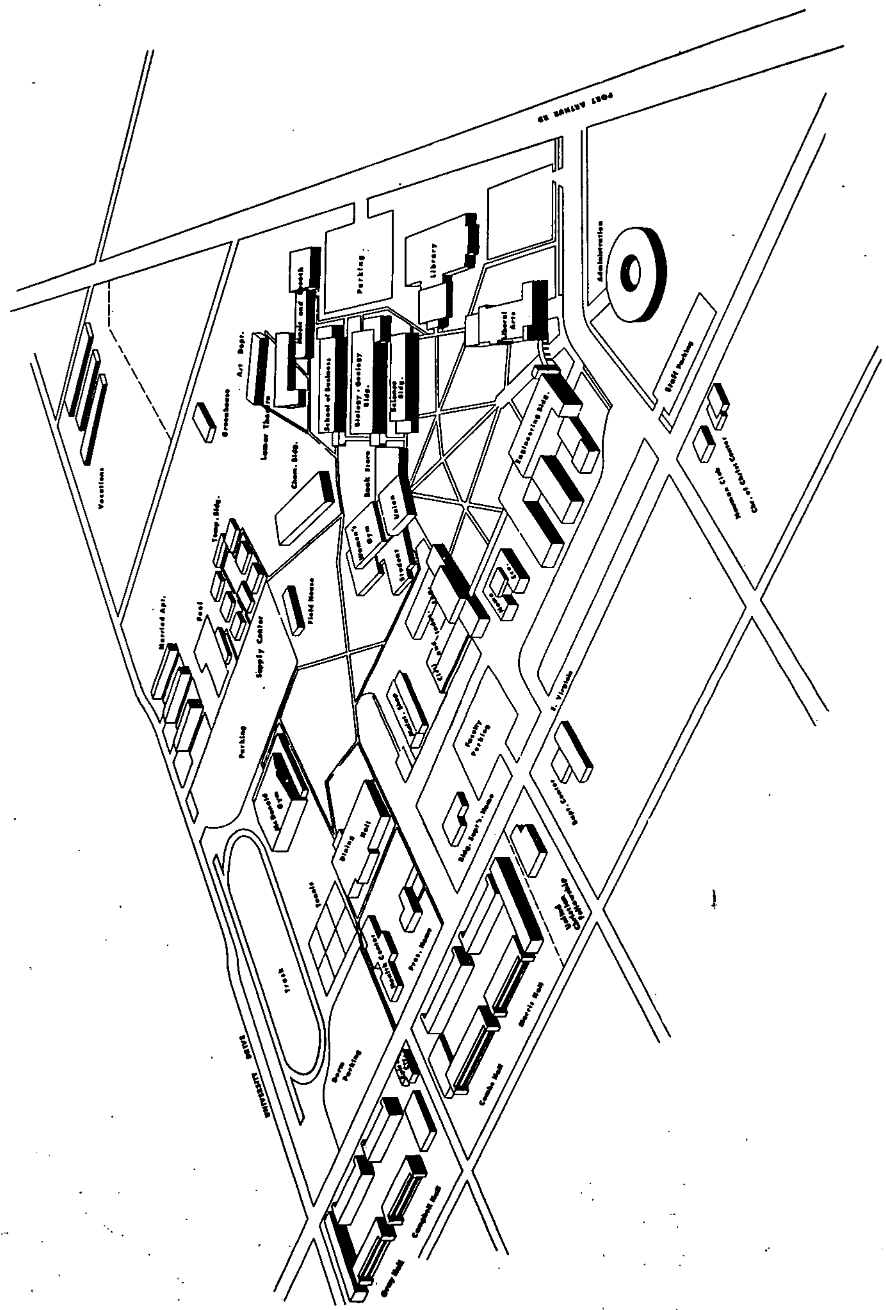
BULLETIN OF

LAMAR STATE COLLEGE OF TECHNOLOGY

GRADUATE SCHOOL

BEAUMONT, TEXAS

WITH ANNOUNCEMENTS FOR 1962-1963


PORT ARTHUR RD
Parking
Library
Administration
Music and Speech
Art Dept.
Greenhouse
Lamar Theatre
School of Business
Biology-Geology Bldg.
Science Bldg.
Fine Arts
Engineering Bldg.
Staff Parking
Classroom Bldg.
Book Store
Union
Women's Gym
Field House
Supply Center
Married Apt.
Pool
Temp. Bldg.
Vocations
Parking
McDonald Gym
Dining Hall
Tennis
Track
UNIVERSITY DRIVE
South Parking
Health Center
Faculty Parking
E. Virginia
Combs Hall
Morris Hall
Campbell Hall
Gray Hall

BULLETIN

OF

LAMAR STATE COLLEGE OF TECHNOLOGY

Vol. XII July 1962 No. 17

Published monthly except May at 4400 Port Arthur Rd., Beaumont, Texas. Second-Class mail privileges authorized at Beaumont, Texas.

Third Annual

GRADUATE SCHOOL CATALOG

With Announcements for 1962-63

The course, tuition and fees, and all other conditions and policies set forth in this 1962-63 graduate catalog issue shall be and are hereby put into effect as of Feb. 1, 1962 and shall remain in effect with such conditions and alterations as may be duly authorized by the Board of Regents, until a new graduate catalog is issued. Bulletins published monthly except May.

TABLE OF CONTENTS

BOARD OF REGENTS

J. B. Morris, Chairman ..... Beaumont, Texas

Otho Plummer, Vice-Chairman ..... Beaumont, Texas

Garland Shepherd, Secretary ..... Beaumont, Texas

Cecil Beeson ..... Orange, Texas

Lee Eagleson ..... Port Arthur, Texas

Fred Hartman ..... Baytown, Texas

John W. Mecom ..... Houston 2, Texas

Charles S. Pipkin ..... Beaumont, Texas

Arthur A. Temple, Jr. ..... Diboll, Texas

LAMAR STATE COLLEGE OF TECHNOLOGY

DIRECTORY (1962-1963)

OFFICERS OF ADMINISTRATION

F. L. McDONALD, A.B., M.A., M.S., Ph.D., President
Administration Building

RICHARD W. SETZER, A.B., M.A., Ph.D., Dean of the College
Administration Building

G. A. WIMBERLY, B.S., Assistant to the President
Administration Building

H. C. GALLOWAY, JR., B.S., M.Ed., Comptroller
Administration Building

NORRIS H. KELTON, B.A., M.A., Dean of Admissions
Administration Building

CELESTE KITCHEN, B.A., M.Ed., Registrar
Administration Building

DAVID BOST, B.A., M.J., Dean of Student Life
Room 201, Student Union Building

COL. WARD HOFFMAN, B.A., Dean of Men
Room 201, Student Union Building

MRS. BESS NEAL GENTRY, B.S., M.Ed., Dean of Women
Room 201, Student Union Building

JACK HILL, B.B.A., M.B.A., Director of Evening Classes
Room 100, Liberal Arts Building

JOE B. THRASH, B.S., M.A., Director, Testing and Placement Center
Room 102, Liberal Arts Building

The Graduate Council

RICHARD W. SETZER, A.B., M.A., Ph.D., Dean, Chairman
Administration Building

MRS. RUTH OLCOTT, B.S., M.S., Ed.D., Dean, School of Education
Room 208, Business Building

FRANK A. THOMAS, JR., B.S., M.S., Ph.D., Dean, School of Engineering
Room 101, Engineering Building

LLOYD B. CHERRY, B.A., M.A., B.S. in E.E., E.E., Head, Electrical Engineering Department
Room 123, Engineering Building

CHARLES W. HAGELMAN, JR., B.A., M.A., Ph.D., Head, English Department
Room 101, Liberal Arts Building

JEREMIAH M. STARK, B.S., S.M., Ph.D., Head, Mathematics Department
Room 114, Engineering Building

PRESTON WILLIAMS, B.A., M.A., Ph.D., Head, History Department
Room 112, Liberal Arts Building

WINFRED S. EMMONS, JR., B.A., M.A., Ph.D., Professor of English
Room 109, Liberal Arts Building

M. L. McLAUGHLIN, B.S., M.Ed., Ed.D., Professor of Education
Room 212, Business Building

PETER TERWEY, JR., B.A., M.A., Ph.D., Professor of Mathematics
Room 219, Engineering Building

RALPH A. WOOSTER, B.A., M.A., Ph.D., Professor of History
Room 114, Liberal Arts Building

THE GRADUATE FACULTY

Members

FRANCIS E. ABERNETHY, Associate Professor of English
B.A., Stephen F. Austin State College
M.A., Ph.D., Louisiana State University

HOWARD W. ADAMS, Professor of Education
B.A., Wayne State Teachers College
M.A., Ed.D., University of Nebraska

ROBERT J. BARNES, Professor of English, Director of Freshman English
B.A., M.A., The University of Kansas
Ph.D., The University of Texas

LLOYD B. CHERRY, Professor of Electrical Engineering, Head, Department of Electrical Engineering, Director of Lamar Research Center
B.A., M.A., The University of Texas
B.S. in E.E., E.E., Oklahoma State University

JAMES L. COOKE, Professor of Electrical Engineering
B.S. in E.E., Texas Technological College
M.S. in E.E., The University of Texas
Ph.D., Northwestern University

WINFRED S. EMMONS, JR., Professor of English
B.A., Louisiana Polytechnic Institute
M.A., University of Virginia
Ph.D., Louisiana State University

SAMUEL LEE EVANS, Associate Professor of History
B.A., A & M College of Texas
M.A., Ph.D., The University of Texas

HARRY L. FRISSELL, Associate Professor of English
B.A., Southwestern University
M.A., Ph.D., Vanderbilt University

CHARLES W. HAGELMAN, JR., Professor of English--Head, Department of English
B.A., The University of Texas
M.A., Columbia University
Ph.D., The University of Texas

PAUL EDWARD ISAAC, Associate Professor of History
B.A., Pepperdine College
M.A., Ph.D., The University of Texas

CONRAD DELL MANG, Professor of Education
B.S., M.Ed., M.L., The University of Houston
Ed.D., The University of Texas

ROBERT A. McALLISTER, Professor of Chemical Engineering--Head, Department of Chemical Engineering
B.Ch.E., North Carolina State College
M.S., University of Wisconsin
S.M., Massachusetts Institute of Technology
Ph.D., Georgia Institute of Technology

MARVIN L. McLAUGHLIN, Professor of Education
B.S., Sam Houston State College
M.Ed., The University of Texas
Ed.D., The University of Houston

HARRY T. MEI, Associate Professor of Mechanical Engineering
B.S., National Taiwan University
M.S., Ph.D., The University of Texas

L. WESLEY NORTON, Associate Professor of History
B.A., Olivet College
M.A., Ph.D., University of Illinois

MRS. RUTH H. OLCOTT, Professor of Education--Dean, School of Education
B.S., M.S., Ed.D., The University of Houston

ROBERT C. OLSON, Associate Professor of English
B.S., Northwestern University
M.A., Ph.D., University of Colorado

HENRY B. RULE, Associate Professor of English
B.A., The University of Texas
M.A., Columbia University
Ph.D., University of Colorado

THOMAS T. SALTER, Associate Professor of Education
B.S., Anderson College
M.Ed., Stephen F. Austin State College
Ed.D., The University of Houston

E. LEE SELF, Associate Professor of Education
B.S., M.Ed., Northwestern State College
Ph.D., Louisiana State University

JEREMIAH M. STARK, Professor of Mathematics--Head, Department of Mathematics
B.S., United States Coast Guard Academy
B.S., North Texas State University
S.M., Ph.D., Massachusetts Institute of Technology

CONSTANTINE N. STAVROU, Professor of English
B.A., M.A., Ph.D., The University of Buffalo

PETER TERWEY, JR., Professor of Mathematics
B.A., Texas Western
M.A., The University of Texas
Ph.D., A & M College of Texas

FRANK A. THOMAS, JR., Professor of Mechanical Engineering--
Dean, School of Engineering
B.S., Purdue University
M.S., Ph.D., Georgia Institute of Technology

PRESTON B. WILLIAMS, Professor of History--Head, Department of History
B.A., M.A., North Texas State University
Ph.D., The University of Texas

RALPH A. WOOSTER, Professor of History
B.A., M.A., The University of Houston
Ph.D., The University of Texas

ALVICE W. YEATS, Associate Professor of English
B.A., McMurry College
M.A., Ph.D., The University of Texas

Associates

BRUCE G. ROGERS, Assistant Professor of Civil Engineering
B.S., The University of Houston
M.S., Ph.D., University of Illinois

DIRECTORY FOR CORRESPONDENCE

To obtain prompt attention, address inquiries to the following persons or agencies:

Academic Program--Admissions	Richard W. Setzer, Dean, Graduate School
Academic Records and Transcripts	Celeste Kitchen, Registrar
Business Affairs	H. C. Galloway, Comptroller
Graduate Record Examination	Joe B. Thrash, Testing Office
Evening School	Jack Hill, Director
Master of Arts--English	Charles W. Hagelman, Jr., Head, Department of English
Master of Arts--History	Preston B. Williams, Head, Department of History
Master of Science--Mathematics	Jeremiah M. Stark, Head, Department of Mathematics
Master of Engineering Science--Engineering	Frank A. Thomas, Jr., Dean, School of Engineering
Master of Education--Elementary Education	Mrs. Ruth Olcott, Dean, School of Education
Master Teacher Certification	M. L. McLaughlin, Professor, Department of Education
Housing, Dormitory Reservations	Ronald Hulin, Director
Publications and Information	R. E. Oliver, Director
Student Activities	George McLaughlin, Director
Student Health	Mrs. Ola Saunders, Health Center
Tuition, Fees, Expenses	Business Office
Veterans' Affairs	Joe B. Thrash, Testing Office

1962

	S	M	T	W	T	F	S
JAN.		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			

	S	M	T	W	T	F	S
FEB.					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			

	S	M	T	W	T	F	S
MAR.					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

	S	M	T	W	T	F	S
APR.	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					

	S	M	T	W	T	F	S
MAY			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		

	S	M	T	W	T	F	S
JUNE						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

	S	M	T	W	T	F	S
JULY	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				

	S	M	T	W	T	F	S
AUG.				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	

	S	M	T	W	T	F	S
SEP.							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						

	S	M	T	W	T	F	S
OCT.		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			

	S	M	T	W	T	F	S
NOV.					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	

	S	M	T	W	T	F	S
DEC.							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					

1963

	S	M	T	W	T	F	S
JAN.			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		

	S	M	T	W	T	F	S
FEB.						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		

	S	M	T	W	T	F	S
MAR.						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						

	S	M	T	W	T	F	S
APR.		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				

	S	M	T	W	T	F	S
MAY				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	

	S	M	T	W	T	F	S
JUNE							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						

	S	M	T	W	T	F	S
JULY		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			

	S	M	T	W	T	F	S
AUG.					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

	S	M	T	W	T	F	S
SEP.	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					

	S	M	T	W	T	F	S
OCT.			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		

	S	M	T	W	T	F	S
NOV.						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

	S	M	T	W	T	F	S
DEC.	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				

31

LAMAR STATE COLLEGE OF TECHNOLOGY

College Calendar for 1962-63

Fall Semester, 1962

Sept. 10	Monday	8 a.m.	Orientation for new students.
		10 a.m.	Meeting of new faculty.
		1 p.m.	General faculty meeting.
		6 p.m.	Testing for new students in evening classes. Registration evening students.
11	Tuesday	8 a.m.	Registration of former students and others who have completed entrance procedures.
		6 p.m.	Testing for evening students. Registration of evening students.
12	Wednesday	8 a.m.	Continued registration.
		1 p.m.	Registration of late entering students.
		6:30 p.m.	Evening classes begin.
13	Thursday	8 a.m.	Classes begin.
			Late registration (penalty fee charged)
	Registration after this date limited to available classes.		
			Payment of fees is a part of registration.
17	Monday	8 p.m.	Last date for registration or adding courses.
28	Friday		Twelfth Class Day.
Oct. 15 - Nov. 30			Period for application for January graduation.
24	Wednesday	8 p.m.	Last date for dropping or withdrawing without penalty.
Nov. 5-9	Monday-Friday		Mid-term week.
30-Feb. 20			Period for application for May graduation.
21	Wednesday	10 p.m.	Thanksgiving holidays begin.
22	Thursday	10 a.m.	Dormitories close.
25	Sunday	12 noon	Dormitories open.
26	Monday	7 a.m.	Dining Hall opens.
		8 a.m.	Classes resume.
30	Friday	5 p.m.	Last date for approval for January graduation.
Dec. 19	Wednesday	10 p.m.	Christmas holidays begin.
20	Thursday	8 a.m.	Dining Hall closes.
		10 a.m.	Dormitories close.
Jan. 2	Wednesday	12 noon	Dormitories open.
3	Thursday	7 a.m.	Dining Hall opens.
		8 a.m.	Classes begin.
14-16	Monday-Wednesday		Restricted social activities
17-24	Thursday-Thursday		Final exams—fall semester.
25	Friday	12 noon	Final date for submitting semester grades to the Registrar's office.

Spring Semester, 1963

Jan. 28 Monday	8 a.m.	Admission conferences for late transfers and new students.
	6 p.m.	Admission conferences for late transfers and new students in evening classes.
29 Tuesday	8 a.m.	Registration of former students and others who have completed entrance procedures.
	6 p.m.	Registration of all evening students.
30 Wednesday	8 a.m.	Continued registration.
	1 p.m.	Registration for late entering students.
	6:30 p.m.	Evening classes begin.
31 Thursday	8 a.m.	Classes begin.
Registration after this date limited to available classes.		Late registration (penalty fee charged)
		Payment of fees is a part of registration
Feb. 4 Monday	8 p.m.	Last date for registration or adding courses.
15 Friday		Twelfth Class Day.
20 Wednesday	5 p.m.	Last date for approval for May graduation.
March 13 Wednesday	7 p.m.	Last date for dropping courses or withdrawing without penalty.
18-22 Monday-Friday		Mid-term week.
April 11 Thursday	10 p.m.	Easter holidays begin.
12 Friday	8 a.m.	Dining Hall closes.
	10 a.m.	Dormitories close.
15 Monday	12 noon	Dormitories open.
16 Tuesday	7 a.m.	Dining Hall opens.
	8 a.m.	Classes resume.
May 1 - June 14		Period for application for August graduation.
May 13-15 Monday-Wednesday		Restricted social activities
16-23 Thursday-Thursday		Final exams—spring semester
24 Friday	12 noon	Final date for submitting semester grades to Registrar's office.
25 Saturday	8 p.m.	Commencement exercises.

Summer Semester, 1963

First Term

June 2 Sunday		Limited operation of dormitories.
3 Monday	8 a.m.	Registration
	6 p.m.	Registration—evening classes.
5 Tuesday	8 a.m.	Classes begin.
Registration after this date limited to available classes.		Late registration (penalty fee charged)
		Payment of fees is a part of registration.

June 5	Wednesday	7 p.m.	Last date for registration or for adding courses.
7	Friday		Fourth Class Day.
June 14	Friday	5 p.m.	Last date for approval for August graduation.
24	Monday	7 p.m.	Last date for dropping courses or withdrawing without penalty.
July 12	Friday		Final exams—first term.
13	Saturday	12 noon	Last date for reporting term grades to Registrar's office.

Second Term

July 15	Monday	8 a.m.	Registration
		6 p.m.	Registration—evening classes.
16	Tuesday	8 a.m.	Classes begin.
			Late registration (penalty fee charged)
			Payment of fees is a part of registration.
17	Wednesday	7 p.m.	Last date for registration or for adding courses.
19	Friday		Fourth Class Day.
August 5	Monday	7 p.m.	Last date for dropping courses or withdrawing without penalty.
23	Friday		Final exams—second term.
24	Saturday	8 a.m.	Last date for reporting term grades to Registrar's office.
		9 a.m.	Commencement
		10 a.m.	Dining Hall and dormitories close.

Registration after this date limited to available classes.

LAMAR STATE COLLEGE OF TECHNOLOGY

Location

Lamar State College of Technology is a state-supported institution located in the center of industrial Southeast Texas at Beaumont. Principal industries in the area are oil refining, shipping, shipbuilding, rubber manufacturing and chemical production. Surrounding the urban communities are ranches and rice farms.

The 100-acre campus faces the Beaumont-Port Arthur Highway in southeastern Beaumont. With a population of approximately 120,000, Beaumont has modern schools, churches, and shopping districts to serve the thriving industrial community.

History

South Park Junior College was established in 1923. The college was organized and controlled by the South Park Independent School District, and classes were conducted in the South Park High School Building. Enrollment increased from about 125 in 1923 to 300 in 1931.

In 1932, the name of the institution was changed to Lamar College. At this time separate facilities were provided, additional equipment was purchased, and new policies were instituted. By 1939, enrollment was approximately 640.

In 1940, Lamar Union Junior College District was created, and Lamar College was separated from the South Park Independent School District. Bonds were voted and new facilities were constructed on the site of the present main campus.

A movement to expand Lamar College into a state-supported senior school culminated in the creation of Lamar State College of Technology on September 1, 1951. Since that time the curriculum has been expanded and liberalized to include many areas of study, and many additional facilities have been provided. Enrollment has increased until there are now over 6,500 students.

Government

The government of the college is vested in a board of nine regents appointed by the Governor and approved by the Senate for terms of six years. The direction of academic affairs is delegated by the Board of Regents to the President, administrative officers, and faculty.

Accreditation

Lamar is accredited by the Association of Texas Colleges and Universities and the Southern Association of Colleges and Secondary Schools.

The Texas Education Agency has approved the Master of Arts degree programs in English and history along with the master teacher programs in each field.

THE GRADUATE SCHOOL

History

The Graduate School was instituted in the fall, 1960, with the offering of the Master of Arts degree in the fields of history and English. Master teacher certification programs were also available in each of these fields. Additional master's degrees were authorized beginning in the fall, 1962, in the areas of mathematics, engineering, and elementary education.

Government

The general policies of the Graduate School are determined and administered by the Graduate Council whose members represent each department offering graduate degrees. This Council has defined the Graduate School as the center of joint effort of faculty and students in creative study and research. Such study and research involves moral and intellectual responsibilities, fostering a spirit of independent thought and the extension of knowledge.

Objectives

The objectives of the Graduate School 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 the student responsible for his own scholarship.

Degrees Offered

The Master of Arts degree is offered in the fields of English and history. A master teacher program may be completed along with the graduate degree in each of these departments.

The Master of Science degree is available in the field of mathematics. Master of Engineering Science is offered in the School of Engineering and combines graduate work in engineering with courses in science and mathematics.

The Master of Education degree is available in Elementary Education through the Department of Education and Psychology.

Buildings and Grounds

Located on a campus of approximately one hundred acres and valued in excess of $10,000,000, the Lamar plant includes many new and functional buildings of modern design. These structures include: Administration Building, Art Building, Biology-Geology Building, Bookstore, Business Building, Chemistry Building, Dining Hall, Engineering I, Engineering II, Health Center, Home Economics Building, Lamar Theatre, Liberal Arts Building, Library, McDonald Gymnasium, Music-Speech Building, Science Building, Student Union, Vocations I, Vocations II, Vocations III, and Women's Gymnasium. On-campus dormitories include: Campbell Hall, Combs Hall, Gray Hall, Morris Hall, as well as three apartment buildings for married couples.

Additional facilities include the President's Home, Superintendent of the Grounds' Home, athletic field house and practice fields, Olympic-size swimming pool, tennis courts, and miscellaneous storage buildings.

The Library and almost all instructional and service buildings utilized during the summer sessions are completely air-conditioned.

Library

The Library, with seating room for several hundred students, is conveniently located among the instructional buildings on the campus. In addition to a reference room, a film supply room, and a micro-film reader room, the Library contains 60,000 volumes and also subscribes to more than 1,000 periodicals.

Research Center

The Research Center was formally organized in 1956. It is administered by a director who serves as chairman of the faculty research committee. Many National Science Foundation grants as well as private foundation grants have been received through this research organization.

Proposed faculty research projects are submitted each year for approval and financing through the Research Center.

The East Texas area is one of the most heavily industrialized sites of the world, and many industrial research problems are referred by industries of the area to the Lamar Research Center. Faculty members and advanced students often cooperate in seeking the solutions to these industrial problems.

Computer Laboratory

The College operates a computer laboratory as a division of the Research Center. This laboratory houses three major computers of the digital and analog type, valued in excess of $300,000. Faculty members and advanced students make good use of these computers in various approaches to research problems.

ENROLLMENT

Admission

Applicants seeking admission to the Graduate School must present evidence that their academic record and personal attributes indicate the ability to pursue graduate work successfully. Admission to the Graduate School is administered by the Graduate Council. In general, the policies set forth by this Council for admission are as follows:

1. An applicant must hold a bachelor's degree or its equivalent from an institution approved by a recognized accrediting agency.

2. The following official credentials should be filed with the Dean of the Graduate School at least four weeks before registration.

   A. A completed transcript of all previous college work.

   B. Two copies of the completed application form for admission to the Graduate School.

   C. Scores on the aptitude and the appropriate subject matter area of the Graduate Record Examination (sent directly to the Dean of the Graduate School by the Educational Testing Service). The College Testing and Placement Center, located in Room 102 in the Liberal Arts Building, administers the Graduate Record Examination. Application forms and information about the Graduate Record Examination are available at this Center.

   Applicants for admission to the Graduate School are urged to take the Graduate Record Examination prior to registration for their first term. Students who have not taken this examination prior to their first registration, must complete the examination before registering for a second semester.

   Students who fail to meet this requirement will not be permitted to register for additional courses, and credit for all courses taken at Lamar State College will be withheld.

3. Grade-point average on all undergraduate work taken of 2.0 (3-point system).

   A. Upon recommendation by the major department, a student with a grade-point average below 2.0 (3-point system) may be admitted to the Graduate School on probation. This probation may be removed upon recommendation by the major department, by the student completing nine semester hours of graduate work with grades of B or better.

4. A student who wishes to pursue graduate work in any area for which he has not had the prerequisites will be required to make up deficiencies as prescribed by the Graduate Council. In general, the student is required to have a minimum of twenty-four semester hours (twelve of which must be on the junior-senior

level) of undergraduate work in the subject chosen as the graduate major. For a minor, twelve semester hours of undergraduate work are required.

5. Admission to the Graduate School does not imply candidacy for a master's degree.

6. The Dean of the Graduate School will notify the applicant of his admission to the Graduate School. All transcripts, certificates, etc., become the property of the Graduate School and are not returnable.

Special Students

An applicant who wishes to enroll in a graduate course without receiving credit toward any graduate degree may do so under the following conditions:

1. He must hold a bachelor's degree.

2. He must have the written consent of the department head concerned and the Dean of the Graduate School.

3. An individual may not pursue more than two courses under this agreement and only one such course in any semester or summer term.

4. Nothing in this statement is to prevent the Graduate Council from granting graduate credit for these courses toward a degree if the Council elects to do so in the event the student applies for admission to the Graduate School.

Registration

Students who have been admitted to the Graduate School may register in September or February, for the long sessions; or in June or July for the summer terms. Attention is called to the College rule which requires that applicants for graduate degrees must be registered in the College during the session in which the degree is to be awarded. Graduate students who have completed all course work, but who are working on their thesis, must be registered in the College if they wish to use the College Library.

FEES AND EXPENSES

Payment of Fees

Lamar State College of Technology reserves the right to change fees in keeping with acts of the Texas Legislature.

A student is not registered until all his fees are paid in full. Payment may be made by check, money order, or currency. Checks and money orders, not in excess of total fees, should be made payable to Lamar State College of Technology and will be accepted subject to final payment.

Fees Summary

Resident Students (Texas)

Semester Hours	Tuition	S.S. Fee	Bldg. Use Fee	Total Plus Laboratory Fees
12 or more	50.00	20.00	8.00	78.00 + Lab Fee
11	47.00	20.00	8.00	75.00 " " "
10	43.00	20.00	8.00	71.00 " " "
9	39.00	20.00	8.00	67.00 " " "
8	35.00	20.00	8.00	63.00 " " "
7	31.00	7.00	4.00	42.00 " " "
6	27.00	7.00	4.00	38.00 " " "
5	23.00	7.00	4.00	34.00 " " "
4	19.00	7.00	4.00	30.00 " " "
3 or less	15.00	7.00	4.00	26.00 " " "

Non-Resident Students (out of Texas)

Semester Hours	Tuition	S.S. Fee	Bldg. Use Fee	Total Plus Laboratory Fees
12 or more	200.00	20.00	8.00	228.00 + Lab Fee
11	183.00	20.00	8.00	211.00 " " "
10	167.00	20.00	8.00	195.00 " " "
9	150.00	20.00	8.00	178.00 " " "
8	133.00	20.00	8.00	161.00 " " "
7	117.00	7.00	4.00	128.00 " " "
6	100.00	7.00	4.00	111.00 " " "
5	83.00	7.00	4.00	94.00 " " "
4	66.00	7.00	4.00	77.00 " " "
3 or less	50.00	7.00	4.00	61.00 " " "

For summer session students the student service fee is $5.00 per term.

These fees have been approved by appropriate acts of the Legislature of the State of Texas.

Property Deposit

Any student taking one or more courses is required by law to put up a $7 property deposit. This deposit, less any charges, is returnable when the student leaves the College and must be maintained at this level.

Parking Fee

For campus parking privileges, a fee of $3 per semester or $1per summer term is charged.

In the fall the total fee for two semesters ($6) is charged, and in the first term of the summer session the total fee for the two summer terms ($2) is charged.

Returned Check Fee

If a check is returned unpaid, the student is automatically suspended from college, but may re-enter upon redemption of the check plus payment of the return check fee of $2.

Special Fees

Fees for courses for which special plans must be prepared and for which specialists must be secured as instructors will be set for each such course by the College Administration subject to the approval of the President.

Miscellaneous Fees

Binding Thesis (3 copies)	12.00
Master's Diploma	6.50
Cap, Gown, and Hood Rental (Master's)	8.50
Late Registration	2.00
Returned Checks	2.00
Re-entry Fee	5.00
Transcript Fee	.50

Health and Accident Insurance

Additional health and accident coverage providing protection over and beyond that given by the health center is available at registration for students carrying nine or more semester hours. The fee is $12 (estimated).

Refund of Fees

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

Long Session

1. During the first two weeks of the semester, 80 per cent.
2. During the third week of the semester, 60 per cent.
3. During the fourth week of the semester, 40 per cent.
4. During the fifth week of the semester, 20 per cent.

Summer Session

1. During the first week of the semester, 60 per cent.
2. After first week, no refund.

No refunds are made when a student drops a course.

Application for refund must be made to the Comptroller after the student has officially withdrawn but not later than the end of the current semester or summer session.

It takes about 60 days to process these refunds.

Fine and Breakage Loss

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

The College reserves the right to make a special assessment against any student guilty of inexcusable breakage or loss of instructional equipment or other College property.

HOUSING

I Dormitories

The dormitory housing program is part of the overall educational plan of the College. The Board of Regents has committed this college to maintaining full occupancy of all rooms in the dormitories. For these reasons students at Lamar State College of Technology are required to live in one of the College dormitories and take their meals in the College dining hall.

The only exceptions to this regulation are:

1. Students who live with parents or relatives.
2. Married students who live with their wives or husbands.
3. Students whose health conditions demand special service.
4. Students whose part-time employment conflicts with the College meal service hours.
5. Students for whom no housing is available when all dormitories have been filled. In such cases these students will be permitted to live in approved housing off campus until the beginning of a semester in which dormitory space becomes available.

The Dean of Men and the Dean of Women will review all requests for permission to live off the campus. The College reserves the right to require campus residence of any student.

Dormitories for men and women were completed in 1954, 1955, 1958, and 1959. These ultra-modern halls are three stories high, each floor housing 36 students. The halls are organized into units for purposes of self-government, intramural athletics and social life.

Students live in suites for six. Each suite consists of two large bedrooms, two study rooms and bath. Each room has a dial telephone for intercampus and Beaumont exchange calls.

The Dining Hall serves three meals per day with the exception of Sundays. Breakfast and lunch are served on Sundays.

Costs

Charges for board and room for the nine-month term are $629. Charges for a full semester may be paid at the beginning of school; or for the convenience of those who desire a monthly plan, payments may be made as follows:

September	71.00
October	71.00
November	71.00
December	41.00
January	71.00
First Semester	325.00
February	76.00
March	76.00
April	76.00
May	76.00
Second Semester	304.00

If the monthly pay plan is followed, payments must be made on the first day of each semester and between the first and fifth of all other months.

When students move into a dormitory, they automatically enter into a contract for room and board for the fall and spring semesters, unless they officially withdraw from college or obtain special permission from the Dean of Student Life to live elsewhere.

No refunds of September or February payments will be made to students who withdraw from the dormitory system. Students who are given official permission to withdraw during other months may obtain pro-rata refunds for meal tickets after presenting proper withdrawal documents to the Comptroller. No refunds will be made on room rent for a partial month.

Summer Term

Charges for board and room for each six-week summer term are $121.50. This amount is payable at time of admission to the dormitory.

Some of the rooms are air-conditioned for the summer months. The extra charge for air-conditioned rooms for each six-week period is $30 per room regardless of the number of students occupying the room.

Changes in Rates

The College reserves the right to change room and board rates with ten days' notice.

Reservations

To reserve a room in the dormitory, direct a request to the Dean of Student Life, Lamar State College of Technology, Beaumont, Texas. A check for $20 must accompany the reservation request. Room reservations may be cancelled with full refund until three weeks prior to the first day of classes. No refund will be made on cancellations received after this date. Dormitory residents will be refunded deposits, less any breakage charges, at the end of the year. If a student moves from a dormitory at any time other than the end of the semester, the $20 deposit will not be refunded.

All unclaimed rooms in the dormitory system will be declared vacant and the $20 deposit will be forfeited at 6:00 p.m. on the last day of registration unless a student gives the Dean of Student Life written instructions to hold the room for a longer period.

II Apartments

Located on the campus and owned and operated by the College are a limited number of accommodations for married couples who have no children.

Three new modern fireproof, three-story buildings, each accommodating 35 couples, are now available. Each apartment consists of kitchenette, bath, two clothes closets and combination living room-bedroom. These apartments are completely furnished with fold-away beds, living room furniture, dinette set, kitchen stove, refrigerator, and window fan. There is also a central laundry with automatic washers and dryers.

These apartments rent for $585 for the nine-month period. This rental includes all utilities except telephones. Renters may make direct arrangements with the telephone company if they desire telephone service.

A reserved parking space goes with each apartment and is leased to the renter at $6 for the nine-month period.

For the convenience of students who wish to pay rentals by the month, the charges may be arranged in nine equal payments of $65 each.

For information regarding these apartments, write the Business Manager. A $20 deposit is required to reserve an apartment. For those reserving apartments for the fall term, the first payment of $65 is due by September 5. If this first payment is not received by September 5, the apartment will not be held and the deposit will be forfeited.

Some of these apartments can be air-conditioned from April 15 to October 15 upon request of the occupant. An additional $20 per month is charged for this service during the months of operation.

Health Center

The College maintains a Health Center for the use of students.

Two types of service are available: (1) out-patient service for those who have minor ailments but who do not require constant supervision, and (2) infirmary service for those who are in need of the continued attention of the College physician or a registered nurse.

It is not possible for the College to provide unlimited medical service. Special medicines, examinations, treatments, X-ray examinations, and laboratory tests are not furnished by the College. However, no charge is made for care in the Health Center up to ten days each semester. A small fee for drugs, supplies, and special services may be charged students required to remain in the Health Center for more than ten days.

The Health Center is located on East Virginia near Combs Hall. It is adequately staffed and equipped for treating acute illnesses and minor injuries. It is not intended that the Center will provide care for students requiring surgery or the services of specialists. In these cases, every effort will be made by the College physician or nurse to notify the parents or guardians of the students' needs.

The College assumes no responsibility for continued medical care for students having chronic diseases. These students should arrange for the care of a private physician located in Beaumont or vicinity.

In the event the Health Center is filled to capacity, the College is not under obligation to provide hospital service elsewhere. However, the Health Center has a sufficient number of beds for all normal needs.

Students who are ill should report promptly to the Center for diagnosis and treatment. They will not be treated in the dormitory or in rooming houses. The College will take appropriate disciplinary action against students who refuse to report for medical advice when ill.

Veterans' Education

Lamar is approved for educating veterans under the Vocational Rehabilitation Law, known as Public Law Number 16 and Public Law Number 550.

Veterans who are interested in continuing their education under federal laws providing such training are directed to secure information and aid in planning their college work by consulting the office for Veteran's Education, Room 102 Liberal Arts Building.

Veterans may lose payments for the first calendar month of the semester if application and enrollment forms are not completed by the end of registration week. It is not possible for the College to process late entries until the following month.

Loan Funds and Scholarships

Financial assistance in the form of loans and scholarships is available for a limited number of students. Details may be obtained from the "Bulletin of Scholarships and Loans" which can be obtained on request to the Dean of Student Life, Lamar State College, Beaumont, Texas.

Teaching Fellowships

A limited number of teaching fellowships are available in the departments of the Graduate School. The usual stipend is $1,000 per academic year, which obligates the student to teach one, three-hour course for two semesters.

Graduate students employed as teaching fellows must reduce their academic load according to the teaching assignments in any given semester.

COLLEGE REGULATIONS

Course Numbering

Semesters of a course are numbered separately, and each number contains three or more figures. The first digit indicates the rank of the course: 1 means that it is for freshmen; 2, for sophomores; 3, for juniors; 4, for seniors; and 5, for graduates. The second figure indicates the number of semester hours' credit. The third figure (or figures) indicates the order in which the course is taken and is selected by the department concerned.

Postponed Examinations

Arrangements for taking postponed examinations and examinations for removing conditions are made with the department head concerned. Such arrangements should be made at least forty-eight hours prior to the examination.

Changing Schedules

No course may be added, changed, or dropped without the permission of the department head of the student's major field. Usually a course may not be added after the first week of the semester (first two days of summer session). Likewise, section changes may not be made after this period unless the change involves one instructor only. See the College Calendar.

Dropping Course

A student may drop a course without academic penalty during the first six weeks (three weeks of the summer session) of the semester.

For drops after this penalty-free period, grades are recorded as Drop or F indicating the student is passing or failing at the time of the drop.

A student may not drop a course within three days of the beginning of the final examination week.

Withdrawals

A student wishing to withdraw for the remainder of a semester, or term, should fill out a Withdrawal Petition in triplicate, after clearing all financial obligations, and returning all uniforms, books, laboratory equipment, and other materials to the point of original issue.

The Withdrawal Petition is signed by the Dean of the Graduate School and, together with a withdrawal notice for each class, is then presented to the Registrar by the student.

On application before the end of the semester or summer term, the Comptroller will return such fees as are returnable according to the schedule shown under the "Fees" section of the Catalog Bulletin. This refund is made only to the person withdrawing and if requested before the end of the current semester or summer term.

If a withdrawal is made before the end of the first six weeks (three weeks of summer term) of if the student is passing at the time of withdrawal, a grade of "W" is issued for each course so affected. A grade of "F" is issued for all courses not being passed at time of withdrawal after this penalty-free period.

A student may not withdraw within three days of the beginning of final exam week.

A student who leaves without an official withdrawal will receive a grade of "F" in all courses and will forfeit all returnable fees.

Enforced Withdrawal Due to Illness

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

Discipline

It is assumed that any student eligible for admission to the College is familiar enough with the ordinary rules of conduct for ladies and gentlemen to need no definite discipline regulations. The College reserves the right to place on disciplinary probation or to dismiss any student at any time for sufficient cause.

Any activity sponsored by any group of Lamar students recognized as such must conform to behavior requirements of the College. The officers of the particular group are held responsible for the behavior of the participants in the sponsored activity. Failure to maintain this standard of behavior may subject the group to suspension of all social activities for as much as one long session.

Possession or use of alcoholic liquors on the campus is forbidden by law, and the guilty student is subject to immediate dismissal as well as criminal prosecution. Possession or use of such liquors at any college-sponsored function is classified as unacceptable behavior.

Penalty for False Statements

A student who makes a false statement on any official form submitted to the College is subject to immediate dismissal.

Official Summons

An official summons from any administrative office takes precedence over all other college activities of the student and should be answered promptly on the day and hour designated. Failure to heed this official summons may subject the student to serious disciplinary action.

Parking Regulations

At registration time each student who pays the necessary fee is issued a car decal which permits parking on the campus. This numbered decal is to be placed in a specific place on the back window of the car.

Each student is warned to place this decal properly, to follow parking rules, and to stay out of restricted areas.

Ignoring parking tickets or official summons may result in suspension from all classes.

Student Debts

The College 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.

Penalty for failure to clear up these obligations may be: (1) no readmission; (2) withholding of grades and transcripts; (3) withholding of degree.

GRADUATE SCHOOL REQUIREMENTS

General

1. All the course work applied toward a given degree must be completed within a period of six years. Time spent in active military service will not be used in computing the six-year limit.

2. No graduate student is permitted to carry more than fifteen semester hours of graduate work during one semester of the long term nor more than twelve semester hours of graduate work during the summer session of twelve weeks.

3. With the approval of the head of the major department, an undergraduate student within fifteen semester hours of graduation may take not more than six semester hours of graduate courses to be applied toward the master's degree provided these courses are approved by the Graduate Council at the time of registration and provided the total academic load does not exceed the maximum load for graduate students.

4. The grading system for graduate students is A, B, C, D, F, I, Drop, Withdrawal--graduate credit being allowed for grades of A and B only.

5. With the approval of the head of the major department, the student may transfer as much as six semester hours of graduate work completed at another institution.

6. No academic work done in extension courses may be transferred or applied to graduate degree programs.

7. Fewer than six semester hours in any department may not be counted for graduate work. This regulation may be modified upon the approval of the head of the major department and the Graduate Council.

8. A student must be enrolled in the semester or term in which he receives his degree.

9. No graduate student may receive more than six semester hours credit for the thesis.

10. A student may be required to drop either from any course or from the College temporarily, or permanently, for any of the following reasons:

    A. Academic work below the standard as specified by the Graduate Council.

    B. Academic dishonesty or misconduct on the part of the student.

11. Resignation from the Graduate School should be made in writing to the Dean.

12. The College reserves the right to change any of its rules, requirements, or course regulations without notice.

DEGREE REQUIREMENTS

General

1. A graduate student must earn thirty to thirty-six semester hours of graduate credit depending upon the plan he is following and must complete a residence requirement of at least one academic year or its equivalent in summer terms.

2. A minimum of eighteen semester hours of the required thirty to thirty-six hours must be courses numbered 500 or above. Courses numbered 300 may be used for graduate credit only if extra academic work is required and if written approval has been secured from the department head and the Graduate Council prior to registration in such a course.

3. All candidates must pass a comprehensive oral examination covering the fields of concentration and the thesis, if a thesis is required.

4. The student must meet the specific requirements as set forth in this Catalog for his particular degree program.

Master of Arts

1. Meet all general degree requirements.

2. Complete thirty semester hours of graduate work: eighteen in the major field, six in thesis, six in an approved minor or six additional hours in the major (for candidates who wish to combine the master teacher program with a Master of Arts degree--thirty-six hours of graduate work are required: fifteen hours in the major, six hours in thesis, six hours in an approved minor, and nine hours in approved teacher education).

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.

Master of Science

1. Meet all general degree requirements.

2. Complete thirty semester hours of graduate work: fifteen to eighteen semester hours in the major field, six in thesis, and six to nine semester hours in the minor field.

Master of Engineering Science

1. In addition to the general requirements, complete thirty semester hours of graduate work as follows: twelve semester hours in engineering courses, six semester hours in thesis, and twelve semester hours in a combination of science and mathematics courses.

Master of Education

1. Meet all general degree requirements.

2. Earn a minimum of thirty-six semester hours of graduate credit including: twenty-one semester hours in education and fifteen semester hours in academic subject matter areas; or eighteen semester hours in education, six semester hours in thesis, and twelve semester hours in academic disciplines.

ADMISSION TO CANDIDACY

1. A student who desires to become a candidate for the master's degree should, before the time of registration, advise with the department head of his major field regarding the selection of his major professor. If his degree program requires a minor, then the head of the department selected as the minor field will advise with the student and his major professor regarding the selection of the minor professor.

   The major professor along with two members of the graduate faculty will constitute the student's advisory committee. (If the student selects a minor field, the advisory committee of three will include the minor professor.)

2. The student plans his program of study under the direction of this advisory committee immediately after the completion of the first semester of graduate work, or after he has completed six hours or more of graduate work. The degree plan should be submitted to the Graduate Council for final approval. No student will be admitted to candidacy until a degree plan has been approved by this Council.

   When such a degree plan has been approved and when the major department has made the recommendation, the Graduate Council may admit the student to candidacy for the master's degree.

3. A student will be admitted to candidacy for a graduate degree only after he has demonstrated his ability and fitness to do graduate work.

4. No student will be permitted to apply for candidacy prior to the removal of all undergraduate deficiencies.

5. A student must complete at least nine semester hours after admission to candidacy.

THESIS REQUIREMENTS

The Master of Arts, Master of Science, and Master of Engineering Science degrees require a thesis. The Master of Education degree offers two plans, one of which does not require a thesis. A student who is required or elects to write a thesis must:

1. Register for the thesis course after he has been admitted to candidacy and has obtained the approval of the head of his major department.

2. Secure a copy of the approved manual of instructions for preparing a thesis and follow it explicitly.

3. Write a thesis under the direction of his supervising professor. The thesis must be approved by his advisory committee and the Graduate Dean. Six semester hours of credit will be granted for the successful completion of the thesis. No credit will be reported for the thesis course until the final copy of the thesis has been approved.

CONFERRING OF DEGREES

Degrees earned in the Graduate School are normally conferred at the annual commencement in June and August. The candidate must be present to receive the degree, unless he has been excused by the Graduate Dean. Requests to receive a degree in absentia must be filed in the Dean's office at least four weeks before commencement date.

1. All candidates for the master's degree must file in the Graduate Dean's office during the first thirty days of the semester in which the student plans to receive his degree or during the first six days of the summer term in which the requirements for the degree are to be completed, the following:

   A. A diploma name card and pay the appropriate fees.

   B. An official transcript of all work to be counted on the master's degree.

2. If a thesis is being submitted as part of the graduate program, a single, unbound copy of the thesis must be submitted to the Dean of the Graduate School at least thirty days prior to the expected date of graduation.

   A. No later than fifteen days prior to the graduation date, the student must submit three copies of the finished thesis to the Graduate Dean.

   B. No later than ten days prior to the graduation date, the student must pay the thesis binding fee to the Lamar Bookstore.

3. A comprehensive oral examination must be completed at least ten days prior to the conferring of the degree.

DEPARTMENT OF ENGLISH

The Department of English offers two plans leading to the Master of Arts degree.

The regular plan requires the completion of thirty semester hours of graduate work: eighteen in English, six in thesis, and six in an approved minor or six additional hours in English. At least twelve semester hours, exclusive of the thesis, must be in English courses numbered 500 or above. The minor must be approved by the Head of the Department of English; such approval will be given on the basis of the support the minor can give to the major.

The master teacher plan requires the completion of thirty-six semester hours of graduate work: twelve in English, six in thesis, twelve in resource areas, and six in approved teacher education. With this combination plan, the student fulfills the requirements for the master's degree and is eligible to apply for the Professional Certificate--Secondary. At least nine semester hours, exclusive of the thesis course, 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; 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 six semester hours of teacher education required in the master teacher plan must be taken in courses specifically approved for the master teacher plan in English.

GRADUATE FACULTY

Members

Associate Professor Francis E. Abernethy
Renaissance literature, Folklore.

Professor Robert J. Barnes
British and Continental literature: 1840 to the present.

Professor Winfred S. Emmons, Jr.
Medieval English language and literature, American literature.

Associate Professor Harry L. Frissell
Renaissance and seventeenth century literature.

Professor Charles W. Hagelman, Jr.
Nineteenth century British and American literature.

Associate Professor Robert C. Olson
Old English language and literature, eighteenth century literature.

Associate Professor Henry B. Rule
American literature: 1840 to the present.

Professor Constantine N. Stavrou
American literature: 1840 to the present.
Twentieth century British literature.

Associate Professor A. W. Yeats
British literature: 1840 to the present.

The graduate student will select his English courses from the following list:

430--History of the English Language. Theory and nature of language. Studies in the growth of British and American forms. Class: 3 hours. Credit: 3 semester hours.

431--Chaucer. A study of the poetry and language of Chaucer with emphasis on the Canterbury Tales. Class: 3 hours. Credit: 3 semester hours.

432--The Age of Elizabeth. The non-dramatic literature of England from Skelton to Donne. Class: 3 hours. Credit: 3 semester hours.

433--The Age of Elizabeth. The dramatic literature of England, exclusive of Shakespeare, from Heywood to Ford. Class: 3 hours. Credit: 3 semester hours.

434--Shakespeare. Intensive study of selected major plays. Class: 3 hours. Credit: 3 semester hours.

435--The Seventeenth Century. The non-dramatic literature of England from the Metaphysical poets to Dryden. Class: 3 hours. Credit: 3 semester hours.

436--Milton. A study of Milton's poetry and prose against the social, political, and literary background of his time. Class: 3 hours. Credit: 3 semester hours.

437--Restoration and Eighteenth Century Drama. A study of the plays of the period: 1660-1800. Class: 3 hours. Credit: 3 semester hours.

438--The Eighteenth Century. The poetry and prose in England from the Restoration to the rise of Romanticism. Class: 3 hours. Credit: 3 semester hours.

439--The Romantic Period. An intensive study of the major authors of the period from Burns to Keats. Class: 3 hours. Credit: 3 semester hours.

4310--The Victorian Period. An intensive study of the major authors of the period from Carlyle to Swinburne. Class: 3 hours. Credit: 3 semester hours.

4313--The American Literary Renaissance: 1820-1860. An intensive study of the major authors of the period from Poe to Melville. Class: 3 hours. Credit: 3 semester hours.

4314--The Development of American Realism: 1860-1900. An intensive study of the major authors of the period from Whitman to Norris. Class: 3 hours. Credit: 3 semester hours.

4316--Literary Criticism. Chronological study of the great critics. An introduction to aesthetics. Prerequisite: senior standing. Class: 3 hours. Credit: 3 semester hours.

4317--Contemporary Drama. A study of dramatic trends and representative plays from Ibsen to the present. Class: 3 hours. Credit: 3 semester hours.

4318--Contemporary Poetry. A study of poetic developments in England and America with emphasis on representative poets from Hardy to the present. Class: 3 hours. Credit: 3 semester hours.

4319--Contemporary Fiction. A study of prose fiction representative of modern ideas and trends, with emphasis on English and Continental authors. Class: 3 hours. Credit: 3 semester hours.

4320--Selected Problems in Comparative Literature. Intensive study of an author or authors, literary genre, or period selected from the range of world literature. Emphasis upon analysis and literary method. Class. 3 hours. Credit: 3 semester hours.

4325--Language: Sound and Meaning. Theory of language for non-English majors. A study of meaning as related to words and to grammatical features. English phonology as applied to orthography. Class: 3 hours. Credit: 3 semester hours.

530--Bibliography and Research Methods. An introduction to graduate research methods and sources. Basic course for all beginning graduate students. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

531--Old English. A study of the grammar and the reading of short selections from the poetry and prose written before 1200. Emphasis will be placed on vocabulary and the historical development of the language. Prerequisite: graduate standing and English 430 (History of the Language) or the equivalent. Class: 3 hours. Credit: 3 semester hours.

532--Middle English. A study of the grammar and the reading of short selections from the literature of the period, 1200-1450. Emphasis will be placed on the development of the language into Modern English. Prerequisite: graduate standing and English 431 (Chaucer) or the equivalent. Class: 3 hours. Credit: 3 semester hours.

534--Studies in Medieval English Literature. An intensive study of an author or related authors selected from the Old English and Middle English periods. Course may be repeated for a maximum of six semester hours credit when the topic varies. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

535--Studies in Renaissance and Seventeenth Century English Literature. 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. Class: 3 hours. Credit: 3 semester hours.

536--Studies in Restoration and Eighteenth Century English Literature. 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. Class: 3 hours. Credit: 3 semester hours.

537--Studies in Nineteenth Century English Literature. 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. Class: 3 hours. Credit: 3 semester hours.

538--Studies in Twentieth Century Literature. 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. Class: 3 hours. Credit: 3 semester hours.

539--Studies in American Literature. 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. Class: 3 hours. Credit: 3 semester hours.

669--Thesis. Prerequisite: admission to candidacy for the master's degree. Credit: 6 semester hours.

DEPARTMENT OF HISTORY

The Department of History offers two plans of work leading to the Master of Arts degree.

The regular plan requires the completion of thirty semester hours of graduate work: eighteen in history, six in thesis, and six in an approved minor or six additional hours in history. At least twelve semester hours, exclusive of the thesis, must be in history courses numbered 500 or above. 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.

The master teacher plan requires the completion of thirty-six semester hours of graduate work: twelve in history, six in thesis, twelve in resource areas, and six in approved teacher education. With this combination plan, the student fulfills the requirements for both the master's degree and the Professional Certificate--Secondary. At least nine semester hours, exclusive of the thesis, must be in history courses numbered 500 or above.

The courses in the resource areas must be approved by the Head of the Department of History; 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 six semester hours of teacher education required in the master teacher plan must be taken in courses specifically approved for the master teacher plan in history.

GRADUATE FACULTY

Members

Associate Professor Samuel L. Evans
United States history; agriculture; economic; Texas.

Associate Professor Paul E. Isaac
United States history; recent; the West.

Associate Professor L. Wesley Norton
United States history; social and intellectual.

Professor Preston B. Williams
Modern European history; Central and Western Europe.

Professor Ralph A. Wooster
United States history; Civil War; the South.

The graduate student will select his history courses from the following list:

430--Era of the Renaissance and Reformation. Western Europe from 1453 to 1660. Class: 3 hours. Credit: 3 semester hours.

431--The Old Regime. Western Europe from 1660 to 1783. Class: 3 hours. Credit: 3 semester hours.

432--The French Revolution and Napoleon. Western Europe from 1783 to 1815. Class: 3 hours. Credit: 3 semester hours.

433--Russia and Eastern Europe to 1815. Russia, Poland, and the Balkans from the period of the Byzantine Empire to 1815. Class: 3 hours. Credit: 3 semester hours.

434--Nineteenth Century Europe. Europe from 1815 to 1914. Class: 3 hours. Credit: 3 semester hours.

435--Twentieth Century Europe. Europe since 1914. Class: 3 hours. Credit: 3 semester hours.

436--The American West. The American West from the Louisiana Purchase to the present. Class: 3 hours. Credit: 3 semester hours.

437--The American South. The American South from colonial times to the present. Class: 3 hours. Credit: 3 semester hours.

438--Victorian England. Great Britain from 1832 to 1914. Class: 3 hours. Credit: 3 semester hours.

4310--Problems in World History: Ancient and Medieval. Class: 3 hours. Credit: 3 semester hours.

4311--Problems in World History: Modern. Class: 3 hours. Credit: 3 semester hours.

4312--The Colonial and Revolutionary Period: The United States to 1789. Class: 3 hours. Credit: 3 semester hours.

4313--The Early National Period: The United States from 1789 to 1848. Class: 3 hours. Credit: 3 semester hours.

4314--The Civil War: The United States from 1848 to 1865. Class: 3 hours. Credit: 3 semester hours.

4315--Reconstruction and Industrialization: The United States from 1865 to 1898. Class: 3 hours. Credit: 3 semester hours.

4316--World Power and Reform: The United States from 1898 to 1929. Class: 3 hours. Credit: 3 semester hours.

4317--New Deal and World Leadership: The United States Since 1929. Class: 3 hours. Credit: 3 semester hours.

530--History of Historical Writing. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

531--Sources and Literature of Early United States History. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

532--Sources and Literature of Recent United States History. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

533--Sources and Literature of Modern European History. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

534--Sources and Literature of Modern British History. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

535--Seminar in Texas History. Course may be repeated for a maximum of six semester hours credit when the topic varies. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

536--Seminar in Southern History. Course may be repeated for a maximum of six semester hours credit when the topic varies. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

537--Seminar in Early United States History. Course may be repeated for a maximum of six semester hours credit when the topic varies. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

538--Seminar in Recent United States History. Course may be repeated for a maximum of six semester hours credit when the topic varies. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

669--Thesis. Prerequisite: admission to candidacy for the master's degree. Credit: 6 semester hours.

SCHOOL OF ENGINEERING

The School of Engineering offers a program of study leading to the Master of Engineering Science degree (M.E.S.). The Department of Mathematics offers the Master of Science degree in Mathematics (M.S.). (See Department of Mathematics, this Catalog.)

The Master of Engineering Science degree plan requires the completion of thirty semester hours of graduate work, including the thesis. For admission to the program, the student must meet the following requirements:

1. The general requirements for admission to the Graduate School.
2. Hold a bachelor's degree in a field of engineering or applied science.
3. Have completed mathematics through differential equations.
4. Have completed courses in chemistry and physics, equivalent to those required for undergraduate engineering students at Lamar.
5. Have completed courses in applied mechanics through Mechanics of Materials, Elements of Field Theory, Electronics, Thermodynamics, and Fluid Mechanics.

Degree Requirements

The candidate for the M.E.S. degree must meet all the Graduate School general degree requirements as listed in this Catalog. Additional specific degree requirements are as follows:

1. Eighteen semester hours of credit in engineering courses, including the following:
   - A. Fifteen semester hours of course work on the 500 level (may include thesis credit).
   - B. Six semester hours of graduate engineering courses from those designated as core courses (Egr 531, Egr 533, Egr 535, Egr 537).
   - C. Six semester hours in thesis.
2. Complete twelve semester hours of senior-graduate work in the fields of science and mathematics. A minimum of six semester hours must be in mathematics and at least three semester hours must be chosen in science.
3. All course work presented for the M.E.S. degree must have the approval of the candidate's graduate committee.

GRADUATE FACULTY

Members

Professor Lloyd B. Cherry
Electrical Engineering.

Professor James L. Cooke
Electrical Engineering.

Professor Robert A. McAllister
Chemical Engineering.

Associate Professor Harry T. Mei
Mechanical Engineering.

Professor Frank A. Thomas, Jr.
Mechanical Engineering.

Associates

Assistant Professor Bruce G. Rogers
Civil Engineering.

The graduate student will select his engineering courses from the following:

Chemical Engineering (CHE)

424--Instrumentation. The fundamental principles of process dynamics and instruments used for measurement and control of process variables, such as pressure, temperature, and flow rate. Class: 2 hours. Credit: 2 semester hours.

4314--Crystallization. Phase diagrams for three, four, and five component systems, separation of salts, and solution of problems with models. Prerequisite: CHE 333. Class: 3 hours. Credit: 3 semester hours.

4315--Phase Rule. Applications of the phase rule to chemical engineering three and four liquid components, and azeotropic distillation. Prerequisite: CHE 333. Class: 3 hours. Credit: 3 semester hours.

4316--Stagewise Processes. Graphical and analytical solutions of differential equations, and applications to the stagewise processes of engineering. Prerequisites: CHE 442, Mth 331. Class: 3 hours. Credit: 3 semester hours.

4317--Diffusional Operations. Principles of diffusion, boundary layer equations, mass-transfer coefficients, and diffusional operations of chemical engineering. Prerequisite: CHE 442. Class: 3 hours. Credit: 3 semester hours.

4318--Advanced Distillation. A study of the various design procedures used in multicomponent distillation and batch fractionation. Prerequisite: CHE 442. Class: 3 hours. Credit: 3 semester hours.

4323--Corrosion and Materials of Construction. Construction materials and corrosion in the chemical and petroleum industry. Class: 3 hours. Credit: 3 semester hours.

4324--Pollution and Waste Disposal. A study of the control and elimination of air and water pollution, and waste disposal methods, for chemical and petroleum plants. Class: 3 hours. Credit: 3 semester hours.

4325--Introduction to Nuclear Engineering. A study of the engineering aspects of nuclear fundamentals and processes. Prerequisite: CHE 331. Class: 3 hours. Credit: 3 semester hours.

4329--Properties of Gases and Liquids. A critical review of various estimation and correlation procedures for a number of physical properties of pure gases and liquids. Though the subject matter is tied closely to basic theory, its intrinsic value results from its utility in almost every chemical or petroleum industry. Class: 3 hours. Credit: 3 semester hours.

Civil Engineering (CE)

430--Indeterminate Structures. The basic principles of statically indeterminate structural analysis, based upon requirements of equilibrium and continuity. The classical methods of slope deflection and minimum potential energy are compared with moment distribution. Prerequisite: CE 334. Class: 2 hours. Laboratory: 3 hours. Credit: 3 semester hours.

433--Advanced Highway Engineering. Continuation of CE 442. Includes traffic studies, analysis of the functions and organizational set up of federal, state and local agencies. Financing and design of modern expressways. Grade separators. Access control. Prerequisites: CE 437 and CE 434. Class: 2 hours. Laboratory: 3 hours. Credit: 3 semester hours.

4311--Plastic Design. Indeterminate methods of analysis combined with plastic theory of behavior of material in the design of metal structures of the rigid frame type. Consideration of load and shape factors. Prerequisite: CE 334. Class: 3 hours. Credit: 3 semester hours.

444--Advanced Strength of Materials. A continuation of CE 333, state of stress at a point, experimental stress analysis, theories of failures; thick walled cylinders, unsymmetrical bending; curved flexural members; flat plates; torsion of non-circular sections. Prerequisite: CE 333. Class: 3 hours. Laboratory: 3 hours. Credit: 4 semester hours.

445--Advanced Sanitary Engineering. Sanitary engineering design problems, water treatment plants, water distribution systems, sewage collection systems, sewage treatment plants, and incinerators. Prerequisite: CE 432. Class: 3 hours. Laboratory: 3 hours. Credit: 4 semester hours.

446--Advanced Soil Mechanics. Soil influence on pile design. An analysis of stress conditions for a failure in soils; plastic equilibrium in a semi-infinite mass; arching in ideal soils; passive earth pressure;

bearing capacity; stability of slopes; theory of consolidation. Prerequisite: CE 434. Class: 3 hours. Laboratory: 3 hours. Credit: 4 semester hours.

447--Advanced Reinforced Concrete Design. Design of beam, girder and flat structures, including columns; spread, pile and pier foundations; retaining walls; construction methods. Prerequisite: CE 438. Class: 3 hours. Laboratory: 3 hours. Credit: 4 semester hours.

Electrical Engineering (EE)

432--Electronics III. Tuned voltage and power amplifiers, oscillators, rectifiers with associated filers and regulators, and frequency modulation and demodulation (detection), relaxation oscillators, sweep generators, and electronic instruments. Prerequisite: EE 431. Class: 3 hours. Credit: 3 semester hours.

434--Transient Analysis of Circuits. The fundamental principles of transient circuit analysis by using the LaPlace Transform method of solving the circuit differential equations. Applications of method to television, servo-systems, and power system protection. Prerequisites: EE 427, EE 431, and Mth 331. Class: 3 hours. Credit: 3 semester hours.

436--Servo Mechanisms. An introduction to the theory of linear open-and-closed-loop systems. An analytical analysis of the controlling differential equations of regular and hybrid systems. Includes an investigation of the frequency response, stability and compensating methods of systems by using operational calculus. A study of components for use in servo-systems. Prerequisites: EE 431 and EE 435. Class: 3 hours. Credit: 3 semester hours.

437--Micro-Wave. A study of micro-wave generation, transmission, and detection. Includes a treatment of motion of electrons in micro-wave devices and specific tubes such as klystrons, traveling-wave tubes, and magnetrons. Consideration is given to measurements and measuring devices at these frequencies. Concurrent: EE 431 and EE 433. Class: 3 hours. Credit: 3 semester hours.

438--Electric Power Systems. Theory of operation of electric power systems under balanced steady-state conditions and unbalanced or faulty conditions. Treatment involves generalized circuit equations and symmetrical components. Prerequisite: EE 435. Class: 3 hours. Credit: 3 semester hours.

449--Advanced Circuit Theory. Generalized electric and electromechanical circuits in steady state and in transient conditions, including sufficient transformation calculus to analyze the stability of such networks. Class: 3 hours. Laboratory: 3 hours. Credit: 4 semester hours.

Mechanical Engineering (ME)

428--Principles of Automatic Controls. The theory of automatic control with application to combustion, temperature, pressure, flow

and humidity control. Industrial control systems are considered. Prerequisite: ME 322. Class: 2 hours. Credit: 2 semester hours.

432--Mechanical Vibrations. The theory of vibrating systems, including kinematics of vibrations, harmonic and non-harmonic, single and multiple degrees of freedom; free and forced vibrations, with and without damping. Applications to crank and slider, rotating machinery, balancing, vibration isolation and absorption, and instrumentation. Prerequisites: ME 4311 or concurrent, and ME 332. Class: 3 hours. Credit: 3 semester hours.

433--Aerodynamics. Topics include circulation and curl, irrotational flow, velocity potential, vortex theorems, the equations of motion, flow about a body, and the thin airfoil. Vector and complex notation is used. Prerequisite: ME 321 or concurrent. Class: 3 hours. Credit: 3 semester hours.

439--Advanced Dynamics. Dynamics of a particle. Dynamics of a system of particles. Dynamics of systems with constraints. Theory of small vibrations. Rotation of a rigid body about a fixed point. Prerequisites: ME 234 and ME 4311. Class: 3 hours. Credit: 3 semester hours.

4313--Advanced Strength of Materials. Introduction to the fundamental theory of three dimensional elasticity. Specialization of the general theory to provide the theory of plane stress and plane strain. Determination of stress and deflections in a beam on elastic foundation, plates, shells, and cylinders. Study of torsion of bars and cylinders. Prerequisites: ME 234, CE 331, and ME 4311. Class: 3 hours. Credit: 3 semester hours.

4314--Fundamentals of Physical Metallurgy. Fundamental and scientific principles of physical metallurgy to include: nucleation theory of solidification, behavior of single and polycrystalline solids under stress and heat treatment--plastic deformation and recrystallization, and basic principles of x-ray diffraction used in physical metallurgy. Prerequisites: ME 211, ME 212, and ME 320. Class: 3 hours. Credit: 3 semester hours.

4315--Thermodynamics III. An introduction to the kinetic theory of gases, statistical mechanics, and quantum theory. Prerequisites: ME 338, Mth 4317 or concurrent. Class: 3 hours. Credit: 3 semester hours.

4316--Thermodynamics IV. Topics in chemical thermodynamics of interest to the Mechanical Engineer, including combustion and combustion charts, binary mixtures, equilibrium and generalized thermodynamic charts. Prerequisite: ME 338. Class: 3 hours. Credit: 3 semester hours.

4317--Engineering Analysis II. A continuation of ME 4311 with some emphasis being placed on analog methods and computer techniques in solving engineering problems. Prerequisite: ME 4311. Class: 2 hours. Laboratory: 3 hours. Credit: 3 semester hours.

4318--Two-Dimensional Photoelasticity. Stress and strains at a point. Stress-strain relations. Isoclinics and stress trajectories. A

brief review of optics with emphasis on polarization of light. Double refraction. Stress-optic law. Stress patterns. Analysis of photoelastic results. The laboratory consists of preparing photoelastic models, determining stresses with a photoelastic analysis, and comparing results from existing theoretical approaches. Prerequisites: ME 332, Phy. 232. Class: 2 hours. Laboratory: 3 hours. Credit: 3 semester hours.

Engineering (Egr)

Core Courses

531--Materials Science. Principles underlying the behavior of materials existing in the solid, liquid, and gaseous phases. Class: 3 hours. Credit: 3 semester hours.

533--Engineering Analysis. Methods of solution of problems drawn from contemporary engineering practice. Methods of mathematical physics including lumped parameter and distributed-parameter problems are covered. Analog and digital computer techniques are introduced and employed. Statistical concepts are employed. Prerequisite: Mth 4302 or concurrent. Class: 3 hours. Credit: 3 semester hours.

535--Controls Engineering. Principles and analysis of systems and processes with applications drawn from the various engineering fields. Covers controls, response, stability and compensation. Special topics, which may be varied according to interest, from nonlinear systems, digital systems, statistically described signals and multivariable systems. Prerequisite: Mth 4301. Class: 3 hours. Credit: 3 semester hours.

537--Energy Conversion. A study of energy forms and their relation to physical systems, including general laws of thermodynamics, quantum mechanics, electric and magnetic phenomena and methods of irreversible thermodynamics. Class: 3 hours. Credit: 3 semester hours.

Others

5311--Transport Phenomena. The fundamental relationships involved in momentum heat and mass transfer. Emphasis is on principles and fundamentals, but applications and analogies are developed extensively. Prerequisite: Mth 4301 or concurrent, or Mth 433 or concurrent. Class: 3 hours. Credit: 3 semester hours.

5313--Rate Processes. Rates of energy transfer with selected topics in the fields of mechanical, thermal, chemical, electrical, and other energy transformation. Prerequisite: Mth 4302 or concurrent. Class: 3 hours. Credit: 3 semester hours.

5315--Advanced Engineering Mechanics. General analysis of stress and strain, equations of equilibrium and compatibility, stress strain relations, two dimensional stress problems, elastic energy principles, thermoelastic problems. Class: 3 hours. Credit: 3 semester hours.

669--Thesis. Prerequisite: admission to candidacy for the master's degree. Credit: 6 semester hours.

DEPARTMENT OF MATHEMATICS

The Department of Mathematics offers a program of study leading to the Master of Science degree in Mathematics (M.S.). Those seeking admission to this program must meet the general requirements as set forth in this Catalog for admission to the Graduate School. In addition, the applicant's twenty-four semester hours of undergraduate work in mathematics must include a course in advanced calculus or its equivalent.

Degree Requirements

The Master of Science degree in mathematics requires the completion of thirty semester hours of graduate work of which eighteen semester hours must be in courses listed 500 or higher.

Additional specific degree requirements are as follows:

1. Fifteen semester hours in mathematics, including nine semester hours of graduate courses (exclusive of thesis).
2. Six semester hours in thesis.
3. Nine semester hours in a minor field. (Minor field must be approved by candidate's graduate committee.)

GRADUATE FACULTY

Members

Professor Jeremiah M. Stark
Analysis.

Professor Peter Terwey, Jr.
Applied Mathematics.

The graduate student will select his courses in mathematics from the following:

4302--Advanced Calculus for Engineers. Boundary-value problems, orthogonal functions, introduction to vector analysis and functions of a complex variable, partial differential equations of mathematical physics. Class: 3 hours. Credit: 3 semester hours.

431, 432--Introduction to Functions of a Complex Variable. Review of theorems from analysis and point set theory followed by a study of analytic functions from the Cauchy-Riemann and Weierstrass points of view. Compact sets, uniform convergence, Taylor Expansion Theorem, analytic continuation, Laurent expansions, calculus of residues, conformal mapping. Class: 3 hours. Credit: 3 semester hours.

433--Vector Analysis. The algebra and calculus of vectors with applications. Scalar and vector fields, operators, Green's, Stokes', and Divergence Theorems, curvilinear coordinates. Other topics as time permits. Class: 3 hours. Credit: 3 semester hours.

434--Partial Differential Equations. General and particular solutions, boundary conditions, Fourier series, Bessel functions, harmonic analysis, numerical solutions, condition of heat, flow of electricity. Class: 3 hours. Credit: 3 semester hours.

4311--Numerical Solution of Differential Equations. Analytical foundations. Methods for ordinary and partial differential equations. Class: 3 hours. Credit: 3 semester hours.

531--Theory of Functions of Real Variable. Analytic functions, pathological functions, set functions, Riemann integral, measure theory, Lebesque integral, Riemann-Stieltjes and Lebesque-Stieltjes integral. Class: 3 hours. Credit: 3 semester hours.

533--Calculus of Variations. The Euler-Lagrange differential equation, necessary conditions of Legendre, Jacobi, and Weierstrass, sufficient conditions for an extreme, brachistochrone problem, geodesics, surfaces of revolution of minimum area, other problems as time permits. Class: 3 hours. Credit: 3 semester hours.

535--Introduction to Advanced Analysis. The Riemann mapping theorem, prime number theorem, functions of finite order, Turan's proof of Fabry gap theorem, other topics as time permits. Prerequisite: Mth 431. Class: 3 hours. Credit: 3 semester hours.

537--Methods of Applied Mathematics. The Dirichlet problem, solution of boundary-value problems, the Bergman kernel function, method of the minimum integral, applications of conformal mapping. Fredholm theory. Prerequisite: Mth 431. Class: 3 hours. Credit: 3 semester hours.

539--Infinite Series. Sequences, power series, series of functions, complex series, expansion of functions, tests for convergence, uniform convergence, conditions for rearranging terms in a series, Fourier series, Lambert series, Weierstrass theorem on double series, asymptotic expansions, sumation of series. Class: 3 hours. Credit: 3 semester hours.

669--Thesis. Prerequisite: admission to candidacy for the master's degree. Credit: 6 semester hours.

For Non-Mathematics Majors

530--Seminar in Mathematics for Teachers. A review of basic mathematics through description and problem solving techniques. May not be taken for credit by science, engineering, or mathematics students. Class: 3 hours. Credit: 3 semester hours.

DEPARTMENT OF EDUCATION

The Department of Education offers work leading to the Master of Education degree in Elementary Education. The completion of this program fulfills the curriculum requirements for the Professional Certificate in Elementary Education.

The Department also offers courses to fulfill the Professional Development requirements for a Professional Certificate in Secondary Education in the areas of English and history.

Master of Education Degree (M.Ed.)

in Elementary Education

General Requirements

1. The student must fulfill the general requirements for admission and the general degree requirements that are stated elsewhere in this Bulletin.
2. The applicant must have completed twenty-four semester hours in education, including twelve semester hours of junior-senior courses in elementary education.
3. The student must have completed a course in supervised student teaching or have taught one year.
4. The student must earn a minimum of thirty-six semester hours of graduate credit.
5. The student may elect to write a thesis. If so, he is required to complete a minimum of thirty semester hours in addition to a thesis.

Degree Plan:

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. Twelve semester hours must be selected from the following courses:
   - A. Edu. 534 - Advanced Study in Child Psychology
   - B. Edu. 537 - The Elementary School Curriculum
   - C. Edu. 538 - Problems in Teaching Arithmetic and Science
   - D. Edu. 539 - Developmental Reading
   - E. Edu. 536 - Problems in Teaching Language Arts and Social Studies

F. Edu. 5310 - Current Literature for Children and Adolescents

2. Area of Professional Development. Nine semester hours must be selected from the following courses (six semester hours if the student elects to write a thesis):

A. Edu. 530 - Structure and Organization of Public Education

B. Edu. 531 - Research

C. Edu. 532 - Current Issues in Education

D. Edu. 533 - Contemporary Philosophies of Education

E. Edu. 535 - Advanced Educational Psychology

F. Edu. 669 - Thesis. Credit: six semester hours

3. Resource Areas. Fifteen semester hours of advanced or graduate courses are required. (Twelve semester hours if a thesis is written)

A. Six semester hours of senior or graduate level courses must be taken in one of the following disciplines: history, government, English, foreign language, mathematics, and science.

B. Nine semester hours must be selected from the following seminars: (Six semester hours if a thesis is written)

(1) Phy. 430 - Seminar in Physical Sciences

(2) Mth 530 - Seminar in Mathematics for Elementary Teachers

(3) Bio. 431 - Seminar in Biological Sciences

(4) Eco. 4312 - Seminar in Economics

(5) Soc. 430 - Seminar in Principles of Sociology

(6) Spc. 439 - Seminar in Fine Arts

Program Leading to Professional Certificate--Secondary

Prerequisites and Requirements:

1. The student must hold or be eligible for the Provisional Certificate--Secondary in the designated area.

2. The student must fulfill the requirements for a Master of Arts degree in history or English.

3. The student must complete the following program of study:

A. Specialization Area. Twelve semester hours of graduate

courses must be completed in the area of English or history.

B. Resource Areas. Twelve semester hours in senior or graduate courses must be completed in one or more of the following areas (different from specialization area): English, history, government, sociology, foreign language, mathematics, and science.

C. Professional Development. Six semester hours of approved courses in professional education must be completed.

D. Thesis in Major Field.. Credit: six semester hours.

General Information Concerning Professional Certificates

Validity

The Professional Certificate is valid for life unless canceled 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 faces of the certificates.

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 constitutions 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 $3.00.

Course Load for Full-Time Teachers

Full-time teachers may enroll for as much as six semester hours of graduate credit for one semester during an academic year; however, the load of such students shall not exceed nine semester hours for the academic year.

GRADUATE FACULTY

Members

Professor Howard W. Adams
Secondary Education; educational research.

Professor M. L. McLaughlin
Elementary Education; contemporary education.

Professor Conrad D. Mang
Elementary Education; educational philosophy.

Professor Ruth H. Olcott
Elementary Education; administration; psychology.

Associate Professor Thomas T. Salter
Elementary Education; elementary curriculum.

Associate Professor E. Lee Self
Secondary Education; public education.

The graduate student will select his education courses from the following list:

530--Structure and Organization of Public Education. Analysis of the operation and functions of public education at the local, state, and national levels. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

531--Research. Introduction to skills and techniques necessary for research and problem solving in education. Emphasis on terminology, methodology, and spirit of systematic research. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

532--Current Issues in Education. Current controversies and trends in public education. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

533--Contemporary Philosophies of Education. Influence of recent philosophies on education. Schools of educational philosophy and implications for curriculum development and teaching methods. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

534--Advanced Study in Child Psychology. A study of the development and nature of the human personality. Emphasis on recent psychological and biological experiments. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

535--Advanced Educational Psychology. Current theories and developments in the process of learning. Emphasis on motivation, transfer, and learning techniques. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

536--Problems in Teaching the Language Arts and Social Studies. Recent developments and trends with primary consideration given to

individual teaching problems and individual research. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

537--The Elementary School Curriculum. Analysis of the objectives, organization, and content of the different areas of the elementary school curriculum. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

538--Problems in Teaching Arithmetic and Science. Study of current developments and trends with emphasis upon individual teaching problems. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

539--Developmental Reading. Methods for extending and refining fundamental reading habits and attitudes, and for increasing reading efficiency. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

5310--Current Literature for Children and Adolescents. Survey of recent literature for children and adolescents. Emphasis given to nonfiction in such areas as earth science and social science. Extensive reading of actual literature. Prerequisite: graduate standing. Class: 3 hours. Credit: 3 semester hours.

669--Thesis. Prerequisite: admission to candidacy for the Master of Education degree. Credit: 6 semester hours.