor.

6391 Doctoral Dissertation – Deaf Education
Prerequisite: Approval of doctoral advisor.

Additional hours are required in Statistics/Research as well as Cognate areas and Electives to meet full doctoral hour requirements (60 hours total).

Department of Music, Theatre and Dance

The Department of Music, Theatre and Dance offers the following graduate degrees: the Master of Music in Performance, the Master of Music Education, and the Master of Science in Theatre. The Music degrees are designed to help performers and music educators improve skills and develop new concepts which may be applied to their particular fields of endeavor. Persons seeking admission to these degree programs must meet the general requirements for admission which are outlined elsewhere in this catalog. Generally, an applicant must also hold a bachelor's degree in music.

Students who did not graduate from Lamar University must take a music theory placement examination. Applicants for the graduate degree in performance must audition for the major professor.

The Master of Science in Theatre is designed to help performers and technicians increase their skills and study new concepts in their perspective specialization. Persons seeking admission to this degree must meet the general admission requirements as outlined elsewhere in this catalog. It is necessary for an applicant to hold a bachelor's degree in theatre or a compatible field.

Music Degree Requirements

Candidates for master's degrees in music must meet all general degree requirements of the College of Graduate Studies as listed elsewhere in this catalog. The Master of Music in Performance requires 30 semester hours, including 12 hours in the applied major, six in music literature, six in music theory, and six in music education. In addition, a public recital and research paper or lecture recital are required. Voice majors must show proficiency (to be determined by the Department of Music) in German, French and Italian diction prior to entering this degree program.

The Master of Music Education degree requires 36 semester hours, including 18 in music education, six in music literature, six in music theory, and six in thesis. Two additional courses in music education may be substituted for the thesis, and six hours of applied music may replace two music education courses.

All degree candidates must take MUED 5320 (Seminar in Special Problems) and pass a final oral examination before a degree can be granted. The director of graduate music studies will serve as the general advisor of all graduate students in music. A committee of three graduate faculty members will also serve in an advisory capacity and administer the final oral examination.

Theatre Degree Requirements

The Master of Science degree in Theatre is a highly individualized program. Candidates for the degree must meet all general degree requirements in the College of Graduate Studies as listed elsewhere in this catalog. The student must complete a course load of 36 semester hours including 18 hours in a specialized area, 12 hours in practical individual studies, and 6 hours in a related elective (music, dance, art or philosophy). Six hours of thesis or a two-semester major project may be substituted for the 6 semester hours of fine arts or philosophy electives.

The student will choose from the following areas of specialization: technical production (set, costume or lighting design), acting/directing, or theatre management. Courses are selected from a variety of graduate and senior level offerings. Senior level courses used for graduate credit are enhanced with additional research and application work. Matching the student's needs with a practical and viable degree plan is an excellent format for the student seeking a practical or education-oriented degree in theatre.

Graduate Faculty

Professor L. Randolph Babin
Choral music education
Professor Robert Culbertson
Brass and music education
Professor Wayne Dyess
Brass and music education
Associate Professor Kim Ellis
Woodwinds
Associate Professor Kurt Gilman
Graduate Advisor and Strings
Professor Barbara Mathis
Voice
Professor Raul S. Ornelas
Brass and music education
Professor Adonia Placette
Theatre
Professor James M. Simmons
Woodwinds and music education
Professor Russ Schultz
Brass and Music History

Applied Music (AM)

5210, 5220, 5230 Graduate Applied Music 2:2:0
For music education majors only. Graduate applied music in any instrument category, including composition. No more than six hours may be applied toward graduation in the music education degree.

5410, 5420, 5430 Graduate Applied Music 4:4:0
Graduate applied music in any instrument category, including composition. No more than 12 hours may be applied toward graduation in the Master of Music degree.

Music Education (MUED)

5310 Microcomputer Applications in Music 3:3:0
A study of microcomputers and music-related software, especially in the area of computer-assisted marching band charting and administrative duties.

5320 Seminar in Special Problems 3:3:0
Research problems of special interest to students whose major emphasis is on the graduate field of music. Research paper required.

5330 Basic Concepts in Music Education 3:3:0
The historical, philosophical and psychological bases of music education.

5340 Supervision of Music 3:3:0
Supervision of public school music programs, with emphasis on leadership, instruction, public relations and problems in scheduling and finance.

5370 Advanced Instrumental Conducting 3:3:0
Advanced interpretive problems and rehearsal techniques related to the conducting of various types of band and orchestral music.

5390 Advanced Vocal Methods 3:3:0
The principles and techniques of teaching vocal music.

Music Literature (MULT)

5360 Survey of the Baroque Era 3:3:0
Comprehensive study of the period, beginning with the transition to Baroque, c. 1580, and ending c. 1750. Emphasis on advances in musical form, stylistic developments and performance practices.

5370 Survey of the Classic Era 3:3:0
Comprehensive study of the period, beginning with the transition to classicism, c. 1730, and ending c. 1827. Emphasis on advances in the musical form, stylistic developments and performance practices.

5380 Survey of the Romantic Era 3:3:0
Comprehensive study of the period, beginning with the transition to Romanticism, c. 1815, and ending c. 1910. Emphasis on advances in musical form, stylistic developments and performance practices.

5390 Twentieth Century Music 3:3:0
A survey of major composers and schools of composition from Debussy to the present.

Music Theory (MUTY)

5350 Twentieth Century Harmony 3:3:0
The analysis and writing of music based on twentieth century harmonic techniques and devices.

5360 Pedagogy of Theory 3:3:0
The principles and techniques of teaching the various branches of music theory, including principles of learning, history of theory, critical study of appropriate texts and supervised teaching of music theory classes.

5370 Analytical Techniques 3:3:0
Traditional and contemporary approaches to the visual and aural analyses of music from all periods.

Music (MUSI)

5300 Special Projects in Music Education 3:A:0
Individual projects for students with specialized needs in the music education area.
Prerequisite: Consent of Department Chair.

5310 Special Projects in Music Literature 3:A:0
Individual projects for students with specialized needs in the music literature area.
Prerequisite: Consent of Department Chair.

5320 Special Projects in Music Theory 3:A:0
Individual projects for students with specialized needs in the music theory area.
Prerequisite: Consent of Department Chair.

5390-5391 Thesis
Prerequisite: Approval of graduate advisor.

Theatre Courses (The)

5300 Theatre Management
An in-depth study of working on the business side of managing a theatrical house. The course will follow the conception of a theatre through all of the development stages of fund raising, grant writing, publicity and everyday financial workings.

5310 Problems & Projects in Theatre
Individualized instruction or supervised projects in the various areas of the theatre. May be performance or technically oriented. May be repeated for credit.

5325 Directed Studies
Individual instruction in theatre genres, styles and periods through research and performance-oriented projects.

5330 Advanced Scenic Construction
Advanced course in scenic construction techniques and principles. Hands-on experience in University productions.

5340 Media Performance
A split course for those interested in on-camera and off-camera work. Half of the semester will focus on the off-camera technology and the other half on the on-camera performance techniques.

5349 Costume Design
Advanced study of principles and practices of costume design. Emphasis on drafting and historical accuracy.

5350 Theatre Individual Study
Individual study of special problems in theatre under faculty guidance.

5370 Acting IV - Acting Theories
Detailed study of period styles and techniques for acting.

5371 Directed Theatre Activities
A "how-to" course on the organization and production of a variety of theatrical activities. Covers the areas of fund raising, publicity, promotion, script and technical requirements. Each student will be required to participate in an internship program at an assigned theatre during the semester or as arranged.

5380 Advanced Directing
Application of the principles and practices of play directing for the graduate student. Production work is required outside of class.

5390-5391 Thesis
Prerequisite: Approval of graduate advisor.

5399 Summer Repertory Theatre
Participation in a variety of shows during the summer session to enable the student to work in a professional repertory atmosphere.

LAMAR UNIVERSITY

Texas Common Course Number Cross-Reference

ACC	231	ACCT2301	AM	3253	MUAP3257	ART	235	ARTS1303
ACC	232	ACCT2302	AM	3261	MUAP3245	ART	236	ARTS1304
ACC	331	ACCT3310	AM	3262	MUAP3249	ART	237	ARTS2331
ACC	332	ACCT3320	AM	3263	MUAP3253	ART	238	ARTS2316
ACC	333	ACCT3330	AM	3271	MUAP3205	ART	239	ARTS2379
ACC	334	ACCT3340	AM	3273	MUAP3201	ART	3199	ARTS3199
ACC	338	ACCT3380	AM	3281	MUAP3281	ART	3303	ARTS3303
ACC	339	ACCT3390	AM	3411	MUAP3409	ART	3313	ARTS3313
ACC	430	ACCT4300	AM	3415	MUAP3429	ART	3315	ARTS3315
ACC	431	ACCT4310	AM	3417	MUAP3438	ART	3316	ARTS3316
ACC	532	ACCT5320	AM	3421	MUAP3417	ART	3317	ARTS3317
ACC	533	ACCT5330	AM	3423	MUAP3441	ART	3323	ARTS3323
ACC	534	ACCT5340	AM	3431	MUAP3421	ART	3325	ARTS3325
ACC	537	ACCT5370	AM	3441	MUAP3469	ART	3326	ARTS3326
AM	1101	MUAP1101	AM	3451	MUAP3433	ART	3327	ARTS3327
AM	1183	MUAP1181	AM	3453	MUAP3457	ART	3333	ARTS3333
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AM	1223	MUAP1241	AM	522	MUAP5220	ART	3371	ARTS3371
AM	1231	MUAP1221	AM	523	MUAP5230	ART	3375	ARTS3375
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AM	1273	MUAP1201	ANT	334	ANTH3340	ART	4331	ARTS4331
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AM	3211	MUAP3209	ART	133	ARTS1311	ART	4343	ARTS4343
AM	3215	MUAP3229	ART	134	ARTS1312	ART	4348	ARTS4348
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ART	4398	ARTS4398
ART	4399	ARTS4399
ART	5301	ARTS5301
ART	5305	ARTS5305
ART	5308	ARTS5308
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ART	5386	ARTS5386
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ART	5395	ARTS5395
ART	5398	ARTS5398
ART	6390	ARTS5390
ART	6391	ARTS5391
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AS	432	ADSV4320
AS	530	ADSV5300
AS	539	ADSV5390
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BA	669B	BUSI5391
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BAC	332	BUAL3320
BAC	335	BUAL3350
BAC	434	BUAL4340
BAC	439	BUAL4390
BAC	530	BUAL5300
BAC	531	BUAL5310
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BIO	144	BIOL2402
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BIO	245	BIOL2420
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BIO	344	BIOL3440
BIO	345	BIOL3450
BIO	346	BIOL3460
BIO	347	BIOL3470
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BIO	4101	BIOL5101
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BIO	445	BIOL5455
BIO	446	BIOL4460
BIO	446	BIOL5460
BIO	447	BIOL4470
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BIO	511	BIOL5110
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BIO	5401	BIOL5401
BIO	541	BIOL5410
BIO	545	BIOL5450
BIO	547	BIOL5470
BIO	669A	BIOL5390
BIO	669B	BIOL5391
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BLW	332	BULW3320
BLW	333	BULW3330
BLW	334	BULW3340
BLW	434	BULW4340
BLW	435	BULW4350
BLW	438	BULW4380
BLW	530	BULW5300
BLW	535	BULW5350
BLW	539	BULW5390
C&D	5301	CNDV5301
C&D	5310	CNDV5310
C&D	5311	CNDV5311
C&D	5312	CNDV5312
C&D	5320	CNDV5320
C&D	5321	CNDV5321
C&D	5322	CNDV5322
C&D	5323	CNDV5323
C&D	5350	CNDV5350
C&D	5351	CNDV5351
C&D	5380	CNDV5380
C&D	5381	CNDV5381
C&D	5382	CNDV5382
C&D	5390A	CNDV5390
C&D	5390B	CNDV5391
C&D	5391A	CNDV5392
C&D	5391B	CNDV5393
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CDC	4302	CMDS5342
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CDC	4305	CMDS5345
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CDC	6391	CMDS6391
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CE	232	CVEN2372
CE	320	CVEN3200
CE	3290	CVEN3290
CE	331	CVEN3310
CE	334	CVEN3340
CE	335	CVEN3350
CE	336	CVEN3360
CE	337	CVEN3370
CE	339	CVEN3390
CE	411	CVEN4110
CE	411	CVEN5110
CE	4212	CVEN4212
CE	4212	CVEN5212
CE	4290	CVEN4290
CE	4290	CVEN5290
CE	430	CVEN4300
CE	430	CVEN5300
CE	430	ENGR5327
CE	431	CVEN4350
CE	431	CVEN5350
CE	431	ENGR5314
CE	4310	CVEN4310
CE	4310	CVEN5310
CE	4310	ENGR5328
CE	432	CVEN4320
CE	432	CVEN5320
CE	432	ENGR5308
CE	434	CVEN4340
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DAN	1251	DANC1247	ECO	431	ECON4310	EGR	234	ENGR2374
DAN	1252	DANC1248	ECO	4311	ECON4311	EGR	236	ENGR2376
DAN	1253	DANC2247	ECO	4315	ECON4315	EGR	237	ENGR2377
DAN	1261	DANC1241	ECO	433	ECON4330	EGR	335	ENGR3350
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DAN	1263	DANC2241	ECO	435	ECON4350	EGR	337	ENGR3370
DAN	1264	DANC2242	ECO	438	ECON4380	EGR	4101	ENGR4101
DAN	127	DANC1222	ECO	530	ECON5300	EGR	4201	ENGR4201
DAN	128	DANC1233	ECO	535	ECON5350	EGR	4301	ENGR4301
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DAN	2110	DANC2170	EE	319	ELEN3109	EGR	5303	ENGR5303
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DMTH	1302	DMTH0372	EE	4306	ELEN4386	EGR	5324	ENGR5324
DRDG	101	DRDG0071	EE	4307	ELEN4387	EGR	5326	ENGR5326
DRDG	1301	DRDG0371	EE	4309	ELEN4342	EGR	5327	ENGR5327
DWRT	101	DWRT0071	EE	431	ELEN3322	EGR	5328	ENGR5328
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ECO	233	ECON1301	EE	438	ELEN4381	EGR	5331	ENGR5332
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ECO	335	ECON3350	EGR	130	ENGR1301	EGR	5341	ENGR5341
ECO	336	ECON3306	EGR	223	ENGR2273	EGR	5342	ENGR5342

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FSC	533	FCSC5330	HIS	2361	HIST1362	HON	4360	HNRS4360
GEO	141	GEOL1403	HIS	237	HIST2377	HON	4361	HNRS4361
GEO	142	GEOL1404	HIS	2660	HIST2660	HUM	130	HUMA1315
GEO	236	GEOL2376	HIS	339	HIST3390	HUM	1360	HUMA1360
GEO	237	GEOL2377	HIS	430	HIST4300	HUM	4361	HUMA4361
GEO	241	GEOL2471	HIS	431	HIST4310	IE	311	INEN3110
GEO	243	GEOL2473	HIS	4311	HIST4311	IE	330	INEN3300
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GEO	3102	GEOL3102	HIS	4315	HIST4315	IE	3312	INEN3312
GEO	339	GEOL3390	HIS	4315	HIST5315	IE	3322	INEN3322
GEO	341	GEOL3410	HIS	4316	HIST4316	IE	333	INEN3330
GEO	342	GEOL3420	HIS	4316	HIST5316	IE	336	INEN3360
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GEO	346	GEOL3460	HIS	4318	HIST5318	IE	339	INEN3390
GEO	360	GEOL3600	HIS	4319	HIST4319	IE	430	INEN4300
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GEO	4201	GEOL4201	HIS	432	HIST4324	IE	4301	INEN4301
GEO	427	GEOL4270	HIS	4325	HIST4325	IE	431	INEN4310
GEO	428	GEOL4280	HIS	4325	HIST5325	IE	431	INEN5310
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GEO	433	GEOL4330	HIS	4335	HIST5335	IE	4315	INEN5315
GEO	436	GEOL4361	HIS	4341	HIST4341	IE	4316	INEN4316
GEO	4360	GEOL4360	HIS	4341	HIST5341	IE	432	INEN4320
GEO	437	GEOL4371	HIS	4342	HIST4342	IE	432	INEN5320
GEO	4370	GEOL4370	HIS	4342	HIST5342	IE	434	INEN4340
GEO	4380	GEOL4380	HIS	435	HIST4350	IE	434	INEN5340
GEO	439	GEOL4391	HIS	439	HIST4390	IE	435	INEN4350
GEO	4390	GEOL4390	HIS	5311	HIST5311	IE	435	INEN5350
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GEO	441	GEOL4410	HIS	532	HIST5320	IE	437	INEN4370
GEO	442	GEOL4420	HIS	534	HIST5340	IE	437	INEN5370
GEO	445	GEOL4451	HIS	537	HIST5370	IE	438	INEN4380
GEO	4450	GEOL4450	HIS	669A	HIST5390	KIN	132	KINT1301
GEO	5301	GEOL5301	HIS	669B	HIST5391	KIN	231	KINT2371
GEO	532	GEOL5320	HLTH	133	HLTH1373	KIN	232	KINT2372
GER	131	GERM1311	HLTH	434	HLTH4340	KIN	234	KINT2374
GER	132	GERM1312	HLTH	131	HLTH1306	KIN	236	KINT2376

KIN	237	KINT2377	ME	4316	MEEN4316	MKT	334	MKTG3340
KIN	238	KINT2378	ME	4317	MEEN4317	MKT	431	MKTG4310
KIN	332	KINT3320	ME	4319	MEEN4319	MKT	432	MKTG4320
KIN	333	KINT3330	ME	432	MEEN4320	MKT	433	MKTG4330
KIN	335	KINT3350	ME	432	MEEN5320	MKT	436	MKTG4360
KIN	336	KINT3360	ME	4323	MEEN4323	MKT	437	MKTG4370
KIN	337	KINT3370	ME	435	MEEN4350	MKT	438	MKTG4380
KIN	339	KINT3390	ME	435	MEEN5350	MKT	530	MKTG5300
KIN	430	KINT4300	ME	438	MEEN4380	MKT	531	MKTG5310
KIN	4301	KINT4301	ME	440	MEEN4400	MKT	533	MKTG5330
KIN	431	KINT4310	ME	540	MEEN5400	MKT	534	MKTG5340
KIN	433	KINT4330	MED	5310	MUED5310	MLB	1101	MULB1170
KIN	436	KINT4360	MED	532	MUED5320	MLB	1102	MULB1171
KIN	438	KINT4380	MED	533	MUED5330	MLB	1104	MULB1172
KIN	462	KINT4620	MED	534	MUED5340	MLB	1120	MULB1173
KIN	530	KINT5300	MED	537	MUED5370	MLB	114	MULB1174
KIN	531	KINT5310	MED	539	MUED5390	MLB	1140	MULB1175
KIN	5311	KINT5311	MGT	331	MGMT3310	MLB	1143	MULB1176
KIN	5312	KINT5312	MGT	332	MGMT3320	MLB	1150	MULB1177
KIN	532	KINT5320	MGT	333	MGMT3330	MLB	117	MULB1178
KIN	533	KINT5330	MGT	431	MGMT4310	MLB	118	MULB1179
KIN	534	KINT5340	MGT	432	MGMT4320	MLB	124	MULB1271
KIN	535	KINT5350	MGT	433	MGMT4330	MLB	210	MULB1157
KIN	536	KINT5360	MGT	434	MGMT4340	MLB	413	MULB4130
KIN	537	KINT5370	MGT	437	MGMT4370	MLT	121	MULT1208
KIN	538	KINT5380	MGT	439	MGMT4390	MLT	222	MULT1209
KIN	669A	KINT5390	MGT	530	MGMT5310	MLT	333	MULT3330
KIN	669B	KINT5391	MGT	531	MGMT5320	MLT	334	MULT3340
KINA	129	KINA1270	MGT	532	MGMT5330	MLT	536	MULT5360
KINA	2201	KINA2271	MGT	533	MGMT5340	MLT	537	MULT5370
KINA	2203	KINA2273	MGT	538	MGMT5380	MLT	538	MULT5380
KINA	2205	KINA2275	MGT	539	MGMT5390	MLT	539	MULT5390
KINA	2206	KINA2255	MIS	133	MISY1373	MTH	1331	MATH1335
KINA	2207	KINA2277	MIS	334	MISY3340	MTH	1334	MATH1314
KINA	2208	KINA2278	MIS	335	MISY3350	MTH	1335	MATH2312
KINA	2209	KINA2279	MIS	337	MISY3370	MTH	1336	MATH1336
ME	321	MEEN3210	MIS	434	MISY4340	MTH	1337	MATH1316
ME	330	MEEN3300	MIS	436	MISY4360	MTH	134	MATH1324
ME	331	MEEN3310	MIS	437	MISY4370	MTH	1341	MATH1325
ME	3311	MEEN3311	MIS	438	MISY4380	MTH	1345	MATH2305
ME	332	MEEN3320	MIS	439	MISY4390	MTH	1460	MATH1460
ME	334	MEEN3340	MIS	534	MISY5340	MTH	148	MATH2413
ME	335	MEEN3350	MIS	536	MISY5360	MTH	149	MATH2414
ME	338	MEEN3380	MIS	539	MISY5390	MTH	233	MATH2318
ME	411	MEEN4110	MKT	331	MKTG3310	MTH	234	MATH1342
ME	431	MEEN4310	MKT	332	MKTG3320	MTH	236	MATH2376
ME	4313	MEEN4313	MKT	333	MKTG3330	MTH	237	MATH2377

MTH	241	MATH2415	MUS	110	MUSI1170	OAS	337	OFAD3370
MTH	330	MATH3300	MUS	130	MUSI1306	OAS	338	OFAD3380
MTH	3313	MATH3313	MUS	131	MUSI1371	OAS	431	OFAD4310
MTH	3315	MATH3315	MUS	227	MUSI2277	OAS	434	OFAD4340
MTH	3317	MATH3317	MUS	311	MUSI3110	OAS	439	OFAD4390
MTH	3321	MATH3321	MUS	312	MUSI3120	OAS	530	OFAD5300
MTH	333	MATH3330	MUS	313	MUSI3130	OAS	539	OFAD5390
MTH	3345	MATH3345	MUS	314	MUSI3140	PED	1201	PEDG1271
MTH	335	MATH3350	MUS	315	MUSI3150	PED	2301	PEDG2371
MTH	3370	MATH3370	MUS	327	MUSI3270	PED	2302	PEDG2372
MTH	338	MATH3380	MUS	331	MUSI3310	PED	2310	PEDG2373
MTH	3401	MATH3401	MUS	332	MUSI3320	PED	232	PEDG2374
MTH	431	MATH4310	MUS	335	MUSI3350	PED	3304	PEDG3304
MTH	431	MATH5350	MUS	336	MUSI3360	PED	3305	PEDG3305
MTH	4315	MATH4315	MUS	337	MUSI3370	PED	331	PEDG3310
MTH	4315	MATH5315	MUS	338	MUSI3380	PED	332	PEDG3320
MTH	4316	MATH4316	MUS	411	MUSI4110	PED	3326	PEDG3326
MTH	4316	MATH5316	MUS	412	MUSI4120	PED	334	PEDG3340
MTH	433	MATH4330	MUS	430	MUSI4300	PED	336	PEDG3360
MTH	433	MATH5330	MUS	431	MUSI4310	PED	337	PEDG3370
MTH	4331	MATH4331	MUS	432	MUSI4320	PED	338	PEDG3380
MTH	4331	MATH5351	MUS	530	MUSI5300	PED	339	PEDG3390
MTH	5303	MATH5303	MUS	531	MUSI5310	PED	4300	PEDG4300
MTH	5304	MATH5304	MUS	532	MUSI5320	PED	4300	PEDG5300
MTH	5308	MATH5308	MUS	669A	MUSI5390	PED	4301	PEDG4301
MTH	531	MATH5310	MUS	669B	MUSI5391	PED	4301	PEDG5301
MTH	5310	MATH5311	NUR	221	NURS2271	PED	4302	PEDG4302
MTH	5311	MATH5312	NUR	261	NURS2671	PED	4302	PEDG5302
MTH	532	MATH5320	NUR	262	NURS2672	PED	4303	PEDG4303
MTH	5331	MATH5331	NUR	292	NURS2972	PED	4303	PEDG5303
MTH	5335	MATH5335	NUR	328	NURS3280	PED	4304	PEDG4304
MTH	534	MATH5340	NUR	331	NURS3310	PED	4304	PEDG5304
MTH	537	MATH5370	NUR	353	NURS3530	PED	4305	PEDG4305
MTH	669A	MATH5390	NUR	355	NURS3550	PED	4305	PEDG5305
MTH	669B	MATH5391	NUR	382	NURS3820	PED	4306	PEDG4306
MTY	131	MUTY1370	NUR	430	NURS4300	PED	4306	PEDG5312
MTY	132	MUTY1311	NUR	433	NURS4330	PED	4307	PEDG4307
MTY	133	MUTY1312	NUR	481	NURS4810	PED	4307	PEDG5307
MTY	232	MUTY2311	NUR	491	NURS4910	PED	4308	PEDG4308
MTY	233	MUTY2312	OAS	132	OFAD1312	PED	4308	PEDG5308
MTY	321	MUTY3210	OAS	230	OFAD1311	PED	4309	PEDG4309
MTY	322	MUTY3220	OAS	231	OFAD1301	PED	4309	PEDG5309
MTY	421	MUTY4210	OAS	232	OFAD1302	PED	431	PEDG4310
MTY	422	MUTY4220	OAS	233	OFAD2301	PED	431	PEDG5313
MTY	535	MUTY5350	OAS	331	OFAD3310	PED	4310	PEDG4311
MTY	536	MUTY5360	OAS	335	OFAD3350	PED	4310	PEDG5314
MTY	537	MUTY5370	OAS	336	OFAD3360	PED	4331	PEDG4331

PED	4331	PEDG5331
PED	434	PEDG4340
PED	434	PEDG5315
PED	4361	PEDG4361
PED	438	PEDG4380
PED	438	PEDG5316
PED	439	PEDG4390
PED	439	PEDG5317
PED	462	PEDG4620
PED	463	PEDG4630
PED	465	PEDG4650
PED	531	PEDG5310
PED	5311	PEDG5311
PED	532	PEDG5320
PED	5320	PEDG5321
PED	5322	PEDG5322
PED	5323	PEDG5323
PED	5324	PEDG5324
PED	5325	PEDG5325
PED	5334	PEDG5334
PED	534	PEDG5340
PED	5340	PEDG5341
PED	535	PEDG5350
PED	5351	PEDG5351
PED	5352	PEDG5352
PED	5355	PEDG5355
PED	5356	PEDG5356
PED	5357	PEDG5357
PED	5358	PEDG5358
PED	5359	PEDG5359
PED	536	PEDG5306
PED	5360	PEDG5360
PED	5361	PEDG5361
PED	5362	PEDG5362
PHY	247	PHYS2425
PHY	248	PHYS2426
PHY	331	PHYS3310
PHY	335	PHYS3350
PHY	338	PHYS3380
PHY	339	PHYS3390
PHY	343	PHYS3430
PHY	345	PHYS3450
PHY	346	PHYS3460
PHY	4101	PHYS4101
PHY	4201	PHYS4201
PHY	421	PHYS4210
PHY	422	PHYS4220
PHY	4301	PHYS4301
PHY	432	PHYS4320
PHY	448	PHYS4480
POLS	131	POLS2304
POLS	231	POLS2301
POLS	232	POLS2302
POLS	321	POLS3210
POLS	322	POLS3220
POLS	323	POLS3230
POLS	331	POLS3310
POLS	332	POLS3320
POLS	334	POLS3340
POLS	335	POLS3350
POLS	337	POLS3370
POLS	339	POLS3390
POLS	430	POLS4300
POLS	432	POLS4320
POLS	433	POLS4330
POLS	434	POLS4340
POLS	435	POLS4350
POLS	437	POLS4370
POLS	439	POLS4390
POLS	532	POLS5320
POLS	535	POLS5350
PSY	131	PSYC2301
PSY	234	PSYC2308
PSY	237	PSYC2376
PSY	241	PSYC2471
PSY	331	PSYC3310
PSY	332	PSYC3320
PSY	333	PSYC3330
PSY	334	PSYC3340
PSY	336	PSYC3360
PSY	342	PSYC3420
PSY	410	PSYC4100
PSY	430	PSYC4300
PSY	4301	PSYC4301
PSY	431	PSYC4310
PSY	432	PSYC4320
PSY	436	PSYC4360
PSY	438	PSYC4380
PSY	443	PSYC4430
PSY	512	PSYC5120
PSY	514	PSYC5140
PSY	530	PSYC5300
PSY	531	PSYC5301
PSY	5310	PSYC5310
PSY	5311	PSYC5311
PSY	5312	PSYC5312
PSY	5313	PSYC5313
PSY	532	PSYC5302
PSY	5320	PSYC5320
PSY	5321	PSYC5321
PSY	5322	PSYC5322
PSY	5323	PSYC5323
PSY	533	PSYC5303
PSY	5330	PSYC5330
PSY	5331	PSYC5331
PSY	534	PSYC5340
PSY	535	PSYC5350
PSY	669A	PSYC5390
PSY	669B	PSYC5391
SOC	131	SOCI1301
SOC	132	SOCI1306
SOC	233	SOCI2301
SOC	235	SOCI2375
SOC	331	SOCI3310
SOC	3311	SOCI3311
SOC	332	SOCI3320
SOC	333	SOCI3330
SOC	335	SOCI3350
SOC	336	SOCI3306
SOC	3360	SOCI3360
SOC	337	SOCI3370
SOC	338	SOCI3380
SOC	339	SOCI3390
SOC	411	SOCI4110
SOC	430	SOCI4300
SOC	4301	SOCI4301
SOC	431	SOCI4310
SOC	432	SOCI4320
SOC	434	SOCI4340
SOC	435	SOCI4350
SOC	438	SOCI4380
SOC	439	SOCI4390
SPA	131	SPAN1313
SPA	132	SPAN1314
SPA	231	SPAN2311
SPA	232	SPAN2312
SPA	330	SPAN3300
SPA	331	SPAN3310
SPA	332	SPAN3320
SPA	333	SPAN3330
SPA	334	SPAN3340

SPA	335	SPAN3350
SPA	338	SPAN3380
SPA	339	SPAN3390
SPA	432	SPAN4320
SPA	433	SPAN4330
SPA	436	SPAN4360
SPA	438	SPAN4380
SWK	131	SOWK2361
SWK	231	SOWK2371
SWK	330	SOWK3300
SWK	331	SOWK3310
SWK	332	SOWK3320
SWK	333	SOWK3330
SWK	334	SOWK3340
SWK	335	SOWK3350
SWK	430	SOWK4300
SWK	432	SOWK4320
SWK	4321	SOWK4321
SWK	4324	SOWK4324
SWK	438	SOWK4380
THE	130	THEA1370
THE	131	THEA1310
THE	1311	THEA2336
THE	132	THEA1330
THE	135	THEA1341
THE	137	THEA1351
THE	230	THEA2370
THE	231	THEA2371
THE	232	THEA2372
THE	235	THEA2375
THE	237	THEA1352
THE	331	THEA3310
THE	332	THEA3320
THE	333	THEA3330
THE	336	THEA3361
THE	3360	THEA3360
THE	337	THEA3370
THE	338	THEA3380
THE	339	THEA3390
THE	430	THEA4300
THE	430	THEA5300
THE	431	THEA4310
THE	431	THEA5310
THE	434	THEA4340
THE	434	THEA5340
THE	435	THEA4350
THE	435	THEA5349
THE	436	THEA4360
THE	437	THEA4370
THE	437	THEA5370
THE	4371	THEA4371
THE	4371	THEA5371
THE	438	THEA4380
THE	438	THEA5380
THE	439	THEA4390
THE	439	THEA5399
THE	5325	THEA5325
THE	533	THEA5330
THE	5350	THEA5350
THE	669A	THEA5390
THE	669B	THEA5391

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Directory of Personnel 2002-2004

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(year term expires in parentheses)

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James L. Sweatt III, M.D. *(2003)* ..... *DeSoto*

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Nichols, Brenda S., *D.N.Sc., Dean, College of Arts and Sciences*
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Westerfield, R. Carl, *Ph.D., Dean, College of Education and Human Development*

The Graduate Council

Bradley, Jerry W., *Ph.D., Professor of English, Associate Vice President for Research and Dean of Graduate Studies*
Crawford, Carolyn H., *Ph.D., Associate Professor of Educational Leadership and Chair,*
Fang, Xing, *Ph.D., Associate Professor of Civil Engineering*
Moss, Jimmy D., *D.B.A., Professor of Finance*
Nordgren, Joseph E., *Ph.D., Associate Professor of English*
Rissman, Maurice B., *D.M.A., Assistant Professor of Music*
Vanderleeuw, James, *Ph.D., Professor of Political Science*

The Graduate Faculty 2002-2004

The following list reflects the status of the graduate faculty of Lamar University as of Fall 2002. The date following each name is the academic year of first service to the University and does not necessarily imply continuous service since that time.

Allin, Shawn, *1996, Assistant Professor of Chemistry.*
B.Sc., University of Waterloo; Ph.D., University of Alabama System

Altemose, J.R., *1997, Professor of Sociology, Social Work and Criminal Justice.*
B.A., Davidson College; M.Ed., Lamar University; M.A., Ph.D., Sam Houston State University; M.R.E., University of St. Thomas

Anderson, Adrian N., *1971, Professor of History.*
B.S., M.A., Ph.D., Texas Tech University

Andreev, Valentin V., *1990, Assistant Professor of Mathematics.*
B.M., M.M., University of Sofia; Ph.D., University of Michigan

Andrews, Jean, *1988, Professor Deaf Education.*
B.A., Catholic University; M.Ed., Western Maryland College; Ph.D., University of Illinois

Arterbury, Elvis A., *1990, Professor of Educational Leadership.*
B.B.A, Baylor; M.Ed., Ph.D., East Texas State University

Babin, L. Randolph, *1968, Professor of Music.*
B.M.Ed., Pha. D., Louisiana State University

Bandyopadhyay, Kakoli, *1998, Assistant Professor of Management Information Systems.*
B.Eng., Jadavpur University; M.A., University of Alabama; Ph.D., University of Texas at Arlington

Bandyopadhyay, Soumava, *1992, Associate Professor of Marketing.*
B.S., Jadavpur University, Ph.D., University of Alabama

Barnes, Cynthia, *1982, Professor of Office Administration.*
B.S., Howard Payne University; M.Ed., Texas Tech University; Ed.D., North Texas State University

Barton, Joel E. III, *1987, Professor of Health and Kinesiology.*
B.S., M.Ed., Ph.D., Texas A&M University

Bean, Wendell C., *1968, Professor of Electrical Engineering.*
B.A., B.S., Lamar University; M.S., Ph.D., University of Pittsburgh; Registered Professional Engineer

Birdwell-Sykes, Donna, *1998, Professor of Anthropology.*
B.A., M.A., Ph.D., Southern Methodist University

Boatwright, Douglas, *1986, Professor of Health and Kinesiology and Director of Graduate Program in Health and Kinesiology.*
B.S., University of Alabama at Birmingham; M.S., Ph.D., Louisiana State University

Boekhout, Brock A., *2001, Assistant Professor of Psychology.*
B.A., M.A., Ph.D., Texas Tech University

Bradley, Jerry W., *2001, Professor of English, Associate Vice President for Research and Dean of Graduate Studies.*
B.A., Midwestern University; M.A., Ph.D., Texas Christian University

Brust, Melvin V., *1978, Professor of Management and Finance.*
B.S.E.E., M.S.E.E., University of Texas; Ph.D., North Texas State University; Registered Professional Engineer

Buck, Janiece T., *2001, Associate Professor of Educational Administration.*
B.S., M.Ed., Stephen F. Austin State University; Ph.D., University of Texas-Austin

Carroll, Anita L., *2000, Assistant Professor of Nursing.*
B.S.N., M.S.N., West Texas A&M University; Ed.D., University of Houston

Caroll, John M., *1972, Professor of History.*
A.B., Brown University; M.A., Providence College; Ph.D., University of Kentucky

Carter, Keith D., *1989, Professor of Art. Walles Chair of Art.*
B.B.A., Lamar University

Castle, David S., *1985, Professor of Political Science.*
B.A., M.A., Marshall University; Ph.D., University of Rochester

Chalambaga, Kimberly A., *1994, Assistant Professor of Family and Consumer Sciences.*
B.S., Central Michigan University; M.A., Michigan State University; Ph.D., Kansas State University

Chen, Daniel H., *1982, Professor of Chemical Engineering.*
B.S., National Chen-Kung University; M.S., National Taiwan University; Ph.D., Oklahoma State University; Registered Professional Engineer

Chilek, Daniel, *2001, Assistant Professor of Health and Kinesiology.*
B.S., M.S., Lamar University; Ph.D., Texas A&M University

Chiou, Paul, *1988 Professor of Mathematics.*
B.S., Natiounal Chung Hsing University; M.A., Ph.D., University of Texas at Arlington

Choi, Jai-Young, *1982, Professor of Economics.*
B.A., Yonsei University; M.A., University of Kansas; Ph.D., University of Oklahoma

Christensen, Ana Beardsley, *1999, Assistant Professor of Biology.*
A.S., Richard Bland College; B.S., College of William and Mary; M.A., College of William and Mary; Ph.D., Clemson University

Chu, Hsing - wei, *1979, Professor of Industrial Engineering.*
B.S., Tunghai University; M.S., Asian Institute of Technology; Ph.D., University of Texas; Registered Professional Engineer

Cocke, David L., *1989, Jack M.Gill Professor of Chemistry.*
B.S., University of Texas; M.S., Lamar University; Ph.D., Texas A&M University

Corder, Paul R., *1987, Professor of Mechanical Engineering.*
B.S., M.S., Ph.D., Texas A&M University; Registered Professional Engineer

Craig, Brian, *2001, Assistant Professor of Industrial Engineering.*
B.S., Bioengineering; B.S., Industrial Engineering, M.S., Ph.D., Texas A&M University

Crawford, Carolyn H., *1994, Associate Professor of Educational Leadership and Chair, Department of Educational Leadership.*
B.A., M.Ed., Lamar University; Ph.D., Texas A&M University

Culbertson, Robert, *1974, Associate Professor of Music.*
B.M., M.M., Northern Illinois University; D.M.A., University of Texas at Austin

Daigrepont, Lloyd M., *1981, Professor of English.*
B.A., M.A., Ph.D., Louisiana State University

Daniel, Bobby Dale, *1998, Assistant Professor of Mathematics.*
B.S., M.S., Stephen F. Austin State University; Ph.D., Texas A&M University

Davis, Terri B., *1998, Assistant Professor of Political Science.*
B.S., M.A., University of Texas at Tyler; Ph.D., University of Texas at Austin

Dawkins, Paul, *1997, Assistant Professor of Mathematics.*
B.S., M.S., Ph.D., University of Nebraska

Doerschuk, Peggy Israel, *1993, Associate Professor of Computer Science.*
B.S., University of Southwestern Louisiana; Ph.D., Tulane University

Dorris, Kenneth, *1965, Associate Professor of Chemestry.*
B.S., Ph.D., University of Texas

Drapeau, Richard A., *1983, Professor of Business Statistics.*
B.S., Arizona State University; M.B.A., Lamar University; Ph.D., Texas A&M University

Droddy, Frances, *1993, Assistant Professor of Family and Consumer Sciences.*
B.S., Northwestern State College; M.A., Lamar University; Ph.D., Texas Women's University

DuBose, Elbert T., Jr., *1974, Associate Professor of Political Science.*
B.A., Southwest Texas State University; M.A., Texas Tech University; Ph.D., University of Oklahoma

Dyess, Wayne, *1977, Associate Professor Music.*
B.M., Stephen F. Austin University; M.M., Catholic University of America; Ed.D., University of Houston

Dyrhaug, Kurt J., *2000, Assistant Professor of Art.*
B.F.A., Minneapolis College of Art & Design; M.F.A., University of Minnesota

Ellis, Kim, *1990, Assistant Professor of Music.*
B.M.E., Illinois Wesleyan University; M.M., Bowling Green State University; D.M.A., Ohio State University

Esser, James K., *1976, Professor of Psychology.*
B.S., University of Iowa; Ph.D., Indiana University

Fang, Xing, *1995, Associate Professor of Civil Engineering.*
B.S.C.E., Tsinghua University, M.S.C.E., Ph.D., University of Minnesota, Registered Professional Engineer

Farrow, Vicky A., *1999, Assistant Professor of Professional Pedagogy.*
B.B.A., Stephen F. Austin State University; M.B.A., Lamar University; Ph.D., Purdue University

Fearnley, Stephen P., *1999, Assistant Professor of Chemistry.*
B.S., Sheffield City Polytechnic, UK; Ph.D., University of Salford, UK

Fitzpatrick, Oney D. Jr., *1991, Associate Professor of Psychology.*
B.A., College of Wooster; M.A., University of Dayton; Ph.D. University of Houston

Friend, Tressa J., *1998, Assistant Professor of Communication Disorders.*
B.S., M.A., Brigham Young University; Ph.D., Northwestern University

Frisbie, Jennifer, *2002, Assistant Professor of Sociology, Social Work, and Criminal Justice.*
B.A., Sociology, B.A., Psychology, Austin College; M.A., University of Texas; Ph.D., Sam Houston State University

Gentry, Mary Anne M., *1996, Assistant Professor of Communication Disorders.*
B.A., Northeast Louisiana University; M.S., Ed.D., Lamar University

Gilman, Kurt A., *1986, Assistant Professor of Music.*
B.M., Eastman School of Music; M.M., Texas Tech University; D.M.A., University of Texas at Austin

Giordano, James, *1996, Assistant Professor of Nursing.*
B.S., St. Peter's College; M.A., Norwich University; M.Phil., M.S., Ph.D., City University of New York

Godkin, Jennie, *2000, Assistant Professor of Nursing.*
A.B., Bethany Nazarene University; M.S.N., University of Texas Medical Branch-Galveston

Godkin, Roy Lynn, *1981, Professor of Management. Chair, Department of Management and Marketing.*
A.B., Bethany Nazarene College; M.R.B.E., Nazarene Theological Seminary; M.A., The University of Illinois at Springfield; Ph.D., University of North Texas

Gossage, John L., *1998, Professor of Chemical Engineering.*
B.S., M.S., Ph.D., Illinois Institute of Technology, Chicago, IL

Griffith, Kimberly, *1999, Assistant Professor of Professional Pedagogy.*
B.S., M.Ed., Ph.D., University of Southern Mississippi

Griffith, Paul, *1997, Assistant Professor of English and Foreign Languages.*
B.A., M.Phil., University of the West Indies; Ph.D., Pennsylvania State University

Gwin, Howell H., Jr., *1962, Professor of History.*
B.A., M.A., Ph.D., Mississippi State University

Gwynn, Robert S., *1976, Professor of English.*
A.B., Davidson College; M.A., M.F.A., University of Kansas

Hall, Iva, *2001, Assistant Professor of Nursing.*
B.S.N., M.S.N., University of Central Arkansas

Harrel, Richard C., *1966, Professor of Biology.*
B.S., East Central State College; M.S.Ed., University of Georgia; Ph.D., Oklahoma State University

Hawkins, Charles, *1966, Regents' Professor of Economics; Chair, Department of Economics and Finance.*
B.A., Lamar University; M.A., Ph.D., Louisiana State University

Hawkins, Emma, *1996, Assistant Professor of English.*
B.A., Oklahoma Baptist University; M.Div., Southwestern Baptist Theological Seminary; M.A., Ph.D., University of North Texas

Hernandez, Barbara L. Michiels, *2001, Associate Professor in Health and Kinesiology.*
B.A., M.Ed; Northwestern State University of Louisiana; Ph.D., Texas Woman's University

Ho, Tho-Ching, *1982, Professor of Chemical Engineering.*
B.S., National Taiwan University; M.S., Ph.D., Kansas State University, Registered Professional Engineer

Hodges, Steve, *1990, Associate Professor of Art.*
M.F.A., University of Arkansas; B.S., Lamar University

Holmes, William R., *1990, Associate Professor of Educational Leadership.*
B.A., Oklahoma Baptist University; Th.M., New Orleans Baptist Theological Seminary; M.S., Ph.D., University of Southern Mississippi

Hopper, Jack R., *1969, Professor of Chemical Engineering and Dean, College of Engineering.*
B.S., Texas A&M University; M.Ch.E., University of Delaware; Ph.D., Louisiana State University; Registered Professional Engineer

Hunt, Madelyn D., *1984, Professor of Biology.*
B.S., Lamar University; M.P.H., Dr.P.H., University of Texas School of Pubic Health, Registered Medical Technologist (A.S.C.P.)

Jack, Meredith M., *1977, Professor of Art.*
B.F.A., University of Kansas; M.F.S., Temple University

Jao, Mien, *1998, Assistant Professor of Civil Engineering.*
B.S., Chung-Yuan University; M.Eng., Ph.D., Pennsylvania State University; Registered Professional Engineer

Johnson, Barry W., *1983, Professor of Music, Interim Chair of the Department of Music, Theatre, and Dance.*
C.B.M.E., M.A., Sam Houston State University; Ed.D., University of Houston

Jolly, Sonny, *1971, Professor of Health and Kinesiology.*
B.S., M.S., Lamar University; M.Ed., Stephin F. Austin State University; Ed.D., North Texas State University

Jordan, Donald L., *1979, Professor of Management Information Systems.*
B.S., East Texas Baptist College; B.S., Lamar University; M.S., Air Force Institute of Technology; Ph.D., University of Houston

Karlin, Andrea, *1981, Professor of Reading.*
B.A., Hunter College; M.A., Ph.D., University of Mexico

Koehn, Enno, *1984, Professor of Civil Engineering and Chair, Department of Civil Engineering.*
B.C.E., City University of New York; M.S., Columbia University; Ph.D., Wayne State University; Registered Professional Engineer

Koh, Hikyoo, *1981, Professor of Computer Science.*
B.A., Young-Nam; M.S., University of Hawaii; Ph.D., University of Pittsburgh

Li, Ku-Yen, *1978, Professor of Chemical Engineering.*
B.S., M.S., Chen Kung University; Ph.D., Mississippi State University

Lin, Che-Jen (Jerry), *1999, Assistant Professor of Civil Engineering.*
B.S., Chemical Engineering, Tatung Institute of Technology; M.S., Environmental Engineering, Duke University; Ph.D., Environmental Engineering, University of Cincinnati; Registered Professional Engineer

Lindoerfer, Joanne, *1980, Associate Professor of Psychology.*
B.S., Loyola University, Chicago; M.S., Ph.D., University of Texas

Loges, Max, *1991, Associate Professor of English.*
B.A., Northwestern Oklahoma State University; M.Div., Southwestern Baptist Theological Seminary; M.A., Fort Hays State University; Ph.D., Oklahoma State University

Lokensgard, Lynne, *1973, Associate Professor of Art.*
B.A., University of Minnesota; Ph.D., University of Kansas

Lumpkin, Richard S., *1999, Associate Professor of Chemistry and Chair, Department of Chemistry and Physics.*
B.S., University of Texas; Ph.D., University of North Carolina

Lunato, Kimberly A., *1998, Instructor, Communication Disorders.*
B.A., Butler University; M.A., The Ohio State University

Lynch, Howell, *1997, Associate Professor of Accounting and Business Law.*
B.B.A., Middle Tennessee State University; M.P.A., University of Texas-Austin; Ph.D., Texas A&M University

Maesumi, Mohsen, *1991, Associate Professor of Mathematics.*
B.A., Princeton University; M.S., Yale University; Ph.D., New York University

Mahavier, William T., *2001, Associate Professor of Mathematics.*
B.S., Auburn University; M.S., Emory University; Ph.D., University of North Texas

Mann, Judith R., *1997, Assistant Professor of Psychology.*
B.S., Northeast Louisiana University, M.S., Ph.D., Texas A&M

Maroonroge, Sumalai, *1999, Assistant Professor of Communication Disorders.*
B.A., West Virginia University; M.S., Michigan State University; M.A., University of Northern Iowa; D.S.H.S., University of Tennessee

Marriot, Richard G., *1976, Professor of Psychology and Chair, Department of Psychology.*
B.S., Weber State College; M.A., Ph.D., University of New Mexico

Martin, Gabriel A., *1989, Associate Professor of Communication Disorders and Chair, Department of Communicative Disorders.*
B.S., M.S., Lamar University; Ed.D., University of Southern Mississippi

Matheson, Alec L., *1983, Professor of Mathematics and Chair, Department of Mathematics.*
B.S., University of Washington; Ph.D., University of Illinois

Mathis, Barbara Thomas, *1990, Professor of Music.*
B.M., M.M., North Texas State University; Ph.D., University of North Texas

Matlock, Ann, *2000, Assistant Professor of Art.*
B.F.A., M.F.A., University of Texas–Austin

Maxum, Bernard J., *1992, Professor of Electrical Engineering, Department of Electrical Engineering.*
B.S., University of Washington; M.S., University of Southern California; Ph.D., University of California, Berkeley; Registered Professional Engineer

Mayer, Bradley W., *1994, Associate Professor of Management.*
B.B.A., B.S.Ed., University of North Dakota; M.B.A., Mankato State University; Ph.D., University of North Texas

McLaughlin, George E., *1995, Professor of Educational Leadership.*
B.S., Lamar University; Ed.D., University of North Texas

Meeks, Donna M., *1995, Professor of Art and Chair, Department of Art.*
B.A., M.A.T., University of Louisville; M.F.A., University of Wisconsin-Milwaukee

Montano, Carl B., *1981, Professor of Economics.*
B.S., M.S., University of the Philipines; Ph.D., Michigan State University

Moore, Dorman Wayne, *1997, Associate Professor of Educational Leadership.*
B.S., M.A.Ed., Angelo State University; Ph.D., University of Texas

Moss, Jimmy D., *1986, Professor of Finance.*
B.S., M.B.A., D.B.A., Mississippi State University

Mouat, William M., *2000, Assistant Professor of Music, Theatre, and Dance.*
B.M.Ed., University of Wyoming; M.M., New England Conservatory; D.M.A., University of Washington

Myler, Harley R., *2001, Professor of Electrical Engineering and Chair, Department of Electrical Engineering, Mitchell Chair in Telecommunications.*
B.S.E.E., B.Sc., Virginia Military Institute; M.S.E.E., Ph.D., New Mexico State University; Registered Professional Engineer

Nguyen, Nhung, *2001, Assistant Professor of Management.*
B.A., Hanoi University; M.S., University of Tennessee

Nichols, Brenda, *2001, Professor of Nursing and Dean of the College of Arts and Sciences.*
B.S.N., M.A.Ed., University of Evansville; D.N.Sc., Indiana University School of Nursing

Nichols, Paula A., *1988, Associate Professor of Educational Leadership.*
B.S., Baylor University; M.Ed., Ed.D., University of Houston

Nicoletto, Paul F., *1995, Associate Professor of Biology.*
B.S., Appalachian State University; M.S., Virginia Polytechnic Institute and state University; Ph.D., University of New Mexico

Nix, Charles L., *2001, Associate Professor in Health and Kinesiology.*
B.S., M.S., Kansas State University; Ed.S., Ed.D., The University of Alabama

Nordgren, Joseph E., *1990, Associate Professor of English.*
B.A., University of Minnesota; M.A., Ph.D., Florida State University

Ortego, James Dale, *1968, Regents' Professor of Chemistry.*
B.S., University of Southwestern Louisiana; Ph.D., Louisiana State University

Osborne, Lawrence, *1990, Professor of Computer Science and Chair, Department of Computer Science.*
B.S., Southeast Missouri State University; M.A., M.S., Ph.D., University of Missouri-Rolla

Pemberton, Amy, *1984, Associate Professor of Family and Consumer Sciences.*
B.S., M.S., Lamar University; Ph.D., University of Texas School of Public Health-Houston; Registered Dietitian

Price, Donald I., *1981, Professor of Economics and Finance.*
B.A., Hendrix College; M.A., Ph.D., University of Arkansas

Priest, Dale G., *1986, Professor of English and Modern Languages.*
B.A., Lamar University; M.A., Ph.D., Rice University

Pryor, Brandt W., *2001, Associate Professor of Educational Administration.*
B.S., M.S., Saint Louis University; Ph.D., University of Illinois

Reddy, G.N., *1990, Associate Professor of Electrical Engineering.*
B.E., Nagarjunasugar Engr College; M.Sc. Engr., PSG College of Technology; M.S., Ph.D., Indian Institute of Technology

Rice, Desmond V., *1987, Associate Professor of Reading and Educational Technology.*
B.A., Avondale College, N.S.W., Australia; M.A., San Francisco State University; Ed.D., University of Southern California

Rinker, Martha A., *1999, Assistant Professor of Psychology*
B.S., University of Wisconsin-River Falls; Ph.D., University of Indiana

Rissman, Maurice B., *2002, Assistant Professor of Music, Theatre, and Dance.*
B.M., Johns Hopkins University; M.M., University of Nevada; D.M.A., Temple University

Rivers, Dianna L., *2000, Assistant Professor of Nursing.*
B.S.N., Mount Marty College; M.P.H., University of Minnesota; Dr.P.H., University of Texas–Houston, Health Sciences Center

Ruiz, Connie, *1976, Associate Professor Family and Consumer Sciences.*
B.S., Southwest Texas State University; M.S., Kansas State University; Ph.D., Texas A&M University; Registered Dietitian

Sanderson, James, *1989, Professor of English.*
B.A., M.A., Southwest Texas State University; Ph.D., Oklahoma State University

Saur, Pamela S., *1988, Professor of English.*
B.A., M.A., University of Iowa; M.Ed., University of Massachusetts; Ph.D., University of Iowa

Schultz, Russ A., *2000, Professor of Music and Dean of the College of Fine Arts and Communication.*
B.M.E., Eastman School of Music; M.M., Memphis State University; D.M.A., North Texas State University

Sen, Kabir C., *1993, Associate Professor of Marketing.*
B. Tech., Indian Institute of Technology; M.B.A., Cranfield School of Management; M.S., Ph.D., Washington University

Sheppeard, Sallye J., *1980, Professor of English and Chair, Department of English.*
B.A., M.A., Texas Christian University; M.R.E., Brite Divinity School; Ph.D., Texas Woman's University

Shukla, Shyam S., *1985, Associate Professor of Chemistry.*
M.S., University of Saskatchewan; Ph.D., Clarkson College of Technology

Sisk, Dorothy, *1990, Conn Professor of Gifted Education.*
B.S., Mount Union College; M.A., California State University Long Beach; Ed.D., University of California at Los Angeles

Smith, Sheila, *2001, Instructor of Nursing.*
B.S.N., Lamar University; M.S.N., University of Texas Medical Branch, Ph.D. (candidate), Texas Woman's University

Smith, Zanthia, *2000, Assistant Professor of Communication Disorders.*
B.S., M.S., Ed.D., Lamar University

Spradley, Larry W., *1972, Professor of Business Statistics.*
B.A., Stephen F. Austin State University; M.Th., Southern Methodist University; M.S., Lamar University; Ph.D., Texas A&M University

Srinivasan, Malur, *1996, Professor and Chair of Mechanical Engineering.*
B.S., University of Mysore; M.S., Ph.D., Indian Institute of Science

Storey, John W., *1968, Regents' Professor of History and Chair, Department of History.*
B.A., Lamar University; M.A., Baylor University; Ph.D., University of Kentucky

Strickland, George, *1995, Assistant Professor of Health and Kinesiology.*
B.S., University of Houston; M.S., Ph.D., Southern Illinois University

Sullivan, Jeri, *1998, Instructor, Communication Disorders.*
B.A., M.A., Lamar University

Sutton, Walter A., *1963, Professor of History.*
B.A., William Marsh Rice University; M.A., Ph.D., University of Texas

Swerdlow, Robert A., *1978, Professor of Marketing and Associate Dean, College of Business.*
B.B.A., M.B.A., Lamar University; Ph.D., University of Arkansas

Terry, Randall, *2000, Assistant Professor of Biology.*
B.S., M.A.T., Livingston University; Ph.D., University of Wyoming

Thomas, Prince V., *1998, Assistant Professor.*
B.A., University of Texas at Arlington; M.A., University of Houston

Thompson, Bob, *1985, Professor of Educational Administration and Supervision.*
B.S., Abilene Christian University; M.Ed., Ph.D., East Texas State University

Thompson, J. Lee, *1998, Assistant Professor of History.*
B.A., M.A., University of Houston; Ph.D., Texas A&M University

Tran, Quoc-Nam, *1999, Assistant Professor of Computer Science.*
B.Sc., University of HCM City; M.Sc., Asian Institute of Technology; Ph.D., RIS-Linz Institute, University of Linz

True, James, *1997, Jack Brooks Chair of Political Science.*
B.A., McMurry University; M.S., Southern Illinois University; Ph.D., Texas A&M

Twigg, Nicholas W., *2001, Assistant Professor of Management.*
B.S., State University of New York, Albany; M.B.A., Southeastern Louisiana University

Underdown, D. Ryan, *1998, Assistant Professor in the Department of Industrial Engineering.*
B.S., M.S., Ph.D., University of Texas at Arlington.

Utter, Glenn H., *1972, Professor of Political Science and Chair, Department of Political Science.*
B.A., State University of New York at Binghamton; M.A., Ph.D., State University of New York at Buffalo

Vanderleeuw, James M., *1988, Professor of Political Science.*
B.A., Ramapo College; M.A., University of Nevada-Reno; Ph.D., University of New Orleans

Varick, Celia B., *1995, Assistant Professor of Accounting.*
B.A., University of Southern Maine; M.A., University of Iowa; Ph.D., University of Arkansas; Certified Public Accountant

Wallace, Faith, *2001,* Assistant Professor of Nursing.
B.S.N., Marian College of Nursing; M.A.N., Licoe College of Nursing

Warren, Michael E., *1969, Professor of Biology and Chair, Department of Biology.*
B.A., M.A., Ph.D., University of Texas at Austin

Weeks, Linda A., *2001, Assistant Professor of Professional Pedagogy.*
B.A., M.A., Ed.D., University of West Florida

Westgate, James W., *1989, Associate Professor of Geology.*
B.S., College of William and Mary; M.S., University of Nebraska-Lincoln; M.S., Southwest Missouri State University; Ph.D., University of Texas-Austin

Wills, Curtis, *1972, Associate Professor of Educational Leadership.*
Associate, Navarro Junior College; B.S., M.Ed., Sam Houston State University; Ed.D., North Texas State University

Wooster, Ralph A., *1955, Regents' Professor of History.*
B.A., M.A., University of Houston; Ph.D., University of Texas

Wright, Stuart A., *1985, Professor of Sociology; Associate Director of Graduate Studies and Research.*
B.A., M.A., University of Houston; Ph.D., University of Connecticut

Yaws, Carl L., *1975, Professor of Chemical Engineering; Interim Chair, Department of Chemical Engineering.*
B.S., Texas A&M University; M.S., Ph.D., University of Houston; Registered Professional Engineer

Yearwood, Stephanie, *1988, Associate Professor of English.*
B.A., Tulane University; M.A., Ph.D., University of Texas

Yoder, Howard R., *2000, Assistant Professor of Biology.*
B.A., Goshen College; Ph.D., University of Wisconsin-Milwaukee

Young, Fred M., *1978, Professor of Mechanical Engineering.*
B.S.M.E., M.S.M.E., Ph.D., Southern Methodist University; Registered Professional Engineer

Zaloom, Victor A., *1981, Professor of Industrial Engineering and Chair, Department of Industrial Engineering, Director of Engineering Graduate Programs.*
B.S.I.E., M.S.E., University of Florida; Ph.D., University of Houston; Registered Professional Engineer

Zani, Steven, *1999, Assistant Professor of English and Foreign Languages.*
B.A., University of South Alabama; M.A., Ph.D., State University of New York

Index

Correspondence Directory

All correspondence should be directed to Lamar University, Beaumont, Texas 77710. Telephone numbers may be obtained through the central switchboard, 409/880-7011.

Academic Programs ..... Kevin Smith, Associate Vice President
P.O. Box 10002, 409/880-8400

Academic Affairs ..... Stephen Doblin, Executive Vice President
P.O. Box 10002, 409/880-8398

Admissions ..... James Rush, Director, Academic Services
P.O. Box 10009, 409/880-8354

Applications/Information ..... Admissions Services
P.O. Box 10009, 409/880-8888

Athletics ..... W. Dean Billick, Athletic Director
P.O. Box 10066, 409/880-8323

Bookstore ..... Manager
Setzer Student Center, P.O. Box 10108, 409/880-8342

Career Center ..... Director
P.O. Box 10012, 409/880-8878

College of Arts & Sciences ..... Brenda S. Nichols, Dean
P.O. Box 10058, 409/880-8508

College of Business ..... Charles F. Hawkins, Interim Dean
P.O. Box 10059, 409/880-8604

College of Education and Human Development ..... R. Carl Westerfield, Dean
P.O. Box 10034, 409/880-8661

College of Engineering ..... Jack R. Hopper, Dean
P.O. Box 10057, 409/880-8741

College of Fine Arts & Communication ..... Russ A. Schultz, Dean
P.O. Box 10077, 409/880-8137

College of Graduate Studies ..... Jerry W. Bradley, Associate Vice President for Research and Dean
P.O. Box 10004, 409/880-8230

Computer Services and Information Systems ..... Cliff Woodruff, Assistant Vice President
P.O. Box 10020, 409/880-8489

Continuing Education ..... Rebecca Woodland, Interim Director
P.O. Box 10008, 409/880-8209

Counseling/Testing ..... Coordinator
P.O. Box 10040, 409/880-8444

Finance ..... Mike Ferguson, Vice President
P.O. Box 10003, 409/880-8395

Financial Aid ..... Jill Rowley, Supervisor
P.O. Box 10042, 409/880-8450

International Student Services ..... Sandy Drane, Coordinator
P.O. Box 10078, 409/880-8349

Library ..... Linda Dugger, Interim Director
P.O. Box 10021, 409/880-8118

Orientation ..... Coordinator
P.O. Box 10006, 409/880-8442

President ..... James Simmons, President
P.O. Box 10001, 409/880-8405

Records & Registration ..... Keith Capps, Registrar
P.O. Box 10010, 409/880-8968

Residence Life ..... Todd Hefner, Director
P.O. Box 10041, 409/880-8111

Scholarships and Recruitment ..... Melissa Gallien, Director
P.O. Box 10009, 409/880-8316

Student Affairs ..... Barry W. Johnson, Interim Vice President
P.O. Box 11950, 409/880-8458

Student Health ..... Director
P.O. Box 10015, 409/880-8466

Teacher Certification ..... Charles Burke, Director
P.O. Box 10034, 409/880-8690

Tuition/Fees/Expenses ..... Donna Quebedeaux, Director
P.O. Box 10183, 409/880-8999

University Advancement ..... Camille Mouton, Executive Director
P.O. Box 10011, 409/880-8419

Veterans Affairs ..... Norma Cumbaa, Coordinator
P.O. Box 10017, 409/880-8437

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