

LAMAR UNIVERSITY • BEAUMONT



1988-1989 GRADUATE STUDIES CATALOG



# LAMAR UNIVERSITY

## COLLEGE OF GRADUATE STUDIES 1988-89 • Bulletin • Volume 37 Number 2

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Eighteenth annual catalog issued with announcements for 1988-89.

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

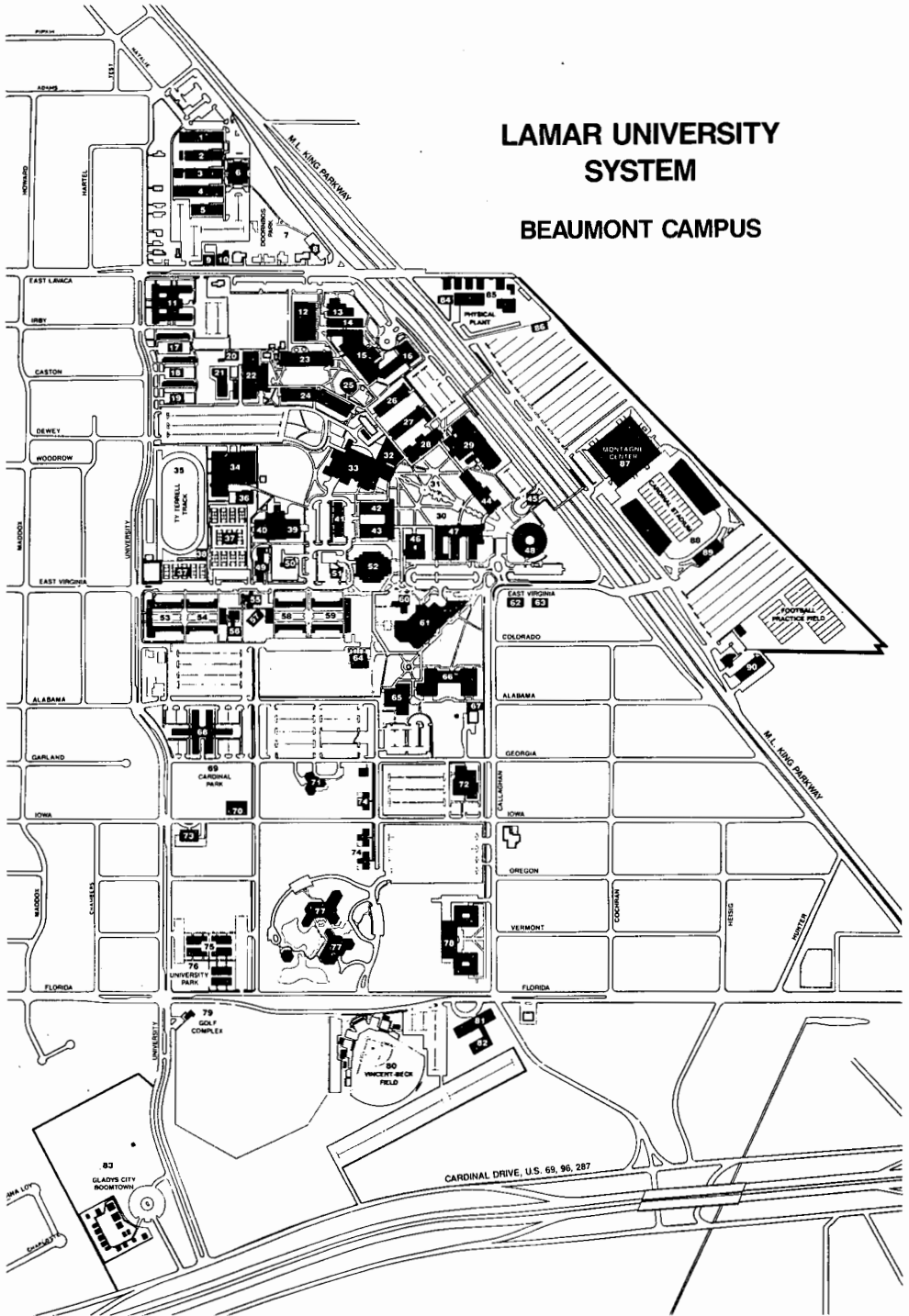
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Lamar University is an equal opportunity/affirmative action educational institution and employer. Students, faculty and staff members are selected without regard to their race, color, creed, sex, or national origin, consistent with the Assurance of Compliance with Title VI of the Civil Rights Act of 1964; Executive Order 11246 as issued and amended; Title IX of the Education Amendments of 1972, as amended; Section 504 of the Rehabilitation Act of 1973. Inquiries concerning application of these regulations may be referred to the Vice President for Administration, Personnel, and Student Services.

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# LAMAR UNIVERSITY SYSTEM BEAUMONT CAMPUS



## LEGEND TO MAP OF LAMAR UNIVERSITY • BEAUMONT

Administration (Plummer Bldg.)	48
Alumni House	50
Army ROTC	64
Art Building	14
Biology (Hayes Bldg.)	23
Bookstore	32
Business (Galloway Bldg.)	29
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Cardinal Park	69
Cardinal Stadium	88
Chancellor's Home	71
Chemistry Bldg.	24
Communication Bldg.	15
Computer Energy Management Facility	67
Continuing Education	87
Custodial Services	41
Dental Hygiene Clinic	12
Dining Hall	39
Dishman Art Gallery	13
Doornbos Park	7
Early Childhood Development Center	81
Education Bldg.	65
Employment Office	9
Engineering I (Lucas Bldg.)	47
Engineering II	43
Engineering III (Cherry Bldg.)	61
Faculty-Staff Dining Room	40
Fraternity Row	74
Geology Bldg.	27
Gladys City Boomtown	83
Golf Complex	79
Gray Institute	77
Gray Library	52
Gym Annex	20
Health Sciences (Mamie McFaddin Ward Bldg.)	12
Health Center	49
Home Economics Bldg.	46
Housing Office	51
Information Center	45
J. B. Higgins Fieldhouse	89
KVLU Radio Station	15
Maes Bldg.	66
McDonald Gym	34
Mirabeau B. Lamar Statue	31
Montagne Center	87
Music Bldg.	16
Parking Office	8
Physical Plant	85
Physics (Archer Bldg.)	28
Placement Center	29
Police Department	41
Pool (indoor)	22
Pool (outdoor)	21
Post Office	41
President's Home	73
Print Shop	42
Psychology Bldg.	26
Public Affairs Bldg.	60
Quadrangle	30
Quick Copy Center	42
Racquetball-Handball Court	36
Recreational Pavilion	70
Religious Centers	
Baptist Student Center	57
Church of Christ Center	63
Episcopal Center	55
Newman Catholic Center	62
Wesley Foundation Methodist Center	56

Residences:	
Unit I	19
Unit II	18
Unit III	17
University Drive Apartments	75
(Men's residence halls)	
Combs	58
Morris	59
Plummer	68
Shivers	78
Stadium Hall (football)	90
(Women's residence halls)	
Brooks	78
Campbell	54
Gentry (sorority)	11
Gray	53
Resource Management Center	10
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Setzer Student Center	33
Shipping and Receiving	86
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Spindletop Museum	82
Student Services (Wimberly Bldg.)	44
Supply Center	42
System Offices	52
Technical Arts Main Bldg. (Beeson)	6
Technical Arts 1	1
Technical Arts 2	2
Technical Arts 3	3
Technical Arts 4	4
Technical Arts 5	5
Theatre	15
Tennis Courts	37
Tennis Pro Shop	38
Ty Terrell Track	35
University Park	76
University Press	33
Vincent-Beck Stadium	80
Women's Gym	22

## REGISTER OF OFFICES

Office	Building Number
Academic deans (by college)	
Arts and Sciences	24
Business	29
Education	65
Engineering	61
Fine Arts and Communication	13
Graduate Studies and Research	44
Health and Behavioral Sciences	12
Technical Arts	6
Academic and Student Affairs	48
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# 1988-89 Calendar

Published dates in this calendar are subject to revision by published notice from the Office of the Associate Vice President for Academic and Student Affairs.

## Fall Semester-1988

### AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

### SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

### OCTOBER

S	M	T	W	T	F	S
						1
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9	10	11	12	13	14	15
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23	24	25	26	27	28	29
30	31					

### NOVEMBER

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		1	2	3	4	5
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

### DECEMBER

S	M	T	W	T	F	S
				1	2	3
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

### August

- 18 New Student Orientation
- 21 Dormitories open at 1 p.m.  
Dining Halls open at 4:30 p.m.
- 22 Registration begins
- 23 Registration
- 25 Classes begin  
Schedule revisions — late registration
- 26 Last day for schedule revisions and/or late registration

### September

- 5 Labor Day — no classes
- 12 Twelfth Class Day

### October

- 5 Last day to drop or withdraw without academic penalty  
Last day to petition for no grade
- 12 Last day to apply for December graduation  
Last day to pay for diploma; cap and gown

### November

- 3 Comprehensive written examinations
- 9— December 7—period for oral examination/thesis defense
- 14 Last day to drop or withdraw
- 14-18 Early registration for Spring semester
- 17 First copy of thesis due in Graduate College
- 23 Thanksgiving recess begins at 10 p.m.  
Dining halls close at 6 p.m.  
Dormitories close at 10 p.m.
- 27 Dormitories open at 1 p.m.  
Dining halls open at 4:30 p.m.
- 28 Classes resume at 8 a.m.

### December

- 7 Finals preparation day — no classes prior to 5 p.m.  
End oral examination/thesis defense period  
Final copies of thesis due in Graduate College  
Deadline for payment of thesis binding fee
- 7-14 Final examinations
- 15 Dining halls close at 10 a.m.  
Dormitories close at 12 noon  
Grades for graduating students due 8:30 a.m.  
All grades due 4 p.m.
- 17 Commencement

## Spring Semester-1989

### JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

### FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

### MARCH

S	M	T	W	T	F	S
			1	2	3	4
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19	20	21	22	23	24	25
26	27	28	29	30	31	

### APRIL

S	M	T	W	T	F	S
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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

### MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

### January

- 5 New Student Orientation
- 8 Dormitories open at 1 p.m.  
Dining halls open at 4:30 p.m.
- 9 Registration begins
- 10 Registration
- 12 Classes begin  
Schedule revisions — late registration
- 13 Last day for schedule revisions and/or late registration
- 27 Twelfth Class Day

### February

- 22 Last day to drop or withdraw without penalty  
Last day to petition for no grade

### March

- 1 Last day to apply for May graduation  
Last day to pay for diploma; cap and gown
- 10 Spring recess begins at 5 p.m.  
Dining halls and dormitories close at 6 p.m.
- 19 Dormitories open at 1 p.m.  
Dining halls open at 4:30 p.m.
- 20 Classes resume at 8 a.m.
- 24 Good Friday — no classes

### April

- 3— May 3—period for oral examination/thesis defense
- 6 Comprehensive written examinations
- 12 Last day to drop or withdraw
- 13 First copy of thesis due in Graduate College
- 17-21 Early registration for Fall semester

### May

- 4 Finals preparation day — no classes prior to 5 p.m.  
End oral examination/thesis defense period  
Final copies of thesis due in Graduate College  
Deadline for payment of thesis binding fee
- 3-10 Final examinations
- 11 Dining halls close at 10 a.m.  
Dormitories close at 12 noon  
Grades for graduating students due 8:30 a.m.  
All grades due 4 p.m.
- 13 Commencement

## Summer Session-1989 First Term

### June

JUNE						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

- 1 New Student Orientation
- 4 Dormitories open at 1 p.m.  
Dining halls open at 4:30 p.m.
- 5 Registration
- 6 Classes begin — schedule revisions and/or late registration
- 7 Last day for schedule revisions and/or late registration
- 9 Fourth Class Day
- 12 Last day to drop or withdraw without academic penalty  
Last day to petition for no grade
- 20-22 Orientation — Session I
- 22 Comprehensive written examinations (except College of Business and College of Education)
- 26— August 9—period for oral examination/thesis defense

### July

- 3 Comprehensive written examinations (College of Business and College of Education only)  
Last day to apply for August graduation  
Last day to pay for diploma; cap and gown
- 4 Independence Day — No Classes
- 5 Last day to drop or withdraw
- 12 Last class day
- 13 All grades due by 4 p.m.
- 14 Reservation deadline for Orientation Session II

## Summer Session-1989 Second Term

### July

JULY						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

- 12 Registration
- 13 Classes begin — schedule revisions and/or late registration
- 14 Last day for schedule revisions and/or late registration
- 18 Fourth Class Day
- 19 First copy of thesis due in Graduate College
- 22-24 Orientation — Session II
- 26 Last day to drop or withdraw without academic penalty  
Last day to petition for no grade
- 31 Reservation for Orientation Session III

AUGUST						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

### August

- 8-10 Orientation — Session III
- 9 End oral examination/thesis defense period  
Final copies of thesis due in Graduate College  
Deadline for payment of thesis binding fee
- 11 Last day to drop or withdraw
- 17 Last class day  
Dining halls and dormitories close at 6 p.m.
- 18 Grades for graduating students due 8:30 a.m.  
All grades due 12 noon
- 19 Commencement

Summer 1989 class schedule is subject to change.

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Director of Graduate Studies: Howell H. Gwin, Jr.

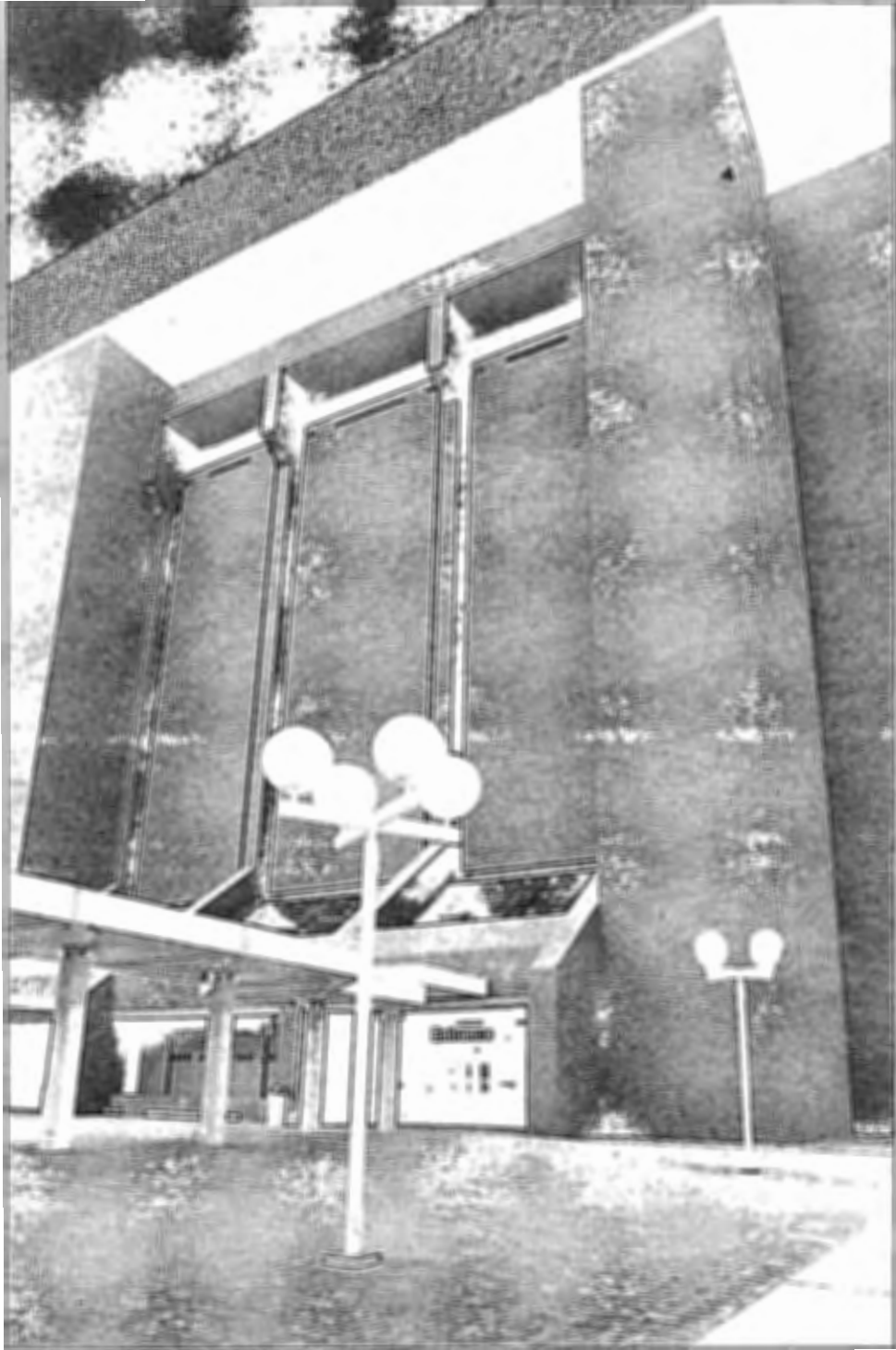
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The eight-story Mary and John Gray Library stands as a focal point of both the learning experiences and the landscape of Lamar University-Beaumont.

# General Information

## Location

The central campus of Lamar University, a state-supported institution, is located in Beaumont, Texas, one of the world's largest petrochemical centers. Beaumont is a progressive city in the Sunbelt, offering private and public schools, churches, museums, shopping districts and a wide range of leisure-time activities to serve a metropolis of 130,000. 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 major recreational facilities of southeast Texas, including the Gulf of Mexico, large lakes and the Big Thicket National Preserve.

Other campuses of the Lamar University System are located in Orange and Port Arthur, Texas.

## 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.

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. Following World War II, the College grew to 1,079, and a bill to make Lamar University a state-supported senior college was introduced in the House of Representatives. The legislature approved the Lamar bill (House Bill-52) on 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. Uniquely, Lamar retained much of its traditional community college mission, particularly in vocational programs, while continuing to grow with strong programs in engineering, sciences, business, and education.

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 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 Port Arthur College became Lamar University at Port Arthur. The Lamar University System, of which Lamar University-Beaumont is the primary component, was established by the 68th Session of the Texas Legislature with the passage of SB-620, which took effect in August 1983.

Since Lamar University-Beaumont first opened in 1923, it has achieved a unique position in the community of higher education with its traditional academic degree programs, including graduate and baccalaureate curricula, offered alongside one- and two-year degree programs and certification programs in vocational-technical fields. Diplomas and certificate programs are offered in 15 areas of training. Degrees are offered in more than 130 fields of study.

## Government

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

## **Accreditation and Approval**

Lamar University-Beaumont is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award Associate, Bachelor's, Master's and Doctor's degrees and 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.

Several departments and programs have been accredited by professional agencies. In the College of Engineering, the programs in Chemical, Civil, Electrical, Industrial and Mechanical Engineering are accredited by the Accreditation Board for Engineering and Technology. The undergraduate and graduate programs of the College of Business are accredited by the American Assembly for Collegiate Schools of Business.

In the College of Health and Behavioral Sciences, Dental Hygiene is accredited by the American Dental Association; Radiologic Technology, Respiratory Technology and Respiratory Therapy by the American Medical Association; and Nursing by the National League for Nursing.

Other accreditations include the Department of Chemistry by the American Chemical Society; Department of Music by the National Association of Schools of Music; and the College Education by the National Council for the Accreditation of Teacher Education; and Council on Social Work Education; and programs in Speech Pathology by the American Speech-Language-Hearing Association and in Deaf Education by the Council for Education of the Deaf.

The University also is a member of a number of academic councils, societies, associations and other such organizations.

## **The Library**

The eight-story Mary and John Gray Library building dominates the campus from its central location. Built to house a million volumes, the Library occupies six floors and has a fully computerized system that provides open access to 800,000 volumes. 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 and Special Collections.

The eighth floor offers expansion space for the future, but is presently shared with other University services. This spacious and elegant 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 strong collection of books 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 multi-media programs on campus and is developing basic collections of equipment and materials for central distribution.

## **Research Office**

A Research Office was formally organized in 1956. It is administered by the Dean of Graduate Studies and Research who serves as the chairman of the faculty research committee. All state-financed research projects are awarded through the research committee.

## **Computer Center**

The University Computer Center is responsible for providing the computing services required by the academic, administrative and research communities of the University.

The Computer center has a Dual Honeywell DPS8/49 computer with 1536K words of 36 bit MOS memory and approximately 1.1 billion characters of on-line disk storage. The system supports one card reader, one card punch, two line printers and three tape drives at the main site. Over 90 terminals are available for interactive computer use. Extensive communication equipment can connect up to 53 synchronous and 134 asynchronous terminals to the computer concurrently. A remote job entry station which has one card reader and one printer is located in the Beeson Technical Arts Building.

Academic computing work, particularly by students in Computer Science courses, accounts for a large portion of the Computer Center's computer usage. Each student is responsible for preparing his or her own program. Most student programs are usually processed within 30 minutes. Keypunches are available for punching cards. All jobs are automatically scheduled by the computer which considers computing time and storage requirements as well as other factors.

## **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 certified kindergarten programs for children between the ages of 18 months and five years.

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 provides a site for college students to observe and 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.

## **Counseling and Testing Center**

Lamar University maintains a Counseling Center located in Room 116 of the Wimberly Student Services Building that offers a full range of services to students. In this central resource location, professional staff are available to provide educational, diagnostic and career testing; instruction for and access to individual computer-assisted career exploration; educational, personal, social, career counseling; and assessment and referral to student development programs including those of Special Services and Learning Skills.

The center is staffed with a licensed psychologist and licensed and certified counselors to assist in the resolution of student problems and questions. The Counseling Center does not address problems of a long-term therapeutic nature. Students encountering difficulties are encouraged to consult the office on a no-charge basis. All contacts are confidential.

In order to assist students in making decisions concerning choices of majors and careers, the Counseling Center maintains two computerized career information systems, SIGI, and Discover, as well as a career library.

The Center coordinates testing required by Lamar University and provides individual testing services for students. These services include the administration and interpretation of career interest and personality tests.

The office also acts as a national test center for administration of Graduate Record Examination, Law School Admission Test, Graduate Management Admission Test, Scholastic Aptitude Test (SAT), American College Testing Program (ACT), College Level Examination Program (CLEP), General Educational Development Test (High School Equivalency Test), the Miller Analogies Test, and the Pre-Professional Skills Test. Information and application forms concerning these tests may be obtained from the Counseling Center.

## **Placement Center**

The Placement Center is a centralized operation responsible for placement activities for all colleges of the university. The placement services are available free of cost to students, faculty, staff and all former students. The center keeps updated information in career fields and job areas, employers and the kind of employees being sought.

Interviews are scheduled regularly with companies, governmental agencies, schools and other employers.

The center also offers seminars pertaining to job search techniques, interviews, resume writing and job availability. The Placement Center is located in Room 102 of the Galloway Business Building.

## **Health Center**

The University maintains a Health Center for use by Lamar students. Outpatient service is available for illness or injury that does not require constant supervision.

While it is not possible for the University to provide unlimited medical service, some routine laboratory tests are available at the clinic at a reasonable cost. More extensive laboratory tests and x-rays are available from private physicians of requested by the Health Center Director.

All drugs, splints, special bandages, as well as serums, vaccines, and gamma globulin, which may be prescribed by the Health Center are dispensed at prices equal to the cost assessed the University. Pre-admission vaccinations are not given. Emergency Room or other outside medical care is not the responsibility of the University and is not offered by the Health Center. Any student who has a chronic illness or disability requiring continuing medical attention should make arrangements with a local private physician.

Student Health Center services are available during regular hours when the University is in session.

## **Veterans Education**

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

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 a number of qualified students. Details may be obtained on request from the Director of Student Aid.

## **Teaching Fellowships and Assistantships**

A number of teaching fellowships and assistantships are available in the various departments of the College of Graduate Studies. Application forms and additional information may be obtained either from the department head or from the Dean of the College of Graduate Studies.

Fellowships and assistantships are awarded **only** to those individuals who meet all requirements for admission to a graduate degree program, including satisfactory GRE/GMAT scores.

The stipend for a teaching fellow varies in accordance with the number of courses taught. Students must reduce their academic load in relation to their teaching assignment (the combined teaching and course load may not exceed 15 load units in the long term). The maximum teaching responsibilities for a teaching fellow or assistant is six load units.

Tuition and fees are not waived for teaching fellows or assistants, but nonresidents of Texas are not required to pay out-of-state tuition.

Applications should be received by February 1 for the following academic year.

## **Teacher Certification**

Lamar University has been approved by the Texas Education Agency to offer professional certification programs in administration, counseling and guidance, elementary secondary, special education, reading, supervision and visiting teacher. Specific information concerning certification may be found in the College of Education section of this catalog or may be obtained from the Director of Certification in the College of Education.

## **Fees and Expenses**

### **Payment of Fees**

Lamar University reserves the right to change fees in keeping with acts of the Texas Legislature and the University's Board of Regents.

*A student is not registered until all fees are paid in full.* Payment may be made by check, MasterCard/VISA, money order or currency. Checks and money orders not in excess of total fees should be made payable to Lamar University and will be accepted subject to final payment. Checks and drafts deposited with Federal Reserve banks cannot be handled through regular bank collection channels if received without the magnetic ink (MICR transit number).

### **Tuition and Fees**

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; a nonresident U.S. citizen; or a citizen of another country.\*

\*Determination of legal residence for tuition purposes is made on the basis of statutes of the State of Texas. Refer to the Coordinating Board, Texas College and University System "Rules and Regulations for Determining Residence Status" as revised, July 15, 1981, available in the Office of the Director of Admission Services.

### **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 Dean of Records and Registrar 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 Dean of Records and Registrar.

### **Publication of Thesis/Dissertation Abstracts**

The Graduate Council requires that thesis and dissertation abstracts be published by University Microfilms. Fees for this service are \$30 for a master's thesis and \$40 for a doctoral dissertation. If copyrighting is desired, an additional fee of \$20 is charged.

### **Refund of Fees**

Any student officially withdrawing will receive a refund on tuition, Setzer Center, student service, laboratory, building and general use and private lesson fees according to the following schedule:

#### **Fall or Spring Semester**

- Prior to the first class day, 100 per cent.
- During the first five class days, 80 per cent.
- During the second week of classes, 70 per cent.
- During the third week of classes, 50 per cent.
- During the fourth week of classes, 25 per cent.
- After the fourth week of classes, none.

#### **Summer Session**

- Prior to the first class day, 100 per cent.
- During the first, second or third class day, 80 per cent.
- During the fourth, fifth or sixth class day, 50 per cent.
- Seventh class day and thereafter, none.

Questions regarding refunds should be addressed to the Finance Office.

## Summary of Fees

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

### Fall 1988

No. of Semester Hours	Tuition		Student Service Fee	General Use Fee	Setzer Center Fee	Health Center Fee	Total Charge	
	Texas Resident	Non-Texas Resident*					Texas Resident	Non-Texas Resident
1	\$100	\$ 120	\$26	\$20	\$30	\$ 5	\$181	\$ 201
2	100	240	33	20	30	5	188	328
3	100	360	40	20	30	5	195	455
4	100	480	47	24	30	5	206	586
5	100	600	54	30	30	5	219	719
6	100	720	61	36	30	6	233	853
7	112	840	68	42	30	7	259	987
8	128	960	75	48	30	8	289	1,121
9	144	1,080	75	54	30	9	312	1,248
10	160	1,200	75	60	30	10	335	1,375
11	176	1,320	75	66	30	11	358	1,502
12	192	1,440	75	72	30	12	381	1,629
13	208	1,560	75	78	30	13	404	1,756
14	224	1,680	75	84	30	14	427	1,883
15	240	1,800	75	90	30	15	450	2,010
16	256	1,920	75	90	30	15	466	2,130
17	272	2,040	75	90	30	15	482	2,250
18	288	2,160	75	90	30	15	498	2,370
19	304	2,280	75	90	30	15	514	2,490
20	320	2,400	75	90	30	15	530	2,610

### Summer 1989

1	\$ 50	\$ 120	\$26	\$20	\$15	\$ 5	\$116	\$186
2	50	240	33	20	15	5	123	313
3	50	300	37	20	15	5	127	437
4	64	480	37	24	15	5	145	561
5	80	600	37	30	15	5	167	687
6	96	720	37	36	15	6	170	814
7	112	840	37	42	15	7	213	941
8	128	960	37	48	15	8	236	1,068
9	144	1,080	37	54	15	9	254	1,195
10	160	1,200	37	60	15	10	282	1,322

\*Non-resident tuition will be revised each January for the following academic year (Sept.-Aug.)

## Laboratory Fees

A laboratory fee of \$2 is charged each semester for courses with a combined lecture and laboratory credit of from one to three semester hours. The laboratory fee is \$4 per semester for courses of four or more semester hours credit.

## Private Lessons in Voice and Instrumental Music

Graduate applied music courses (per semester hour).....\$18.00

## Late Registration Fee

A charge of \$5 is made during the first day of late registration. This fee increases to \$10 for the second day and \$15 for the third and subsequent days.

## 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, \$15; Spring Semester, \$10; Summer Session I, \$6; Summer Session II, \$4. 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 after the student graduates or withdraws from the University.

**Health and Accident Insurance**

Health and accident insurance coverage is available at registration for students carrying nine or more semester hours. Insurance fees are as follows: Fall Semester, \$48; Spring and Summer Semesters, \$92; yearly fee, \$140. This or similar insurance is required of all international students. Additional information may be obtained from the Dean of Students' office, Room 109, Wimberly Student Services Building.

**Miscellaneous Fees**

Thesis binding (each copy) . . . . .	\$ 8.50
Microfilming (Master's) . . . . .	30.00
Microfilming (Doctor's) . . . . .	40.00
Master's Diploma . . . . .	12.00
Cap, Gown and Hood Rental (Master's) . . . . .	25.50
Cap, Gown and Hood Rental (Doctor's) . . . . .	27.50
Returned Checks . . . . .	15.00
Reentry Fee . . . . .	10.00
Transcript Fee . . . . .	2.00

**Returned Check Fees**

Checks written in payment of registration fees and returned to the University due to insufficient funds will result in a \$10 check charge plus a \$15 late registration fee.

A student already enrolled in the University is automatically suspended from the University if a check is returned unpaid. The student may re-enter upon redemption of the check plus payment of the returned check fee of \$10.

**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 student housing 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.

Students who do not feel the residence hall program meets their personal needs may elect to find living accommodations off campus.

Questions concerning the housing system, its policies, room and board rates, should be directed to the Student Housing Office, Lamar University Station, Box 10041, Beaumont, Texas 77710.



Lamar honors Mirabeau B. Lamar, second president of the Republic of Texas and Father of Public Education in Texas, whose sculpture adorns the Quadrangle.

# Academic Information

## Course Numbering

Semesters of a course are numbered separately and each number contains three or more figures. Master's level courses are numbered 400G and 500. Doctoral level courses are numbered 500D and 600. Students who receive graduate credit for 400 (also 400G) level courses are expected to complete extra assignments in the courses over and above what is required for undergraduate credit.

The second figure indicates the number of semester hours credit. The third figure or figures indicates the order in which the course normally is taken. The letter "A" or "B" following course numbers indicates partial credit in each course; full credit for such numbered courses will be granted only when the series has been completed.

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. 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 head of the student's major field. All such changes are initiated by the completion of the proper form available in the department head'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 head, 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 Office of Records. 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 schedule 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.

## Withdrawals

Students who wish to withdraw during a semester or summer term should fill out a Withdrawal Petition in triplicate in the office of their department head. Students must clear all financial obligations and return all uniforms, books, laboratory equipment and other materials to the point of original issue. Copies of the withdrawal form signed by the department head and the Director of Library Services are presented to the Office of Records by the student.

The Finance Office, on application before the end of the semester or Summer Session, will return such fees as are returnable according to the schedule shown under the "fees" section of the 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" is issued for each course affected. A grade of "F" is 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 or five 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 wishing to withdraw after the official withdrawal date may review the issue with the Dean of the student's major.

## **Enforced Withdrawal Due to Illness**

The Director of the Health Center and the Associate Vice President/Dean of Students, 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 personally or will be released on the student's written authorization.

Students who owe debts to the University may have their official transcripts withheld until the debt is paid.

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, PL 93-380.

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

The types, locations and names of custodians of educational records maintained by the University are available from the Dean of Records and 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 that any or all of this information be withheld from the public by making written request to the Dean of Records and Registrar. The request must be made by the last official day to register for a given session and applies to that session only. Directory information includes name; current and permanent address; telephone listing; date and place of birth; marital status; country of citizenship; major and minor; semester hour load; classification; eligibility for and 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 they are 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 Office of Records.

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 or, second, by the parent validating the student's dependency as defined by IRS.

## **Summons**

An official summons takes precedence over other university activities of the student and should be answered promptly on the day and hour designated.

## **Student Conduct**

In order to meet its educational objectives, an institution of higher learning must expect rational, mature behavior from its constituency. To accept anything less is to invite the destruction of not only academic freedom but the system of higher education itself.

Disciplinary procedures, specific University rules and regulations, and statements of student rights and responsibilities are published each year in the *Student Handbook*. Copies of the *Student Handbook* are available in the office of the Dean of Students.

## **Penalty**

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 Office of Records. 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 Office of Records.

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 Office of Records. 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.

## **Class Attendance**

Regular class attendance is important to the attainment of the educational objectives of the University. Especially in lower division courses and in large classes at any level, the instructor 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 scheduled for that day at a time specified by the instructor if, not later than the 15th day after the first day of the semester, the student notifies the instructor

of each class the student had scheduled on that date that the student would be absent for a religious holy day.

“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. A form, *Notification of Planned Absence for Religious Holy Days*, may be obtained from the Office of Records and Registrar, Wimberly Building, for the purpose of notification. The completed form must be delivered by the student to the instructor of each class affected by the absence. Upon review of the Notification form, 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 Associate Vice President/Dean of Students. Students may be required to present to the Associate Vice President/Dean of Students a written statement documenting that such absence qualifies under the terms of a religious holy day.



The College of Graduate Studies seeks to advance knowledge, intensify specialization, develop research skill and promote independent thought.

# College of Graduate Studies

## History

The College of Graduate Studies was instituted in the 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, 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 for 1974. In 1975, master's degrees in music, music education and home economics were initiated, and the Master of Engineering Management degree was begun in 1983. A Master of Science in Computer Science was added in 1984.

## 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 making students responsible for their own scholarship.

## Degrees Offered

### Master of Arts

- Master of Arts in English
- Master of Arts in History
- Master of Arts in Political Science

### Master of Business Administration

### Master of Education

- Master of Education in Elementary Education
- Master of Education in Guidance and Counseling
- Master of Education in Secondary Education
- Master of Education in Special Education
- Master of Education in Supervision
- Master of Education in School 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

- Master of Science in Biology
- Master of Science in Chemistry
- Master of Science in Computer Science
- Master of Science in Deaf Education
- Master of Science in Health and Physical Education
- Master of Science in Home Economics
- Master of Science in Mathematics
- Master of Science in Psychology
- Master of Science in Speech (Theater, Speech Pathology/Audiology, Public Address)

### Doctor of Engineering



## Enrollment

### Admission to a Degree Program

1. For admission to a degree program the applicant must meet the following minimum standards and have submitted the following credentials to the Office of Admissions Services at least 30 days before registration.
  - A. An applicant must hold a bachelor's degree from an institution approved by a recognized accrediting agency.
  - B. An official transcript sent directly from each college previously attended.
  - C. Scores on the aptitude section of the Graduate Record Examination (GRE) are sent directly to the Office of Admissions Services by the Educational Testing Service. The Lamar Testing and Counselling Center, located in the Wimberly Student Affairs Building, administers the GRE. Application forms and information about the GRE are available at this center. Applicants for the Master of Business Administration are not required to take the GRE, but must take the Graduate Management Admission Test. (See the College of Business section of this Bulletin for specific requirements).

**NOTE: GRE, GMAT, or NTE scores more than five years old will be accepted only by special permission of the Graduate Dean/Director.**

- D. Applicants for the Doctor of Engineering degree should write a letter to the Dean of the College of Engineering. This letter should include information about the applicant, engineering experience, present employment and chief interests. Applicants also should indicate what type of work they would like to undertake for their field study.
- E. An application for admission sent to the Office of Admissions Services.
- F. The applicant's undergraduate grade point average and GRE scores must be above the minimum standards established by the College of Graduate Studies. For all students, except those wishing to pursue the Master of Business Administration degree, one of the following requirements for admission must be met:
  - (1) A minimum undergraduate grade point average of 2.5 on a four point scale (overall *OR* on the last 60 hours of undergraduate course work) and a minimum score of 400 on the Verbal and on the Quantitative section of the Graduate Record Examination. A total of 800 on these two sections is also required.

**NOTE: In academic year 1988-1989 a total of at least 850 on Verbal plus Quantitative will be required and in academic year 1989-1990 the minimum total will be increased to 900.**

- (2) A grade point average lower than 2.5 (overall *OR* on the last 60 hours of undergraduate course work) and 540 on an appropriate section of the GRE as listed below. Students must also have a minimum of 400 on the other section (Verbal or Quantitative) of the GRE as noted above. Departmental requirements are as follows:

<b>540 in Either V or Q</b>	<b>540 in V</b>	<b>540 in Q</b>
Biology	Deaf Education	Audiology
Education	English	Chemistry
HPE	History	Computer Science
Home Economics	Speech	Engineering
Music	Speech Pathology	Mathematics
Political Science		
Psychology		
Public Administration		

- (3) A minimum overall grade point average of 2.5 on a four point scale and a score at or above the 25th percentile on the appropriate Advanced Test of the GRE; appropriate test will be determined by the department in which

the graduate program is offered. Students admitted under this option must submit GRE aptitude scores before admission.

- (4) The Graduate Council has approved higher standards for admission to some programs. These are stated in the particular departmental section of this Bulletin.
2. Students wishing to pursue the Master of Business Administration degree should refer to the College of Business section of the Bulletin for specific requirements.
3. Admission applications from international students are evaluated on an individual basis after the following material has been received:
  - A. An official transcript from each college previously attended. Complete and official English translations must be furnished along with the certified copies of the transcripts.
  - B. Scores on the aptitude section of the GRE and scores on the Test of English as a Foreign Language, (TOEFL), must be submitted. All international students whose native language is not English are expected to score 500 or above on the TOEFL (550 for admission to the Master of Arts in English) and over 1100 on the aptitude section of the GRE. The application form, test scores, financial statement and complete educational records for international students must be on file by the dates indicated: term beginning in August, by June 15; January, by November 1; June by March 15.
  - C. An original statement of financial resources. The University provides a form for this purpose. Other forms will not be accepted.
4. Any other applicant whose native language is not English and who attended foreign secondary schools, colleges, or universities must submit a TOEFL score of 500 or above in addition to the requirements stated above. Individual departments may require higher scores.
5. International students who are assigned to ESL courses must be enrolled in ESL courses every semester or term until they receive a grade of "S". Students will not be admitted to candidacy or allowed to graduate until this requirement has been completed.
6. Students who wish to pursue graduate work in an area for which they have not had the prerequisites will be required to make up deficiencies as required by the major department. In general, the student is required to have a minimum of 24 semester hours (12 on the junior-senior level) of undergraduate work in the subject chosen as the graduate major. For a graduate minor, 12 semester hours of undergraduate work are required.
7. Admission to the College of Graduate Studies does not imply candidacy for a degree.
8. The Director of Admissions Services will notify the applicant of admission to the College of Graduate Studies. All transcripts, certificates, etc. become the property of Lamar University and are not returnable.
9. The admission requirements stated above are minimum requirements for admission to the College of Graduate Studies. Applicants must also have the approval of the department in which the degree program is offered, and must meet the specific requirements of that department. Prospective students should consult the college/department section of this Bulletin for those requirements.

## **Post Baccalaureate Admission**

1. Students who wish to take graduate courses but do not intend to work toward a particular graduate degree or who have not met all requirements for admission to the College of Graduate Studies, may be admitted as Post Baccalaureate students to one of the undergraduate colleges under the following conditions:
  - A. The applicant must hold a bachelor's degree.
  - B. The applicant must submit an application for admission to the Post Baccalaureate program.

- C. The applicant must submit an official transcript from each college previously attended.
- D. The applicant must be approved for admission by the Director of Admissions Services.
2. International students will not be admitted to the Post Baccalaureate Program.
3. If application for admission to a graduate degree program is received in a subsequent semester and requirements for admission to the College of Graduate Studies are completed, a maximum of six semester hours completed at Lamar before full admission is gained *may* be counted for degree credit if approved by the department and the Graduate Dean.
4. Post Baccalaureate students who have successfully completed six or more hours of graduate course work and who do not meet the minimum admission requirements for the College of Graduate Studies may petition for admission following the procedure given below for the Graduate Admissions Appeals Committee. If admission is then granted by the College of Graduate Studies, the student may receive degree credit for six hours or for the number of hours completed at the end of the semester in which the student exceeds six hours.
5. Post baccalaureate students are not permitted to enroll in business courses for graduate credit without the prior consent of the Coordinator of Graduate Studies, College of Business.

### **Graduate Admissions Appeals Committee**

1. Purpose and Composition
  - A. The Graduate Admissions Appeals Committee shall consider appeals by students who have been denied admission to the College of Graduate Studies by the Office of Admissions Services.
  - B. The Committee is composed of seven members of the Graduate Faculty appointed by the Dean of the College of Graduate Studies in September of each academic year. Each academic College having graduate programs shall have one representative, except that Arts and Sciences shall have one from the Arts division and one from the Sciences division. Five members, not including the Chairman, shall constitute a quorum.
  - C. The Committee shall meet on the second Wednesday in October and on the first Wednesday in March; special meetings may be called by the Graduate Dean if necessary.
2. Appeals Procedure
  - A. Before filing an appeal, the student shall consult with the Director of Admissions Services and with the Dean/Director of the College of Graduate Studies.
  - B. The student must request a hearing in writing from the Dean/Director of the College at least two weeks before the Committee's scheduled meeting date. This request shall state the grounds upon which the appeal is based. The student may also furnish other pertinent material (letters, statements, etc.) for inclusion in the appeals file. Such material must be provided at least one week prior to the scheduled meeting.
  - C. The Dean/Director will notify the Committee Chairman of the pending appeal(s) and the Chairman will arrange a time and place for the meeting. The Dean/Director will then inform the student(s).
  - D. The Dean/Director will forward copies of the appellant's academic records and other supporting documentation to the Chairman who will distribute the material to the Committee members at least three working days before the scheduled meeting.
  - E. The appellant may appear before the Committee to make a statement and to answer such questions as may be posed by the Committee members. The appellant may be accompanied by counsel or by witnesses to speak in the appellant's behalf. However, the appellant shall notify the Dean/Director of such participation at least 24 hours before the meeting.

- F. The hearing shall be open to any interested parties. Following a full hearing, the Committee will meet in closed session to formulate its recommendations. Recommendations will be by majority vote with the Chairman voting only in case of a tie. The appellant shall be immediately informed of the Committee's recommendation.
- G. A written recommendation and the reasons for such recommendation on each case will be forwarded to the Dean of the College within two working days. The Dean will make the final decision on the disposition of each case and will inform the student in writing one week after the hearing.
- H. All relevant materials will be available to the appellant through the Dean of the College, and will be maintained in the Graduate Office for one year. These materials will not be available for public inspection except with the written permission of the student involved.
- I. Copies of the Admissions Appeal Committee procedures and policies will be available in the Office of the Dean of the Graduate College, the Director of Admission Services, and the office of each academic dean.

## Registration

1. A student who has been admitted to the College of Graduate Studies may register in August or January for the long sessions, or in June or July for the summer terms.
2. Graduate students who have completed all course work, but are working on their thesis, must register for 669A or 669B (Thesis) if they wish to obtain professional assistance from a faculty member.

## College of Graduate Studies Regulations

**NOTE: All graduate students are expected to be familiar with the rules and requirements of the College of Graduate Studies and of their particular graduate program.**

1. All course work applied toward a given degree, except the Doctor of Engineering, must be completed within a period of six years. This time limit applies to all work on the graduate level, including any work transferred from another institution. Time spent on active military service will not be included in the six-year limit.
2. No graduate student is permitted to take more than 15 semester hours of class work during one semester of the long term nor more than six semester hours of class work during the summer term of five weeks. A graduate student is permitted to take seven semester hours in a summer term if one course has a lab. A full-time graduate student is defined as a student taking nine semester hours of graduate work, or enrolled in both 669A and 669B thesis during the same semester, or enrolled in Egr 662. Students taking four-to-five hours of graduate work per semester will be considered half-time graduate students; students taking six-to-eight hours of graduate work will be considered three-quarter time graduate students.
3. With the approval of the head of the major department and the Graduate Dean, an undergraduate student within 12 semester hours of graduation may take a maximum of six semester hours of graduate courses to be applied toward the master's degree, provided the total academic load does not exceed 15 semester hours.
4. With the approval of the head of the major department and the Graduate Dean, a student may transfer up to six semester hours of graduate work completed at another institution. The student must have received grades of "A", "B", or "S". "S" is defined as equivalent to an "A" or "B", and acceptable for graduate credit at the institution where the work was taken.
5. Over 50 percent of the total credit hours required for a degree must be taken on the Beaumont campus of Lamar University.
6. A maximum of six semester hours of work done in institutes may be approved for graduate credit on a degree program.
7. 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 master's degree is sought.

8. A student may be required to drop a course or to withdraw from the University temporarily or permanently for any of the following reasons:
  - A. Academic work below the standard specified by the Graduate Council.
  - B. Academic dishonesty or misconduct on the part of the student.
9. The grading system for graduate students in "A", "B", "C", "D", "F", "I", "S", "U", Drop and Withdrawal. Graduate credit is allowed only for grades "A", "B", "C" and "S". Failing grades for graduate students are "D", "F", and "U". An overall grade point average of "B" (3.0) on all graduate work attempted is required for graduation; however, a thesis grade may not be averaged with course grades to provide the required 3.0 average. Incomplete work must be finished during the next long semester, or the Office of Records will change the grade of "I" to the grade of "F". Under unusual circumstances, the student may apply for an extension through the instructor. The extension may be granted by the Dean of the College of Graduate Studies.
10. A department may impose academic requirements for its majors in addition to the minimum university grade point standard with the approval of the Dean of the College of Graduate Studies.
11. Faculty members above the rank of Instructor will not be permitted to work toward a graduate degree at Lamar University.
12. Resignation from the College of Graduate Studies should be made in writing to the Dean of the College of Graduate Studies.
13. The University reserves the right to change any of its rules, regulations or course requirements without notice.

## **Probation/Suspension Regulations**

1. Grade point averages for graduate students are computed using all work taken for graduate credit at Lamar University, except 669 thesis courses. Transfer work applied toward a graduate degree is also used in computing grade point averages.
2.
  - A. When a graduate student with regular admission status falls below a 3.0 (B) average, the student is placed on academic probation. The student will be removed from probation only when all grade point deficiencies are removed.
  - B. Students who are on probation are not allowed to drop a course or to withdraw from school without written permission of the Graduate Dean/Director. Students on probation may not be admitted to candidacy or take comprehensive written or oral examinations.
  - C. No student who has any grade point deficiency (i.e., has less than a 3.0 average on all graduate work taken) may apply for graduation.
  - D. Students with a grade point deficiency of more than six grade points at the end of the Fall or Spring semester will be suspended for the following semester. Suspension for the Fall semester may be removed if the student reduces the deficiency to six or less during the summer program.
  - E. The first academic suspension shall be for one long semester and the second suspension for two long semesters. Readmission will not be permitted after the third suspension.
  - F. Students suspended under this provision may be admitted to another department after they have completed their suspension, provided that they meet the prescribed standards and are accepted through the normal admission procedure.
  - G. A department may require its majors to meet additional standards with regard to probation, suspension, and dismissal from its program. These may be found in the appropriate departmental section of this catalog.
3.
  - A. Post baccalaureate students taking graduate course work are not subject to these regulations until they have been fully admitted to the College of Graduate Studies and to a degree program.

- B. Students with a grade point deficiency of six grade points or less may be admitted to a degree program upon the recommendation of the department to which they are applying, but will be placed on probation by the Graduate College until the deficiency is completely removed.
- C. Students with deficiency of more than six grade points may be admitted to a degree program, but will be suspended for the next long semester if the deficiency is not reduced to six or less at the end of the semester during which they were admitted.

## **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. A minimum of 18 semester hours of the required hours must be courses numbered 500 or above.
3. 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.
4. 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. 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. 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.
4. For the Master of Arts in Political Science, successful completion of nine hours of quantitative skills courses (POLS 3319, POLS 4319, and POLS 530) may be substituted for the foreign language requirement.

## **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 as follows: a minimum of 18 semester hours in 500 level engineering courses, including six semester hours in thesis; a minimum of nine semester hours in a combination of science and mathematics and three additional semester hours.

**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 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 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 500 and 600 level course work, excluding Egr 632 and Egr 662, beyond the equivalent of a master's degree will be required.
2. Satisfactorily pass candidacy examinations as required by the student's doctoral committee.
3. Complete a field study, normally 30 semester hours, involving some technological innovation.
4. Submit and defend a formal engineering report on the field study.

## Admission to Candidacy

### Master's Degree

1. Prior to the time a graduate student is admitted to candidacy, the head of the major department or a person designated by the head acts as the student's adviser.
2. A student must be admitted to candidacy after completing one-half of the coursework (excluding thesis) and after removing all undergraduate deficiencies. No student with a grade point deficiency may be admitted to candidacy.
3. The individual student is responsible for applying for Admission to Candidacy in the office of the head of the major department or college graduate coordinator.
4. A departmental recommendation containing the applicant's degree plan and permanent graduate committee is then submitted to the Dean of the College of Graduate Studies. If approved, the student is admitted to candidacy.
5. The graduate advisory committee will include a member of the graduate faculty designated as the supervising professor, chairman, or major professor, and two other members of the graduate faculty. The graduate advisory committee will assist in planning the remainder of the student's program, including revision of the degree plan or program of study, thesis title and thesis approval, type of research problem, and administration and evaluation of the final comprehensive examination. The Graduate Dean has the option of appointing additional members to an advisory committee.
6. Students must be admitted to candidacy before beginning their last nine hours of coursework, and will not be allowed to graduate at the end of the semester or term in which they are admitted to candidacy. Exceptions will be made only in the case of fulltime graduate students who have taken a maximum load each semester they have attended Lamar. Such students must apply for candidacy before the 12th class day of the semester in which they intend to graduate.
7. Advanced Graduate Record Examination scores may be required by individual departments.
8. Candidacy examinations are required by the Departments of Psychology and Biology.

### 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 a two consecutive semester period. 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.

### Advisory Committees

As noted above, members of advisory committees are appointed by the Graduate Dean at the time the student is admitted to candidacy. After admission to candidacy, but before the date of the final examination, the student may request a change in the committee composition with the approval of the supervising professor and one other committee



member. Should the supervising professor and/or another committee member 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. Writing 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 669A; all subsequent registrations are for Thesis 669B. All students are expected to register for Thesis 669B until the thesis has been completed. 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.
2. Write a thesis under the direction of the supervising professor. The form and style of the thesis must follow the *Thesis Information Manual* which is 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 two weeks 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. All candidates for graduate degrees who do not write theses 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.
2. 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.

3. 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.
4. Written comprehensive examinations will be administered in accordance with the following schedule.

Fall Term	First Thursday in November
Spring Term	First Thursday in April
Summer I	Fourth Thursday in June
Summer II	Fourth Thursday in July

NOTE: The College of Business and the College of Education will give written examinations only once in the summer: on the last Monday of Summer I. If this date conflicts with the July 4 holiday, the examination will be given on the last Monday in June.

5. All oral examinations will be scheduled as follows:
 

Fall Term	First Monday in November until 10 days before the date of graduation
Spring Term	First Monday in April until 10 days before the date of graduation
Summer Term	Last Monday in June until 10 days before the date of graduation
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; Summer is considered to be one 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 Lamar University.

Degree candidates must be present at the commencement exercises unless they have been excused by the Graduate Dean. Written requests to graduate *in absentia* must be approved by the Graduate Dean at least four weeks before the scheduled date of graduation.



The practiced eye of the professor inspires excellence in students as they concentrate on their project in a biology lab.

## 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, political science and history; to the Master of Science degree in the fields of biology and chemistry; and to the Master of Public Administration degree. In addition, graduate study is available in geology, physics 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.

### 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. Thirty-three hours of graduate credit which may include a maximum of 16 semester hours in approved 400G level courses with augmented requirements. All course work will be in biology. Exceptions must be approved by major advisor and head of department.
2. Prior to obtaining candidacy:
  - A. Take a preliminary written examination covering all major aspects of biology. The exam will be used in assessing a student's level of preparation and may result in remedial work as appropriate. Details of the exam format are available in the office of the Department of Biology.
  - B. 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 should be completed during the first year of enrollment and **must** be completed by the end of the second year of the program.
3. For their professional development, students will enroll in Bio 511 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.

### Graduate Faculty

Associate Professor David L. Bechler  
Animal behavior, ichthyology  
Associate Professor Wayne W. Carley  
Physiology  
Assistant Professor Michael W. Haiduk  
Genetics, mammology

Professor Richard C. Harrel  
Limnology, ecology, invertebrate  
zoology  
Assistant Professor Madelyn D. Hunt  
Medical microbiology, epidemiology  
Associate Professor Phillip Malnassy  
Botany, plant physiology

Professor J. Leon McGraw, Jr.  
 Cellular biology, invertebrate zoology  
 Professor Jed J. Ramsey  
 Ornithology, comparative physiology  
 Associate Professor William C. Runnels  
 Algology, marine biology

Assistant Professor John T. Sullivan  
 Parasitology, immunology  
 Professor Michael E. Warren  
 Entomology, mosquito biology

## Biology Courses

<b>510</b>	<b>Materials and Techniques of Research</b> Survey of laboratory and library research techniques, instrumentation and materials requisite to scientific investigation. Required of all entering graduate students.	<b>1:1:0</b>
<b>511</b>	<b>Graduate Seminar</b> Current topics in biological research. May be repeated for credit.	<b>1:1:0</b>
<b>531</b>	<b>Seminars in Biological Sciences</b> A resource area course for those seeking the M.Ed. degree and teaching at the elementary and junior high level. Topics include modern biological concepts and demonstration of how these concepts may be applied to various grade levels. Emphasis is placed on practical application in the classroom.	<b>3:3:0</b>
<b>540</b>	<b>Ornithology</b> Natural history, taxonomy and ecology of birds. <i>Prerequisite: Bio 440.</i>	<b>4:3:3</b>
<b>541</b>	<b>Animal Behavior</b> An analysis of the development and significance of various behavior patterns in animals from an evolutionary point of view.	<b>4:3:3</b>
<b>542</b>	<b>Mycology</b> Isolation, cultivation and identification of fungi with special emphasis on those of economic importance.	<b>4:3:3</b>
<b>543</b>	<b>Ichthyology</b> Natural history, taxonomy and ecology of freshwater and marine fishes. Required field trip.	<b>4:3:3</b>
<b>544</b>	<b>Herpetology</b> Natural history, taxonomy and ecology of amphibians and reptiles. Required field trip.	<b>4:3:3</b>
<b>545</b>	<b>Mammalogy</b> Natural history, taxonomy and ecology of mammals. Required field trip.	<b>4:3:3</b>
<b>546</b>	<b>Marine Invertebrate Zoology</b> Field study and identification of area species; current research. Required field trips. <i>Prerequisite: Bio 346 or 445.</i>	<b>4:3:3</b>
<b>547</b>	<b>Ecology of Polluted Waters</b> Analyses of effects of water pollutants on aquatic ecosystems. <i>Prerequisite: Bio 443.</i>	<b>4:3:3</b>
<b>548</b>	<b>Helminthology</b> Biology of free-living and parasitic worms. <i>Prerequisite: Bio 346 or 441.</i>	<b>4:3:3</b>
<b>549</b>	<b>Comparative Physiology</b> Fundamental physiological processes in animals from the phylogenetic viewpoint. <i>Prerequisite: Bio 344, Chm 342.</i>	<b>4:3:3</b>
<b>560</b>	<b>Field Biology</b> Basic environmental relationships and natural history of plants, invertebrate and vertebrate animals. Laboratory includes extensive field trips for the study and collection of organisms in their natural habitat. Offered summers only. <i>Prerequisite: Bio 345. 20 hours credit in Biology and consent of instructor.</i>	<b>6:A:A</b>
<b>5101, 5201, 5301, 5401</b>	<b>Special Topics</b> Research in areas other than thesis. <i>Prerequisite: Approval of graduate advisor. May be repeated when topic changes.</i>	<b>1-4:A:0</b>
<b>669A-669B</b>	<b>Thesis</b> <i>Prerequisite: Approval of graduate advisor.</i>	<b>6:A:0</b>

From the list below, a maximum of 16 semester hours of 400 level courses with augmented requirements may be taken for graduate credit, subject to approval by the graduate advisor and department head. Course descriptions may be found in the Bulletin of Lamar University.

- 440 Ornithology
- 441 Parasitology
- 442 Entomology
- 443 Limnology
- 444 Vertebrate Natural History
- 445 Marine Biology
- 446 Ecology
- 447 Cellular Biology
- 449 Protistology
- 460 Field Biology
- 4302 Cellular Physiology
- 4303 Principles of Electron Microscopy
- 4304 Electron Microscope Techniques
- 4402 Taxonomy of Vascular Plants

## **Department of Chemistry**

The Department of Chemistry 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. 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.

Students working toward the graduate degree in chemistry will take a set of four proficiency examinations, one in each of the fields of chemistry; analytical, inorganic, organic and physical. These examinations are taken on entrance and are offered in the fall and again during the beginning of the spring semester. The results of these examinations are used for orientation and guidance.

### **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 Chm 531, 533, 535, 537 and at least one 500 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 400G or 500 level courses in an approved field of study.
4. A reading knowledge of a modern foreign language (German, French or Russian) or competence in computer science.
5. Examination results on the chemistry section of the GRE must be submitted before graduation.

### **Graduate Faculty**

Associate Professor Hugh A. Akers  
Biochemistry

Professor Margaret D. Cameron  
Organic chemistry

Associate Professor Kenneth L. Dorris  
Physical chemistry

Professor Keith C. Hansen  
Organic chemistry

Professor John P. Idoux  
Organic chemistry

Professor J. Dale Ortego  
Inorganic chemistry

Assistant Professor Shyam S. Shukla  
Analytical chemistry, environmental chemistry

Professor John A. Whittle  
Organic chemistry, biochemistry

## Chemistry Courses

531	<b>Advanced Analytical</b> <i>Prerequisite: Graduate standing or consent of instructor.</i>	3:3:0
533	<b>Advanced Inorganic</b> <i>Prerequisite: Graduate standing or consent of instructor.</i>	3:3:0
535	<b>Advanced Organic</b> <i>Prerequisite: Graduate standing or consent of instructor.</i>	3:3:0
537	<b>Advanced Physical</b> <i>Prerequisite: Graduate standing or consent of instructor.</i>	3:3:0
539, 569	<b>Graduate Problems in Chemistry</b> May be repeated for credit. Techniques of research under close supervision of instructor; individual consultations; reports. May not be substituted for required courses. <i>Prerequisite: Graduate standing and consent of instructor and department head.</i>	3 or 6:A:0
25101, 5201, 5301, 5401, 5501, 5610	<b>Special Topics</b> The course is designed to meet special needs of students. Each topic is offered on an irregular schedule as the demand requires. <i>Prerequisite: Departmental approval.</i>	1-6:1-6:0-6
5311	<b>Selected Topics in Analytical Chemistry</b> May be repeated for credit when topic varies. Description of course content will appear in schedule of classes. <i>Prerequisite: Chm 531 or consent of instructor.</i>	3:3:0
5331	<b>Selected Topics in Inorganic Chemistry</b> May be repeated for credit when topic varies. Description of course content will appear in schedule of classes. <i>Prerequisite: Chm 535 or consent of instructor.</i>	3:3:0
5352	<b>Modern Synthetic Organic</b> Selected topics in modern synthetic organic chemistry. <i>Prerequisite: Graduate standing.</i>	3:3:0
5371	<b>Selected Topics in Physical Chemistry</b> May be repeated for credit when topic varies. Description of course content will appear in schedule of classes. <i>Prerequisite: Chm 537 or consent of instructor.</i>	3:3:0
669A-669B	<b>Thesis</b> <i>Prerequisite: Approval of graduate advisor.</i>	6:A:0

Below is the list of 400G level courses which may be taken with augmented requirements for graduate credit, subject to approval by the graduate advisor. Course descriptions may be found in the Bulletin of Lamar University.

- 411G Chemical Literature
- 412G Senior Seminar
- 430G Organic Polymers
- 433G Modern Physical
- 436G Inorganic
- 442G Biochemistry II
- 444G Qualitative Organic Analysis
- 446G Instrumental Methods of Analysis

## Department of English and Foreign Languages

The graduate program of the Department of English and Foreign Languages offers opportunity for intensive study of languages 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, 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 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: 18 in English, six in thesis and six in an approved minor. With the approval of the head of the department, 12 semester hours of course work may be substituted for the thesis. At least 18 semester hours, including the thesis, must be in English courses numbered 500 or above. The minor must be approved by the head of the department. With the department head's approval, six additional hours in English may be substituted for the minor. International students must score 550 on the TOEFL before admission.

## Professional Certification Requirements (Texas) in English

The plan for the Professional Certificate—Secondary requires the completion of 36 semester hours of graduate work: 18 in English, six in resource areas and 12 in approved teacher education. At least 12 semester hours must be in English courses numbered 500 or above. The courses in the resource areas must be approved by the head of the Department of English and Foreign Languages; such approval will be given on the basis of the support they can give to the major and on the specific needs of the graduate student. The 12 semester hours of teacher education must be taken in courses specifically approved for the Professional Certificate Secondary.

Depending on the student's undergraduate course work, the graduate program in English will ordinarily include English 4327G, 533, 539, and one course from either 535, 536, 537, 538, or 5311.

## Graduate Faculty

Associate Professor Christopher P.

Baker

English Renaissance

Professor Robert J. Barnes

British and Continental literature:  
1840 to the present

Assistant Professor Lloyd M. Daigrepoint

American literature before 1900

Assistant Professor Edwin W. Duncan

Old and Middle English, linguistics

Professor Marilyn D. Georgas

Renaissance and Victorian literature

Associate Professor R. S. Gwynn

Creative writing and post-modernism

Assistant Professor J. Mark Heumann

Technical writing, English  
Renaissance

Professor Kirkland C. Jones

Medieval and Renaissance literature

Associate Professor Annette E. Platt

Eighteenth century and Romantic  
British literature, English education

Associate Professor R. Victoria Price

English as a second language, Modern  
American and British literature

Assistant Professor Dale G. Priest

English Renaissance, Eighteenth  
century

Associate Professor R. Clay Reynolds

Modern American literature and  
American drama

Assistant Professor Sallye J. Sheppard

Medieval and Renaissance literature  
and rhetoric

Professor Arney L. Strickland

Linguistics and English education

Associate Professor Charles T.

Summerlin

American literature, literary criticism

## English Courses

- |     |  |       |
|-----|--|-------|
| 511 | <b>Composition Practicum</b><br>Practicum in the teaching of writing. Involves classroom experience, peer discussion and mentor consultation. Graded on S-U basis.<br><i>Prerequisite: Graduate teaching fellow standing.</i>  | 1:1:0 |
| 533 | <b>Special Topics in Old and Middle English Language and Literature</b><br>Intensive study of the language necessary for reading literature of the period. Course may be repeated for a maximum of six semester hours credit when the topic varies.<br><i>Prerequisite: Graduate standing and Eng 430.</i> | 3:3:0 |



- 535 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.*
- 536 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.*
- 537 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.*
- 538 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.*
- 539 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.*
- 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.
- 669A-669B Thesis** 6:A:0  
*Prerequisite: Approval of graduate advisor.*

Below is the approved list of 400 level courses which may be taken with augmented requirements for graduate credit, subject to approval by the graduate advisor. Course descriptions may be found in the Bulletin of Lamar University.

- 430 History of the English Language
- 432 Studies in Sixteenth Century Literature
- 434 Shakespeare
- 435 Survey of Seventeenth Century Literature
- 438 Studies in Eighteenth Century Literature
- 439 Studies in Romantic Literature
- 4311 Studies in Victorian Literature
- 4312 Studies in Language and Linguistics
- 4317 Contemporary Drama
- 4318 Contemporary Poetry
- 4319 Contemporary Fiction
- 4322 Russian Literature
- 4326 Expository Writing
- 4327 Bibliography and Methods of Research
- 4328 Early American Literature
- 4329 Modern American Literature
- 4333 Studies in a Particular Author
- 4334 Critical Studies in Literature
- 4336 Directed Studies in American Literature
- 4337 Directed Studies in British Literature
- 4345 Writing Seminar
- 4355 Editing Technical Communications

## English as a Second Language

Below is the approved list of 400 level courses applicable to the ESL endorsement program; these courses may be taken for graduate credit with the approval of the appropriate graduate advisor.

- 431 The Teaching of English as a Second Language  
 432 Foundations in Teaching ESL  
 433 Psycholinguistics  
 434 Introduction to Linguistics

## 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 William R. Pampe  
 Paleontology, meteorology, stratigraphy

## Geology Courses

- 532 **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.
- 534 **Fossils and Earth History** 3:3:0  
 The evolution and history of life as recorded by fossils. Laboratory identification of common fossils. Demonstration of "hands-on" approach to the use of materials that illustrate the fossil record. Field trip required. Term paper based on laboratory, library or field studies.
- 5601 **Institute in Earth Science** 6:6:9  
 Summer, in-service or other institute for earth science teachers patterned after the inquiry-oriented Earth Science Curriculum Project approach to earth science. The course includes laboratory and field investigations in aerospace science, geology, meteorology and oceanography and "hands-on" experience with rocks, minerals, fossils, maps and other earth science materials and techniques. Field trips required.

## 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.

## Degree Requirements

The degree of Master of Arts in History requires the completion of 30 semester hours of graduate work: 18 in history, six in thesis and six in an approved minor. At least 12 semester hours, exclusive of thesis, must be in history courses numbered 500 or above, and six of these must be in seminar courses. With the approval of the head of the Department of History, 12 semester hours of course work may be substituted for the thesis. In this latter program, at least 21 semester hours of course work must be in courses numbered 500 or above, and nine of these must be in seminar courses. The minor must be approved by the head of the Department of History; such approval will be given on the basis of the support the minor can give to the major. With the approval of the head of the Department of History, six additional hours in history may be substituted for the minor.

## Graduate Faculty

Professor Adrian N. Anderson  
 United States history, revolution, early national  
 Professor John M. Carroll  
 United States history, diplomatic, the South

Assistant Professor Ronald H. Fritze  
 Tudor-Stuart England  
 Professor Howell Holmes Gwin, Jr.  
 European history, ancient, classical and medieval.

Professor Paul E. Isaac  
 United States history, recent, the West  
 Professor Howard Mackey  
 Modern European history, Great  
 Britain  
 Professor R. Beeler Satterfield  
 United States history, middle period

Professor John W. Storey  
 United States history, urban, social  
 and intellectual  
 Professor Walter A. Sutton  
 United States history, diplomatic  
 Professor Ralph A. Wooster  
 United States history, Civil War, the  
 South

## History Courses

530	<b>Classical and European Historiography</b> <i>Prerequisite: Graduate standing.</i>	3:3:0
531	<b>American Historiography</b> <i>Prerequisite: Graduate standing.</i>	3:3:0
532	<b>Readings in American History</b> Course may be repeated for a maximum of six semester hours credit when topic varies. <i>Prerequisite: Graduate standing.</i>	3:3:0
533	<b>Readings in European History Before 1815</b> Course may be repeated for a maximum of six semester hours credit when the topic varies. <i>Prerequisite: Graduate standing.</i>	3:3:0
534	<b>Readings in European History Since 1815</b> Course may be repeated for a maximum of six semester hours credit when the topic varies. <i>Prerequisite: Graduate standing.</i>	3:3:0
535	<b>Seminar in Texas History</b> Course may be repeated for a maximum of six semester hours credit when the topic varies. <i>Prerequisite: Graduate standing.</i>	3:3:0
536	<b>Seminar in Southern History</b> Course may be repeated for a maximum of six semester hours credit when the topic varies. <i>Prerequisite: Graduate standing.</i>	3:3:0
537	<b>Seminar in United States History</b> Course may be repeated for a maximum of six semester hours credit when the topic varies. <i>Prerequisite: Graduate standing.</i>	3:3:0
539	<b>Seminar in the American West</b> Course may be repeated for a maximum of six semester hours credit when the topic varies. <i>Prerequisite: Graduate standing.</i>	3:3:0
5311	<b>Seminar in European History</b> Course may be repeated for a maximum of six semester hours credit when the topic varies. <i>Prerequisite: Graduate standing.</i>	3:3:0
5312	<b>Directed Readings in History</b> Directed readings arranged with instructor in area of mutual interest. Will not apply to 500 level course requirement in program. Under limited and special circumstances, course may be repeated but only with specific approval of History Graduate Committee.	3:A:0
669A-669B	<b>Thesis</b> <i>Prerequisite: Approval of graduate advisor.</i>	6:A:0

Below is the approved list of 400G level courses which may be taken with augmented requirements for graduate credit, subject to approval by the graduate advisor. Course descriptions may be found in the Bulletin of Lamar University.

430G Era of the Renaissance and Reformation  
 431G The Old Regime  
 432G The French Revolution and Napoleon  
 433G Russian and Eastern Europe to 1860  
 434G Nineteenth Century Europe  
 435G Twentieth Century Europe  
 436G The American West  
 437G The Old South  
 438G The New South

- 4311G Colonial America
- 4312G The American Revolution
- 4313G The Age of Jackson
- 4314G The American Civil War
- 4315G Reconstruction and Industrialization: The United States from 1865 to 1898
- 4316G World Power and Reform: The United States from 1898 to 1920
- 4317G New Deal and World Leadership: The United States from 1920 to 1940
- 4318G Classical Civilization
- 4319G Medieval Civilization
- 4321G The Far East to 1800
- 4322G The Far East Since 1800
- 4323G Latin America to 1810
- 4324G Latin America since 1810
- 4325G Tudor and Stuart England
- 4327G Victorian England
- 4328G Contemporary America: The United States Since 1940
- 4329G Modern European Intellectual History
- 4331G Russia Since 1860
- 4332G Afro-American History to 1865
- 4333G Afro-American History Since 1865
- 4334G Early National Period
- 4335G Topics in History
- 4336G Ancient Near East
- 4341G World War II
- 4342G Nazi Germany

## Department of Physics

The Department of Physics offers the following graduate courses to provide an area of specialization for the Master of Education degree in Secondary Education and as support to other advanced degree programs. For the M.S. degree in Mathematics, a nine semester-hour minor in Physics is accepted; in addition, the subject of the thesis may be a mathematical problem in physics.

## Graduate Faculty

Professor Cruse D. Melvin  
Solid state physics

Associate Professor Hugh O. Peebles, Jr.  
Astrophysics

Professor Joseph F. Pizzo, Jr.  
Theoretical physics, relativity

Professor Carl J. Rigney  
Thermal physics

## Physics Courses

- |  |   |                    |
|--|---|--------------------|
| <b>5101, 5201, 5301, 5401 and 5601</b> | <b>Institute in Physics</b>   | <b>1-6:1-6:2-4</b> |
|  | Designed to provide credit for participation in summer, in-service or other institutes. 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.  |                    |
| <b>530</b>                             | <b>Seminar in Physical Science</b>  | <b>3:3:0</b>       |
|  | Designed for non-science majors. Measurement, light, the solar system and stars, force and motion, work and energy, heat, weather, lightning, electric charge and current, magnetism, batteries, atoms and molecules. Credit in this courses may not be applied toward a degree in science, engineering or mathematics. |                    |
| <b>531</b>                             | <b>Theoretical Physics</b>  | <b>3:3:0</b>       |
|  | The application of typical mathematical techniques, with emphasis on field and potential concepts.  |                    |
| <b>532</b>                             | <b>Relativity</b>   | <b>3:3:0</b>       |
|  | Brief introduction to the special and general theory followed by detailed study of a particular topic.  |                    |

**533 Seminar****3:3:0**

Selected topics pertaining to the research reported in contemporary publications. Course may be repeated for credit when the topic varies, but only six semester hours credit in this seminar may be applied toward a degree.

Below is the approved list of 400G level courses which may be taken with augmented requirements for graduate credit, subject to approval by the graduate advisor. Course descriptions may be found in the Bulletin of Lamar University.

- 431G Classical Mechanics
- 432G Introductory Quantum Mechanics
- 433G Solid State Physics
- 436G Nuclear Physics
- 437G Astrophysics
- 448G Optics

## **Department of Political Science**

The faculty of the Department of Political Science, committed to research and scholarly publication which support excellence in graduate programs, is actively engaged in research on the following topics: Southern politics; congressional leadership; administrative accountability in state government; empirical normative links between voting and political obligation; the trial courts' responses to Supreme Court policy changes; Brazilian public policy; minority politics and social policy analysis; public personnel and budgetary policy; Polish-German relations; voting behavior in state and local politics; and a comparison of caucus and primary methods for selection of presidential nominees.

The Department of Political Science offers programs of study leading to the Master of Public Administration degree and the Master of Arts in Political Science degree. Persons seeking admission to either program must meet the general requirements for admission as outlined in the graduate catalog.

### **Degree Requirements**

The degree of Master of Public Administration requires the completion of 36 semester hours of graduate hours of graduated work: 21 in the core curriculum (POLs 535, 5351, 5352, 5353, 5354, 5358, and 5359) and 15 from an approved list of courses. Applicants must have completed the following undergraduate courses or their equivalents: 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.

The degree of Master of Arts in Political Science requires the completion of 30 semester hours of graduate work with a thesis or 36 hours without a thesis. At least 18 semester hours must be in political science courses numbered 500 or above, and Political Science 530 is required for the degree. Applicants for the Master of Arts in Political Science must have completed a bachelors degree in Political Science or a related field **and** earned credit in 12 undergraduate semester hours in political science on the junior or senior level.

Successful completion of nine hours of quantitative skills courses (POLs 3319, POLs 4319, and POLs 530) may be substituted for the foreign language.

## **Graduate Faculty**

Professor Bruce R. Drury  
Comparative politics, Latin American  
politics  
Assistant Professor Elbert T. Dubose, Jr.  
Public administration  
Professor William M. Pearson  
Public administration

Associate Professor Ronald Stidham  
Constitutional law, judicial process  
Associate Professor Glenn H. Utter  
Political philosophy, American  
political thought

## Political Science Courses

- 530 Scope and Methods of Political Science** 3:3:0  
 The study in depth of selected topics concerning the theoretical foundations underlying a scientific approach to the study of political phenomena and analytical techniques to be applied to a study of political behavior.  
*Prerequisite: Graduate standing.*
- 531 Seminar in Political Theory** 3:3:0  
 Selected issues in political thought with emphasis on the classical thinkers and their relationship to contemporary political, economic and social problems.  
*Prerequisite: Graduate standing.*
- 532 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 head of the Department of Political Science.*
- 534 Seminar in American Government and Politics** 3:3:0  
 A survey of the literature in the field of American government and politics. Classical and contemporary works are examined, with emphasis on the modern approaches to the study of American government and politics.  
*Prerequisite: Graduate standing.*
- 535 Seminar in 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 Seminar in Personnel Administration** 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 Seminar in Fiscal Administration** 3:3:0  
 The study of formulation and administration of government budgeting, including the role of the budget in the policy process, approaches to budget formulation and analysis, the development of the PPB approach and other basic concepts and practices in government budget and finance administration.  
*Prerequisite: Graduate standing.*
- 5353 Seminar in 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 Seminar in 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.  
*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 governmental agency if they elect three additional hours from the approved program courses.  
*Prerequisite: Graduate standing.*
- 5359 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 governmental agency if they elect three additional hours from the approved program courses.  
*Prerequisite: POLS 5358 and graduate standing.*

- 536 **Seminar in International Relations** 3:3:0  
The study of selected problems in international relations. Theoretical, legal and institutional issues as well as specific policies will be examined.  
*Prerequisite: Graduate standing*
- 537 **Seminar in Comparative Study of Political Systems** 3:3:0  
Study of the theory and method of comparative political analysis; systematic examination and explanation of the structure and function of Western and non-Western political systems.  
*Prerequisite: Graduate standing.*
- 669A-669B **Thesis** 6:A:0  
*Prerequisite: Approval of graduate advisor.*

## **Department of Sociology, Social Work, and Criminal Justice**

The Department of Sociology, Social Work, and Criminal Justice offers Soc 532, Sociology of Education in support of the Master of Education degree program.

### **Graduate Faculty**

Professor Wayne C. Seelbach  
Gerontology, the family

Associate Professor Kevin B. Smith  
Social inequality, sociology of  
education

### **Sociology Courses**

- 532 **Sociology of Education** 3:3:0  
A study of the multicultural influences on the institutions of education. Included will be a sociological analysis of educational problems in Texas.



Mastery of the microcomputer is a key aspect of studies in Lamar's College of Business, as the professor emphasizes to her student.



## College of Business

The College of Business offers a program of study leading to the Master of Business Administration degree (MBA). The MBA program is fully accredited by the American Assembly of Collegiate Schools of Business (AACSB). The objective of the MBA Program at Lamar University is to provide intensive, rigorous training to produce managerial professionals with a thorough conceptual understanding of the economic, legal, and ethical environment of public and private sector organizations and the capability of applying analytical, problem solving skills to a broad range of decision situations that may arise within one or a combination of functional areas within the organization.

Students with degrees in **non-business** fields are **encouraged** to earn the Master of Business Administration degree. Students are encouraged to make an appointment with the Coordinator of Graduate Studies a **minimum of 60-90 days in advance** of the semester in which they wish to enroll.

### 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 (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, 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 500 on the TOEFL.
4. Post Baccalaureate students are not permitted to enroll in Business courses for graduate credit without the prior consent of the Coordinator of Graduate Studies.

### Degree Requirements

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

Acc 530 Financial Accounting: Concepts and Procedures  
 Eco 530 Foundations of Economics  
 BLW 530 The Legal Environment of Business  
 BAC 530 Statistical Analysis for Decision Making  
 Mgt 531 Operations Management and Information Systems  
 Mgt 532 Administrative Policy and Strategy  
 OAS 530 Administrative Communications  
 Mkt 530 Marketing Concepts  
 Fin 530 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 Coordinator of Graduate Studies, College of Business, prior to enrollment.)

3. Students must have met the entrance requirements for the MBA Program to enroll in first year courses. Any exceptions must have the **prior** approval of the Coordinator of Graduate Studies, College of Business.
4. First year courses may not be taken as second year course electives.

### Second Year Courses

#### Note:

1. All first year courses must 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

Acc 537 Managerial Accounting  
 Mgt 533 Seminar in Management  
 Eco 531 Seminar in Monetary and Fiscal Policy  
 Fin 531 Financial Management  
 Mkt 531 Seminar in Marketing  
 BAC 531 Advanced Statistical Theory and Analysis for Business  
 Eco 538 The Environment of Business  
 Three semester hours of approved electives  
 BA 669A Thesis  
 BA 669B 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

Acc 537 Managerial Accounting  
 Mgt 533 Seminar in Management  
 Eco 531 Seminar in Monetary and Fiscal Policy  
 Fin 531 Financial Management  
 Mkt 531 Seminar in Marketing  
 BAC 531 Advanced Statistical Theory and Analysis for Business  
 Eco 538 The Environment of Business  
 Mgt 538 Business Research

Twelve semester hours of approved electives. Non-thesis route students must take three hours of electives from either Mkt 534, Eco 533, Fin 533, or BLW 531. The remaining nine hours of electives may be chosen from an approved College of Business graduate elective.

A written comprehensive exam will follow the completion of course work

## Graduate Faculty

Associate Professor Charles L. Allen  
 Economics  
 Associate Professor Cynthia Barnes  
 Office administration  
 Associate Professor Richard W. Brunson  
 Management  
 Associate Professor Melvin F. Brust  
 Management and finance  
 Associate Professor William T. Burke,  
 III  
 Business Law  
 Professor Richard T. Cherry  
 Finance  
 Associate Professor Jai-Young Choi  
 Economics  
 Professor Nancy S. Darsey  
 Office administration  
 Assistant Professor Richard A. Drapeau  
 Business statistics

Associate Professor Lynn Godkin  
 Management  
 Professor Charles Hawkins  
 Economics  
 Associate Professor William T. Harris  
 Accounting  
 Professor Richard W. Jones  
 Accounting  
 Associate Professor Carl B. Montano  
 Economics  
 Assistant Professor Jimmy D. Moss  
 Finance  
 Professor Sam F. Parigi  
 Economics  
 Associate Professor Donald Price  
 Economics  
 Professor Willy Sellekaerts  
 Economics, Dean of the College

Assistant Professor Anusorn  
Singhapakdi  
Marketing  
Professor Larry W. Spradley  
Business statistics  
Professor Robert A. Swerdlow  
Marketing, Coordinator of Graduate  
Studies

Professor Malcolm W. Veuleman  
Accounting  
Professor Kathryn White  
Office administration  
Professor Bob E. Wooten  
Management

## Business Courses

Accounting courses must be selected from the following list:

- 530 Financial Accounting: Concepts and Procedures** 3:3:0  
Intensive examination of financial accounting. A conceptual study of the generally accepted accounting principles that impart financial reporting to persons and institutions outside the reporting entity. Emphasis is placed on outside readings, oral and written reports, and problems and cases.  
*Prerequisite: Graduate standing.*
- 534 Taxation for Graduate Students** 3:3:0  
Provisions of the income tax code as applied to individuals and business in the measurement of income, deductions, gains and losses, and other impacts of the law on business decisions.  
*Prerequisite: Graduate standing, Acc 530.*
- 537 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, Acc 530.*

Economics courses must be selected from the following list:

- 530 Foundations of Economics** 3:3:0  
This is a fast-paced course which discusses both macro and micro economic theory and which analyzes current 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*
- 5301 Money and Capital Markets** 3:3:0  
Survey of the functions and performances of financial institutions; analysis of the sources and uses of funds in financial markets, market structures of interest rates; and flow of funds analysis.  
*Prerequisite: Graduate standing, Eco 530.*
- 531 Seminar in Monetary and Fiscal Policy** 3:3:0  
Lecture and group discussions. Topics include the public sector budget and the supply of money as instruments of economic stabilization; the role of expectations, theories of economic fluctuations, and approaches to the problems of inflation and unemployment.  
*Prerequisite: Graduate standing, Eco 530.*
- 533 International Finance** 3:3:0  
A study of international financial decision-making. Measurement, determinants and control of the flow of payments among nations. The spot and forward exchange markets: clearing, hedging, speculation, exposure and official intervention. Short- and long-term portfolio capital movements. Direct foreign investments and multinational corporations. The working and growth of Eurocurrency and Eurobond markets.  
*Prerequisite: Graduate standing, Eco 530.*
- 534 Collective Bargaining** 3:3:0  
Background ideologies, contract provisions, current legal and social developments, public employment and international labor practices.  
*Prerequisite: Graduate standing, Eco 530.*
- 535 Economics of Entrepreneurship/Consulting** 3:3:0  
A study of business development or acquisition from the perspective of both personal ownership and outside consulting. This course is primarily a case-method study which provides the student with the methodology for analyzing business problems and finding solutions for those problems.  
*Prerequisite: Graduate standing, Eco 530.*

- 536 Econometrics** 3:3:0  
Development and testing of hypotheses through the construction and operation of static and dynamic econometric models.  
*Prerequisite: Graduate standing, Eco 530.*
- 537 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 530.*
- 538 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 are discussed. Government activities in antitrust, traditional regulation, and new social regulation are presented. Special problems associated with different social and legal systems faced by firms operating in foreign markets are reviewed.  
*Prerequisite: Graduate standing, Eco 530.*

**Finance courses must be selected from the following list:**

- 530 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 530, Eco 530.*
- 531 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 530 or equivalent.*
- 532 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 531 or consent of instructor.*
- 533 International Finance** 3:3:0  
A study of international financial decision-making. Measurement, determination and control of the flow of payments among nations. The spot and forward exchange markets, clearing, hedging, speculation, exposure and official intervention. Short- and long-term portfolio capital movements. Direct foreign investments and multinational corporations. The working and growth of Eurocurrency and Eurobond markets.  
*Prerequisite: Graduate standing, Eco 530.*

**Management courses must be selected from the following list:**

- 530 Foundations of Management** 3:3:0  
A study of the basics of an operational theory and science of management emphasizing the essentials of the discipline most pertinent to practicing managers. The course presents various areas of management as a system and demonstrates how managing itself is part of a larger system interacting with a manager's total environment—economic, technical, social, political, and ethical. Also, the course stresses the practice of management concerning its activities which may be modified by contingencies and situations — the requirements and behavior factors which may be faced.  
*Prerequisite: Graduate standing, Acc 530, Eco 530.*
- 531 Operations Management and Information Systems** 3:3:0  
A study of the management of productive systems and product design and development facility layout, quality control, planning and scheduling of operations and project management. The course includes consideration of the problems involved in analysis, design, and implementation of management information systems. Emphasis is placed on developing an understanding of models and their proper use in support of management decisions.  
*Prerequisite: Graduate standing, Mgt 530.*
- 532 Administrative Policy and Strategy** 3:3:0  
Socio-political change taking place in even remote areas of the globe are impacting on the strategic initiatives of businesses; small and large, international and domestic. This course will focus on the role of top management in welding functional areas such as marketing, management, and finance to fulfill strategic organizational aims. Economic and socio-political conditions existing in various world regions will be considered.  
*Prerequisite: Graduate standing, Mgt 530.*

- 533 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, Mgt 532.*
- 534 Seminar in Cross-Cultural Organization Behavior** 3:3:0  
In this course students will examine the basic theories of organization behavior. The implications of those theories will be considered in terms of cross-cultural situations evident in domestic and internationally based organizations. Theories in the areas of motivation and leadership will be surveyed.  
*Prerequisite: Graduate standing, Mgt 532.*
- 535 Management of Technology Transfer** 3:3:0  
In contrast to diffusion of technology, which is a random process, technology transfer, in the context of this course, is the volitional movement of technology from a source to recipient. Particularly the linkage between technology transfer and mechanisms joining government, higher education, and industry used to further the process and promote economic development will be at issue. Students will prepare papers relating technology transfer to their employer.  
*Prerequisite: Graduate standing, Mgt 530, 531.*
- 538 Business Research** 3:3:0  
The student will design and carry out an individual research project under the supervision of a faculty member. Emphasis will be placed on research design and methodology, sources of business and economic data and the use of quantitative techniques to achieve substantive research results.  
*Prerequisite: Graduate standing, Mgt 532.*

**Marketing courses must be selected from the following list:**

- 530 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, Acc 530, Eco 530.*
- 531 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, Mkt 530.*
- 532 Marketing Strategies and Problems** 3:3:0  
A survey of current literature and case studies involving marketing strategies in a dynamic environment. Development of analytical skills, critical thinking and communication skills are directed toward a set of simulated business scenarios.  
*Prerequisite: Graduate standing, Mkt 531.*
- 533 Buyer Behavior and Strategies** 3:3:0  
An in-depth study of social and psychological influences on the ultimate and organizational buyer behavior and decision-making processes. Major concepts, models, and theories regarding buyer behavior will be emphasized with emphasis on marketing strategies and environmental changes.  
*Prerequisite: Graduate standing, Mkt 531.*
- 534 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, Mkt 530.*

**Administrative Service courses must be selected from the following list:**

- AS 530 Managerial Decision Support Systems** 3:3:0  
The focus of the course in an analysis of the functional information support systems which serve the manager. These systems provide quantitative-based information derived from one or more data bases within an organization and are used to help managers in the decision-making process. Theoretical concepts are applied to real-world applications.  
*Prerequisite: Graduate standing.*

- AS 531 Seminar in Information Systems Management 3:3:0**  
 This seminar provides a broad overview of the information systems management function. The course emphasizes information systems management with particular attention to planning, organizing, and controlling user services and managing the computer information systems development process.  
*Prerequisite: Graduate standing, AS 530.*
- AS 535 Business Literature and Contemporary Thought 3:3:0**  
 An intensive and critical study of several major works in business literature and contemporary thought in order to develop and enhance the student's appreciation for and understanding of the business environment with particular emphasis upon ethics, social responsibility, and competitive business practices.  
*Prerequisite: Graduate standing*
- AS 536 International Business Research 3:3:0**  
 A seminar class featuring intensive investigation of topics in such areas as Admiralty, Comparative Law, the European Common Market, the European Economic Community, Immigration, International Energy Operations, International Entities and Transactions, International Financial Transactions, the International Monetary Fund, International Tax and/or International Technology Transfers or other areas of international relevance.  
*Prerequisite: Three hours graduate international business course.*
- BAC 530 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.*
- BAC 531 Advanced Statistical Theory and Analysis for Business 3:3:0**  
 An advanced course in statistical theory and application of the quantitative techniques commonly used in business research and analysis. Advanced topics in sampling theory, statistical inferences, and regression/correlation analysis are presented. Specific topics include analysis of variance; multiple linear and non-linear regression/correlation analysis; classical time series and forecasting; decision theory; and other statistical models. Students will have the opportunity to use a standard statistical software package.  
*Prerequisite: Graduate standing, BAC 530 or equivalent.*
- BAC 533 Business Forecasting 3:3:0**  
 A course designed to provide an integrated approach to developing a strategy for making business forecasts. Emphasis will be placed on the importance of the selection of an appropriate data set, various forecasting techniques, and the trends through autoregression models and Box-Jenkins techniques will be considered along with other regression and econometric models.  
*Prerequisite: BAC 531.*
- BLW 530 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.*
- BLW 531 The International Law of Business 3:3:0**  
 Origin, composition and application of international law to the multinational business environment. Topics include the International and Transcontinental Judicial Systems, International Treaties on the Regulation of Business, the Foreign Corrupt Practices Act, Import-Export Laws and the rights and responsibilities existing between foreign governments and multinational businesses engaged in international business enterprise.  
*Prerequisite: Graduate standing.*
- OAS 530 Administrative Communication 3:3:0**  
 Communication theory and practice with emphasis on variables affecting organizational communication. Intrapersonal, organization, and technological dimensions of communication. Specific areas include cultural and international differences in communication; one-to-one, small group and large group communication; formal and informal networks; electronic transmission; business letters and memoranda; and research papers and formal reports.  
*Prerequisite: Graduate standing.*

**OAS 531 Contemporary Problems in Business Education**

**3:3:0**

Problems and materials in teaching business subjects; analysis of various teaching techniques; examination of recent research and experimentation. When the course is offered in sufficiently different areas, students may repeat the course for credit with the approval of the department head.

*Prerequisite: Graduate standing and suitable background.*

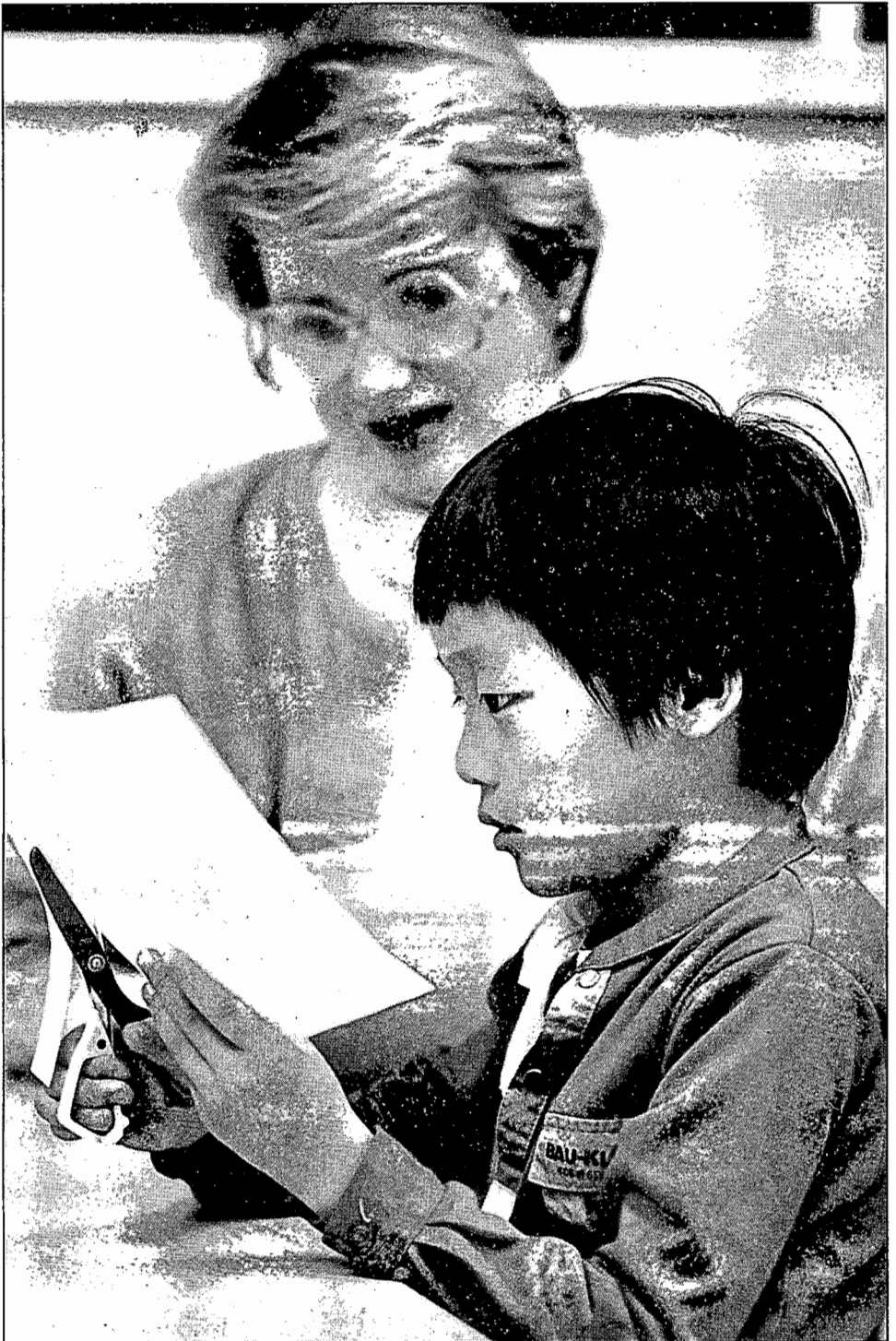
**Thesis courses necessary for graduation under Plan I.**

**BA 669A-669B Thesis**

Students must be continually enrolled in Thesis each Fall, Spring, and once in the Summer, until the thesis is completed.

*Prerequisite: Approval of Coordinator of Graduate Studies.*

Courses numbered 400 with a G designation may be taken as electives in the MBA program. Courses taken at the 400G level must have the approval of the Coordinator of Graduate Studies and must be augmented by additional requirements. Course descriptions for 400-level courses are found in the undergraduate Bulletin of Lamar University.



Lamar's Early Childhood Development Center offers prospective teachers first-hand experience while it fosters creative learning in their young pupils.



## **College of Education**

The College of Education offers graduate programs of study leading to the Master of Education degree in six different areas and to the Master of Science degree in Health and Physical Education and in Home Economics.

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 Elementary Education
- Master of Education in Guidance and Counseling
- Master of Education in School Administration
- Master of Education in Secondary Education
- Master of Education in Special Education
- Master of Education in Supervision
- Master of Science in Health and Physical Education
- Master of Science in Home Economics

### **Professional Certificates Available**

- Counselor
- Educational Diagnostician
- Elementary Education
- Mental Retardation
- Mid-Management Administrator (Principal)
- Reading Specialist
- School Superintendent
- Secondary Education
- Special Education Supervisor
- Supervisor
- Visiting Teacher

## **Department of Professional Development and Graduate Studies**

**Department Head: Bob Thompson**

**204 Education Building**

The Department of Professional Development and Graduate Studies offers programs leading to the Master of Education (M.Ed.) degree in Elementary Education, Guidance and Counseling, School Administration, Secondary Education, and Supervision. In addition, the Department offers course work leading to eleven different Professional Certificates. It is the goal of the Master of Education and the Professional Certificate programs to provide the rigorous academic climate and practical experience necessary to produce teachers, administrators, supervisors, 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 Advisement 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 24 semester hours in education, including 12 semester hours in elementary education methods and materials courses.
  - B. The applicant in secondary education must have been completed a minimum of 18 semester hours in education and hold a baccalaureate level teaching certificate or its equivalent in an approved discipline to be pursued at the graduate level. At least nine of the 18 hours must be at the 300 level or higher.
  - C. The applicant in guidance and counseling, school administration, special education and supervision must hold a Provisional Teaching Certificate, or its equivalent.
3. The student in fields other than guidance and counseling and school administration 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 choose to write a thesis must earn a minimum of 36 hours of graduate credit and is required to successfully complete a written comprehensive examination.

### Step by Step Procedure

1. Apply for Admission to the Graduate College of Lamar University.
  - A. Obtain application packet from the Graduate Office in Room 101 of the Wimberly Building or call (409) 880-8350.
  - B. Take the Graduate Record Exam and have scores sent to: Graduate Admissions, Lamar University, P.O. Box 10009, Beaumont, Texas 77710.
  - C. Have all transcripts sent to Graduate Admissions as in b above.
2. Meet with graduate advisor to develop a degree plan. **NOTE:** No deviations from the degree plan will be permitted without 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 one half of course work 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
  - B. Pass Comprehensive Exam
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. **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.

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

2. **Professional Development.** Six semester hours must be selected from the following courses:
  - Edu 531 Research (Required)
  - Edu 534 Advanced Study in Human Development
  - Edu 535 The Learning Process
  - Edu 537 Public School Curriculum
3. **Resource Area.** 12 semester hours must be selected from the following courses (nine semester hours if the student elects to write a thesis):
  - Edu 536 Problems in Teaching Science and Social Studies in the Elementary School
  - Edu 538 Modern Mathematics in the Elementary School
  - Edu 539 Foundations of Reading
  - Edu 5303 Strategies for Individualizing Elementary Instruction
  - Edu 5310 Language Arts in the Elementary School
  - Edu 5329 Corrective Reading
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**
    - Edu 539 Foundations of Reading
    - Edu 5301 Current Literature for Children and Adolescents
    - Edu 5302 Practicum: Diagnosis and Remediation of Reading Difficulties
    - Edu 5329 Corrective Reading
  - B. **Early Childhood Education**
    - Edu 5351 Advanced Study in Early Childhood Curriculum
    - Edu 5352 Creative Activities in Early Childhood Education
    - Edu 5354 Trends and Issues in Early Childhood Education
    - Edu 5355 Analysis of Program Implementation in Early Education
  - C. **Supervision**
    - Edu 5334 Test and Measurements
    - Edu 5336 Leadership and Evaluation of Instruction
    - Edu 5337 Practicum and Seminar
    - Edu 5338 Instructional Supervision
  - D. **Special Education**
    - SpEd 5361 Survey of Learning Potentials of Exceptional Children
    - SpEd 5364 Behavior Modification and Contingency Management of Disabled Learners
    - SpEd 5365 Instructional Processes With Exceptional Children
    - SpEd 5366 Modification of Curriculum and Instruction for the Atypical Learner

## **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. The usual pattern of coursework is as follows:
  - A. **Professional Development Area.** Six semester hours required.
    - Edu 531 Research (Required)
    - Edu 534 Learning Process
    - Edu 535 The Learning Process
    - Edu 537 Public School Curriculum

- B. **Resource Area.** 12 semester hours required.  
 Edu 536 Problems in Teaching Science and Social Studies in the Elementary School  
 Edu 538 Modern Mathematics in the Elementary School  
 Edu 539 Foundations of Reading (Required)  
 Edu 5303 Strategies for Individualizing Elementary Instruction  
 Edu 5310 Language Arts in the Elementary School  
 Edu 5329 Corrective Reading (Required)  
 Edu 5340 Microcomputers for Educators
- C. **Specialization Area.** Six semester hours.  
 Soc 432G Educational Sociology  
 or  
 Edu 5367 Psychosocial Foundations of Educating the Culturally Different  
 Eng 4312G Studies in Language and Linguistics
- D. **Additional Requirements:** 12 semester hours required.  
 Edu 5301 Current Literature for Children and Adolescents (Required)  
 Edu 5302 Practicum: Diagnosis and Remediation of Reading Difficulties (Required)
- Six semester hours to be selected from:  
 Edu 5312 Middle School Teaching and Research  
 Edu 5319 Problems in Secondary School Instruction  
 Edu 5320 Adolescent Development  
 Edu 5321 Strategies for Individualizing Secondary Instruction

## 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 Director of Certification in the College of Education or the Department of Professional Development and Graduate Studies.

## Other Certificates

It is possible for students to complete part or all of the requirements for a Provisional Teaching Certificate or an endorsement to such a certificate while working on a Master of Education degree in Elementary Education. Endorsements in areas such as mental retardation, physically handicapped/minimally brain injured, emotionally disturbed, learning disabilities, early childhood/exceptional children and kindergarten may be adapted to such an arrangement. Specific information concerning these certificates may be obtained from the Director of Certification in the College of Education.

## 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  
 Edu 531 Research in Education  
 Edu 5320 Adolescent Development

*Electives:* 12 semester hours should be in one of the following areas:

Classroom Specialist	Reading Specialist
Foundations of Education	Supervision

A list of specific courses required or recommended in each of the concentrations is available through the Department of Professional Development and Graduate Studies.

- 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 500 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 500 level.

A plan listing the specific courses required to recommended is available through the Department of Professional Development and Graduate Studies. Specialization areas are available in the following disciplines:

Biology	Physical Education
Chemistry	History
Earth Science	Mathematics
Physics	English
Speech	Government

## **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 six semester hours beyond the usual requirements for the degree. Specific information may be obtained from the Department of Professional Development and Graduate Studies.

## **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 in the Department of Professional Development and Graduate Studies.

## **Other Certificates**

It is possible for graduate students to complete requirements for a Provisional Teaching Certificate while completing a Master of Education degree in Secondary Education. Specific information concerning these certificates may be obtained from the head of the Department of Professional Development and Graduate Studies.

## **Degree Plan in Guidance and Counseling**

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

- The Guidance Program:** Three semester hours.  
Edu 5322 Organization and Administration of Guidance Program

2. **The Pupil Served:** Six semester hours.  
Three semester hours:  
Edu 534 Advanced Studies in Human Development  
Edu 535 The Learning Process  
Three semester hours:  
Soc 532 Sociology of Education  
or  
Edu 5367 Psychosocial Foundation of Educating the Culturally Different
3. **Specialization Area:** 21 semester hours.  
Edu 531 Research  
Edu 5323 Occupational and Vocational Guidance  
Edu 5324 Group Counseling  
Edu 5328 Practicum in Guidance and Counseling  
Edu 5333 Individual Counseling Theories and Techniques  
Edu 5334 Interpretation and Analysis of Tests and Measurements  
Edu 5335 Individual Testing  
Electives: (six semester hours)
4. **Graduate courses in Special Education or Psychology may be used with approval of the advisor**  
SpEd 5361 Survey of Learning Potentials of Exceptional Children  
SpEd 5362 Psychoeducational Evaluation of Exceptional Children  
SpEd 5364 Behavior Modification

## Professional Counselor's Certificate

A student who completes requirements for a Master of Education degree in Guidance and Counseling will have fulfilled all curriculum requirements for a Professional School Counselor's Certificate. A student who desires the certificate without fulfilling all degree requirements should check with a faculty member in Guidance and Counseling for specific information. Usually a student who is otherwise eligible can meet these requirements by completing 30 semester hours. The Texas Education Agency issues a Professional Counselor's Certificate based upon completion of an approved program in guidance and counseling and three years of teaching experience in an accredited school system.

## Degree Plan in Supervision

Requirements for a Master of Education in Supervision may be met by completing a 36 semester hour non-thesis program or by completing a 30 semester hour plan including thesis. The student is allowed some flexibility in planning the program; however, the usual pattern of course work is as follows:

1. **Professional Development:** Six semester hours.  
Edu 531 Research (Required)  
Edu 5334 Interpretation and Analysis of Tests  
SpEd 5316 Administration and Supervision of Special Education
2. **Specialization Area:** Nine semester hours.  
Edu 5336 Leadership and Evaluation of Instruction  
Edu 5337 Practicum and Seminar: Supervision and Curriculum Development  
Edu 5338 Instructional Supervision
3. **Resource Area:** 21 semester hours; if thesis is written, 15 semester hours.  
Learning Process: Three semester hours.  
Edu 534 Advanced Study of Human Development  
Edu 535 Learning Process  
SpEd 5364 Behavior Modification
4. **Electives:** 18 semester hours, (six semester hours plus thesis) in the area of Reading, Early Childhood, Special Education, and Curriculum and Instruction.

If the student chooses to write a thesis, the number of electives is reduced to six hours in course work plus six hours in thesis. With approval, other graduate level courses applicable to professional certification sequences may be selected.

## Professional Supervisor's Certificate

Curriculum requirements for a Professional Certificate in supervision may be met by completing a Master of Education degree in Supervision. A student who desires the certificate without fulfilling all degree requirements should consult a faculty advisor in the Department of Professional Development and Graduate Studies.

## Degree Plan in School Administration

Requirements for a Master of Education degree in School Administration may be met by completing a 36 semester hour non-thesis program. The program is designed to provide the first 36 of the 45 semester hours required for the Mid-Management Administrators' Certificate. A plan listing the specific courses for the degree is available in the office of Professional Development and Graduate Studies.

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

1. **Common Core for Administration:** (24 semester hours)
  - A. **General Administrative Competencies:** 18 semester hours—all required
    - Edu 531 Research in Education
    - Edu 535 The Learning Process
    - Edu 537 The Public School Curriculum, K-12
    - Edu 5331 Theory and Practice in School Administration
    - Edu 5336 Leadership and Evaluation of Instruction
    - Edu 5344 School Law
  - B. **Related Areas of Study:** (six semester hours)
    - Soc 432G Sociology of Education
    - or
    - Edu 5367 Psychosocial Foundations of Educating the Culturally Different
    - CS 5301 Computer Systems for Education Applications
    - or
    - Edu 5340 Microcomputers for Educators
2. **Specialized Preparation for School Administrators:** (12 semester hours)
  - Edu 5317 Organization and Administration of Special Programs (required)
  - Edu 5318 School Management and School Services (required)
  - Edu 5339 The Public School Principal (required)
3. **Three hours of electives from:**
  - Edu 539 Foundations of Reading
  - Edu 5334 Tests and Measurements
  - Edu 5343 Administration of the School Plant
  - Edu 5326 School-Community Relations
  - Edu 5342 School Finance and Business Management
  - Edu 5345 Personnel Management
  - Edu 5347 Seminar in School Administration
4. **Specialized preparation for the School Superintendent.** 15 semester hours required.
  - Edu 5326 School-Community Relations
  - Edu 5341 The School Superintendent (required)
  - Edu 5342 Public School Finance (required if not previously completed)
  - Edu 5343 Administration of the School Plant
  - Edu 5345 Personnel Management
  - Edu 5349 Internship for the School Superintendent (required: three hours to be taken during two consecutive long terms).

## Professional Certification for Mid-Management School Administrator and for School Superintendent

The standards presented in this catalog for certification as Mid-Management Administrator and the School Superintendent are based on the 1972 Revised Standards and are applicable to all Lamar students entering programs after September 1, 1973. Two certificates are available under these new standards.

1. The Mid-Management Administrator's Certificate requires the completion of the approved 45 semester hour plan of graduate credit.
2. The Professional School Superintendent's Certificate requires the completion of the Mid-Management Administrator's Certificate and an additional 15 semester hour approved plan of graduate credit.

To be eligible for recommendation for the Mid-Management Administrator's Certificate, the candidate completing the 45 hour approved plan must hold a Provisional Teaching Certificate, must hold a Master's degree, must have a minimum of three years of creditable classroom teaching experience, and must have completed an approved administrative internship experience.

To be eligible for recommendation for the Professional School Superintendent's Certificate, the candidate must have met all of the requirements for the Mid-Management Administrator's Certificate, plus the completion of the 15 semester hour plan of specialized graduate work for school superintendents.

Professional Certificate course requirements are as follows:

1. **General Administrative Competencies:** 18 semester hours—all required.

Edu 531 Research in Education

Edu 535 The Learning Process

Edu 537 The Public School Curriculum, K-12

Edu 5331 Theory and Practice in School Administration

Edu 5336 Leadership and Evaluation of Instruction

Edu 5344 School Law

2. **Related Areas of Study:** Nine semester hours, Six required.

Soc 432G Sociology of Education

or

Edu 5367 Psychosocial Foundations of Educating the Culturally Different

CS 5301 Computer Systems for Educational Applications

or

Edu 5340 Microcomputers for Educators

Three semester hours selected from the following:

Eco 534 Collective Bargaining

Eco 4301G Institute in Economics

Gov 535 Seminar in Theory and Practice in Public Administration

Gov 5351 Seminar in Personnel Administration

3. **Specialized Preparation for School Administrators:** 18 semester hours

Edu 5317 Organization and Administration of Special Programs (required)

Edu 5318 School Management and School Service (required)

Edu 5339 The Public School Principal (required)

Edu 5348 Practicum in Educational Administration (required)

Six semester hours to be selected from:

Edu 539 Foundations of Reading

Edu 5334 Tests and Measurements

Edu 5326 School-Community Relations

Edu 5342 Public School Finance

Edu 5343 Administration of the School Plant

Edu 5345 Personnel Administration

Edu 5347 Seminar in School Administration



4. **Specialized preparation for the School Superintendent.** 15 semester hours required.
- Edu 5326 School-Community Relations
  - Edu 5341 The School Superintendent (required)
  - Edu 5342 Public School Finance (required if not previously completed)
  - Edu 5343 Administration of the School Plant
  - Edu 5345 Personnel Management
  - Edu 5349 Internship for the School Superintendent (required: three hours to be taken during two consecutive long terms).

## 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 Provisional Certificate as an Educational Diagnostician or in Mental Retardation or in Supervision. In addition, the student may complete requirements for a Provisional 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 Department of Professional Development and Graduate Studies. General information concerning Professional Certificates is presented in another portion of the College of Education section of this bulletin.

### A. M.Ed. in Special Education-Generic Certification

#### 1. Professional Development Area:

- Edu 531 Research (required)
- Edu 534 Advanced Study in Human Development (required)
- Edu 535 The Learning Process (required)

#### 2. Resource Area: (12 hours)

- Edu 5334 Interpretation and Analysis of Tests and Measurements (required)
- SpEd 5314 Instruction Processes with the Mentally Retarded (required)
- SpEd 5321a Practicum in Educating the Exceptional Child (Reading/Language Arts) (required)
- 5361 Survey of Learning Potentials of Exceptional Children (required)

#### 3. Specialization Area: (15 hours)

Must be selected from the following courses or in concentrated area when attaining a specific certification.

- SpEd 5321b Practicum II-Educating the Exceptional Child
- SpEd 5362 Psychoeducational Evaluation of Exceptional Children
- SpEd 5364 Behavior Modification and Contingency Management of Disabled Learners
- SpEd 5365 Instructional Processes with Exceptional Children
- SpEd 5366 Modifications of Curriculum and Instruction for the Atypical Learner

### B. M.Ed. in Special Education-Mental Retardation Certification

#### 1. Professional Development Area:

- Edu 531 Research (required)
- Edu 534 Advanced Study in Human Development (required)
- Edu 535 The Learning Process (required)

#### 2. Resource Area (12 hours)

- Edu 5334 Interpretation and Analysis of Tests and Measurements (required)
- Select three courses from those listed below:

Edu 5340 Microcomputers for Educators  
 Edu 5351 Advanced Study in Early Childhood Curriculum  
 Edu 5367 Psycho-Social Foundations of Educating the Culturally Different  
 SpEd 5316 Administration and Supervision of Special Education Programs  
 SpEd 5321b Practicum II-Educating the Exceptional Child  
 SpEd 5362 Psychoeducational Evaluation of Exceptional Children  
 SpEd 5363 Practicum in Psychoeducational Procedures  
 SpEd 5365 Instructional Processes with Exceptional Children  
 SpEd 5366 Modifications of Curriculum and Instruction for the Atypical Learner

\*Other selections must be approved by the chairperson of the student's committee

3. **Specialization Area: (15 hours)**

Must be selected from the following courses or in concentrated area when attaining a specific certification.

SpEd 5313 Learning Potentials in the Mentally Retarded  
 SpEd 5314 Instruction Processes with the Mentally Retarded  
 SpEd 5315 Problems and Issues in Special Education  
 SpEd 5361 Survey of Learning Potentials of Exceptional Children  
 SpEd 5364 Behavior Modification and Contingency Management of Disabled Learners

C. **M.Ed. in Special Education-Supervision Certification**

1. **Professional Development Area:**

Edu 531 Research (required)  
 Edu 534 Advanced Study in Human Development (required)  
 Edu 535 The Learning Process (required)

2. **Resource Area: (12 hours)**

Edu 5334 Interpretation and Analysis of Tests and Measurements (required)  
 Select three courses from those listed below:

Edu 5340 Microcomputers for Educators  
 Edu 5351 Advanced Study in Early Childhood Curriculum  
 Edu 5367 Psycho-Social Foundations of Educating the Culturally Different  
 SpEd 5301 Institute or Workshop in Special Education  
 SpEd 5313 Learning Potentials in the Mentally Retarded  
 SpEd 5314 Instruction Processes with the Mentally Retarded  
 SpEd 5315 Problems and Issues in Special Education  
 SpEd 5321b Practicum II-Educating the Exceptional Child  
 SpEd 5362 Psychoeducational Evaluation of Exceptional Children  
 SpEd 5363 Practicum in Psychoeducational Procedures  
 SpEd 5364 Behavior Modification and Contingency Management of Disabled Learners  
 SpEd 5365 Instructional Processes with Exceptional Children  
 SpEd 5366 Modification of Curriculum and Instruction for the Atypical Learner

\*Other selections must be approved by the chairperson of the student's committee

3. **Specialization Area: (15 hours)**

Must be selected from the following courses or in concentrated area when attaining a specific certification.

SpEd 5316 Administration and Supervision of Special Education Programs  
 SpEd 5361 Survey of Learning Potentials of Exceptional Children  
 Edu 5336 Leadership and Evaluation of Instruction  
 Edu 5337 Practicum and Seminar  
 Edu 5338 Instructional Supervision

**D. M.Ed. in Special Education-Educational Diagnostician Certification****1. Professional Development Area:**

Edu 531 Research (required)

Edu 534 Advanced Study in Human Development (required)

Edu 535 The Learning Process (required)

**2. Resource Area: (12 hours)**

Edu 5334 Interpretation and Analysis of Tests and Measurements (required)

Edu 5335 Individual Testing (required)

Select two courses from those listed below:

Edu 5340 Microcomputers for Educators

Edu 5351 Advanced Study in Early Childhood Curriculum

Edu 5367 Psycho-Social Foundations of Educating the Culturally Different

SpEd 5301 Institute or Workshop in Special Education

SpEd 5313 Learning Potentials in the Mentally Retarded

SpEd 5314 Instruction Processes with the Mentally Retarded

SpEd 5315 Problems and Issues in Special Education

SpEd 5316 Administration and Supervision of Special Education Programs

SpEd 5321b Practicum II-Educating the Exceptional Child

\*Other selections must be approved by the chairperson of the student's committee

**3. Specialization Area: (15 hours)**

Must be selected from the following courses or in concentrated area when attaining a specific certification.

SpEd 5362 Psychoeducational Evaluation of Exceptional Children

SpEd 5363 Practicum in Psychoeducational Procedures

SpEd 5364 Behavior Modification and Contingency Management of Disabled Learners

SpEd 5365 Instructional Processes with Exceptional Children

SpEd 5366 Modification of Curriculum and Instruction for the Atypical Learner

**Professional Certification in Special Education****Educational Diagnostician****Mental Retardation****Special Education Supervisor****Special Education Counselor**

(See Committee Chairperson)

With careful planning, a student may complete requirements for two of the professional certificates indicated above within the master's degree program. Specific information concerning these certificates may be obtained from the Professional Development and Graduate Studies Department.

**Provisional Certificates in Special Education****Special Education****Generic**

Students may obtain the provisional certificate in the above listed areas. A combination of graduate and undergraduate courses leading to the certificate is possible. Specific information concerning the certificate may be obtained from the Department of Professional Development and Graduate Studies.

## General Information Concerning Professional Certificates

The Professional Certificate is valid for life unless cancelled by lawful authority, 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 certification officer in the College of Education.

### Requirements

1. Have completed the requirements for a Provisional Certificate.
2. Have at least three years of teaching experience.
3. Have completed an approved teacher education program.
4. Be of good moral character.
5. Be a citizen, or in the process of becoming a naturalized citizen of the United States.
6. Believe in and uphold the Constitution of the United States and the State of Texas.
7. Have completed, in a Texas institution of higher learning, a course or courses in which the Constitutions of the United States and the State of Texas have been given special emphasis.
8. Have completed at least six semester hours of American history or three semester hours in American history plus three semester hours in Texas history.
9. Pay an application fee of \$10.

### Graduate Faculty - College of Education

Associate Professor Virginia Anderson  
Home Economics: family life  
education, housing

Associate Professor Joel R. Barton III  
Health, Physical Education and  
Dance: health education

Professor Alice C. Bell  
Health, Physical Education and  
Dance: health education

Assistant Professor Douglas Boatwright  
Health, Physical Education and  
Dance: exercise physiology

Professor David L. Bost  
Professional Development and  
Graduate Studies: counseling,  
research

Professor Kenneth R. Briggs  
Professional Development and  
Graduate Studies: educational  
psychology

Professor Charles M. Burke  
Curriculum and Instruction: school  
curriculum, math education

Associate Professor Michael A. Cass  
Professional Development and  
Graduate Studies: special education

Assistant Professor Mark J. Cooper  
Curriculum and Instruction: early  
childhood, kindergarten

Professor Vernon R. Crowder  
Health, Physical Education and  
Dance: exercise physiology

Professor Jane S. Davidson  
Home Economics: education,  
nutrition, child development,  
management family economics

Professor Vernon M. Griffin  
Professional Development and  
Graduate Studies: supervision

Professor W. Richard Hargrove  
Curriculum and Instruction:  
educational psychology, school  
curriculum

Associate Professor Sandra Lee Haven  
Professional Development and  
Graduate Studies: microcomputers;  
tests and measurements

Assistant Professor Jane O. Hinchey  
Home Economics: equipment,  
research, consumer science

Professor V. Raye Holt  
Health, Physical Education and  
Dance: Physical Education, health  
education

Associate Professor Aileen S. Johnson  
Professional Development and  
Graduate Studies: Reading,  
instruction

Associate Professor Andrea Karlin  
Curriculum and Instruction: reading

Assistant Professor James E. Lane  
Curriculum and Instruction: special  
education

Professor Mildred A. Lowrey  
Health, Physical Education and  
Dance: physical education, motor  
learning, sports psychology

Associate Professor LeBland McAdams  
Home Economics: clothing and  
fashion merchandising

Professor Dennis P. McCabe  
Professional Development and  
Graduate Studies: supervision,  
administration

Professor Phillip B. Snyder  
Curriculum and Instruction: science  
education

Professor Monty Sontag  
Curriculum and Instruction: special  
education

Professor William H. Stanley  
Professional Development and  
Graduate Studies: educational  
administration, supervision

Assistant Professor Rita L. Stevens  
Professional Development and  
Graduate Studies: counseling

Professor Bob Thompson  
Professional Development and  
Graduate Studies: administration and  
supervision

Associate Professor Jerry R. Tucker  
Professional Development and  
Graduate Studies: educational  
administration, supervision

Professor William White  
Professional Development and  
Graduate Studies: educational  
psychology, research

Associate Professor Curtis F. Wills  
Professional Development and  
Graduate Studies: counseling

## Education Courses

- 530 Structure and Organization of Public Education** 3:3:0  
Analysis of the operation and function of public education at the local, state and national levels.
- 531 Research** 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.
- 532 Current Issues in Education** 3:3:0  
Current controversies and trends in public education.
- 533 Contemporary Philosophies of Education** 3:3:0  
Influence of recent philosophies on education. Schools of educational philosophy and implications for curriculum development and teaching methods.
- 534 Advanced Study in Human Development** 3:3:0  
A study of development and nature of the human personality. Emphasis on recent psychological and biological experiments.
- 535 The Learning Process** 3:3:0  
History and systems of learning which have application to the classroom. Emphasis on social learning and cognitive theories and strategies. Twenty percent of the class in learning laboratory activities.
- 536 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.
- 537 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.
- 538 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.
- 539 Foundations of Reading** 3:3:0  
Methods for extending and refining fundamental reading habits and attitudes, and for increasing reading efficiency. Attention will be given to all facets of the foundations of a reading program.
- 510, 5201, 5401, 5601 Institute in Education** 1-6:1-6:0  
Designed to advance the professional competence of participants. For each institute, a description of the particular area of study will be indicated. May be repeated for credit when nature of institute differs sufficiently from one previously taken. A maximum of six hours in institutes may be applied toward a Master's degree.

- 5301 Current Literature for Children and Adolescents** 3:3:0  
Survey of recent literature for children and adolescents. Emphasis is given to nonfiction in such areas as earth science and social science. Extensive reading of actual literature.
- 5302 Practicum: Diagnosis and Remediation of Reading Difficulties** 3:3:0  
Work with pupils in diagnosing and correcting reading disabilities. Students will determine the causes of reading disabilities, employ observation and interview procedures, use standard and informal tests and study materials and methods of instruction.  
*Prerequisite: Edu. 5329*
- 5303 Individualized Instruction in the Elementary School** 3:3:0  
Basic concepts of individualized instruction will be covered in detail. Various innovative methods of individualized instruction will be investigated. Particular attention will be given to types of school organization such as the "open" school.
- 5304 Advanced Child Development** 3:3:0  
A consideration of the contribution of scientific research to an understanding of child development and behavior. Emphasis on biological, social, cultural and psychological factors determining individual differences in the child.
- 5305 Problems in Elementary School Instruction** 3:3:0  
Consideration of the instructional problems encountered by teachers in the elementary schools.  
*Prerequisite: One year of teaching experience.*
- 5306 Institute in Education** 3:3:0  
Designed to advance the professional competence of participants. A description of the institute will be indicated. May be repeated for credit when nature of institute differs significantly from one previously taken. A maximum of six hours in institutes may be applied toward a Master's degree.
- 5307 History of Education** 3:3:0  
A study of the evolution of educational theory traced from the time of primitive man to the present and depicting the development of concepts and contributions leading to modern educational thought.
- 5308 The Gifted Child** 3:3:0  
Study of the process of identifying and effectively teaching academically gifted students in a variety of settings.
- 5310 Language Arts in the Elementary School** 3:3:0  
A study of developments and trends in the teaching of language arts with primary consideration given to individual teaching problems, individual research and recent innovative methods.
- 5111, 5211, 5311 Individual Study in Education** 1-3: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.*
- 5312 Middle School Teaching and Research** 3:3:0  
Presentation of alternate teaching strategies in middle school programs. Exemplary organizational designs are examined with existing impact of research on middle schools.
- 5317 Organization and Administration of Special Program** 3:3:0  
Study of principles, organization and administrative practices in special, vocational, adult and community education programs. Study of programs for guidance and standardized testing, library and media, UIL and student activities, and state and regional accreditation.  
*Prerequisite: Edu 5331, Edu 5339.*
- 5318 Organization and Administration of School Services** 3:3:0  
Study of principles, organization and administrative practices for school service of attendance, food, health, maintenance, personnel, textbooks, and transportation.  
*Prerequisite: Edu 5331, Edu 5339.*
- 5319 Problems in Secondary School Instruction** 3:3:0  
Consideration of the instructional problems encountered by experienced teachers in the secondary schools.  
*Prerequisite: One year of teaching experience.*
- 5320 Adolescent Development** 3:3:0  
Physical, mental, social and emotional characteristics of the adolescent; interests and problems; family and community relationships.
- 5321 Strategies for Individualizing Secondary Instruction** 3:3:0  
An analysis of the strategies for individualizing instruction, including the techniques of diagnosis and prescription for learning problems. Studies of the open classroom, team teaching, independent study, learning modules, nongraded programs and other organizations for instruction are included.

<b>5322</b>	<b>Organization and Administration of the Guidance Program</b> Essential services and management functions of guidance and counseling services for schools.	<b>3:3:0</b>
<b>5323</b>	<b>Occupational and Vocational Guidance</b> Concepts and delivery of vocational guidance and career education. <i>Prerequisites: Edu 5322, Edu 5333.</i>	<b>3:3:0</b>
<b>5324</b>	<b>Group Counseling</b> Processes of individual study. Counseling procedures and techniques for individuals and groups. <i>Prerequisites: Edu 5322, Edu 5333.</i>	<b>3:3:0</b>
<b>5325</b>	<b>Pupil Personnel Management</b> Survey of student services in the public schools emphasizing principles, philosophy and operating procedures.	<b>3:3:0</b>
<b>5326</b>	<b>School-Community Relations</b> Emphasizes the relationship of educational and social patterns of living which exists in every community; recognizes the burden of leadership which rests with the public school as it occupies the central position of influence in the community. <i>Prerequisites: Edu 5331, 5339.</i>	<b>3:3:0</b>
<b>5327</b>	<b>College Teaching</b> Designed for graduate students with little or no pedagogical training or experience. Application of learning principles and pedagogical procedures in college classes.	<b>3:3:0</b>
<b>5328</b>	<b>Practicum in Guidance and Counseling</b> Supervised observation and practice of guidance and counseling in a school setting during the school day. <i>Prerequisite: Completion of all other counseling courses.</i>	<b>3:8:0</b>
<b>5329</b>	<b>Corrective Reading</b> Causes of reading disability, methods of diagnosis and remedial instruction. <i>Prerequisite: Edu 539.</i>	<b>3:3:0</b>
<b>5331</b>	<b>Theory and Practice in School Administration</b> Introduction to theories of administration, organizational structures and current practices in educational administration. Emphasis is given to types of organizational designs, personnel titles and roles, line staff relationships and general theories of successful administrative practice.	<b>3:3:0</b>
<b>5332</b>	<b>Guidance and Counseling in the Elementary School</b> A course designed to provide an understanding of guidance principles and techniques applicable to the elementary school. <i>Prerequisites: Edu 5322, Edu 5333.</i>	<b>3:3:0</b>
<b>5333</b>	<b>Individual Counseling Theories and Techniques</b> Opportunities are provided for the student to enrich his/her background and experience in interviewing and in dealing with human relations problems in the counseling situation.	<b>3:3:0</b>
<b>5334</b>	<b>Tests and Measurement</b> 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.	<b>3:3:0</b>
<b>5335</b>	<b>Individual Testing</b> Theoretical and practical study emphasizing the administration, scoring and basic interpretation and practice in the use of individual psychological tests. Students will be trained to administer the Wechsler tests, the Stanford Binet or other subsequently developed individual intelligence scales. <i>Prerequisites: Edu 5322, Edu 5333, Edu 5334.</i>	<b>3:3:0</b>
<b>5336</b>	<b>Leadership and Evaluation of Instruction</b> An investigation of processes and procedures used to evaluate instructional and administrative personnel in the public schools. Special attention is given to the role of the principal and supervisor in this process. Included in the content are programs of clinical supervision and staff development.	<b>3:3:0</b>
<b>5337</b>	<b>Practicum and Seminar</b> Supervision and curriculum development. Investigation of the role of the supervisor with emphasis on curriculum development. Investigations will center around problems in supervision, curriculum theory and educational experimentation. <i>Prerequisite: Must be within six semester hours of completing all certification requirements.</i>	<b>3:3:0</b>
<b>5338</b>	<b>Instructional Supervision</b> A study of human resources supervision and organizational leadership for more effective schools. Special investigation into the elements of school climate, leadership behavior, motivation theory, and group supervisory effectiveness.	<b>3:3:0</b>

- 5339 The Public School Principal** 3:3:0  
Study of the role and competencies for the administrator of the elementary, middle and secondary schools. Specific studies of job analysis and responsibilities in various organizations of the K-12 program are included.
- 5340 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.
- 5341 The School Superintendent** 3:3:0  
Emphasis on the legal and delegated authority, responsibilities and operative techniques of the superintendency.  
*Prerequisites: Edu 5331, Edu 5339.*
- 5342 Public School Finance** 3:3:0  
Analysis of principles of school finance to include problems of budgeting, accounting and administration of funds.  
*Prerequisites: Edu 5331, Edu 5339.*
- 5343 Administration of School Plant** 3:3:0  
Operation, maintenance and utilization of physical plant to include administration of records, standards and control of plant and development of school building programs.  
*Prerequisites: Edu 5331, Edu 5339.*
- 5344 School Law** 3:3:0  
Interpretation and operation of school law including a study of the Texas Education Code and the Handbook for Public School Law.
- 5345 Personnel Management** 3:3:0  
Fundamentals of human relations and organizational behavior in developing programs of recruitment selection, assignment, evaluation, promotion and termination of personnel.  
*Prerequisites: Edu 5331, Edu 5339.*
- 5346 Public Relations in School Administration** 3:3:0  
Development of principles governing school-community relationships to promote mutual understanding and support of school's purpose, functions and needs.
- 5347 Seminar in School Administration** 3:3:0  
Study of basic 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.
- 5348 Practicum in Educational Administration** 3:A:0  
Supervised experience in administration and offered by arrangement between the University and the public school.  
*Prerequisite: Must be within six semester hours of completing all certification requirements.*
- 5349 Internship for School Superintendent** 3:A:0  
Designed to give the prospective superintendent on-the-job training under the guidance of a successful, experienced, practicing administrator with the supportive supervision of members of the University faculty. May be repeated once for credit; must be taken in consecutive long terms within the same academic year.  
*Prerequisite: Must be within six semester hours of completing all certification requirements.*
- 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.
- 5354 Trends and Issues in Early Childhood Education** 3:3:0  
An analysis of trends and issues in early childhood education.
- 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.
- 5367 Psycho-Social Foundations of Educating the Culturally Different** 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.
- 5368 Practicum: Role and Responsibilities of the Visiting Teacher** 3:0:0  
Studies involve supervised one-to-one interactions with pupils, parents, community agencies and other personnel to actualize resources that enhance educational opportunities for children.



- 5378 Instructional Supervision of Student Teachers** 3:3:0  
 Designed to facilitate instructional personnel who, directly or indirectly, work with/supervise student teachers to better understand their roles of supervision as they relate to student teaching. Emphasis is given to the cooperative endeavor and special relationships as they exist between state regulatory bodies, the supervising teacher and the University supervisor.  
 Note: This course has been recognized by the Lamar Teacher Center as meeting the in-service requirement of supervising teachers as specified by state statute.
- 5381 Advanced Seminar in Counselor Relations** 3:0:0  
 An intensive exploration of the dynamics of interpersonal relationships. A critical analysis of various approaches to counseling will be established. Development and demonstration of personal counseling skills will be of major concern.  
*Prerequisite: Edu 5322, Edu 5333.*
- 5390-1 Selected Instructional Topics** 3:3:0  
 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 semester schedule. Contact hours must be the same as instructional courses require.
- 669A-669B Thesis** 6:A:0  
*Prerequisite: Approval of graduate advisor.*

Below is the approved list of 400G level courses which may be taken with augmented requirements for graduate credit, subject to approval by the graduate advisor. Course descriptions may be found in the Bulletin of Lamar University.

- 431G Diagnostic-Prescriptive Techniques in the Teaching of Reading  
 4301G Institute or Workshop in Education  
 4304G History and Philosophy of the Kindergarten  
 4305G Seminar in Early Childhood Educational Research  
 4337G Tests and Measurements  
 439G Reading Practicum

## Special Education Courses (SpEd)

- 5101, 5201, 5301, 5601 Institute or Workshop in Special Education** 1-6:1-6:0  
 Designed to advance the professional competence of participants. For each institute or workshop a description of the particular area of study will be indicated. May be repeated for credit when institute or workshop differs sufficiently from one previously taken. A maximum of six hours of credit in Institutes may be applied toward a Master's degree.
- 5121, 5221, 5321 Individual Study in Special Education** 1-3:A:0  
 Investigation into special areas in special education under the direction of a faculty member. This course may be repeated for credit when topics of investigation differ.  
*Prerequisite: Consent of department head.*
- 5313 Learning Potentials in the Mentally Retarded** 3:3:0  
 Determining the degree of modifiability of pupil behaviors and identifying functioning levels; individual projects.
- 5314 Instruction Processes with the Mentally Retarded** 3:3:0  
 Translating the behaviors of the mentally retarded into developmental categories and applied instructional modification processes.
- 5315 Problems and Issues in Special Education** 3:3:0  
 Appraisal of current problems, trends and practices in the education and care of exceptional children.
- 5316 Administration and Supervision of Special Education Programs** 3:3:0  
 Analysis of the functions of special education in the administrative structure of the school; the principles and practices in administration and supervision in special education.
- 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.

<b>5363</b>	<b>Practicum in Psychoeducational Procedures</b>	<b>3:3:0</b>
	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. <i>Prerequisite: SpEd 5362.</i>	
<b>5364</b>	<b>Behavior Modification and Contingency Management of Disabled Learners</b>	<b>3:3:0</b>
	The description of specific types of learning, the sequence in learning school-related tasks and the competencies to manipulate events to effect desired learning.	
<b>5365</b>	<b>Instructional Processes with Exceptional Children</b>	<b>3:3:0</b>
	Competency in developing educational strategies for the remediation, amelioration or compensation of exceptionality as it interferes with achievement or adjustment in school.	
<b>5366</b>	<b>Modification of Curriculum and Instruction for the Atypical Learner</b>	<b>3:3:0</b>
	Information and familiarity with instructional materials necessary for meeting the special needs of exceptional learners. Utilization of Special Educational Instructional Materials Centers.	
<b>5390</b>	<b>Special Education and the Pre-school Age Child</b>	<b>3:3:0</b>
	Study in the problems, trends and practices in the education and care of the pre-school child in special education.	
<b>5391</b>	<b>Special Education and the Elementary School Age Child</b>	<b>3:3:0</b>
	Study in the problems, trends and practices in the education and care of the elementary school age child in special education.	
<b>5392</b>	<b>Special Education and the Secondary School Age Child</b>	<b>3:3:0</b>
	Study in the problems, trends and practices in the education and care of the secondary school age child in special education.	
<b>5393</b>	<b>Mainstreaming and the Exceptional Child</b>	<b>3:3:0</b>
	Review of current problems, trends and practices in the education and care of exceptional children through mainstreaming.	
<b>669A-669B</b>	<b>Thesis</b>	<b>6:A:0</b>
	<i>Prerequisite: Approval of graduate advisor.</i>	

## Graduate Resource Courses

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

<b>CS 5301</b>	<b>Computer Systems for Educational Applications</b>	<b>3:3:0</b>
	Functional units of computers including both hardware and firmware; software; analysis, design and evaluation of computing configurations for educational applications; cost estimation techniques for both academic and administrative applications.	
<b>Soc 430G</b>	<b>Seminar in Sociology</b>	<b>3:3:0</b>
	Basic concepts and principles of sociology as applied to the study of selected topics. Designed for education majors or other non-sociology majors.	
<b>Soc 532</b>	<b>Sociology of Education</b>	<b>3:3:0</b>
	A study of the multi-cultural influences on the institutions of education. Included will be a sociological analysis of educational problems in Texas.	
<b>Eng 4312G</b>	<b>Studies in Language and Linguistics</b>	<b>3:3:0</b>
	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.	

## Department of Health, Physical Education and Dance

The Department of Health, Physical Education and Dance offers a program of study leading to the Master of Science degree in Health and Physical Education. 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 and must meet the necessary undergraduate prerequisites as prescribed for a particular area of specialization. The areas of specialization available include (1) teaching and research, (2) exercise science, and (3) fitness program administration. A teaching and research specialization is offered for those graduate students who are interested in advanced preparation for teaching in school and university settings, re-

search opportunities, doctoral level work and administrative responsibilities. The exercise science area of specialization provides a concentration on theory and research. Fitness program administration involves a concentration in exercise technology and practical applications for those students seeking employment in public, private, or corporate fitness centers.

## Degree Requirements

The candidates for the Master of Science degree in Health and Physical Education 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 HPE 534 (Scientific Basis of Exercise), HPE 536 (Research Methods), and HPE 538 (Motor Learning).
2. The thesis is optional for specialization areas of teaching/research and fitness program administration.
3. The thesis is **required** for the exercise science area of specialization.
4. Each specialization area requires additional core requirements contingent upon the option selected.
5. Exercise science specialization requires undergraduate prerequisites in biology and chemistry.

## Graduate Faculty

Associate Professor Joel E. Barton III  
Health education

Professor Alice C. Bell  
Health education

Assistant Professor Douglas Boatwright  
Physical education, exercise  
physiology

Professor Vernon R. Crowder  
Exercise physiology

Professor V. Raye Holt  
Physical education, health education

Professor Mildred A. Lowrey  
Physical education, motor learning,  
sports psychology

## Health and Physical Education Courses

- |            |   |              |
|------------|---|--------------|
| <b>530</b> | <b>Problems in Health and Physical Education</b><br>Biological, physiological, social, psychological and other purposes and outcomes; selection and distribution of activities; teaching methods; facilities; teacher preparation; literature; research problems.<br><i>Prerequisite: Permission must be obtained from an active teaching member of the graduate faculty.</i> | <b>3:A:0</b> |
| <b>531</b> | <b>Cultural Foundations of Physical Education</b><br>A study of history and cultural foundations of sport and physical education activities, their origin and influence upon modern man.  | <b>3:3:0</b> |
| <b>532</b> | <b>Seminar in Health and Physical Education</b><br>Designed to develop abilities in locating and evaluating literature and research in physical education and in allied fields. Course may be repeated for a maximum of six semester hours as the topic varies.   | <b>3:3:0</b> |
| <b>533</b> | <b>Organization and Administration of the School Health Program</b><br>Administrative relationships and procedures in conducting school health programs.  | <b>3:3:0</b> |
| <b>534</b> | <b>Scientific Basis of Exercise</b><br>A study of professional literature and laboratory experimentation on the role of physical activities and their effects on the human organism.  | <b>3:3:0</b> |
| <b>535</b> | <b>Trends and Issues in Health and Physical Education</b><br>Designed to assist the student to become knowledgeable on current trends and issues in the areas of the health and physical education. Study will include historical, analytical and projective approaches. Course may be repeated for a maximum of six semester hours as the topic varies.                      | <b>3:3:0</b> |
| <b>536</b> | <b>Research Methods in Health and Physical Education</b><br>Familiarity with types of research in Health and Physical Education with emphasis on tools and techniques of research and research design.  | <b>3:3:0</b> |
| <b>537</b> | <b>Basis of Sports Medicine</b><br>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.   | <b>3:3:0</b> |

- 538 **Motor Learning** 3:3:0  
A formalized and scientific study of learning, performance and related factors as applied to gross motor skills.
- 539 **Psychosocial Aspects of Sport** 3:3:0  
Psychological and sociological concepts related to physical activity. Major concepts and experimental evidence pertaining to learning and behavior are discussed.
- 5101, 5201, 5301 **Workshop in Health and Physical Education** 1-6:1-6:0  
This course is designed to advance the professional competence of graduate students in health and physical education. Topics will vary. A description of the particular area of study will be indicated. Course may be repeated for a maximum of six semester hours if topic varies. A maximum of six semester hours of workshop may be applied to a degree program.
- 5311 **Curriculum Development in Physical Education** 3:3:0  
Emphasis given to models of curriculum development and to techniques for curriculum improvement. Analysis of objectives, organization and content of physical education K-12.
- 5312 **Independent Study** 3:A:0  
Intensive study in an area of special interest in health or physical education. Course may be repeated for a maximum of six semester hours as the topic varies.  
*Prerequisite: Demonstrated competence for independent work, research methods, and consent of active teaching member of the graduate faculty.*
- 5316 **Exercise Psychobiology** 3:2:1  
Comprehensive review of current literature dealing with exercise stress, emotionality, immune system function, and neuroendocrine function. Psychoneuroendocrine aspects of holistic health concepts are considered, including those of Asian fitness systems and Oriental philosophy.  
*Prerequisite: Exercise physiology.*
- 5318 **Fitness Program Management and Exercise Technology** 3:2:1  
Review of current literature dealing with physical fitness. Students function a group leaders and learn applied exercise technology, including stress and diet management, fitness testing, and exercise prescription. Preparation for adult fitness program administration.  
*Prerequisite: Exercise physiology.*
- 669A-669B **Thesis** 6:A:0  
*Prerequisite: Approval of graduate advisor.*

## Department of Home Economics

The Master of Science degree in Home Economics allows students to choose courses from the areas of foods and nutrition, textiles and clothing, child development, family relationships, interior design, home management and home economics education. Workshops and travel/study tours along with regular daytime and evening classes make completion of a Home Economics Masters degree attainable and rewarding.

### Degree Requirements

The Master of Science degree in Home Economics requires the completion of 30 semester hours of graduate work; 18 in home economics, six in thesis and six in an approved supporting field. With the approval of the the student's graduate committee 12 semester hours of course work may be substituted for the thesis.

The student's graduate program must include Home Economics 5314, Research Techniques and Home Economics 530, Seminar in Home Economics.

A student must be enrolled in at least one graduate-level Home Economics course during the semester of graduation.

### Graduate Faculty in Home Economics

Associate Professor Virginia Anderson  
Family life education, housing  
Professor Jane S. Davidson  
Home economics education, nutrition,  
child development and management

Assistant Professor Jane O. Hinchey  
Equipment, research, consumer  
science  
Associate Professor LeBland McAdams  
Clothing, fashion merchandising and  
retailing

## Home Economics Courses

- 530 Seminar in Home Economics** 3:3:0  
An intensive study of selected problems and recent developments in Home Economics.
- 531 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.
- 532 Clothing Design and Merchandising** 3:2:3  
An application of couture costume design principles and techniques related to construction and merchandising.
- 533 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 to civilization.
- 534 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.
- 535 Cultural Aspects of Food** 3:2:3  
The relationships of food acceptability and use to the cultural and social development of people over the world. Food preparation experiences as influenced by international food patterns.
- 537 Family Management** 3:3:0  
Socio-economic changes, public policies and programs, and management practices related to family well-being.
- 538 Occupational Home Economics** 3:3:0  
Philosophy and development of vocational home economics education for secondary schools, colleges or universities with emphasis on occupational home economics careers and jobs, curriculum trends and developments. Credit for course applied to six hours required for teaching in occupational home economics programs.  
*Prerequisite: HEC 5308*
- 539 Nutrition in Aging** 3:3:0  
Study of the effects of aging on the nutritional status of the individual. The role of nutrition in the aging process is addressed.
- 5101, 5201, 5301, 5601 Workshop in Home Economics**  
Workshops designed to strengthen professional competence (or expertise) needed for addressing societal issues related to Home Economics. May be repeated for credit when topic of interest varies. Credit: one to six hours.
- 5308 World of Work in Home Economics** 3:3:0  
A study of occupational home economics education within the secondary curriculum such as cooperative education, pre-employment education, coordinated vocational-academic education and vocational education for the handicapped. Attention will be given to essential elements such as leadership skills, employability skills, entrepreneurial opportunities and personal development for employability.
- 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 Home Economics Education** 3:3:0  
Creative development, selection and evaluation of instructional materials including preparation, selection and use of visual materials.
- 5313 Current Topics in Home Economics**  
Intensive study of a current problem of professional interest in home economics. 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. Credit: three hours.
- 5314 Research Techniques** 3:3:0  
Principles and application of standard techniques used in research.
- 5315 Independent Study in Home Economics** 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. Credit: three hours.
- 5316 Family Life Education** 3:3:0  
Principles and philosophy of family life education, program planning and implementation, educational techniques and materials development and evaluation.

- 5317 Family Communication** **3:3:0**  
Communication patterns and problems of husband-wife and parent-child, including stress and conflict management.
- 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.
- 669A-669B Thesis** **6:A:0**  
*Prerequisite: Approval of graduate advisor.*



Students in the College of Engineering learn to work with this artificial vision system and other examples of state-of-the-art high technology.

# College of Engineering

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 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 fifteen 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) 880-8350
  - b. Take GRE and have scores sent to: Graduate Admissions, Lamar University, P.O. Box 10009, Beaumont, Texas 77710.
  - c. Have all undergraduate transcripts sent to Graduate Admissions as in b.
  - 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 15 hours of course work including all core courses and apply for admission to candidacy.



6. Complete remaining course work specified in candidacy application
  - a. Apply for Graduation
  - b. Pass Comprehensive Examination
7. Graduate

### Core Courses

- |    |     |      |   |
|----|-----|------|---|
| 1. | EGR | 5369 | Engineering Management                    |
| 2. | EGR | 5362 | Decision Making Processes                 |
|    |     |      | or  |
|    | IE  | 432G | Statistical Decision-Making for Engineers |
| 3. | EGR | 5363 | Administrative Control Systems            |
|    |     |      | or  |
|    | EGR | 5321 | Quality Control Systems                   |
| 4. | EGR | 5366 | Advanced Engineering Economics            |
| 5. | ACC | 530  | Financial Accounting                      |
|    |     |      | or  |
|    | ECO | 530  | 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

- EGR 5347 Manufacturing Analysis
- EGR 5333 Production Control
- EGR 5316 Operations Research I
- EGR 5365 Industrial Planning

### Business Administration

- \*ACC 530 Financial Accounting
- ACC 537 Managerial Accounting
- ECO 534 Collective Bargaining
- ECO 530 Foundations of Economics

### Technical Management

- \*EGR 5369 Engineering Management
- \*EGR 5362 Decision Making Processes
- \*EGR 5321 Quality Control Systems
- \*EGR 5366 Advanced Engineering Economics

## II. Construction Project Management (CE)

### Technical Discipline

- EGR 5390 Project Management Systems
- EGR 5387 Elements of Construction Systems
- EGR 5318 Stress Analysis
- EGR 5308 Cost and Optimization Engineering

### Technical Management

Same as Option I

### Business Administration

Same as Option I

## III. Construction Project Management (CHE)

### Technical Discipline

- EGR 533 Computer Methods
- EGR 5341 Mass Transfer
- EGR 5344 Process Modeling
- EGR 536 Thermodynamics

### Technical Management

Same as Option I

### Business Administration

Same as Option I

## IV. Instrumentation and Control (EE)

### Technical Discipline

(Select 4)

- EGR 5364 Digital Hardware Design
- EGR 6364 Micro Processor Design
- EGR 535 Control Theory
- EGR 6346 Advanced Engineering Analysis
- EGR 538 Digital Control

### Technical Management

Same as Option I

### Business Administration

Same as Option I

## V. Power and Energy (EE)

### Technical Discipline

(Select 4)

- EGR 5354 Nuclear Power Plants
- EGR 5351 Power Systems I
- EGR 5352 Power Systems II
- EGR 6311 Computer Methods in Power Systems
- EGR 5364 Digital Hardware

### Technical Management

Same as Option I

### Business Administration

Same as Option I

## VI. Construction Project Management (IE)

### Technical Discipline

- EGR 5308 Cost and Optimization Engineering (Pert/Cost)
- EGR 5303 Regression Analysis
- EGR 5370 Technical Communication
- EGR 5305 Reliability

### Technical Management

Same as Option I

### Business Administration

Same as Option I

## VII. Construction Project Management (ME)

### Technical Discipline

(Select 4)

- EGR 5308 Cost and Optimization Engineering
- EGR 5318 Stress Analysis
- EGR 5312 Heat Transfer
- EGR 537 Thermodynamics - Energy Conversion
- EGR 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 Courses: (M.E.S., M.E. and D.E. Programs)**

EGR	5311	Heat Transfer Analysis
EGR	5341	Mass Transfer Operations
EGR	535	Advanced Process Control
EGR	5347	Manufacturing Analysis
EGR	5366	Advanced Engineering Economics
EGR	5316	Operations Research I
EGR	532	Instrumentation
EGR	5306	Linear Systems Control Theory
EGR	6364	Microcomputer Based Design
EGR	5318	Stress Analysis
EGR	5309	Problems in Design and Analysis
EGR	5308	Cost and Optimization Engineering
EGR	5312	Transport Mechanisms
EGR	539	CAD/CAG
EGR	537	Thermodynamics
MTH	5310	Numerical Analysis
EGR	5319	Design of Experiments
EGR	5303	Regression Analysis

The following mathematics courses are recommended as support courses for the graduate programs in engineering:

MTH	5303	Modeling Theory
MTH	5311	Complex Variables

**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.

**Degree Requirements**

1. All of the College of Graduate Studies general degree requirements.
2. A minimum of nine semester hours (three courses) from those courses listed above as core courses.
3. A minimum of 15 semester hours (five courses) of electives. Additional core courses may satisfy part of this requirement.
4. Satisfactory completion and defense of thesis (EGR 669A and EGR 669B).

**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.

**Degree Requirements**

1. All of the College of Graduate Studies general degree requirements.
2. A minimum of 21 semester hours (seven courses) from those listed above as core courses.

3. A minimum of 15 semester hours\* (five courses) of electives. Additional core courses may satisfy part of this requirement.
4. Satisfactory completion of a final comprehensive examination.

\*A graduate student holding an Engineer-in-Training (EIT) certificate 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 12 semester hours of electives provided EGR 631 (Design Project) is included.

## 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. Attainment of appropriate scores on the Graduate Record Examination (GRE).
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.

### Degree Requirements

1. All of the College of Graduate Studies general degree requirements.
2. Completion of a minimum of 21 semester hours (seven courses) of course work from those listed as core courses above. For students who have completed a thesis this requirement is reduced to a minimum of nine semester hours (three courses) from the core courses listed above.
3. 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.
4. Completion of the field study preparatory requirements for "Design, Analysis, and Control", "Energy Systems", "Manufacturing Systems" as stated below. (See Note 1)
5. 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.
6. Completion of the field study. After the student is admitted to candidacy a formal engineering proposal conforming to a standard 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.

Note 1: A student's Doctoral Committee may, with the written approval of the Graduate Steering Committee and the Dean of the College of Engineering, design a special course group for a particular student.

7. 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.

## Field Study Preparatory Requirements Design, Analysis, and Control

EGR	538	Sampled Data Control Systems
EGR	611***	Professional Seminar
EGR	632	Justification of Engineering Projects
EGR	633	Advanced Engr. Design
EGR	6346	Advanced Engr. Analysis
	15	Semester Hours
	15	Semester Hours Related Electives
	30	Semester Hours Total

### Energy Systems

EGR	5354	Nuclear Power Plants
EGR	611***	Professional Seminar
EGR	632	Justification of Engr. Projects
EGR	634	Synthetic Fuel Process Analysis
EGR	6361	Solar Energy I
	15	Semester Hours
	15	Semester Hours Related Electives
	30	Semester Hours Total

### Manufacturing Systems

EGR	5347	Manufacturing Analysis
EGR	632	Justification of Engineering Projects
EGR	611***	Professional Seminar
EGR	6349	Computer Aided Manufacturing
EGR	5321	Quality Control Systems
	15	Semester Hours
	15	Semester Hours Related Electives
	30	Semester Hours Total

\*\*\*Doctoral Candidates must enroll in EGR 611 for three semesters.

## Graduate Faculty

<p>Professor Wendell C. Bean Nuclear engineering, bioengineering</p> <p>Associate Professor Carl Carruth Work design and measurement, human factors and motivation</p> <p>Associate Professor Daniel H. Chen Process control, optimization, numerical methods</p> <p>Assistant Professor Hsing-wei Chu Operations research statistical decision analysis, networks</p> <p>Professor James L. Cooke Process control; power systems analysis</p> <p>Associate Professor Paul Corder Mechanical systems design; stress analysis; finite element models</p> <p>Professor Floyd M. Crum Solid state devices in electronic circuits</p>	<p>Associate Professor Saeed Daniali Structural analysis and design</p> <p>Professor David C. Gates Decision-making processes; plant layout, human factors, engineering management</p> <p>Associate Professor John B. Harvill Data base management systems, microcomputers</p> <p>Associate Professor Tho-Ching Ho Fluidization, heat transfer, optimization</p> <p>Professor Jack R. Hopper Reaction kinetics, catalysis</p> <p>Assistant Professor Donald L. Jordan Information systems</p> <p>Associate Professor Narayan R. Joshi Metallurgical engineering, material science</p>
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Professor Enno Koehn  
Construction, planning, scheduling  
and productivity. Design and analysis

Assistant Professor Hikyoo Koh  
Software engineering, software  
testing, artificial intelligence

Associate Professor Ku-Yen Li  
Mass transfer, thermodynamic  
properties, gas-liquid reactions

Associate Professor Peter A. Mantz  
Ocean engineering, coastal and wave  
process

Professor Eugene P. Martinez  
Kinetics and thermal sciences of  
fluids

Professor Sterling W. McGuire  
Computer science, statistics and  
optimization techniques

Professor Harry T. Mei  
Computer applications, humidity  
control, solar energy

Professor William E. Morgan  
Environmental engineering

Professor David R. Read  
Computer science, numerical analysis

Professor Bruce G. Rogers  
Ultimate load characteristics of  
structures, analysis

Associate Professor James L. Thomas  
Computer-aided Manufacturing,  
Computer-aided Design

Associate Professor Gary L. Viviani  
Computer methods for analysis,  
control of large scale systems

Professor William R. Wakeland  
Control systems design,  
computer-aided design

Professor Bobby R. Waldron  
Computer science, statistics and  
information systems

Professor Richard E. Walker  
Rheology, computer applications

Professor Joseph T. Watt  
Digital systems, control, and analog  
computers

Professor Carl L. Yaws  
Physical and thermodynamic  
properties, solar energy, cost  
engineering

Professor Fred M. Young  
Fluid dynamics, heat transfer

Professor Victor Zaloom  
Engineering economics,  
manufacturing productivity, computer  
applications, statistical quality control

## Engineering Courses

- |     |  |       |
|-----|--|-------|
| 531 | <b>Materials Science</b><br>Principles underlying the behavior of materials existing in the solid, liquid and gaseous phases.  | 3:3:0 |
| 532 | <b>Instrumentation</b><br>Consideration is given to the design and analysis of instruments that are used to interface with analog, microprocessor and minicomputer applications that involve data acquisition and process control.   | 3:3:0 |
| 533 | <b>Computer Methods in Engineering Analysis</b><br>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.<br><i>Note: Core Course. May be repeated one time for graduate credit with prior approval where course content varies.</i> | 3:3:0 |
| 534 | <b>Nonlinear Analysis</b><br>Various methods of solving nonlinear differential equations are studied. Analytical, graphical and computer solutions are included.   | 3:3:0 |
| 535 | <b>Advanced Process Control</b><br>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.  | 3:3:0 |
| 536 | <b>Thermodynamics-Process Industry</b><br>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.<br><i>Note: Core Course. May be repeated one time for graduate credit, with prior approval, where course content varies.</i>  | 3:3:0 |

- 537 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.  
*Note: Core Course. May be repeated one time for graduate credit, with prior approval, where course content varies.*
- 538 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.*
- 539 CAD/CAG** 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.*
- 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.
- 5303 Regression Analysis** 3:3:0  
Review of regression analysis; theory of least squares; multivariate analysis; theory of the general linear hypothesis model.
- 5304 Nonlinear Programming** 3:3:0  
Theory of linear and nonlinear programming; the lambda and delta-form of the approximating problem; quadratic programming; gradient methods.
- 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.
- 5306 Linear Systems Control Theory** 3:3:0  
Review of control systems analysis involving frequency domain and state variables. Analytical procedures for design of Lag, Lead, Laglead, and PID compensation. State variable system representation and design. Extensive use of computers.  
*Prerequisite: undergraduate course in control theory or consent of instructor.*
- 5308 Cost and Optimization Engineering** 3:3:0  
Includes the mathematics of cost comparisons, profitability, productivity, and optimization with emphasis on processing or construction 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 with 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 Transport Mechanisms** 3:3:0  
This course will be concerned with individual mechanisms of heat transfer, mass transfer, or momentum transfer. May be repeated for credit as topics vary.
- 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 Operations Research I** 3:3:0  
The use of advanced mathematical models for optimizing engineering problems with emphasis on management decision. Includes special techniques based on systems analysis, design of experiment, linear programming, queuing, simulation and probabilistic analysis.
- 5318 Stress Analysis** 3:3:0  
Topics in advanced strength of materials including unsymmetrical loading of beams, shear center, curved beams, torsion of non-circular cross sections, strain energy, virtual work, plasticity, fatigue, and introduction to the theory of elasticity. May be repeated for credit when the subject matter varies.
- 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 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.
- 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 Rheology** 3:3:0  
A study of non-Newtonian liquids with emphasis on principles and fundamentals. Methods of measuring rheological properties of non-elastic and elastic liquids are developed. Laminar and turbulent flow characteristics are reviewed.
- 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 in Particulate Matter** 3:3:0  
Propagation of elastic waves in semi-infinite media. Surface waves and body waves. Behavior of particulate masses under the effect of dynamic loading, impact and transient phenomena. Effect on substructures of waves from industrial, seismic and nuclear sources. Mechanical and electronic recording. May be repeated for credit when the subject matter varies.
- 5325 Information Theory** 3:3:0  
Aspects applicable to all fields of engineering. Entropy as a measure of information: signal processing; channel capacity; and coding theory.
- 5326 Waves and Coastal Processes** 3:3:0  
Hydrodynamics of waves, wave generation, reflection, energy transmission and dissipation. Coastal phenomena, harbors and breakwaters, analysis of tides, and tidal currents. Salt water, fresh water interaction and diffusion in estuaries; erosion and shoaling in tidal waters. May be repeated for credit when the subject matter varies.
- 5327 Numerical Methods of Structural Analysis** 3:3:0  
Matrix methods applied to analysis of trusses, beams and frames. May be repeated for credit when the subject matter varies.
- 5328 Inelastic Theory of Structures** 3:3:0  
Investigation of structural behavior under conditions of overload. Design of structures using principles of ultimate strength and plastic design theories. Consideration of load and safety factors, stress redistribution and shakedown. May be repeated for credit when the subject matter varies.
- 5329 Water and Waste Analysis** 3:3:0  
Fundamental treatment of sanitary chemistry and microbiology; an intensive study of basic chemical theories and/or laboratory techniques and instrumentation. May be repeated for credit when the subject matter varies.
- 5330 Wastewater Treatment** 3:3:0  
Principles of treatment for domestic and industrial wastewaters with emphasis on process kinetics. May be repeated for credit when the subject matter varies.



- 5331 Similitude and Model Design** 3:3:0  
Dimensional analysis, data processes, prediction equations and model design, including a study of distorted and dissimilar models. Models studied include structural fluid flow, thermal, electrical, magnetic, acoustical and illumination types. Various analogs from second-order ordinary and partial differential equations are also discussed. May be repeated for credit when the subject matter varies.  
*Prerequisite; Mth 434C recommended.*
- 5332 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: EGR 5316 or equivalent.*
- 5333 Production Control** 3:3:0  
Advanced topics in techniques employed in different types of manufacture for planning and controlling production.
- 5334 Salary Administration for Engineers and Scientists** 3:3:0  
A study of salary incentives, job evaluation and merit rating for engineering and scientific personnel, executive and managerial compensation.
- 5336 Operations Research III** 3:3:0  
Recent advances in the methodology and philosophy of operations research.  
*Prerequisite: Consent of instructor.*
- 5337 System Simulation** 3:3:0  
Study of the design, construction, testing and operation of process models for simulation. Starting with simple hand-computed simulations, the student progresses to relatively complex models requiring the use of a high-speed digital computer.
- 5338 Reclamation Engineering Seminar** 3:3:0  
Investigations of the reclamation of resources by multiple use, reuse and improvement of existing sources to meet quality requirements. May be repeated for credit when the subject matter varies.
- 5340 Kinetics** 3:3:0  
Rate equations are developed by the application of statistical methods and the theory of absolute reaction rates. Partition functions and potential energy surfaces will be introduced. Considerable attention will be given to the measurement of reaction rates and the interpretation of experimental data. May be taken for graduate credit in chemistry or engineering.
- 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.
- 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 Process Modeling** 3:3:0  
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.
- 5345 Reactor Design I** 3:3:0  
Basic principles of reactor design are presented. The primary goal is the successful design of chemical reactors. Major reactor types are treated, giving particular attention to their performance capabilities.
- 5346 Optimization Techniques** 3:3:0  
Analytical methods of constrained and unconstrained optimization. Geometric programming; linear programming. One-dimensional search techniques. Multivariable search techniques. Dynamic programming. Variational methods.
- 5347 Manufacturing Analysis** 3:3:0  
The course is designed to provide the background analysis required to understand manufacturing operations and to predict manufacturing behavior. It includes material behavior, metal cutting, metal forming, new and unconventional cutting and forming techniques, machine tool vibration and manufacturing cost optimization.
- 5349 Properties of Gases and Liquids.** 3:3:0  
Properties of gases and liquids. Major physical, transport and thermodynamic properties of gases and liquids. Pure components and mixtures. Theory, correlation and estimation methods covered.

- 5350 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.
- 5351, 5352, 5353 Electric Power Systems Analysis I, II, III** 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.
- 5354 Nuclear Power Plants** 3:3:0  
Nuclear reactor neutron kinetics; core reactivity effects of control poisons, coolant and fuel temperatures, fission product poisons; self regulation, automatic control; startup and shut-down; types of nuclear plants foreseen in electric power generation; special problems and benefits of nuclear power plants.
- 5356 Optimal Control** 3:3:0  
Bellman's Dynamic Programming, calculus of variations, and Pontryagin's minimum principle. System representation by state variables. Computer methods utilized.  
*Prerequisite: EGR 535 or consent of instructor.*
- 5359 Seminar in Engineering Administration** 3:3:0  
Direct reading, analysis and research in the classic and modern literature of engineering administration. May be repeated for credit where subject matter differs.
- 5360 Case Problems in Engineering Administration** 3:3:0  
The case method applied to complex administration problems encountered by engineers. May be repeated for credit where subject matter differs.
- 5362 Decision Making Processes** 3:3:0  
A study of the bases and philosophical implications of executive decision-making. Elementary game theory, minimax and other strategies. Bayesian interference, subjective probability, teleology of measurement.  
*Prerequisite: Consent of instructor.*
- 5363 Administrative Control Systems** 3:3:0  
Problems affecting the engineer in design, analysis and control of information systems.
- 5364 Digital Hardware Design** 3:3:0  
Problem formulation, dependency notation, programmable combinational circuits, designing for maintainability, algorithmic state machines.  
*Prerequisite: Logical design, or consent of instructor.*
- 5365 Industrial Planning** 3:3:0  
Industrial planning and decisions. Plant location, design, evaluation. Symbolic logic, relative importance factors, probabilistic models, fiscal factors.
- 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  
Transition from engineering to management, decision making responsibilities — a comparison; planning, organizing and staffing in a technical environment, technical project management, team leadership, appraising engineers.
- 5370 Technical Communication** 3:3:0  
Improving the effectiveness and efficiency of technical communications; interpersonal relations and organizational structure for communications.
- 5371 Seminar in Administrative Practices** 3:3:0  
Study of the interrelationships between the fields of economics, politics, physical science and social science and the effects upon the management of engineering work. May be repeated for credit where subject matter differs.
- 5380 Structural Timber Design** 3:3:0  
Characteristics of wood as a structural material. Use of standard specifications in the design of connections, beams, and columns. May be repeated for credit when the subject matter varies.  
*Prerequisite: CE 334*
- 5381 Structural Masonry Design** 3:3:0  
The design of load-bearing masonry. Specifications for reinforced masonry construction. Building code requirements. May be repeated for credit when the subject matter varies.  
*Prerequisite: CE 334*

- 5382 Structural Dynamics** 3:3:0  
Behavior of structures subjected to dynamic loads. Design of structures to resist earthquake and wind forces. May be repeated for credit when the subject matter varies.  
*Prerequisite: CE 334.*
- 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.
- 5390 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.
- 5391 Work Systems Engineering** 3:3:0  
Study of current research in methods engineering and work measurement; work design; work systems, systems of standard data and predetermined motion time data, statistical treatment of work measurement.
- 5399 Human Factors Engineering** 3:3:0  
The specialized adaptation of engineering designs to the human operator's role in man-machine systems.
- 611 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.
- 631 Design Projects** 3:A:0  
May be repeated for credit when the subject matter varies.  
*Prerequisite: Admission to candidacy.*
- 6311 Optimal Control of Power Systems** 3:3:0  
Addresses the issue of economic operation of power systems by application of control theory and the digital computers with emphasis on computer algorithms.  
*Prerequisite: Proficiency in computer programming, undergraduate power course.*
- 6313 Digital Filters** 3:3:0  
Introduction to digital filtering. Recursive, non-recursive filters and their design. Butterworth, chebyshev filters.  
*Prerequisite: Proficiency in computer programming.*
- 632 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.*
- 633 Advanced Engineering Design** 3:3:0  
Application of various engineering concepts and principles combined with economic considerations and decision-making processes to the rigorous methods required in the design, analysis, and synthesis of complex engineering systems and their components.
- 634 Synthetic Fuel Process Analysis** 3:3:0  
Attention is devoted to engineering fundamentals required to develop sythetic fuels from alternate energy sources of coal, shale oil and tar sands. The fundamentals of thermodynamics, kinetics, mass transfer, fluid mechanics, and heat transfer will be discussed in relation to the development of alternate energy sources.
- 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.
- 6341 Absorption** 3:3:0  
The theoretical aspects of gas-phase and liquid phase diffusion systems are presented, and empirical correlations for diffusion coefficients are critically surveyed. Equipment for gas-liquid operations and the estimation of gas-liquid solubilities are discussed. The principles of gas absorption will be applied to chemical reactions occurring on the surface of solid catalysts and on liquid surfaces.

- 6342 Design Principles of Equilibrium Stages** 3:3:0  
Thermodynamics of fluid-phase equilibria is reviewed with emphasis on the prediction and calculation of fluid-phase densities, enthalpies, fugacities and activities. Rigorous multicomponent-multistage methods are developed to design problems in mass transfer operations with emphasis on absorption, extraction, and distillation. Computer aided design is emphasized.
- 6343 Reactor Design II** 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.  
*Prerequisite: Egr 5345 or equivalent.*
- 6345 Professional Practice** 3:3:0  
The development of engineering as a profession. Code of ethics and their justification, licensing requirements, engineer-client relationships and responsibilities. Credit will be given only to students who have passed the professional part of a state engineering registration examination.
- 6346 Advanced Engineering Analysis** 3:3:0  
Methods of analysis based on finite differences, finite elements, matrices and special numerical techniques applied to engineering systems. The computer is used as a tool of investigation and optimization.
- 6350 Nuclear Reactor Plant Dynamics** 3:3:0  
Operating characteristics of reactor systems; modeling of neutronic, fluid, heat transfer and fluid processes; dynamics, stability and control of reactor plant systems; engineered safeguards.  
*Prerequisite: Egr 5354 or equivalent.*
- 6351 Nuclear Reactor Kinetics** 3:3:0  
Development of kinetics equations; special topics in space-time kinetics, noise analysis, rod oscillator tests, xenon stability, special control problems.  
*Prerequisite: Egr 5354 or equivalent.*
- 6361 Solar Energy I** 3:3:0  
Origin, nature and availability. Heat transfer considerations. Plate collectors, energy storage and thermal performance are discussed. Applications and experimentation are covered.  
*Prerequisite: Egr 537 or equivalent.*
- 6362 Solar Energy II** 3:3:0  
The design of solar heating and cooling systems. Performance estimates and economic analyses are included.  
*Prerequisite: Egr 6361*
- 6364 Microcomputer Based Design** 3:3:0  
Registers and data manipulation, computer organization, memory, input-output, algorithmic processes. Design Application.  
*Prerequisite: Logical design, or consent of instructor.*
- 661 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.
- 662 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.
- 669A-669B Thesis** 6:A:0  
*Prerequisite: Approval of graduate advisor.*

Below is the approved list of 400G level courses which may be taken with augmented requirements for graduate credit, subject to approval by the graduate advisor. Course descriptions may be found in the Bulletin of Lamar University.

ChE 435G Advanced Analysis  
ChE 437G Computer Applications  
ChE 4111G Seminar  
ChE 4316G Stagewise Processes  
ChE 4318G Advanced Distillation  
ChE 4321G Process Economics

ChE 4322G Unit Operations  
ChE 4323G Engineering Materials  
ChE 4325G Introduction to Nuclear Engineering  
CE 4212G Civil Engineering Systems Design Project  
CE 4290G Civil Engineering Systems II  
CE 420G Photogrammetry  
CE 430G Indeterminate Structures  
CE 431G Hydraulics II  
CE 432G Planning, Scheduling and Estimating  
CE 433G Environmental Health Engineering  
CE 434G Soil Engineering  
CE 435G Water and Waste Water Treatment  
CE 437G Transportation  
CE 438G Reinforced Concrete Design  
CE 439G Structural Steel Design  
CE 4310G Soil-Structure Interaction  
CE 4312G Advanced Structural Design  
CS 439G Scientific Computer Application  
CS 4101G Special Topics  
CS 4201G Special Topics  
CS 4301G Special Topics  
CS 4302G System Analysis and Design  
CS 4305G Introduction to Information Structure  
CS 4306G Techniques of Information Processing and Retrieval  
CS 4307G Survey of Programming Languages  
CS 4308G Introduction to Compiler Theory  
CS 4309G Introduction to Simulation Techniques  
CS 4310G Computer Architecture  
CS 4321G Computer Uses in Education  
CS 4401G Special Topics  
EE 432G Electronics III  
EE 436G Control Engineering  
EE 4302G Communication Theory  
EE 4304G Advanced Topics  
EE 4306G Minicomputers  
EE 4307G Microcomputers  
EE 4308G Automata Theory  
EE 4310G Computer Architecture  
EGR 438G Introductory Petroleum Engineering  
IE 430G Quality Assurance and Control  
IE 432G Statistical Decision Making for Engineers  
IE 434G Materials Science and Manufacturing  
IE 435G Production and Inventory Control  
IE 437G Operations Research  
IE 4313G Human Engineering  
IE 4315G Organization and Management  
MTH 4301G Differential Equations and Linear Algebra  
MTH 4302G Partial Differential Equations  
MTH 431G Complex Variables  
MTH 4315G Numerical Analysis  
MTH 4316G Mathematical Programming  
MTH 4317G Modern Developments in Statistical Methodology  
MTH 4321G Least Squares and Regression Analysis  
MTH 4322G Analysis of Variance  
MTH 433G Linear Algebra  
MTH 437G Probability and Statistics

MTH 4386 Theory of Statistics  
 ME 432G Mechanical Vibrations  
 ME 434G Internal Combustion Engines  
 ME 435G Turbomachinery  
 ME 438G Environmental Systems Engineering  
 ME 439G Advanced Strength of Materials  
 ME 4311G Controls Engineering  
 ME 4312G Gas Dynamics  
 ME 4313G Transport Theory II  
 ME 4315G Thermodynamics III  
 ME 4316G Engineering Project  
 ME 4317G Engineering Analysis II

## 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.

### Admission

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. Satisfy the depth and breadth requirements of knowledge in Computer Science as defined by the Graduate Faculty of the Department of Computer Science. This may be done with a combination of academic achievement, professional experience and individual examination by the Department's Graduate Faculty.
3. 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.

### Degree Requirements

#### A. Core Courses

Students in the masters program in Computer Science are required to establish competence in several areas considered basic to the field of Computer Science. The Core Requirement consists of the indicated number of courses in each field listed below.

Number	Area	Courses
2	Programming Languages	CS 5315, CS 5319, CS 5320
2	Operating Systems and Computer Architecture	CS 5310, CS 5322, CS 5324, CS 5328
1	Theoretical Computer Science	CS 5313, CS 5330, CS 5329
1	Data and File Structures or Other Topics	CS 5311, CS 5312, CS 5314, CS 5331, CS 5332, CS 5333, CS 5334, CS 5335, CS 5336, CS 5340, CS 5339

6 Courses (18 semester hours)

#### B. Option I (Thesis)

1. Satisfactory completion of the depth and breadth requirements.

2. Completion of the core requirements listed above with at least a "B" (3.0) average. One "C" is permitted in this area if it is balanced by an "A" in one other course.
  3. Completion of nine additional hours in graduate level courses\* **OR** completion of an approved minor of nine hours with at least a "B" (3.0) average. One "C" is permitted in this area if it is balanced by an "A" in one other graduate level course.\*
  4. Completion of CS 669A and 669B and submission of an acceptable thesis.
  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. Satisfactory completion of the depth and breadth requirements.
  2. Completion of the core requirements listed above with at least a "B" (3.0) average. One "C" is permitted in this area if it is balanced by an "A" in one other graduate level course.\*
  3. All non-thesis students must take and satisfactorily complete CS 5340. This course consists primarily of a significant research project and the submission of a written professional report.
  4. Completion of an additional 15 hours in graduate level Computer Science courses **OR** the completion of an approved minor of nine hours, with six additional hours of graduate level courses\* in Computer Science. One "C" is permitted in this area if it is balanced by an "A" in one other graduate level course.\*
  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 Graduate Faculty. Failure to pass this examination in two attempts will result in the student being dropped from the degree program in Computer Science.

\*NOTE: All courses for the Master of Science in Computer Science must be 500 level or above; 400 and 400G courses may not be applied toward degree requirements.

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.

## Computer Science Courses

- |             |   |              |
|-------------|---|--------------|
| <b>5301</b> | <b>Computer Systems for Educational Application</b><br>Functional units of computers including both hardware and firmware; software analysis, design and evaluation of computing configurations for educational applications; cost estimation techniques for both academic and administrative applications. (Not for Computer Science majors)<br><i>Prerequisite: Consent of department head.</i>                           | <b>3:3:0</b> |
| <b>5310</b> | <b>Operating Systems and Computer Architecture II</b><br>Study of concurrent processes, support structures for modular programming, resource allocation and protection, pipelining and parallelism, telecommunications, networks and distributed processing.<br><i>Prerequisite: CS 4302 or its equivalent.</i>   | <b>3:3:0</b> |
| <b>5311</b> | <b>Database Management Systems Design</b><br>Advanced file structures; database concepts including relational, hierarchial and network logical models; data description and manipulation languages.<br><i>Prerequisite: Consent of department head.</i>   | <b>3:3:0</b> |
| <b>5312</b> | <b>Artificial Intelligence</b><br>Introduction to basic concepts and techniques of artificial intelligence and to insights into active research and application areas. Emphasis is placed on representation methods and strategies in both heuristic and algorithmic approaches. Students are expected to implement a small intelligent system of their design in LISP.<br><i>Prerequisite: Consent of department head.</i> | <b>3:3:0</b> |

- 5313 Algorithms** 3:3:0  
Topics on what can and cannot be proven about computational complexity including Algorithm design methodologies.  
*Prerequisite: Consent of department head.*
- 5314 Software Design and Development** 3:3:0  
Program development techniques with structured methodology, structured design, the Jackson method, top-down development, structured programming, programming style, program testing and debugging, and other current techniques.  
*Prerequisite: Consent of department head.*
- 5315 Theory of Programming Languages** 3:3:0  
Theoretical aspects of parsing context free languages, translation specifications, and machine-independent code, finite state grammars, and recognizers, lexical scanners, push-down automata, recursive descent.  
*Prerequisite: CS 4307 or its equivalent.*
- 5319 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: CS 4307 or its 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: Consent of department head.*
- 5322 Performance Evaluation** 3:3:0  
A survey of techniques of modeling concurrent processes and the resources they share. Includes levels and types of system simulation, performance prediction, bench-marking and synthetic loading, hardware and software monitors.  
*Prerequisite: Consent of department head.*
- 5324 Computer Communication Networks and Distribute Processing** 3:3:0  
A study of networks of interacting computers. The problems, rationales, and possible solutions for both distributed databases will be examined. Major national and international protocols including SNA, X.21, and X.25 will be presented.  
*Prerequisite: Consent of department head.*
- 5328 Microcomputer Systems and Local Networks** 3:3:0  
A consideration of the uses and organization of microcomputers. Typical eight or 16 bit microprocessors will be described. Microcomputer software will be discussed and contrasted with that available for larger computers. Each student will gain hands-on experience with a microcomputer.  
*Prerequisite: Consent of department head.*
- 5329 Applied Combinatorics and Graph Theory** 3:3:0  
A study of combinatorial and graphical techniques for complexity analysis including generating functions, recurrence relations, Polya's theory of counting, planar directed and undirected graphs, and NP complete problems. Applications of the techniques to analysis of algorithms in graph theory and sorting and searching.  
*Prerequisite: Consent of department head.*
- 5330 Theory of Computation** 3:3:0  
A survey of formal models for computation. Includes Turing Machines, partial recursive functions, recursive and recursively enumerable sets, the recursive theorem, abstract complexity theory, program schemes, and concrete complexity.  
*Prerequisite: Consent of department head.*
- 5331 Information System Design** 3:3:0  
A practical guide to Information System Programming and Design, Theories relating to module design, module coupling, and module strength are discussed. Techniques for reducing a system's complexity are emphasized. The topics are oriented toward the experienced programmer or systems analyst.  
*Prerequisite: Consent of department head.*
- 5332 Information Storage and Access** 3:3:0  
Advanced data structures, file structures, databases, and processing systems for access and maintenance. For explicitly structured data, interactions among these structures accessing patterns, and design of processing/access systems. Data Administration, processing system life cycle, system security.  
*Prerequisites: CS 4305 and CS 4306 or their equivalents.*



- 5333 Distribution System Analysis** 3:3:0  
A consideration of the problems and opportunities inherent in distributed databases on a network computer system. Includes file allocation, directory systems, deadlock detection and prevention, synchronization, query optimization, and fault tolerance.  
*Prerequisite: Consent of department head.*
- 5334 Pattern Recognition** 3:3:0  
An introduction to the problems, potential, and methods of pattern recognition through a comparative presentation of different methodologies and practical examples. Covers feature extraction methods, similarity measures, statistical classification, minimax procedures, maximum likelihood decisions, and the structure of data to ease recognition. Applications are presented in image and character recognition, chemical analysis, speech recognition, and automated medical diagnosis.  
*Prerequisite: Consent of department head.*
- 5335 Computer Graphics** 3:3:0  
An overview of the hardware, software, and techniques used in computer graphics. The three types of graphics hardware: refresh, storage, and raster scan are covered as well as two-dimensional transformations, clipping, windowing, display files, and input devices. If a raster scan device is available, solid area display, painting and shading will be covered. If time allows, three-dimensional graphics may be included.  
*Prerequisite: Consent of department head.*
- 5336 Modeling and Simulations** 3:3:0  
A study of the construction of models which simulate real systems. The methodology of solution should include probability and distribution theory, statistical estimation and inference, the use of random variates, and validation procedures. A simulation language should be used for the solution of typical problems.  
*Prerequisite: Consent of department head.*
- 5339 Information System Analysis** 3:3:0  
Methods and considerations for planning, organizing, implementing, and evaluating information systems; current systems analysis tools and techniques are presented.  
*Prerequisite: Consent of department head.*
- 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 head.*
- 5402 Microcomputers I** 4:3:3  
Architecture, hardware components, languages, operating systems, software systems and utilization of microcomputers.  
*Prerequisite: Consent of department head.*
- 5403 Microcomputers II** 4:3:3  
Continuation of CS 5402.  
*Prerequisite: Consent of department head.*
- 669A-669B Thesis** 3:3:0  
Thesis.  
*Prerequisite: Consent of Department Head.*

## 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 pure and 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. Score 1100 or higher on the Graduate Record Examination.
2. Successfully complete 12 semester hours of approved graduate work in mathematics.
3. Remove any deficiencies in mathematics designated by the Graduate Advisor and the Department Head.
4. 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 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 a committee designated by the Graduate Faculty.
3. Include at least three course from among the following five possibilities:
  - Math 531 Theory of Functions of a Real Variable
  - Math 532 Modern Algebra
  - Math 534 Topology
  - Math 5310 Numerical Analysis or Math 4315E Numerical Analysis
  - Math 5311 Complex Variables or
  - Math 431G Complex Variables
4. Satisfy the general degree requirements as set forth in this catalog.

### Graduate Faculty

Associate Professor Joseph A. Baj, II  
Topology, analysis  
Assistant Professor B. Joanne Baker  
Topology, analysis  
Professor George Berzsenyi  
Analysis, problem solving  
Professor Sterling C. Crim  
Applied mathematics

Associate Professor Michael A. Laidacker  
Topology, applied mathematics  
Assistant Professor Alec Matheson  
Functional and numerical analysis  
Professor Jeremiah M. Stark  
Analysis, applied mathematics  
Associate Professor Sam M. Wood, Jr.  
Analysis, abstract algebra

## Mathematics Courses

- 531 Theory of Functions of Real Variable** 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 338.*
- 532 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 335 or its equivalent.*
- 534 Topology** 3:3:0  
Topological spaces, metric spaces, compact spaces, embedding, Urysohn's lemma and homotopy.  
*Prerequisite: Graduate standing and Mathematics 338*
- 535 Introduction to Advanced Analysis** 3:3:0  
The Riemann mapping theorem, prime number theorem, functions of finite order, Turan's proof of Fabry gap theorem, other topics as time permits.  
*Prerequisite: Graduate standing and Mathematics 431.*
- 537 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 431.*
- 538 Fourier Series** 3:3:0  
Expansion of functions in Fourier series, orthogonal sets of functions, orthonormality. Fourier integrals. Applications.  
*Prerequisite: Graduate standing and Mathematics 331 or 3301.*
- 5301 Operational Mathematics** 3:3:0  
Ordinary differential equations, the Laplace Transform, elementary properties; Inverse Transforms, applications of the Laplace Transform to ordinary differential equations.  
*Prerequisite: Graduate standing and Mathematics 331 or 3301.*
- 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 331 or 3301.*
- 5304 Functional Analysis** 3:3:0  
Study of linear topological spaces, convexity, Hilbert spaces, Banach spaces, applications.  
*Prerequisite: Graduate standing and Mathematics 338.*
- 5310 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.*
- 5311 Complex Variables** 3:3:0  
Conformal mapping and analytic continuation, calculus of residues, and applications.  
*Prerequisite: Graduate standing and Mathematics 431 or its equivalent.*
- 5315 Finite Element Analysis** 3:3:0  
Application of the finite element method to steady-state and time-dependent problems and to the theory of elasticity. Radial and axisymmetric field problems. Higher-order elements.  
*Prerequisite: Graduate standing, Mathematics 331 or 3301, and some knowledge of computer programming.*
- 5325 Numerical Linear Algebra** 3:3:0  
Numerical Solution of linear systems; direct and interactive techniques including LU and Cholesky decompositions. Algebraic eigenvalue problems, Householders reflectors, Givens rotations and the QR method.  
*Prerequisite: Mathematics 233, Programming language.*
- 5326 Topics in Probability and Statistics** 3:3:0  
Topics include Markov Chains, Stochastic processes, Stochastic Differential Equations, Sampling Theory.  
*Prerequisite: Graduate standing and consent of instructor.*
- 5327 Data Processing** 3:3:0  
Includes a history of computers, an overview of computer and data organization, computer languages, program design, and applications to computational mathematics.  
*Prerequisite: Graduate standing and consent of instructor.*

- 5328 History of Mathematics** 3:3:0  
 Historical origin and development of mathematical concepts. The lives and achievements of great mathematicians.  
*Prerequisite: Graduate standing and Mathematics 335 or 338.*
- 5330 Enrichment Topics in Mathematics** 3:3:0  
 A potpourri of important mathematical ideas not normally covered in other courses.  
*Prerequisite: Graduate standing and Mathematics 335 or 338.*
- 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.*
- 5332 Topics in Geometry** 3:3:0  
 Topics include Differential Geometry, Algebraic Topology, Homotopy Theory, Non-Euclidean Geometry and Advanced Euclidean Geometry.  
*Prerequisite: Graduate standing and consent of instructor.*
- 5333 Topics in Number Theory** 3:3:0  
 Topics include Prime Number Theory, Irrational Number Theory, Analytic Number Theory, Diophantine Equations and Algebraic Number Theory.  
*Prerequisites: Graduate standing and consent of instructor.*
- 5334 Seminar in Problem Solving** 3:3:0  
 Methodology of problem solving, extreme cases, similarity, continuity, generalizations and transformations.  
*Prerequisite: Graduate standing and Mathematics 335 or 338.*
- 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.*
- 669A-669B Thesis** 6:A:0  
*Prerequisite: Approval of graduate advisor.*

The following list of 400G level courses and graduate engineering courses may be taken for graduate credit, with augmented requirements for graduate credit, subject to approval by the graduate advisor. Course descriptions may be found in the Bulletin of Lamar University, or in this Bulletin.

- Mth 4202G Partial Differential Equations
- Mth 4203G Vector Analysis
- Mth 4315G Numerical Analysis
- Mth 4316G Mathematical Programming
- Mth 4321G Least Squares and Regression Analysis
- Mth 4322G Analysis of Variance
- Mth 433G Linear Algebra II
- Mth 435G Introductory Topology
- Mth 4351G Cultural Approach to Mathematics
- Mth 437G Mathematical Theory of Probability
- Mth 438G Statistical Methods
- Egr 5303 Regression Analysis
- Egr 5304 Nonlinear Programming
- Egr 5305 Reliability
- Egr 5316 Operations Research
- Egr 5319 Design of Experiments



A tiny client of the Lamar Speech and Hearing Center receives the attention of a graduate audiology student during a test of middle-ear function.

# College of Fine Arts and Communication

The College of Fine Arts and Communication offers graduate programs of study leading to the Master of Science degree in Speech with majors in public address, speech pathology and audiology; a Master of Science degree in Deaf Education and the Master of Music and Master of Music Education degrees. The College also supports some Master of Education degrees with courses from the Department of Art. 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. 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 field of study.

## Department of Art

The Department of Art offers the following graduate courses in support of the Master of Education degree programs in Elementary Education and in Supervision.

### Graduate Faculty

Professor Jerry A. Newman  
Studio art

### Art Courses

- |             |   |              |
|-------------|---|--------------|
| <b>5338</b> | <b>Research in Art History</b><br>An examination of a selected topic in art history including production of a research paper. May be repeated for credit when the subject varies. | <b>3:0:3</b> |
| <b>5395</b> | <b>Graduate Studio Art</b><br>Individual study at the graduate level of a specific area within the visual arts field. May be repeated for credit when the subject varies.         | <b>0:6:3</b> |

## Department of Communication

The Department of Communication offers Master of Science degrees in Speech and in Deaf Education. The Master of Science degree in Speech encompasses the major fields of public address, audiology and speech pathology. Students seeking admission to the public address program must meet the general requirements for admission outlined in this bulletin and, in addition, meet the departmental requirement of a composite GRE score of 1200. If a student desires entrance to graduate study in audiology, deaf education or speech pathology they must obtain a GRE verbal/quantitative minimum score total of 900 with a minimum score of 400 in each area. These requirements shall change as of August 1, 1988 and entrance to these latter areas shall thereafter require a GRE verbal/quantitative minimum score total of 950 with neither verbal nor quantitative scores being less than 425. An exception to the existing GRE requirements as outlined in this bulletin is available for congenitally or prelingually deaf individuals who wish to major in Deaf Education if they have at least a severe hearing loss across the speech frequencies for their better ear and if they must rely primarily upon a visual-verbal system of communication. An undergraduate cumulative grade point average of 2.5 on a four-point scale and an IQ equivalent score of 120 on the Raven Progressive Matrices Test may be accepted in lieu of the GRE requirement for those individuals.

### Specializations in Speech Pathology/Audiology/Deaf Education

The graduate program in Deaf Education is accredited by the Council on Education of the Deaf and the Speech Pathology program is accredited by the American Speech, Language and Hearing Association. Accreditation of the Audiology program by the American Speech, Language and Hearing Association is pending. These programs and Lamar's Speech and Hearing Center have been designated as comprising one of several strategic areas in the University designed to become centers of national prominence.

The candidate for the Master of Science degree in any one of the above areas of specialization must meet all of the College of Graduate Studies general degree requirements as listed in this catalog. The candidate must complete a minimum of 36 semester hours, which may include six semester hours of electives, and obtain a minimum of 150 supervised clock hours of clinical experience. A thesis program is available with approval of the Communication Disorders faculty which may be substituted for the six hours of electives.

Students who have completed their Bachelor's degree at Lamar in one of the above areas will have completed the undergraduate core curriculum and are prepared to initiate the graduate program if they meet the minimum entrance requirements of the Department and College of Graduate Studies. Other student's undergraduate preparation will be reviewed by a committee of the graduate faculty of the Communication Disorders Program. Students admitted to the graduate program with specific curricular deficiencies will be expected to remove the deficiencies before being admitted to candidacy. The criteria for student/faculty ratios as established by the American Speech, Language and Hearing Association limit the graduate admissions available but individual decisions for admission will be made based on: (1) student appointments available; (2) the student's undergraduate GPA; (3) the student's GRE scores; (4) the student's undergraduate curricular preparation; and (5) the student's letters of recommendation.

Students completing the graduate programs in Speech Pathology and Audiology will be eligible for membership in the American Speech, Language and Hearing Association and will have completed the academic and supervised clinical practicum requirements for the Certificate of Clinical Competence (CCC). These students also will have completed the academic and clinical requirements for licensure in Audiology or Speech Pathology in Texas and for other states requiring licensure. A student wishing to practice Audiology or Speech Pathology in the public schools does not have to complete additional requirements as the Texas Education Agency in 1984 determined professional licensure to be the credential of choice.

Students completing the Deaf Education graduate program will be eligible for national certification in Deaf Education (CED) but certification by the Texas Education Agency to teach as a deaf educator in the public schools may require additional curricular preparation. Student teaching (a requirement for teacher certification in Texas) may be completed during the period of study but may not be taken for graduate credit or counted as part of the master's degree curriculum.

Students who wish to pursue professional credentials in two of the three professional areas to develop dual-certification credentials may do so with the approval of the Head of the Communications Department and the Director of Communication Disorders. This combined program of study will lead either to dual ASHA CCC credentials and state licensure in Speech Pathology and Audiology or will lead to ASHA certification and state licensure in either speech pathology or audiology *and* CED certification and Texas Education Agency certification in Deaf Education. Completion of these programs requires an extended amount of graduate study in order to meet both the academic and clinical training requirements. Students frequently complete two Master's degrees as they pursue dual certification.

Students interested in obtaining information about the Communication Disorders programs should contact: Dr. Olen T. Pederson, Box 10076 Lamar Station, Beaumont, Texas 77710, (409/880-8170).

### **Professional Certification Requirements of the American Speech, Language and Hearing Association (including Undergraduate Work)**

The Certificate of Clinical Competence in Speech Pathology or Audiology requires the completion of 60 semester hours of academics including 18 hours in professional basics and 42 hours in the management of disorders of communication. Of these 42 hours, 24 hours must be in courses in either Speech Pathology or Audiology and six hours must be in courses acceptable toward a graduate degree and thesis hours may not be included. Certification also requires 300 hours of clinical practicum verified by a CCC supervisor.

## Graduate Faculty

<p>Professor Robert F. Achilles Communication disorders</p> <p>Associate Professor May Alice Baker Speech communication</p> <p>Assistant Professor James A. Bethel Speech communication</p> <p>Instructor Roger F. Clem Communication disorders</p> <p>Assistant Professor Adele D. Gunnarson Communication disorders</p> <p>Associate Professor W. Patrick Harrigan, III Speech communication</p>	<p>Professor DeWitte T. Holland Speech communication</p> <p>Professor S. Walker James Speech communication</p> <p>Associate Professor Jess Freeman King Communication disorders</p> <p>Associate Professor Lane Roth Communication</p> <p>Professor Robert Moulton Communication disorders</p> <p>Professor Olen Pederson Communication disorders</p>
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## Speech Courses

530	<b>Neurology</b> Anatomy, physiology and neurobiology of the human nervous system.	3:3:0
5301	<b>Aphasia and Neurogenic Disorders</b> Theory and treatment for organic speech disorders of neurologic origin.	3:3:0
5302	<b>Stuttering</b> Nature, evaluation and treatment of fluency disorders.	3:3:0
5303	<b>Voice Disorders</b> Functional and organic voice disorders, diagnosis and treatment.	3:3:0
5304	<b>Communication Disorders of the Severely Handicapped</b> Nature, evaluation and treatment of speech and language disorders of the severely impaired.	3:3:0
5305	<b>Diagnostics and Counseling</b> Evaluation and counseling procedures in communication disorders.	3:3:0
5306	<b>Children's Language Disorders</b> Assessment and intervention procedures for preschool and school age children with language disorders.	3:3:0
5307	<b>Articulation Disorders</b> Nature, evaluation and treatment of articulation disorders.	3:3:0
5308	<b>Communication Disorders and the Aging Process</b> The normal process of aging and the associated problems including speech, hearing and language disorders.	3:3:0
5309	<b>Advanced Clinical Practice</b> Advanced diagnostics and therapy. May be repeated for credit, and must be taken each semester.	3:0:10
531	<b>Advanced Public Relations</b> Theory, research and contemporary problems in corporate or institutional communication relations.	3:3:0
5311	<b>Instructional Methods in Education of Deaf Children</b> Methods, curriculum and classroom procedures for the teacher of the deaf.	3:3:0
5312	<b>Advanced Manual Communication</b> Advanced sign language including American Sign Language (ASL) and interpreting.	3:3:0
5313	<b>Speech Development in the Hearing Impaired</b> Speech for the young hearing handicapped, home training and therapy plans.	3:3:0
5314	<b>Advanced Speech for the Deaf</b> Curricular and methodological considerations for improving the speech of the deaf.	3:3:0
5316	<b>Language for the Deaf</b> Language development theory applied to the hearing impaired.	3:3:0
5317	<b>Advanced Language for the Deaf</b> Language development and correction in the older deaf child and adult.	3:3:0
5318	<b>Special Audiometric Tests</b> Test batteries for peripheral vs. central site of lesion, non-organicity, electrophysiological assessment.	3:3:0
5319	<b>Bone Conduction and Masking</b> Test procedures for determining individual ear status, includes impedance audiometry.	3:3:0
5320	<b>Pediatric Audiology</b> Hearing evaluation in the young patient, method and theory.	3:3:0



532	<b>Small Group Processes</b>	3:3:0
	Theory, research, and analysis of contemporary problems in group relations, structure, and communication.	
5322	<b>Medical Audiology</b>	3:3:0
	Study of otologic pathology and influence upon auditory/vestibular systems.	
5323	<b>Electrophysical Assessment of Hearing</b>	3:3:0
	Current Electrophysiological auditory assessment; includes ENG, BSER, and Impedance.	
5324	<b>Advanced Hearing Aids</b>	3:3:0
	Pros and cons of amplification theory and practicum.	
5325	<b>Advanced Directing</b>	3:2:3
	Theory and problems in directing plays of different periods and styles including musical comedy. <i>Prerequisite: The 335 or equivalent.</i>	
5326	<b>Psychology of Deafness</b>	3:3:0
	Psychological, personal and social impact of deafness.	
5327	<b>Advanced Auditory Rehabilitation</b>	3:3:0
	Speech reading, auditory training, amplification and counseling for the aurally impaired.	
533	<b>Organizational Communication</b>	3:3:0
	Theory, research, and problems in the application of communication processes and systems in organizations.	
5331	<b>Organizational Communication</b>	3:3:0
	Application of theory through field analyses of communication processes and systems.	
5340	<b>Studies in Modern Theater</b>	3:3:0
	Trends in theater production, theory, practice and techniques from Adolph Appia to the present. <i>Prerequisite: the 233 or equivalent.</i>	
534	<b>Message Analysis</b>	3:3:0
	Analysis, interpretation, and design of individual and group messages particularly in business settings.	
5341	<b>Seminar in Oral Interpretation</b>	3:3:0
	History and contributions of oral interpretation to the field of communication, literary analysis, rhetorical principles and performance skills.	
5346	<b>Dramatic Criticism</b>	3:3:0
	Theories and criteria of dramatics from Classical Greek period to the present.	
535	<b>Individual Study</b>	3:A:0
	Independent study of special problems in disorders of communication. May be repeated once for credit.	
536	<b>Communication Theory</b>	3:3:0
	Study of human communication processes to include psychological, sociological, linguistic and speech communication models and theories.	
5350	<b>Individual Study</b>	3:A:0
	Independent study of special problems in speech under faculty guidance.	
5350	<b>Theater Individual Study</b>	3:A:0
	Independent study of special problems in theater under faculty guidance.	
669A-669B	<b>Thesis</b>	6:A:0
	<i>Prerequisite: Approval of graduate advisor.</i>	

Below is the approved list of 400G level courses which may be taken with augmented requirements for graduate credit, subject to approval by the graduate advisor. Course descriptions may be found in the Bulletin of Lamar University.

430G Creative Communication  
430G Problems and Projects in Speech  
4301G Advanced Speech Pathology  
4302G Advanced Audiology  
431G Problems and Projects in Theater  
431G Laws and Ethics of Mass Media  
432G History and Principles of American Journalism  
4324G Nonverbal Communication  
434G Advanced Stagecraft  
434G Persuasion  
4341G Advanced Interviewing

- 436G History of Theater
- 437G Directing Secondary School Theater and Speech Activities
- 438G Broadcast News
- 439G Seminar in Fine Arts, Rhetoric and Public Address
- 4311G Theory and Practice of Scenery and Lighting Design
- 4312G Costume Design and Construction
- 4371G Advanced Oral Interpretation
- 4381G Rhetoric of Social Movements
- 4383G Print Advertising
- 4391G Advanced Television Production

## **Department of Music**

The Department of Music offers the following graduate degrees: the Master of Music in Performance and the Master of Music Education. These 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 bachelors 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.

### **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 MED 532 (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.

### **Graduate Faculty**

Professor Joseph B. Carlucci  
Woodwinds, Departmental Director of  
Graduate Studies  
Associate Professor J. N. Collier  
Musicology  
Assistant Professor Barry W. Johnson  
Brass, music education

Professor John R. LeBlanc  
Voice, choral  
Assistant Professor Raul S. Ornelas  
Brass, music education  
Associate Professor James M. Simmons  
Woodwinds, music education,  
Department Head  
Professor Joseph Truncale  
Voice, opera

### **Applied Music (AM)**

521, 522, 523, 524, 525 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.

- 541, 542, 543, 544, 545 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 (MEd)

- 521 Seminar in Music Education 2:15:20**  
 Research dealing with special problems related to field work for professional music teachers. Course may be repeated for credit. Class: 15 clock hours. Laboratory: 20 clock hours.
- 530 Advanced Instrumental Organization and Administration 3:3:0**  
 Organization and administration of public school bands and orchestras, with emphasis on rehearsal methods and techniques, library systems, program building, publicity procedures, contest preparation, techniques of class instruction and budget.
- 531 Advanced Choral Organization and Administration 3:3:0**  
 Philosophy, organization and administration of vocal music programs at the public school level; emphasis similar to MEd 530.
- 532 Seminar in Special Problems 3:3:0**  
 Research problems of special interest to students whose major emphasis is in the graduate field of music. Research paper required.
- 533 Basic Concepts in Music Education 3:3:0**  
 The historical, philosophical and psychological bases of music education.
- 534 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.
- 535 Advanced Materials and Methods in Elementary Music 3:3:0**  
 Study of current trends, methods and materials in teaching elementary school music, with emphasis on individual study and presentations.
- 536 Advanced Choral Conducting 3:3:0**  
 Development of technical facility in conducting choral music, with emphasis on complex interpretive elements and problems of the choral conductor.
- 537 Advanced Instrumental Conducting 3:3:0**  
 Advanced interpretive problems and rehearsal techniques related to the conducting of various types of band and orchestral music.
- 538 Advanced Instrumental Methods 3:3:0**  
 The principles and techniques of teaching instrumental music.
- 539 Advanced Vocal Methods 3:3:0**  
 The principles and techniques of teaching vocal music.
- 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.

## Music Literature (MLt)

- 531 Instrumental Literature 3:3:0**  
 Survey of music for large instrumental ensembles, chamber music and music for solo instruments. Emphasis on the concerto and symphony, the string quartet and sonata literature, with special attention to the needs and interests of students enrolled.
- 532 Keyboard Literature 3:3:0**  
 Survey of keyboard literature from the pre-piano period to the present, including study of the piano sonata and other characteristic forms. Emphasis on performing, listening and analysis.
- 533 Choral Literature 3:3:0**  
 The literature, performance practices and history of choral music, including a study of representative works from various countries.
- 534 Survey of Medieval Music 3:3:0**  
 Comprehensive study of the period, from the early Christian Church to c. 1450.
- 535 Survey of Renaissance Music 3:3:0**  
 Comprehensive study of the period, from c. 1430 to c. 1600. Emphasis on advances in musical form, stylistic developments and performance practices.

- 536 **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.
- 537 **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.
- 538 **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.
- 539 **Twentieth Century Music** 3:3:0  
A survey of major composers and schools of composition from Debussy to the present.

## Music Theory (MTy)

- 532 **Advanced Band Arranging** 3:3:0  
Advanced techniques in arranging music for various types of bands, and study of models by masters of band arranging.
- 533 **Advanced Counterpoint** 3:3:0  
Application, through analysis and creative writing, of contrapuntal techniques in larger forms such as canon and fugue.
- 534 **Advanced Orchestration** 3:3:0  
Techniques of scoring for various types of orchestras, and study of models by masters of orchestration.
- 535 **Twentieth Century Harmony** 3:3:0  
The analysis and writing of music based on twentieth century harmonic techniques and devices.
- 536 **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.
- 537 **Analytical Techniques** 3:3:0  
Traditional and contemporary approaches to the visual and aural analyses of music from all periods.

## Music (Mus)

- 530 **Special Projects in Music** 3:A:0  
Individual projects for students with specialized needs.  
*Prerequisite: Approval of graduate advisor.*
- 669A-669B **Thesis**  
*Prerequisite: Approval of graduate advisor.*



With a little help from a friend, a Lamar psychology student studies animal behavior and records his observations during a laboratory session.

# College of Health and Behavioral Sciences

## 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 bachelors degree in psychology (24 semester hours) including courses in statistics and experimental psychology. 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 GRE verbal score of 400.

### Degree Requirements

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

1. Forty-two semester hours of course work in psychology which must include 12 semester hours in Psychology 530, 531, 532, and 5323. For the Community Psychology Program, an additional 12 semester hours in Psychology 5310, 5311, 5312 and 5313 is required. In the Industrial Psychology Program, an additional 11 semester hours is required, including Psychology 5320, 5321, 5322 and two semester hours in Psychology 512.
2. Candidacy examinations as devised by the Psychology Department Graduate Faculty. A student may petition to be administered the candidacy (qualifying) examination during the semester in which the course work listed in #1 above is to be completed provided the student is in good academic standing. Dates to sit for the examination will be announced each semester. A student must have satisfactorily passed candidacy examinations prior to enrolling in Psychology 5330 or 669A.
3. Six-to-seven additional semester hours of 400G and/or 500 level courses in an approved field of study.
4. Six semester hours in Psychology 5330 and 5331.
5. Thesis: Submission of an acceptable thesis and satisfactory performance on a final written comprehensive and/or oral examination with a minimum of six semester hours in Psychology 669.

### 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 an exempt agency as defined by the *Psychologists' Certification and Licensing Act*. Students in training are expected to be aware of and abide by the *Psychologists' Certification and 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 head 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

Associate Professor Ann M. Die  
Individual and group psychotherapy,  
intellectual/personality assessment  
Professor James K. Esser  
Social, industrial-organizational  
psychology  
Assistant Professor Joanne S. Lindoerfer  
Clinical Psychology, community  
psychology

Associate Professor Richard G. Marriott  
Physiological psychology, learning,  
psychopharmacology  
Assistant Professor Joyce E. Shaheen  
Developmental and cognitive  
psychology  
Professor James L. Walker, Jr.  
Psychological measurement, statistics,  
instrumentation and methodology

## Psychology Courses

- |     |   |       |
|-----|---|-------|
| 510 | <b>Clinic Practice</b><br>Prepracticum experience.<br><i>Prerequisite: Regular admission to the program and consent of the instructor.</i>  | 1:A:0 |
| 512 | <b>Research Practicum: Industrial-Organizational Psychology</b><br>Individualized laboratory or field research activities in industrial-organizational psychology. Assignments are designed to supplement the more formal course work by a variety of pre-professional activities such as assisting in research, teaching and working on field projects under staff supervision. Required of all industrial-organizational graduate students prior to eligibility for Psy 5330 with a maximum credit of three semester hours allowed. | 1:A:0 |
| 530 | <b>Advanced General Psychology I</b><br>A comprehensive overview of the history of psychology, systems of psychological thought, and the areas of physiological psychology, sensation and perception, learning, motivation, and cognition. Emphasis will be placed on both background material and current research. May be taken out of sequence.<br><i>Prerequisite: Consent of instructor.</i>   | 3:3:0 |
| 531 | <b>Advanced General Psychology II</b><br>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. May be taken out of sequence.<br><i>Prerequisite: Consent of instructor.</i>   | 3:3:0 |
| 532 | <b>Experimental Design</b><br>A study of the research procedures and techniques commonly used by the applied and theoretical psychologist in the design, execution, control and evaluation of experiments.<br><i>Prerequisite: Consent of instructor.</i>   | 3:3:0 |
| 533 | <b>Individual Study</b><br>Independent study of special topics or problems in industrial/organizational or community psychology. May be repeated for credit.<br><i>Prerequisite: Consent of instructor.</i>   | 3:A:0 |
| 534 | <b>Special Topics in Psychology</b><br>Topics in developmental, physiological, social, differential, experimental, quantitative, cognitive or clinical psychology. Includes coursework, library and/or laboratory work and conferences with a staff 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.<br><i>Prerequisite: Consent of instructor.</i>   | 3:A:0 |

- 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: Acceptance to psychology graduate program and consent of the instructor.*
- 5311 Community Psychology: Introduction to Psychotherapy** 3:3:0  
Psychotherapy skills are introduced using didactic techniques. Emphasis is placed upon each student developing awareness of psychopathology while being exposed to psychotherapeutic techniques by the instructor.  
*Prerequisite: Consent of instructor.*
- 5312 Advanced Psychological Assessment** 3:3:0  
An introduction to the broad area of personality assessment including DSM III diagnostic classifications. Practicum in administration, scoring, interpretation, and formal psychological report writing with the MMPI, Rorschach, TAT, and other objective and projective assessment devices.  
*Prerequisite: Psy 5310.*
- 5313 Community Psychology: Advanced Psychotherapy** 3:3:0  
An in-depth study of psychotherapeutic theories and intervention strategies.  
*Prerequisite: Psy 5311.*
- 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  
A critical examination of the social and organizational factors in the work situation. Primary emphasis on human relations, leadership and organizational influences on behavior.  
*Prerequisite: Consent of instructor.*
- 5322 Advanced Industrial Psychology II** 3:3:0  
Psychological principles and techniques applied to job analysis, selection and placement of workers, training and organizational efficiency.  
*Prerequisite: Psy 5320.*
- 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.*
- 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. Under unusual circumstances, this course may be waived by the graduate faculty of the Psychology Department for students in the Industrial Program if they elect three additional hours from the approved program courses.  
*Prerequisite: Admission to candidacy.*
- 5331 Practicum II** 3:A:0  
Supervised work in an area of particular interest to the student. The practicum includes both a close relationship with a faculty member and a member of the cooperating agency/organization. Under unusual circumstances, this course may be waived by the graduate faculty of the Psychology Department for students in the Industrial Psychology program if they elect three additional hours from the approved program courses.  
*Prerequisite: Psy 5330.*
- 669A-669B Thesis** 6:A:0  
*Prerequisite: Admission to candidacy.*

Below is the list of 400G level courses which may be taken with augmented requirements for graduate credit, subject to approval by the graduate advisor and instructor. Course descriptions may be found in the Bulletin of Lamar University.

435G Leadership and Group Dynamics

436G Learning

438G Physiological Psychology

439G Contemporary Problems in Psychology





With vintage drilling gear, the director of Lamar's Gladys City boomtown museum makes early days of the oil industry come alive for a student of history.

# Directory of Personnel 1988-89

## Board of Regents

H. D. Pate, Chairman	Bridge City
Thomas M. Maes II, Vice Chairman	Beaumont
Wayne Reaud, Secretary	Beaumont
Otho Plummer, Chairman Emeritus	Beaumont
Lloyd Hayes, Chairman Emeritus	Port Arthur
Truman Arnold	Texarkana
Ronald G. Steinhart	Dallas
Amelie S. Cobb	Beaumont
Ted E. Moor, Jr.	Beaumont

## Administration

- McLaughlin, George E., *Ed.D.*, Chancellor
- Baxley, Oscar K., *M.B.A.*, Vice Chancellor for Finance
- Leonard, W. S., *M.S.*, Vice Chancellor for Development
- Johnson, Andrew J., *Ph.D.*, Assistant to the Chancellor
- Franklin, Billy J., *Ph.D.*, President, Lamar University-Beaumont
- Nicholson, Edward A., *Ph.D.*, Executive Vice President for Academic and Student Affairs
- Nylin, William C., *Ph.D.*, Executive Vice President for Finance and Operations
- Deshotel, Joseph D., *J.D.*, Vice President for Administration and Counsel
- Brickhouse, J. Earl, *B.S.*, Executive Director for Public Affairs
- Wooster, Ralph A., *Ph.D.*, Associate Vice President for Academic and Student Affairs; Dean of Faculties
- Monroe, W. Sam, *L.L.D.*, President, Lamar University-Port Arthur
- Welch, Joe Ben, *Ph.D.*, President, Lamar University-Orange
- Wells, John Calhoun, *Ph.D.*, President, John Gray Institute

## Council of Deans/Academic Administration

- Bell, Myrtle L., *Ed.D.*, Dean, College of Health and Behavioral Sciences
- Brentlinger, W. Brock, *Ph.D.*, Dean, College of Fine Arts and Communication
- Die, Ann, *Ph.D.*, Assistant to the Vice President for Academic and Student Affairs
- Gwin, Howell H., Jr., *Ph.D.*, Director of Graduate Studies
- Idoux, John P., *Ph.D.*, Dean, College of Arts and Sciences and Interim Dean, College of Graduate Studies and Research
- Johnston, Maxine, *M.L.S.*, Director of Library Services
- McCabe, Dennis P., *Ph.D.*, Dean, College of Education
- Rode, Elmer G., Jr., *M.Ed.*, Dean of Records and Registrar
- Rush, James, *M.Ed.*, Director of Academic Services
- Sellekaerts, Willy, *Ph.D.*, Dean, College of Business
- Shipper, Kenneth E., *Ph.D.*, Dean, College of Technical Arts
- Seelbach, Wayne D., *Ph.D.*, Assistant to the Vice President for Academic and Student Affairs
- Young, Fred M., *Ph.D.*, Dean, College of Engineering

## The Graduate Council

- Idoux, John P., *Ph.D.*, Professor of Chemistry; Dean, College of Arts and Sciences and Interim Dean, College of Graduate Studies and Research
- Marriott, Richard G., Associate Professor of Psychology and Head, Department of Psychology
- Ortego, J. Dale., Professor of Chemistry

**Pederson, Olen T.**, *Ph.D., Professor of Audiology and Director of Speech and Hearing Programs*

**Swerdlow, Robert A.**, *Professor of Marketing and Coordinator of Graduate Studies, College of Business*

**Thompson, Bob**, *Professor of Education and Head, Department of Professional Development and Graduate Studies*

**Zaloom, Victor**, *Professor of Industrial Engineering and Head, Department of Industrial Engineering*

**Gwin, Howell H., Jr.**, *Professor of History and Director of Graduate Studies*

## **The Graduate Faculty 1988-89**

The following list reflects the status of the graduate faculty of Lamar University as of Fall, 1987. 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.

**Achilles, Robert F.** 1963, *Regents' Professor of Speech Pathology*

B.S., McPherson College; M.A., Ph.D., Wichita State University

**Akers, Hugh A.** 1977, *Associate Professor of Chemistry*

B.S., University of California at Riverside; Ph.D., University of California at Berkeley

**Allen, Charles L.** 1979, *Associate Professor of Economics*

B.A., East Texas State University; M.A., Ph.D., University of Arkansas

**Aly, Ibrahim M.** 1986, *Assistant Professor of Accounting*

B. Comm., Cairo University; M.B.A., Ph.D., North Texas State University

**Anderson, Adrian N.** 1967, *Professor of History and Head, Department of History*

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

**Anderson, Virginia** 1960, *Associate Professor of Home Economics*

B.S., Georgia State College for Women; M.Ed., Trinity University

**Baj, Joseph A. II** 1964, *Associate Professor of Mathematics*

B.A., Kent State University; M.A., University of Texas

**Baker, B. Joanne** 1981, *Assistant Professor of Mathematics*

B.A., Lamar University; M.A., Ph.D., University of Texas

**Baker, Christopher** 1976, *Associate Professor of English and Director of Freshman English*

B.A., St. Lawrence University; M.A., Ph.D., University of North Carolina

**Baker, Mary Alice** 1969, *Associate Professor of Communication*

B.S., M.A., University of Oklahoma; Ph.D., Purdue University

**Barnes, Cynthia** 1982, *Associate Professor of Office Administration*

B.S., Howard Payne University; M.Ed., Texas Tech University; Ed.D., North Texas State University

**Barnes, Robert J.** 1960, *Regents' Professor of English*

B.A., M.A., The University of Kansas; Ph.D., University of Texas

**Barton, Joel E. III** 1987, *Associate Professor of Health, Physical Education and Dance*

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

**Bean, Wendell C.** 1968, *Professor of Electrical and Nuclear Engineering*

B.A., B.S., Lamar University; M.S., Ph.D., University of Pittsburgh; Registered Professional Engineer

**Bechler, David L.** 1981, *Associate Professor of Biology*

B.A., Indiana University; M.S., Northeast Louisiana University; Ph.D., Saint Louis University

**Bell, Alice C.** 1971, *Professor of Health, Physical Education and Dance, and Head, Department of Health, Physical Education and Dance*

B.S., M.A., Ph.D., Texas Woman's University

**Berzsenyi, George** 1969, *Professor of Mathematics*

B.A., M.S., University of Dallas; M.S., Ph.S., Texas Christian University

- Bethel, James** 1987, *Associate Professor of Communication*  
B.A., University of Tulsa; M.A., Ph.D., University of Oklahoma
- Boatwright, Douglas** 1986, *Assistant Professor of Health, Physical Education and Dance*  
B.S., University of Alabama in Birmingham; M.S., Ph.D., Louisiana State University
- Bost, David L.** 1949, *Professor of Graduate Studies in Education*  
B.A., Hardin-Simmons University; M.J., University of Texas; Ph.D., East Texas State University;  
Licensed Psychologist
- Briggs, Kenneth R.** 1966, *Regents' Professor of Curriculum and Instruction*  
B.S., M.Ed., Ed.D., North Texas State University
- Brunson, Richard** 1982, *Associate Professor of Management*  
B.S., U.S. Military Academy; M.B.A., Babson College; Ph.D., Michigan State University
- Brust, Melvin R.** 1978, *Associate 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
- Burke, Charles M.** 1970, *Professor of Curriculum and Instruction*  
B.A., Southeastern Louisiana University; M.Ed., Louisiana State University; Ed.D., University of Southern Mississippi
- Burke, William T. III** 1982, *Associate Professor of Business Law*  
B.A., Morehouse College; J.D., Howard University Law Center
- Cameron, Margaret D.** 1956, *Regents' Professor of Chemistry*  
B.A., Texas Woman's University; M.S., University of Houston; Ph.D., Tulane University
- Carley, Wayne W.** 1983, *Associate Professor of Biology*  
B.S., M.A., Ph.D., University of California
- Carlucci, Joseph B.** 1971, *Professor of Music*  
B.M., M.M., Yale University; D.M.A., Eastman School of Music, University of Rochester
- Carroll, John M.** 1972, *Professor of History*  
A.B., Brown University; M.A., Providence College; Ph.D., University of Kentucky
- Carruth, Carl** 1966, *Associate Professor of Industrial Engineering*  
B.S., Lamar University; M.S., University of Houston; Ph.D., University of Texas at Arlington;  
Registered Professional Engineer
- Cass, Michael A.** 1982, *Associate Professor of Graduate Studies in Education*  
B.A., University of Vermont; M.A., Ed.D., University of Alabama
- Chen, Daniel H.** 1982, *Associate Professor of Chemical Engineering*  
B.S., National Cheng-Kung University; M.S. National Taiwan University; Ph.D., Oklahoma State University
- Cherry, Richard T.** 1966, *Regents' Professor of Finance*  
B.A., Texas A&M University; M.A., Ph.D., The University of Texas
- Choi, Jai-Young** 1982, *Associate Professor of Economics*  
B.A., Yonsei University; M.A., University of Kansas; Ph.D., University of Oklahoma
- Chu, Hsing Wei** 1979, *Assistant Professor in the Department of Industrial Engineering*  
B.D. Tunghai University; M.S., Asian Institute of Technology; Ph.D., University of Texas
- Clem, Roger** 1985, *Instructor of Communication Disorders*  
B.S., M.S., Lamar University; A.S.H.A., Certification in Audiology
- Collier, J. N.** 1955, *Associate Professor of Music*  
B.M., University of Houston; M.M., Southern Methodist University
- Cooke, James L.** 1956, *Regents' Professor of Electrical Engineering*  
B.S., Texas Tech University; M.S., University of Texas; Ph.D., Northwestern University; Registered Professional Engineer
- Cooper, Mark J.** 1984, *Assistant Professor of Curriculum and Instruction*  
B.S.E., M.S.E., Henderson State University; Ph.D., Georgia State University

- Corder, Paul Ray** 1987, *Associate Professor of Mechanical Engineering*  
B.S., M.S., Ph.D., Texas A&M University
- Crim, Sterling C.** 1964, *Professor of Mathematics*  
B.A., Lamar University; B.S., Baylor University; M.Ed., North Texas State University; M.A., George Peabody College for Teachers; Ph.D., University of Texas
- Crowder, Vernon Roy** 1967, *Professor of Health, Physical Education and Dance*  
B.S., Lamar University; M.S., Ph.D., Louisiana State University
- Crum, Floyd M.** 1955, *Regents' Professor of Electrical Engineering*  
B.S., M.S., Louisiana State University; Registered Professional Engineer
- Daigrepoint, Lloyd M.** 1981, *Assistant Professor of English*  
B.A., M.A., Ph.D., Louisiana State University
- Daniali, Saeed** 1981, *Associate Professor of Civil Engineering*  
B.S. Tehran Polytechnique; M.S. School of Engineering of Strasbourg; Ph.D., University of Lille; Registered Professional Engineer
- Darsey, Nancy S.** 1955, *Professor of Office Administration and Head, Department of Administrative Services*  
B.B.A., M.B.A., Texas Tech University; Ph.D., Louisiana State University
- Davidson, Jane S.** 1970, *Professor of Home Economics*  
B.S., Texas Woman's University; M.S., Sam Houston State University; Ph.D., Texas Woman's University
- Die, Ann H.** 1977, *Regents' Professor of Psychology, Assistant to the Executive Vice President for Academic and Student Affairs*  
B.S., Lamar University; M.Ed., University of Houston; Ph.D., Texas A&M University
- Dorris, Kenneth L.** 1965, *Associate Professor of Chemistry*  
B.S., Ph.D., The University of Texas
- Drapeau, Richard A.** 1983, *Assistant Professor of Business Analysis*  
B.S., Arizona State University; M.B.A., Lamar University; Ph.D., Texas A & M University
- Drury, Bruce R.** 1971, *Professor of Political Science*  
B.A., M.A., University of Nebraska; Ph.D., University of Florida
- DuBose, Elbert T., Jr.** 1974, *Assistant Professor of Political Science*  
B.A., Southwest Texas State University; M.A., Texas Tech University; Ph.D., University of Oklahoma
- Duncan, Edwin** 1986, *Assistant Professor of English*  
B.A., Texas Tech University; M.A., Ph.D., University of Texas
- Esser, James K.** 1976, *Professor of Psychology*  
B.S., University of Iowa; Ph.D., Indiana University
- Fritze, Ronald H.** 1984, *Assistant Professor of History*  
B.A., Concordia College; M.A., M.L.S., Louisiana State University; Ph.D., University of Cambridge
- Gates, David G.** 1963, *Professor of Industrial Engineering*  
B.S., M.S., University of Arkansas; Ph.D., Oklahoma State University; Registered Professional Engineer
- Georgas, Marilyn D.** 1962, *Professor of English*  
B.A., Sam Houston State University; M.A., Lamar University; Ph.D., University of Texas
- Godkin, Roy Lynn** 1981, *Associate Professor of Management*  
A.B., Bethany Nazarene College; M.B.E., Nazarene Theological Seminary; M.A., Sangamon State University; Ph.D., North Texas State University
- Griffin, Vernon H.** 1970, *Professor of Graduate Studies in Education*  
B.S., M.Ed., Sam Houston State University; Ed.D., University of Houston
- Gunnarson, Adele D.** 1987, *Assistant Professor of Audiology; A.S.H.A. Certification and Licensure in Audiology*  
B.S., University of Texas; M.S., Ph.D., University of Texas-Dallas
- Gwin, Howell H., Jr.** 1962, *Professor of History and Director of Graduate Studies*  
B.A., M.A., Ph.D., Mississippi State University

- Gwynn, Robert S.** 1976, *Associate Professor of English*  
B.A., Davidson College; M.A., M.F.A., University of Arkansas
- Haiduk, Michael W.** 1983, *Assistant Professor of Biology*  
B.S., M.S., Texas A & M University; Ph.D., Texas Tech University
- Hansen, Keith C.** 1967, *Professor of Chemistry and Head, Department of Chemistry*  
B.S., Lamar University; Ph.D., Tulane University
- Hargrove, W. Richard** 1964, *Professor of Curriculum and Instruction*  
B.S., M.Ed., North Texas State University; Ed.D., George Peabody College for Teachers
- Harrel, Richard C.** 1966, *Professor of Biology*  
B.S., East Central State College; M.S.Ed., University of Georgia; Ph.D., Oklahoma State University
- Harrigan, W. Patrick, III** 1969, *Associate Professor of Speech*  
B.S., Loyola University; M.F.A., Tulane University; Ph.D., Louisiana State University
- Harris, William T.** 1983, *Associate Professor of Accounting*  
B.B.A., M.B.A., Texas Tech University; Ph.D., Louisiana State University; Certified Public Accountant
- Harvill, John B.** 1984, *Associate Professor of Computer Science*  
B.A., M.A., North Texas State University; Ph.D., Southern Methodist University
- Haven, Sandra L.** 1973, *Associate Professor of Graduate Studies in Education*  
B.S., Lamar University; M.A., Central Michigan University; Ed.D., University of Houston
- Hawkins, Charles F.** 1966, *Regents' Professor of Economics and Head, Department of Economics*  
B.A., Lamar University; M.A., Ph.D., Louisiana State University
- Heumann, J. Mark** 1985, *Assistant Professor of English*  
B.A., Cornell University; M.A., University of Houston; Ph.D., State University of New York at Stony Brook
- Hinchey, Jane O.** 1968, *Assistant Professor of Home Economics*  
B.S., Winthrop College; M.S. University of Tennessee; Ph.D., Texas Woman's University
- Ho, Tho-Ching** 1982, *Associate Professor of Chemical Engineering*  
B.S., National Taiwan University; M.S., Ph.D., Kansas State University
- Holland, DeWitte T.** 1971, *Professor of Speech*  
A.B., Howard College; B.S., U.S. Merchant Marine Academy; B.D., Southern Baptist Theological Seminary; M.A., University of Alabama; Ph.D., Northwestern University
- Holt, V. Raye** 1975, *Professor of Health, Physical Education and Dance; Coordinator of Health, Physical Education and Dance Graduate Programs*  
B.S., Georgia State College for Women; M.S., Baylor University; Ed.D., University of Tennessee
- Hopper, Jack R.** 1969, *Professor of Chemical Engineering and Head, Department of Chemical 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, *Assistant Professor of Biology*  
B.S., Lamar University; M.P.H., Dr.P.H., University of Texas School of Public Health, Registered Medical Technologist (A.S.C.P.)
- Idoux, John P.** 1983, *Professor of Chemistry; Dean, College of Arts and Sciences and Interim Dean, College of Graduate Studies and Research*  
B.A., University of St. Thomas; M.S., Ph.D., Texas A & M University
- Isaac, Paul E.** 1960, *Regents' Professor of History*  
B.A., Pepperdine College; M.A., Ph.D., University of Texas
- James, S. Walker** 1965, *Professor of Speech and Director of Theater*  
B.A., M.A., Baylor University; M.F.A., Case Western Reserve University; Ph.D., University of Denver
- Johnson, Aileen S.** 1986, *Associate Professor of Graduate Studies in Education*  
B.A., Western Michigan University; M.A., Ph.D., Arizona State University

- Johnson, Barry W.** 1983, *Assistant Professor of Music*  
B.M.E., M.A., Sam Houston State University; Ed.D., University of Houston
- Jones, Kirkland C.** 1973, *Professor of English*  
B.A., University of Washington; M.A., Texas Southern University; Ph.D., University of Wisconsin
- Jones, Richard W.** 1975, *Professor of Accounting and Head, Department of Accounting*  
B.S.C., Texas Christian University; M.A., University of Alabama; Ph.D., University of Arkansas; Certified Public Accountant
- Jordan, Donald L.** 1979, *Assistant Professor of Computer Science*  
B.S., East Texas Baptist College; B.S., Lamar University; M.S., Air Force Institute of Technology; Ph.D., University of Houston
- Joshi, Narayan R.** 1984, *Associate Professor of Mechanical Engineering*  
B.S., M.S., Poona University; M.S., Ph.D., Johns Hopkins University
- Karlin, Andrea** 1981, *Associate Professor of Curriculum and Instruction*  
B.A., Hunter College; M.A., Ph.D., University of New Mexico
- King, Jess Freeman** 1978, *Associate Professor of Deaf Education*  
B.S., McNeese State College; M.S., Eastern New Mexico University; Ed.D., McNeese State College
- Koehn, Enno** 1984, *Professor of Civil Engineering and Head, 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, *Assistant Professor of Computer Science*  
B.A. Young-Nam; M.S., University of Hawaii; Ph.D. University of Pittsburgh
- Laidacker, Michael A.** 1967, *Associate Professor of Mathematics*  
B.S., M.S., Lamar University; Ph.D., University of Houston
- Lane, James E.** 1967, *Assistant Professor of Curriculum and Instruction; Director, Teacher Certification*  
B.A., Abilene Christian University; M.Ed., Lamar University; Ed.D., North Texas State University
- LeBlanc, John R.** 1971, *Professor of Music*  
B.M.Ed., McNeese State University; M.S.M., Southwestern Baptist Theological Seminary; M.M., Louisiana State University; Ph.D., University of Southern Mississippi
- Li, Ku-Yen** 1978, *Associate Professor of Chemical Engineering*  
B.S., M.S., Cheng Kung University; Ph.D., Mississippi State University; Registered Professional Engineer
- Lindorfer, Joanne** 1980, *Assistant Professor of Psychology*  
B.S., Loyola University, Chicago; M.S., Ph.D., University of Texas
- Lowrey, Mildred A.** 1974, *Professor of Health, Physical Education and Dance and Academic Director*  
B.S., Howard College; M.S., Alabama College; Ph.D., Florida State University
- Mackey, Howard** 1963, *Professor of History*  
B.A., University of Toledo; M.A., Ph.D., Lehigh University
- Malnassy, Phillip G.** 1973, *Associate Professor of Biology*  
A.B., Hutner College; Ph.D., Rutgers University
- Mantz, Peter A.** 1983, *Associate Professor of Civil Engineering*  
B.Sc., Newcastle University; M.Sc., Southampton University; Ph.D., London University; Chartered Engineer (U.K.)
- Marriott, Richard G.** 1976, *Associate Professor of Psychology and Head, Department of Psychology*  
B.S., Weber State College; M.A., Ph.D., University of New Mexico
- Martinez, Eugene P.** 1959, *Regents' Professor of Mechanical Engineering*  
B.S., Lamar University; M.S., William Marsh Rice University; Ph.D., University of Houston
- Matheson, Alec L.** 1983, *Assistant Professor of Mathematics*  
B.S., University of Washington; Ph.D., University of Illinois

- McAdams, LeBland** 1967, *Associate Professor of Home Economics and Head, Department of Home Economics*  
B.S., Sam Houston State University; M.Ed., University of Houston; Ph.D., Texas Woman's University
- McCabe, Dennis P.** 1984, *Professor of Graduate Studies in Education and Dean, College of Education*  
B.A., M.S., New Mexico Highlands University; Ph.D., University of New Mexico
- McGraw, J. Leon, Jr.** 1967, *Professor of Biology*  
B.S., Lamar University; M.S., Ph.D., Texas A & M University
- McGuire, Sterling W.** 1956, *Professor of Computer Science*  
B.S., M.A., Sam Houston State University; Ph.D., Texas A & M University
- Mei, Harry T.** 1960, *Professor of Mechanical Engineering*  
B.S., National Taiwan University; M.S., Ph.D., University of Texas; Registered Professional Engineer
- Melvin, Cruse D.** 1986, *Professor of Physics and Head, Department of Physics*  
B.S., M.S., Stephen F. Austin State University; Ph.D., Tulane University
- Montano, Carl B.** 1981, *Associate Professor of Economics*  
B.S., M.S., University of the Philippines; Ph.D., Michigan State University
- Morgan, William E.** 1972, *Professor of Civil Engineering*  
B.S., U.S. Naval Academy; B.S., U.S. Naval Post Graduate School; M.S., University of Alaska; Ph.D., University of Texas; Registered Professional Engineer
- Moss, Jimmy D.** 1986, *Assistant Professor of Finance*  
B.S., M.B.A., D.B.A., Mississippi State University
- Moulton, Robert D.** 1974, *Professor of Speech and Head, Department of Communication*  
B.S., M.S., University of Utah; Ph.D., Michigan State University
- Newman, Jerry A.** 1962, *Regents' Professor of Art*  
B.F.A., University of Texas; M.F.A., University of Southern California
- Ornelas, Raul Sosa** 1972, *Assistant Professor of Music*  
B.M., University of Texas; M.M.Ed., McNeese State University; D.M.A., University of Southern Mississippi
- Ortego, James Dale** 1968, *Professor of Chemistry*  
B.S., University of Southwestern Louisiana; Ph.D., Louisiana State University
- Pampe, William R.** 1966, *Regents' Professor of Geology*  
A.B., M.S., University of Illinois; Ph.D., University of Nebraska
- Parigi, Sam F.** 1961, *Regents' Professor of Economics*  
B.S., St. Edward's University; M.B.A., Ph.D., University of Texas
- Pearson, William M.** 1969, *Professor of Political Science and Head, Department of Political Science*  
B.S., Sam Houston State University; M.A., Texas A&M University; Ph.D., Louisiana State University
- Pederson, Olen T.** 1975, *Professor of Audiology and Director of Speech and Hearing Programs*  
B.S., University of Houston; M.S., East Texas State University; Ph.D., University of Oklahoma
- Peebles, Hugh O. Jr.** 1963, *Associate Professor of Physics*  
B.S., University of Texas; M.S., Ph.D., Oklahoma State University
- Pizzo, Joseph F. Jr.** 1964, *Professor of Physics*  
B.A., University of Saint Thomas; Ph.D., University of Florida
- Platt, Annette E.** 1963, *Associate Professor of English*  
B.A., M.A., University of Texas; Ed.D., McNeese State University
- Price, Donald I.** 1983, *Associate Professor of Economics*  
B.A., Hendrix College; M.A., Ph.D., University of Arkansas
- Price, R. Victoria** 1972, *Associate Professor of Modern Languages*  
B.A., Tift College; M.A., M.Ed., Lamar University; M.A., Ph.D., Rice University
- Priest, Dale G.** 1986, *Assistant Professor of English*  
B.A., Lamar University; M.A., Ph.D., Rice University



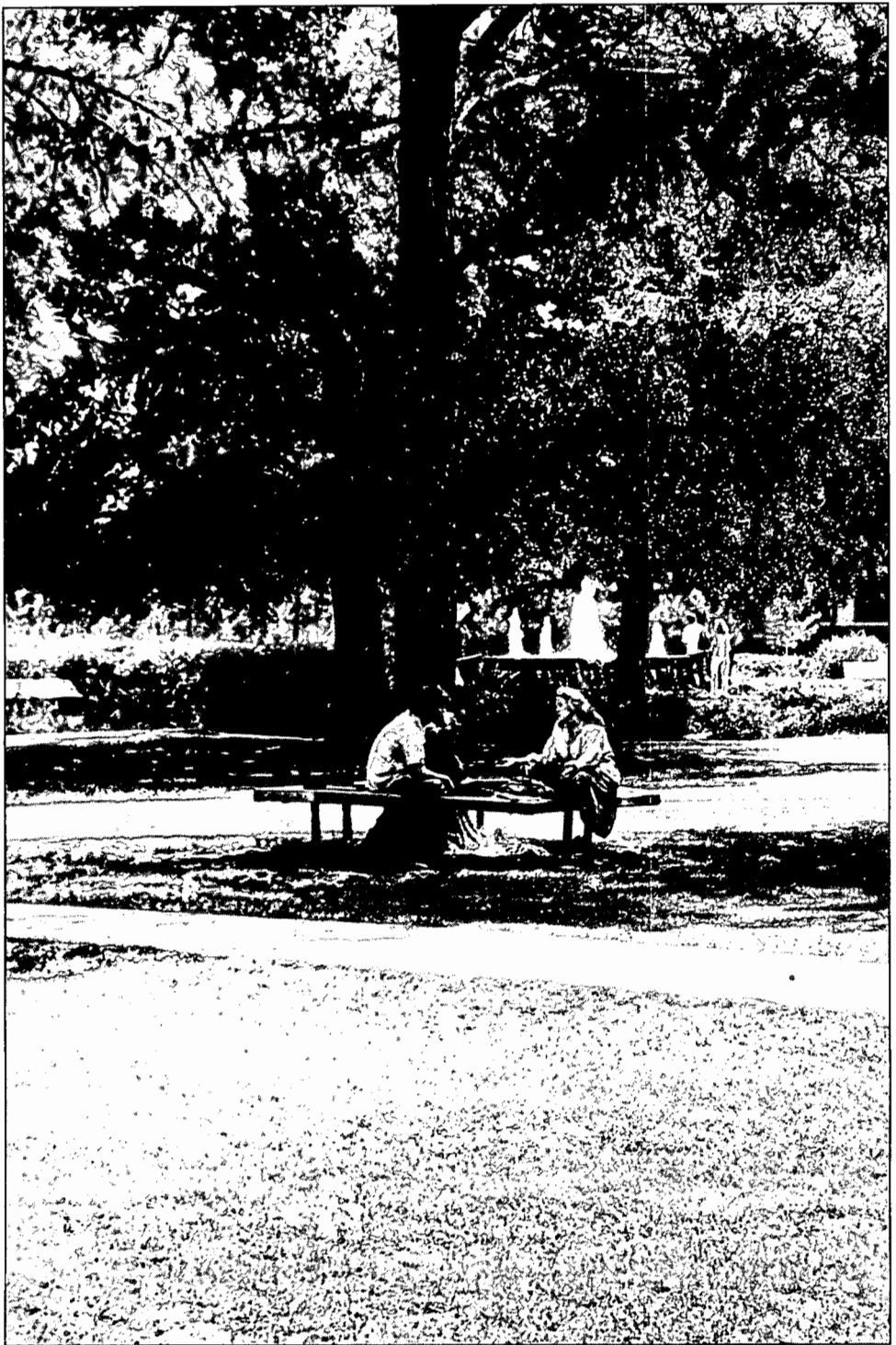
- Ramsey, Jed J.** 1965, *Professor of Biology*  
B.S., Kansas State University of Agriculture and Applied Science; M.S., Kansas State Teachers College; Ph.D., Oklahoma State University
- Read, David R.** 1965, *Regents' Professor of Computer Science*  
B.S., Lamar University; M.S., North Texas State University; Ph.D., University of Houston
- Reynolds, Richard Clay** 1978, *Associate Professor of English*  
B.A., University of Texas at Austin; M.A., Trinity University; Ph.D., University of Tulsa
- Rigney, Carl J.** 1957, *Professor of Physics*  
B.S., University of Louisville; M.S., Ph.D., Northwestern University
- Rogers, Bruce G.** 1961, *Professor of Civil Engineering*  
B.S., University of Houston; M.S., Ph.D., University of Illinois; Registered Professional Engineer
- Roth, Lane** 1978, *Associate Professor of Communication*  
B.A., New York University; M.A., Ph.D., Florida State University
- Runnels, Williams C.** 1965, *Associate Professor of Biology*  
B.S., M.S., Texas A&I University; Ph.D., Texas A&M University
- Satterfield, R. Beeler** 1963, *Professor of History*  
B.A., M.A., Vanderbilt University; Ph.D., Johns Hopkins University
- Seelbach, Wayne C.** 1976, *Professor of Sociology and Gerontology, and Assistant to the Executive Vice President for Academic and Student Affairs*  
B.A., Lamar University; M.A., Stephen F. Austin State University; Ph.D., Pennsylvania State University
- Shaheen, Joyce E.** 1985, *Assistant Professor of Psychology*  
B.S., Emory University; M.S., Ph.D., University of Georgia
- Sellekaerts, Willy** 1987, *Professor of Economics and Dean, College of Business*  
Lic., University of Brussels; M.A., University of Michigan; Ph.D., Michigan State University
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