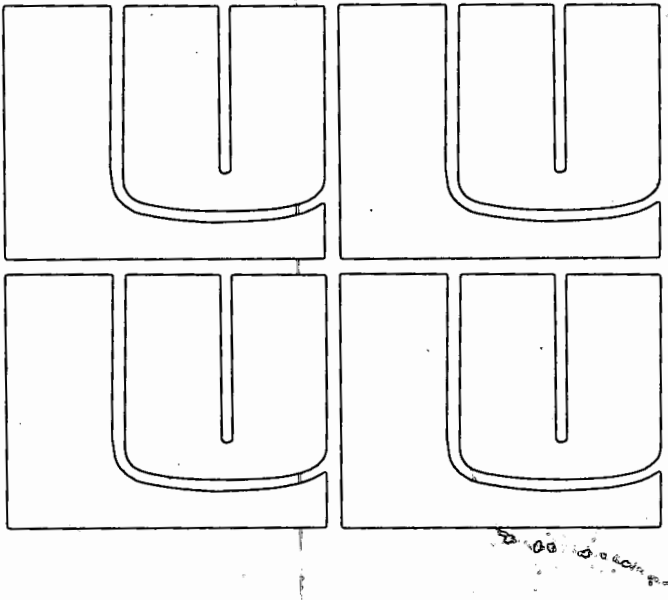

LAMAR UNIVERSITY

Bulletin 1979-81

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Lamar University

1979-81 Bulletin

Vol. 29 No. 2 1978

Twenty-Ninth Annual Catalog Issue

With Announcements for 1979-81

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

The courses, tuition and fees and all other conditions and policies set forth in this catalog issue shall be subject to change without notification.

Bulletin of Lamar University (USPS 074-420). Second class postage paid at Beaumont, Texas 77710. Published monthly except in June, July and August.

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LU at Port Arthur ..... W. Sam Monroe, Dean, 1500 Procter, Port Arthur, Texas 77640

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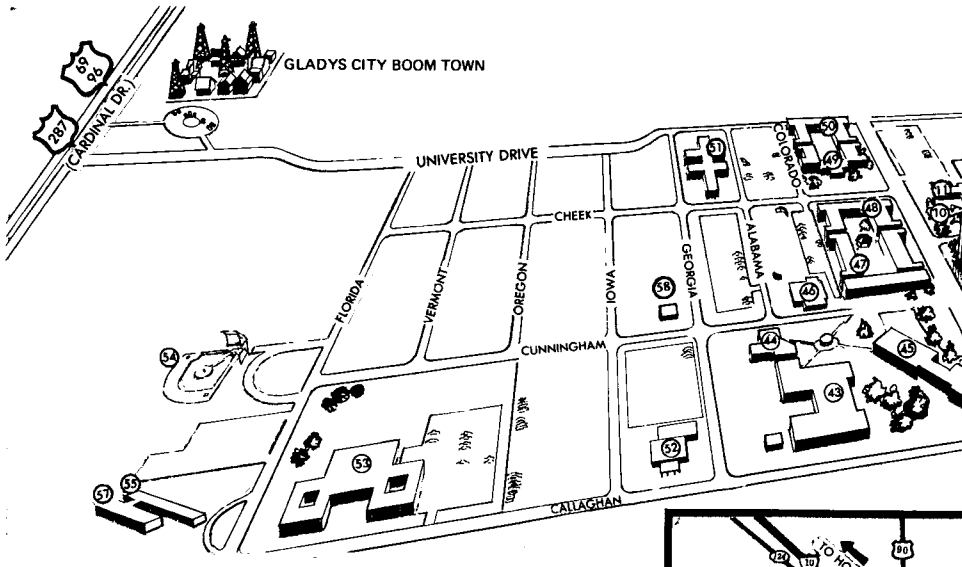

Register of Offices

Visitor Information	**Bldg. 3**	Operations and Planning	1
Academic Deans (By Colleges)		Photographic Services	45
Business	9	Placement Center	9
Education	44	President	1
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Fine and Applied Arts	22	Publications	12
Graduate Studies	1/3	Public Information	1
Health Sciences	33	Purchasing Agent	1
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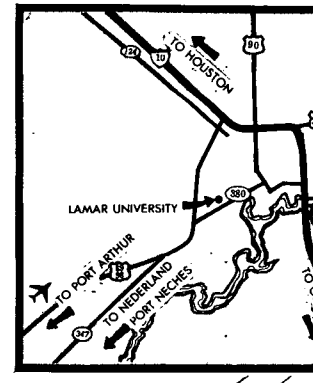
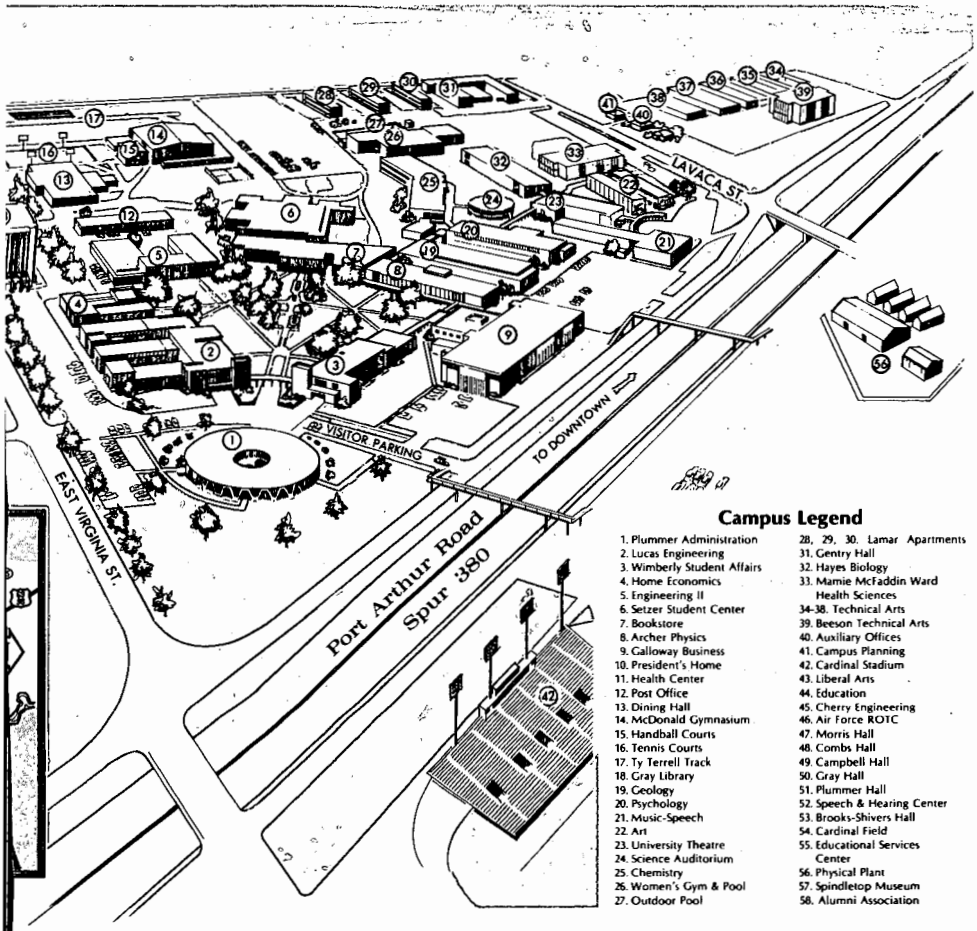


The Campus

Lamar University's campus has expanded rapidly during the past decade and now encompasses more than 200 acres. The University also has campuses in Orange and Port Arthur.

Guidelines for future expansion of the Beaumont campus are included in a conceptual master plan which will guide development into the year 2000. A large portion of the master plan already has been approved by the University's Board of Regents.



Campus Legend

1. Plummer Administration
2. Lucas Engineering
3. Wimberly Student Affairs
4. Home Economics
5. Engineering II
6. Setzer Student Center
7. Bookstore
8. Archer Physics
9. Calloway Business
10. President's Home
11. Health Center
12. Post Office
13. Dining Hall
14. McDonald Gymnasium
15. Handball Courts
16. Tennis Courts
17. Ty Terrell Track
18. Gray Library
19. Geology
20. Psychology
21. Music-Speech
22. Art
23. University Theatre
24. Science Auditorium
25. Chemistry
26. Women's Gym & Pool
27. Outdoor Pool
28, 29, 30. Lamar Apartments
31. Gentry Hall
32. Hayes Biology
33. Mamie McFaddin Ward Health Sciences
34-38. Technical Arts
39. Beeson Technical Arts
40. Auxiliary Offices
41. Campus Planning
42. Cardinal Stadium
43. Liberal Arts
44. Education
45. Cherry Engineering
46. Air Force ROTC
47. Morris Hall
48. Combs Hall
49. Campbell Hall
50. Gray Hall
51. Plummer Hall
52. Speech & Hearing Center
53. Brooks-Shivers Hall
54. Cardinal Field
55. Educational Services Center
56. Physical Plant
57. Spindletop Museum
58. Alumni Association

Architects have placed a strong emphasis upon developing a feeling of "monumentality and dignity," with the library as the dominant focus of the campus. The 20-year plan shows the addition of multi-storied buildings.

1979-81 Calendar

Published dates of this calendar are subject to revision by published notice from the vice president for Academic Affairs — Lamar University.

Fall Semester — 1979

AUGUST 1979

21 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.
22 Registration begins
23 Registration
24 Registration
27 Classes begin — late registration — no schedule revisions
28 Schedule revisions — late registration
30 Last day for schedule revisions and/or late registration

SEPTEMBER

11 Twelfth Class Day

OCTOBER

11 Last day to drop or withdraw without penalty
19 Last day to apply for December graduation
Last day to pay for diploma; cap and gown

NOVEMBER

21 Thanksgiving holidays begin at 10 p.m.
Dining halls close at 6 p.m.
Dormitories close at 10 p.m.
25 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.
26 Classes resume at 8 a.m.
28 Last day to drop or withdraw

DECEMBER

5-11 Final examinations
12 Dining halls close at 6 p.m.
Dormitories close at 10 p.m.
13 Grades for graduating students due 4:30 p.m.
14 All grades due noon
15 Commencement

Spring Semester — 1980

JANUARY 1980

8 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.
9 Registration begins
10 Registration
11 Registration
14 Classes begin — late registration — no schedule revisions
15-18 Schedule revisions — late registration
18 Last day for schedule revisions and/or late registration
29 Twelfth Class Day

FEBRUARY

22 Last day to drop or withdraw without penalty

MARCH

7 Last day to apply for May graduation
Last day to pay for diploma; cap and gown
Spring recess begins at 5 p.m.
Dining halls and dormitories close
16 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.
17 Classes resume at 8 a.m.

APRIL

4 Holiday
23 Last day to drop or withdraw
30-May 6 Final examinations

MAY

1-6 Final examinations
7 Dining halls close at 6 p.m.
Dormitories close at 10 p.m.
8 Grades for graduating students due 4:30 p.m.
9 All grades due noon
10 Commencement
All grades due by 8:30 a.m.

Summer Session — 1980

First Term

JUNE

1 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.
2 Registration
3 Classes begin
4 Last day for schedule revisions and/or late registration
6 Fourth Class Day
16 Last day to drop or withdraw without penalty
30 Last day to apply for August graduation
Last day to pay for diploma; cap and gown

JULY

3 Last day to drop or withdraw
4 Holiday
9 Last class day
11 All grades due by noon

Second Term

JULY

10 Registration
11 Classes begin — schedule revisions — late registration
14 Last day for schedule revisions and/or late registration
16 Fourth Class Day
24 Last day to drop or withdraw without penalty

AUGUST

12 Last day to drop or withdraw
15 Last class day
Grades for graduating students due 8:30 a.m.
Dining halls and dormitories close 6:00 ~~4~~ 10:00
16 Commencement
All grades due by noon

Fall Semester — 1980

AUGUST 1980

24 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.
25 Registration begins
26 Registration
27 Registration
28 Classes begin — late registration — no schedule revisions
29 Schedule revisions — late registration

SEPTEMBER

1 Holiday
2 Last day for schedule revisions and/or late registration
15 Twelfth Class Day

OCTOBER

8 Last day to drop or withdraw without penalty
17 Last day to apply for December graduation
Last day to pay for diploma; cap and gown

NOVEMBER

26 Thanksgiving holidays begin at 10 p.m.
Dining halls close at 6 p.m.
Dormitories close at 10 p.m.
30 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.

DECEMBER

1 Classes resume at 8 a.m.
Dining halls open
3 Last day to drop or withdraw
11-17 Final examinations
17 Dining halls close at 6 p.m.
Dormitories close at 10 p.m.
19 Grades for graduating seniors due 8:30 a.m.
20 Commencement
All grades due by 8:30

Spring Semester — 1981

JANUARY 1981

11 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.
12 Registration begins
13 Registration
14 Registration
15 Classes begin — late registration — no schedule revisions
16-20 Schedule revisions — late registration
20 Last day for schedule revisions and/or late registration
30 Twelfth Class Day

FEBRUARY

25 Last day to drop or withdraw without penalty

MARCH

6 Last day to apply for May graduation
Last day to pay for diploma; cap and gown
Spring recess begins at 5 p.m.
Dining halls and dormitories close
15 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.
16 Classes resume at 8 a.m.

APRIL

17 Holiday
29 Last day to drop or withdraw

MAY

7-13 Final examinations
Dining halls close at 6 p.m.
Dormitories close at 10 p.m.
15 Grades for graduating students due 8:30 a.m.
16 Commencement
All grades due by 8:30 a.m.
31 Dormitories open at 1 p.m.
Dining halls open at 4:30 p.m.

Summer Session — 1981

First Term

JUNE

1 Registration
2 Classes begin
3 Last day for schedule revisions and/or late registration
5 Fourth Class Day
15 Last day to drop or withdraw without penalty
29 Last day to apply for August graduation
Last day to pay for diploma; cap and gown

JULY

2 Last day to drop or withdraw
3 Holiday
8 Last class day
10 All grades due by noon

Summer Session — 1981

Second Term

JULY

9 Registration
10 Classes begin
13 Last day for schedule revisions and/or late registration
15 Fourth Class Day
23 Last day to drop or withdraw without penalty

AUGUST

11 Last day to drop or withdraw
14 Last class day
Grades for graduating students due 8:30 a.m.
Dining halls and dormitories close
15 Commencement
All grades due by noon

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B.S., Texas Tech University; M.M., The University of Texas; Ed.D., University of Colorado; Regents' Professor

JOAN S. WILKERSON, Assistant Professor of English, 1969, 1974
A.B., Duke University; M.A., George Peabody College for Teachers

ROBERT H. WILKERSON, Assistant Professor of Communication, 1964, 1979
B.A., M.A., The University of Oklahoma

DONALD E. WILLIAMS, Associate Professor of Business Administration, 1952, 1966
B.A., M.A., Ed.D., North Texas State University

PRESTON B. WILLIAMS, Professor of History, Dean, College of Liberal Arts, 1950, 1966
B.A., M.A., North Texas State University; Ph.D., The University of Texas

CURTIS E. WILLS, Assistant Professor of Secondary Education, 1971
B.S., M.Ed., Sam Houston State University; Ed.D., North Texas State University; Licensed Psychologist

DONNA WILSKER, Assistant Professor of Nursing, 1977
B.S.N., University of Bridgeport; M.S.N., University of Maryland; Registered Nurse

IRA LEE WILSKER, Instructor I of Mid-Management, 1977
B.S., M.B.A., University of Maryland

JERRY L. WILSON, Instructor III of Industrial Electricity and Electronics Technology, 1970, 1978
B.S., M.Ed., Lamar University

NEDA E. WILSON, Assistant Professor of Public Affairs, 1977
B.A., Lamar University; M.S.W., University of Houston

BETTY WINNEY, Assistant Professor of Speech and Hearing Therapy, 1967, 1976
B.S., M.S., Lamar University; Certificate in Audiology

SAM M. WOOD, JR., Associate Professor of Mathematics, Director of Mathematics Instruction, 1958, 1975
B.A., The University of Texas; M.S., Texas A&M University; Regents' Professor

EMMA JEAN WOODARD, Clinical Instructor in Nursing, 1973
B.S.N., Prairie View A&M University; Registered Nurse

NAAMAN J. WOODLAND, JR., Associate Professor of History, 1957, 1969
B.A., B.S., Louisiana State University; M.A., Northwestern University

GEORGE A. WOODWARD, Associate Professor of Sociology, 1967
B.S., M.A., University of Houston; Ph.D., The University of Oklahoma

RALPH A. WOOSTER, Professor of History, Dean, College of Graduate Studies and Dean of Faculties, 1955, 1977
B.A., M.A., University of Houston; Ph.D., The University of Texas; Regents' Professor

BOBBY E. WOOTEN, Assistant Professor of Business Administration, Coordinator of Management and Finance, 1975, 1977
B.B.A., M.B.A., Lamar University; Ph.D., Louisiana State University

WILLIAM L. WORSHAM, Assistant Professor of Health and Physical Education for Men, Director of Intramurals for Men, 1972, 1978
B.S., M.Ed., Lamar University

LEONARD A. YATES, Professor of Health and Physical Education for Men, 1966, 1973
B.S., M.S., Louisiana State University; Ed.D., University of Houston; Regents' Professor

CARL L. YAWS, Associate Professor of Chemical Engineering, 1975
B.S., Texas A&I University; M.S., Ph.D., University of Houston; Registered Professional Engineer

A. W. YEATS, Professor of English, 1961, 1966
B.A., McMurry College; M.A., Ph.D., The University of Texas

ROGER E. YERICK, Professor of Chemistry, Dean, College of Sciences, 1958, 1974
B.S., Texas A&I University; Ph.D., Iowa State University

FRED M. YOUNG, Professor of Engineering, Dean, College of Engineering, 1978
B.S.M.E., M.S.M.E., Ph.D., Southern Methodist University

IRA LEE YOUNG, Instructor of Radiology Technology, 1978
B.A., McNeese State University; M.S., M.Ed., Nicholls State University; Radiologic Technologist

PAUL T. ZEEK, Instructor of Health and Physical Education for Men, Athletic Trainer, 1971
B.S., The University of Texas at El Paso

Part-Time

FRANK A. ADAMS, Adjunct Instructor of Real Estate, 1975
B.A., Vanderbilt University; J.D., The University of Texas

MARILYN A. ADAMS, Adjunct Instructor of Business Administration, 1976
B.A., The University of Texas; J.D., South Texas College of Law

PAULA AINSWORTH, Lecturer of Health and Physical Education for Women, 1977
B.S., Lamar University

RACHEL ANN BAIZE, Clinical Instructor of Respiratory Technology
Registered Respiratory Therapist, Certified Respiratory Therapy Technician; L.V.N.

KENNETH CHARLES BAKER, Adjunct Instructor, Technical Department, 1978

GENE NORMAN BARRY, D.D.S., Adjunct Instructor of Dental Hygiene

WILLIE BAUER, Adjunct Professor of Criminal Justice, 1978
Advanced Instructor, Texas Commission on Law Enforcement; Officer Standards and Education

RUDOLPH A. BECKER, Lecturer, Industrial Department, 1978

JOHN E. BERWICK, Adjunct Instructor of Industrial Department, 1977

RONNELL H. BERWICK, Adjunct Instructor of Business Data Processing
B.B.A., Lamar University

JAMES K. BOUGHTON, Instructor of Civil Engineering, 1977, 1978
B.S., Illinois Institute of Technology; M.S., Lamar University; Registered Professional Engineer

RALPH J. BROOKNER, Associate Professor of Mathematics and Statistics, 1963, 1978
B.A., William Marsh Rice University; M.A., The University of Michigan; Ph.D., Columbia University

ROBERT S. BURNS, Adjunct Instructor, Related Arts Department, 1978

BARBARA Y. BURRIS, Adjunct Instructor of Business Communication, 1976
B.A., Lamar University

KING A. CAMPBELL, Adjunct Instructor of Accounting, 1978

OTIS CATER, Adjunct Instructor, Related Arts, 1977

LISA J. CLARKE, Adjunct Instructor of Sociology, 1978
B.A., M.A., The University of Texas

JOHN C. DANNA, Adjunct Instructor of Drafting Technology, 1971

CECIL D. DICKERSON, Adjunct Instructor of Welding, 1976
C.C., Durham Technical School

VERNON J. DISNEY, Instructor, Accounting Department
Certified Public Accountant

SUSAN GAY DOMINGUE, Adjunct Instructor of Criminal Justice, 1978
B.S., Lamar University; M.A., Sam Houston State University

LAIRON W. DOWDEN, Adjunct Instructor of Refrigeration and Air Conditioning Technology, 1974

VOLLEY C. DRODDY, Adjunct Instructor, Adult Training, 1978

MARIE LUCILLE ELLIOTT, Clinical Instructor of Respiratory Technology, 1977
Certified Respiratory Therapy Technician

JOANN SABIN FOXX, Instructor, Respiratory Technology, 1977
Certified Respiratory Therapy Technician

WANDA FRANKS, Adjunct Instructor, Related Arts, 1977

MAURICE FREDERICK, JR., Adjunct Instructor of Refrigeration and Air Conditioning Technology, 1976

SAM CHARLES GIGLIO, JR., Adjunct Professor of Dental Hygiene, 1977
B.S., Lamar University; D.D.S., University of Texas Dental Branch, Houston

ERRETT D. GIPSON, JR., Adjunct Instructor of Drafting Technology, 1975
A.A.S., Lamar University

RALPH L. GLENN, Adjunct Instructor of Plant Maintenance and Operations, 1975

RICHARD P. GRIFFIN, Adjunct Instructor, Adult Training, 1978

MARY L. GROSE, Clinical Instructor of Nursing, 1976
B.S., Lamar University; Registered Nurse

NELWYN A. HARDY, Adjunct Instructor of Home Economics, 1976
B.S., M.Ed., Sam Houston State University

CHARLES HAWKES, Adjunct Instructor of Criminal Justice, 1978
A.B., Baylor University; M.A., Sam Houston State University

JAMES L. HAYES, Adjunct Instructor of Accounting, 1974
B.B.A., The University of Texas

KAREN L. HAYES, Clinical Instructor of Dental Hygiene, 1977
A.A.S., Del Mar College; Registered Dental Hygienist

RICHARD B. HEMMINGS, Adjunct Instructor of Occupational Safety and Health, 1977
B.S., McNeese State University

W. R. HENRY, Adjunct Associate Professor in the Department of Civil Engineering, 1976

THOMAS R. HERRINGTON, Adjunct Instructor of Industrial Department, 1978

DIANE D. HUGHES, Clinical Instructor of Respiratory Technology, 1977
Certified Respiratory Therapy Technician

JOYCE L. IRVING, Adjunct Instructor, Adult Training, 1978
B.A., University of Michigan; M.A., Atlanta University

HARRY L. JEPSON, Adjunct Professor of Dental Hygiene, 1978
D.D.S., University of Texas, Dental Branch

MARY A. KLAUS, Adjunct Instructor, Adult Training, 1977
B.S., M.S., University of Missouri

RUBY P. KILPATRICK, Clinical Instructor of Nursing, 1977
Registered Nurse

J. D. LANDES, Professor of Accounting, 1946, 1961
B.A., M.S., North Texas State University; Ph.D., The University of North Carolina

JIM C. LEE, Adjunct Instructor of Civil Engineering
B.S., University of New Mexico; M.S., Pennsylvania State University; Registered Professional Engineer

RAYMOND E. LOVETT, Adjunct Instructor, Technical Department, 1977

DAVID L. MANN, Adjunct Instructor of Real Estate, 1976
B.B.A., Southern Methodist University

ARNOLD O. MANSKE, JR., Adjunct Professor of Radiological Technology, 1977
B.S., Baylor University; M.D., University of Texas Medical Branch at Galveston

BOBBY G. MARSHALL, Adjunct Instructor of Diesel Mechanics, 1971

BERNARD MARTINEK, Adjunct Instructor, Related Arts, 1978

MARTIN D. MATTOX, Adjunct Instructor, Technical Department, 1978

J. PAUL McNEILL, Instructor of Business Administration, 1967
B.A., Elon College; LL.B., Southern Methodist University

WALTER D. MITTERLEHNER, Adjunct Instructor, Adult Training, 1978
Certified Safety Professional

KUMAR T. MITTRA, Adjunct Assistant Professor in the Department of Civil Engineering, 1977
B.S., Ranchi University; M.S., Indian Institute of Technology; Ph.D., University of Mississippi

DAVID S. MONK, Adjunct Instructor of Drafting Technology, 1975

WILLIAM J. MONTANA, Adjunct Instructor of Refrigeration and Air Conditioning Technology, 1975

JACK BRYAN MOORE, Clinical Instructor of Respiratory Technology, 1977
Certified Respiratory Therapy Technician

WILLIAM T. MORRIS, Adjunct Professor of Allied Health, 1977
M.S.D., Baylor College of Dentistry; D.D.S., The University of Texas

LIBBIE C. NYLIN, Adjunct Instructor of Technical Mathematics, 1976
B.A., M.S., Lamar University

ANNA MARIE O'FIEL, Clinical Instructor of Respiratory Technology, Certified Respiratory Therapy Technician

BILLY PATTERSON, Adjunct Instructor of Mid-Management, 1975

THOMAS M. PEDEN, Adjunct Instructor of Mid-Management, 1977
B.S., Belmont College; M.B.A., University of Tennessee

HOWARD PERKINS, Adjunct Instructor of Communication, 1978
B.A., Lamar University; M.A., Louisiana State University

WILLIAM C. PETERS, Adjunct Instructor of Business Data Processing, 1967
B.A., University of Louisville

GEORGE PHAIR, Adjunct Assistant Professor of Criminal Justice, 1978
B.A., University of Houston; J.D., South Texas College of Law

DOROTHY PIERCE, Adjunct Instructor, Related Arts, 1978

JULIA ANN PUCKETT, Clinical Instructor of Respiratory Technology, 1978
A.S., El Centro College; Registered Respiratory Therapist; Certified Respiratory Therapy Technician

CHARLES C. REED, Adjunct Instructor of Accounting, 1978
B.S., Indiana University; Certified Public Accountant

MELINDA K. ROY, Clinical Instructor of Respiratory Technology, 1978
Certified Respiratory Therapy Technician

ANDREW PETER SENORSKI, Lecturer of Health and Physical Education for Men, 1978
B.S., M.S., Lamar University

JAMES E. SHANKS, Adjunct Instructor, Related Arts, 1978

PAUL B. SHAW, Adjunct Professor of Respiratory Technology, 1974
B.S., Mississippi State University; M.D., Tulane University

WILLIAM E. SHROETER, Adjunct Instructor, Related Arts, 1977

RONALD SIGUR, Adjunct Instructor, Technical Department, 1978

ALBERT E. SMITH, Adjunct Instructor of Technical Mathematics, 1976
B.S., M.Ed., Stephen F. Austin State University

ANTHONY VENZA, Adjunct Instructor, Related Arts, 1978

CLEM T. WEBB, Adjunct Instructor of Art, 1976
B.S., Lamar University

WILBUR O. WEBSTER, Adjunct Instructor of Mid-Management, 1972
B.S., University of Southwestern Louisiana

CANDACE WELLS, Clinical Instructor of Dental Hygiene

GARY L. WEST, Clinical Instructor of Respiratory Technology, 1977
A.S., El Centro Junior College

JAMES T. WHITE, Adjunct Instructor, Technical Department, 1977

ANITA J. WOODS, Adjunct Instructor of Basic Communications, 1971

Lamar University at Orange

Faculty

JUDITH Z. ARONOW, Instructor of Mathematics, 1971
B.A., University of North Dakota; M.S., Lamar University

M. RAY BROWN, Assistant Professor of Sociology, 1978
B.A., M.A., Texas Technological University; A.B.D., Brown University

O. EDWARD CUNNINGHAM, Instructor of History, 1978
B.A., Southeastern Louisiana University; M.A., Ph.D., Louisiana State University

G. MAX DANIEL, Instructor of Government, 1973
B.A., University of Houston; M.A., Sam Houston State University

PATRICIA A. FOSTER, Instructor I of Office Occupations, 1976
B.B.A., M.B.A., Lamar University

LARKIN C. FRANKLIN, Instructor of English, 1970
B.A., Lamar University; M.A., Brigham Young University

DON EARL HORTON, Instructor I and Co-ordinator of Mid-Management, 1974
B.S., Louisiana Tech University; M.B.A., University of West Florida; Certified Public Secretary

RAYMOND D. LOVETT, Instructor I of Industrial Electricity & Electronics Technology, 1976

E. RUTH MASON, Instructor of Vocational Nursing, 1973
Registered Nurse

JAMES MIDDLEBROOKS, Instructor I of Drafting Technology, 1978
A.A.S., Lamar University

ROBERT H. PEEBLES, Assistant Professor of History, Director of Academic Programs, 1970, 1972
B.S., Lamar University; M.A., Sam Houston State University; A.B.D., North Texas State University

JAMES R. RIPLEY, Instructor I of Welding, 1975.

JAMES C. RONNING, Assistant Professor of Psychology, 1970, 1972
B.S., Lamar University; M.Ed., Abilene Christian University; Ed.D., McNeese State University

MICHAEL STILL, Adjunct Instructor of Economics, 1978
B.S., M.S., Oklahoma State University

HYMAN K. TAYLOR, Instructor II of Drafting Technology, Director of Technical Arts, 1972, 1977
B.S., Lamar University

HAROLD THIELE, Instructor I of Drafting Technology, 1977
B.S., University of Southwestern Louisiana; M.Ed., Louisiana State University

SHELLEY ANN THRASHER, Assistant Professor of English, 1971
B.A., M.A., North Texas State University; A.B.D., University of Houston

LESLIE G. WALLEY, Instructor I of Industrial Electricity and Electronics Technology, 1976.

JOE BEN WELCH, Associate Professor of Mathematics, Dean of Lamar University at Orange, 1969, 1976
B.S., Louisiana Tech University; M.Ed., Lamar University; Ed.D., McNeese State University

LARRY R. WILMORE, Instructor of Biology, 1974
B.S., Lamar University; M.S., Ohio State University

Part-Time

KENNETH D. ARMSTRONG, Adjunct Instructor of English 1975
B.A., Baylor University; M.A., Lamar University

STRAIN H. ARMSTRONG, Adjunct Instructor of Drafting Technology, 1976
B.S., M.Ed., North Texas State University

WILMA BRANSON, Adjunct Instructor of Technical Mathematics, 1978
B.S., Lamar University

JESSE W. CAMPBELL, JR., Adjunct Instructor of Physical Education, 1978
B.S., Lamar University

CHARLES W. COPELAND, Adjunct Instructor of Mid-Management, 1975

JAMES DUNAWAY, Adjunct Instructor of Real Estate, 1975
B.A., The University of Texas at Arlington; J.D., The University of Texas at Arlington School of Law

BONNIE FLEMING, Adjunct Instructor of Office Occupations, 1978
B.B.A., Lamar University

JUDITH A. GURNEE, Adjunct Instructor of Real Estate, 1976

ROBERT B. HOUSEMAN, Adjunct Instructor of Real Estate, 1976

BONNIE JOHNSON, Adjunct Instructor of Office Occupations, 1978
B.B.A., Stephen F. Austin University

ELISE LEWIS, Adjunct Instructor of English and Basic Communications, 1977
B.A., Southeastern Louisiana University; M.A., Louisiana State University

CHRISTINE HELEN MATHEWS, Adjunct Instructor of Office Occupations, 1976
B.B.A., Lamar University

DON H. MORRISON, Adjunct Instructor of Mid-Management, 1976
B.S., Texas A&M University; M.B.A., Lamar University

BYRON A. NELSON, Adjunct Instructor of Technical Mathematics, 1976
B.S., Texas A&M University

MARK NIES, Adjunct Instructor of Drafting Technology, 1976
A.A.S., Lamar University

JANE ROBERT, Adjunct Instructor of Basic Communication, 1978
B.A., Louisiana Polytechnic Institute; M.A., Louisiana State University

JOANN M. SAVIGNANO, Adjunct Instructor of Basic Communications, 1977
B.S., Stephen F. Austin State University

TRUTH L. SHIPMAN, Adjunct Instructor of Technical Mathematics, 1975
B.A., M.A., Lamar University

SUSAN A. SMITH, Adjunct Instructor of Mathematics, 1975
B.S., M.S., Lamar University; M.Ed., North Texas State University

MARGARET C. STEVENS, Adjunct Instructor of Geology, 1972
B.A., Central Michigan University; M.S., University of Michigan

JAMES D. STRINGER, Adjunct Instructor of Real Estate, 1976

GERALDINE TALMADGE, Adjunct Instructor of Music, 1976
B.S., Lamar University

MILTON A. TURNER, Adjunct Instructor of Art, 1977
B.S., Lamar University; M.A., M.F.A., Stephen F. Austin State University

GORDON UNDERWOOD, Adjunct Instructor of Real Estate, 1973
A.A.S., Lamar University; S.R.A.

RUBY J. WIMBERLY, Adjunct Instructor of Real Estate, 1977

Lamar University at Port Arthur

Faculty

GLENDA O. BARRON, Instructor I of Office Occupations, Head, Office Occupations Department, 1975
B.S., University of Houston; M.Ed., McNeese University

RODNEY BERTHELSEN, Instructor, 1977
B.A., Northwestern College; M.A., University of South Dakota

GERALD E. BREAUX, Instructor I of Welding, 1978

SHIRLEY H. BURRIS, Instructor I of Office Occupations, 1978
B.A., M.B.E., Stephen F. Austin State University

JEAN CARUTHERS, Instructor I of Cosmetology, 1975

WILLIAM N. CHRISTIAN, Instructor II of Electronics Technology, 1978
A.A.S., IEE, B.S., Industrial Technology, Lamar University

VICKI COCKRELL, Instructor, 1978
B.S., Lamar University; M.A., University of Alabama

O. JEAN COLE, Instructor I of Office Occupations, 1975
B.B.A., Lamar University

GAYLE S. DOBBS, Instructor I of Office Occupations, 1976
B.B.A., M.B.A., Lamar University

DENNIS E. DOVE, Instructor I of Automotive Mechanics, 1978

CHARLES GONGRE, Assistant Professor of English, 1977
B.A., Lamar University; M.A., Stephen F. Austin State University

JO ANN GOODWIN, Instructor of Mathematics, 1976
B.A., M.A., Lamar University

SHARON GRAY, Instructor I of Office Occupations, 1977
B.S., M.Ed., Midwestern University

JOHN C. KILMAN, Assistant Professor of English, 1977
B.A., M.A., Texas Christian University; Ph.D., University of Delaware

W. SAM MONROE, Dean of Lamar University at Port Arthur, 1975
B.B.A., Sam Houston State University; LL.D., Lamar University

WILBUR L. PATE, JR., Instructor, 1978
B.B.A., M.B.A., Lamar University

FRANKLIN C. SAVAGE, Instructor I of Automotive Mechanics, Head, Department of Mechanical Arts, 1975

PATRICIA L. SCHIPPLEIN, Instructor I of Office Occupations, 1976
B.B.A., Lamar University; M.B.Ed., North Texas State University

MICHAEL SHAHAN, Instructor of History, 1977
B.A., University of Oklahoma; M.A., Vanderbilt University

OSCAR C. SMITH, Instructor I of Electronics Technology, Head, Electronics Technology Department, 1975

VELMA YOUNG, Instructor I of Cosmetology, 1977

Part-Time

BENNY BAXTER, Adjunct Instructor of Automotive Mechanics, 1977

LEROY FORSE, Adjunct Instructor of Welding, 1977

PAUL JOHNSON, Adjunct Instructor of Drafting, 1978
B.S., Texas A&M University

INELL R. MOORE, Adjunct Instructor of Office Occupations, 1975
B.S., M.Ed., Texas Southern University

BEVERLY S. PARKER, Adjunct Instructor of Office Occupations, 1975
B.A., Southwestern University

ROBERT W. PEELER, Adjunct Instructor of Electronics Technology, 1978
B.S., Lamar University

BANKER PHARES, Adjunct Instructor of Real Estate, 1977
B.S., Lamar University; J.D., Southern Methodist University

ALLISON RULE, Adjunct Instructor of Related Arts, 1978
B.A., M.A., University of Texas

MICHAEL STILL, Adjunct Instructor of Economics, 1978
B.S., M.S., Oklahoma State University

LEE RAY TRAHAN, Adjunct Instructor of Welding, 1975

VIRGINIA M. WHIGHAM, Adjunct Instructor of Office Occupations, 1975

General Information

LOCATION

Lamar University, a state-supported institution, is located in Beaumont, one of the world's largest petrochemical centers. Beaumont is one of the fastest growing and most progressive cities in the Sunbelt. The city offers private and public schools, churches, museums, shopping districts and a wide range of leisure-time activities to serve the metropolis of 130,000. A civic center, convention center and coliseum draw professional entertainers and a wide variety of business, social and professional groups to the city. Beaumont is convenient to major recreational facilities of Southeast Texas, including the Gulf of Mexico, large lakes and the Big Thicket National Forest.

HISTORY

South Park Junior College was established in 1923 and was controlled by the South Park Independent School District. Classes were conducted in the South Park High School Building. An initial enrollment of about 125 students in 1923 had increased to 300 by 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 instituted. By 1939, enrollment was approximately 640.

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

A movement to expand Lamar College into a four-year state-supported school culminated in the creation of Lamar State College of Technology on September 1, 1951. Since that time, enrollment has increased to more than 12,800 students, and the curriculum has been expanded to include many areas of study. Graduate work in specified fields began in the academic year of 1960-61, and extension work became an integral part of the educational program in 1964. A doctoral program in engineering was added in 1971. Lamar University at Orange, offering first and second year courses, opened in 1969. Lamar University at Port Arthur, also offering first and second year courses, began operation in the fall of 1975. The University also owns 36 acres on Pleasure Island in Port Arthur.

The institution's status as a university became official on August 23, 1971, when the name was changed to Lamar University.

GOVERNMENT

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

STATEMENT OF PURPOSE AND MISSION

Lamar University is a regional multi-purpose university serving as an educational, scientific, technical and cultural resource center. Although the Southeast Texas region constitutes its primary constituency, its unique programs and location attracts students from throughout the state and nation as well as from many foreign countries.

The University undertakes to serve the needs of its constituency and understands its mission to include the following:

1. Provide an opportunity for higher education to qualified graduates of accredited high schools, with the understanding that admission to a major or professional field of study requires students to meet the standards of that particular department or college.
2. Develop exceptionally talented students to their full potential.
3. Offer graduate programs in those disciplines where realistic competencies can be achieved and where need exists.
4. Provide post-secondary technical-vocational programs to meet the needs of the people, the businesses and the industries of Southeast Texas.
5. Offer adult and continuing education and University services to meet the needs of the University's constituency.
6. Contribute to the cultural life of the area by providing cultural and artistic presentations and events.
7. Provide a wide-range of student activities and student personnel services.
8. Provide opportunities for research, creativity and scholarly activity through research grants, within the institutes and centers, and departments of the University.

The University re-affirms its traditional teaching emphasis, and encourages the closest interchange between students and faculty including career guidance and counseling. It recognizes further its obligation to maintain a faculty that is professionally creative and productive in its respective disciplines. The University expects to maintain the standards of a four-year baccalaureate program by providing many diversified major specialties and professional programs. To enhance the total development of its students, Lamar University will continually seek to encourage and sustain necessary and appropriate student services. The University will consider every method for expanding the services of higher education to the people, businesses and industries within the region.

ACCREDITATION

Lamar is accredited by the Association of Texas Colleges and Universities, the Southern Association of Colleges and Schools and is approved by the Texas Education Agency.

Several departments have been accredited by professional agencies. In the College of Engineering, the departments of Chemical, Civil, Electrical, Industrial and Mechanical Engineering are accredited by the Engineers' Council for Professional Development. Other accreditations include the Department of Chemistry by the American Chemical Society; Department of Music by the National Association of Schools of Music; and the Departments of Elementary and Secondary Education by the National Council for the Accreditation of Teacher Education.

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

DEGREE OFFERINGS

Associate of Arts

Associate of Science

Associate of Applied Science

Bachelor of Arts in Biology, Chemistry, Economics, English, French, Geology, Government, History, Mathematics, Psychology, Sociology, Spanish and Speech.

Bachelor of Business Administration in Accounting, Economics, Finance, General Business, Management, Marketing, Office Administration and Pre-law.

Bachelor of General Studies

Bachelor of Fine Arts in graphic arts, studio art.

Bachelor of Music

Bachelor of Science in Art, Biology, Chemistry, Criminal Justice, Education, Energy Resources Management, Environmental Science, Geology, Government, Health Education, Home Economics, Mass Communication, Mathematics, Medical Technology, Music, Nursing, Oceanographic Technology, Physical Education, Physics, Psychology, Speech and the following **Engineering Fields**: Chemical, Civil, Computer Science, Electrical, Industrial, Mechanical, Engineering Technology and Industrial Technology.

Bachelor of Social Work

Master of Arts in English, Government and History.

Master of Business Administration (undifferentiated).

Master of Education in Elementary Education, Guidance and Counseling, School Administration, Secondary Education, Special Education and Supervision.

Master of Engineering

Master of Engineering Science

Master of Music

Master of Music Education

Master of Science in Biology, Chemistry, Health and Physical Education, Home Economics, Mathematics, Psychology, Speech, Speech Pathology/Audiology.

Master of Public Administration

Doctor of Engineering

ORGANIZATION

The University is organized into nine colleges, each administered by a dean.

These Colleges are Business, Education, Engineering, Fine and Applied Arts, Health Sciences, Liberal Arts, Sciences, Technical Arts and Graduate Studies.

ROTC

The Air Force Reserve Officers Training Corps (AFROTC) conducts a permanent program of instruction on the campus to provide eligible male and female students an opportunity to qualify for a commission in the United States Air Force. Students who successfully complete the program will be commissioned as second lieutenants upon graduation. For additional details, see the Department of Aerospace Studies.

TEACHER CERTIFICATION

All teacher education programs of the University are approved by the Texas Education Agency. Students seeking teacher certification should consult the Dean of the College of Education regarding requirements.

ENTERING DATES

Courses and schedules have been arranged so that students may enter Lamar four times each year. The current University Calendar contains information regarding registration periods and exact entering dates.

EVENING CLASSES

Classes offered after 4:45 p.m. are considered Evening Classes. Both day and evening classes, with few exceptions, are taught by the regular faculty, and educational facilities are the same. Persons employed during the day may attend classes in the evening and study to obtain a degree or to expand their knowledge in a special field of interest as an adult non-degree student. Enrollment forms are available through the department of Off-Campus and Evening Programs, Room 101 Wimberly Student Affairs Building.

Facilities

BOOKSTORE

The University operates a bookstore, for the convenience of faculty and students, where supplies and books, new and used, may be purchased.

Used books, which are currently approved, may be sold to the bookstore. Books which must be discontinued are not purchased by the Bookstore except at a wholesale price. The Bookstore reserves the right to require the seller to prove ownership of books.

BROWN CENTER

The Brown Center, located off Highway 90 near Orange, became Lamar University property in 1976. It is used as a center of cultural and educational activities for the benefit of the people of Orange County and Southeast Texas. The 87 acres of grounds that comprise the Brown Center include a graceful mansion built in the Southern antebellum tradition, greenhouses, lakes and landscaped grounds.

The estate was a gift to the University from the four sons of the late Edgar W. Brown Jr., Orange industrialist and philanthropist, who served as a charter director of the Lamar University Foundation, Inc.

CAMPUS POST OFFICE

The campus Post Office, a contract facility operated by the University, is officially designated as Lamar University Station 77710. Full postal services are offered.

Each student may make application for a box at the Post Office by completing necessary forms. There is a charge for each box. Three students are allowed to share the same box.

Mail may be picked up at the general delivery window by those students who do not choose to reserve boxes at the Post Office.

COMPUTER CENTER

The University Computer Center is responsible for providing the computing services required by the academic, administrative and research communities of the University. Its equipment includes a Honeywell 66/20 computer with 196,000 words of main memory, 400,000,000 characters of on line disc storage, extensive communication capability, a variety of remote terminals and other associated peripheral equipment.

HANDICAPPED STUDENTS

Handicapped students may receive special assistance with registration by contacting the Office of Admissions and Records one month prior to the registration in which they plan to enroll. The Counseling Center is staffed with qualified counselors to assist with problems handicapped students may have.

LAMAR UNIVERSITY — ORANGE

Beginning in 1969, the university system offered courses in Orange, Texas. With the provision of facilities by the Lamar University-Orange Capital Foundation, this program expanded to offer first and second year courses in principal fields of the University in addition to expanded vocational courses. Career-oriented courses are offered during the extended day hours. For additional information, see the Lamar University at Orange catalog.

LAMAR UNIVERSITY — PORT ARTHUR

Port Arthur College merged with Lamar University in August 1975, with legislative funding of instructional programs at the first and second year level. Lamar University-Port Arthur courses are offered on the same basis as courses authorized for the university system in principal areas of business, education, liberal arts, as well as vocational and technical arts programs.

For additional information, see the Lamar University at Port Arthur catalog.

LIBRARY

The eight-story Mary and John Gray Library has a strong collection of more than 500,000 volumes in support of continuously expanding academic programs. Approximately 20,000 volumes are added to the collection annually. The library subscribes to more than 3,000 periodicals, and as a selective document depository, it has over 50,000 state and federal documents and microforms. Lamar participates in several library networks to extend resources available to Lamar researchers.

DIVISION OF PUBLIC SERVICE

In addition to providing studies and other services for area business and community organizations, the Division of Public Service conducts on-campus and off-campus instructional programs, for credit and non-credit, with emphasis on adult education. A broad spectrum of vocational and academic courses are offered. The division is composed of the departments of Continuing Education, Off-Campus and Evening Courses and Cooperative Education.

OFFICE OF RESEARCH AND PROGRAMS

The Office of Research and Programs is administered by a director who serves as the chairman of the Faculty Research Council which awards all state financed research projects. Many services for research and program acquisition are offered by this office. Among these are administration of state research funds to encourage "seed" grants which stimulate the development of hypotheses or generate proposals requiring extramural support; a program of public relations with outside agencies, establishing personal contacts with members of units in government, industry, business and private foundations to enhance funding of research grants and programs; providing information about the availability of external support for research and programs; assisting faculty to make application for funds, by providing assistance in developing proposals, by making contact with the appropriate funding agency, and by identifying the best possible sources for support. The Office will provide editorial help in the preparation of the application and budget and the arrangement and support of travel for meetings with donors or funding agencies.

SPINDLETOP MUSEUM

The Spindletop Museum, operated by Lamar University, is located in the Educational Services Center, 950 Florida Street. It has artifacts and exhibits on the early days of the oil industry in Texas which began on January 10, 1901, when the Lucas Gusher blew in on a field not far from the present Beaumont campus. An outdoor museum, Gladys City, re-creates the boom town which sprang up at Spindletop following the Lucas discovery. It is located at University and Cardinal Drives. Gladys City may be visited from 1-5 p.m. Sunday through Friday, and from 9 a.m. to 5 p.m. on Saturday. The Spindletop Museum is open from 9 a.m. to 5 p.m. Monday through Saturday and from 1 to 5 p.m. Sunday. Admission to Gladys City is 50 cents for adults, 25 cents for those under 18 years of age and free to Lamar students with their student activity cards. There is no admission charge to the Spindletop Museum.

UNIVERSITY RELATIONS AND DEVELOPMENT OFFICES

The University Relations Office was established in 1975, and includes the areas of development, public information and publications and printing.

The Development Office was reorganized in 1975 under the Office of University Relations. It is administered by a Director of Development, and the office works closely with the President and Board of Regents in raising funds for many worthwhile programs for which appropriations are not received from the Legislature.

VETERANS' AFFAIRS OFFICE

A Veterans' Affairs Office is maintained in the Wimberly Student Affairs Building and aids veterans in obtaining their educational benefits. It also provides academic assistance and counseling. Additional information about veterans' programs may be found in the Fees and Expenses section of this catalog.

Admissions

Applicants for admission to the University are required to meet the academic requirements outlined in this catalog or other applicable publications of the University.

Both the College of Graduate Studies and the College of Technical Arts publish separate bulletins and Graduate Studies requires a special application form.

Information on admission to the undergraduate program at Lamar is covered in this section and applies to Lamar University at Orange and Lamar University at Port Arthur as well as to the main campus in Beaumont. Students seeking admission are invited to study the requirements and procedures which follow. Additional information, application forms, etc., are available from the Office of High School Relations and Recruitment, Box 10007, or from the Office of Admissions and Records, Box 10009, Lamar University Station, Beaumont, Texas 77710.

REQUIREMENTS FOR STUDENTS ENTERING FROM HIGH SCHOOLS

An applicant is required to have graduated from an accredited high school and to have submitted entrance examination scores as specified below. Applicants who have attended another college or university cannot disregard that enrollment and seek admission only on the basis of their high school record. Equivalency diplomas granted on the basis of GED scores will not fulfill entrance requirements. (Non high school graduates should see the section on Individual Approval.)

Entrance Examination Requirement

Applicants may submit either SAT or ACT scores in fulfillment of the entrance examination requirement. These examinations are required for counseling purposes.

A person whose high school class has been graduated for at least seven years is exempt from this test requirement. Both tests are given several times each year at test centers throughout the United States and in many foreign countries. It is recommended that summer and fall applicants take one of the tests early in the senior year and if possible, no later than February. Location of test centers, test dates, fees, test application forms, sample question booklets, etc. may be obtained without charge from high school counselors or by writing to the testing agency. SAT inquiries should be directed to the College Entrance Examination Board, Box 1025, Berkeley, California 94704. ACT inquiries should be directed to the American College Testing Program, Box 168, Iowa City, Iowa 52240.

The Level I Mathematics Test of the College Entrance Exmination Board must be taken by all students entering the College of Engineering. It is strongly recommended for students planning to major in any of the physical sciences. Students planning to continue a language started in high school must take the CEEB reading test in the language for placement purposes. Otherwise, achievement tests are not required, but in many cases are recommended. Students whose high school records are outstanding should consider taking achievement tests for advanced placement.

Recommended High School Preparation

Although specific high school credits are not required for admission, the University expects each applicant to be adequately prepared to do academic work above the high school level. It is strongly recommended that the following credits be included in the high school program:

English	4
Natural Sciences	2
Algebra	1
Geometry	1
Social Sciences	2

In some fields, foreign language is desirable. Applicants to the College of Engineering are required to have completed a minimum of two credits in algebra and one credit in geometry. In addition, engineers should have one-half credit in trigonometry, one credit in chemistry and one credit in physics. Any deficiencies must be made up after enrollment at the University.

Health Record Requirement

All students are required to submit the prescribed health data on first enrollment. Records are considered to be obsolete after five years and must be resubmitted for continued enrollment after that time.

How to Apply for Admission

1. Submit application for admission on the official form. Inclusion of a social security number is required on this form.
2. Take the Scholastic Aptitude Test (October, November or December dates preferred) or the American College Test (October or December dates preferred) and designate this University to receive score reports.
3. Have your complete high school transcript sent to the University Admissions and Records Office immediately following graduation. Partial transcripts prior to graduation are not necessary unless the student is entering the first summer term. In the latter case, have the record sent at the end of the second senior quarter so that the information will be available to your advisors at registration.

When to Apply

Application should be made well in advance of the proposed enrollment date — two or three months in advance, if possible. Students planning to enter either a Summer Session or the Fall Semester, should apply by February 1. Applications for the Spring Semester should be on file by October 1.

The application form ordinarily should be submitted before the other required credentials.

Acceptance Notices

Letters of acceptance normally are issued shortly after the required admission credentials are received. Registration information and general instructions are included. Lamar University has no student quota. All applicants who meet entrance requirements are accepted.

Graduates of Non-Accredited High Schools

Applicants who have not graduated from an accredited high school may be admitted if they (1) have graduated in the upper ⅔ of their class, or (2) score 700 or above on the Scholastic Aptitude Test.

Freshman Orientation and Registration

A series of two-day freshman orientation and registration programs is held during the summer months. These small group sessions are designed to acquaint the new student with campus facilities and services, and to give the individual student an opportunity to confer with university departmental advisors about an academic program. Participation is optional, but is strongly recommended. Registration for the Fall Semester is completed at this time and tuition and fees are paid. Books may be purchased or reserved. Attendance at each session is limited and advance reservations are necessary. Details of the program including available dates, costs and reservation forms, are sent out with acceptance notices. Reservations should be requested early so that a convenient date may be selected. Parents are invited to attend and to participate in programs designed especially for them. Similar programs are available to new students entering in the Spring Semester.

Advanced Placement

The two optional testing programs listed below are offered to enable first time university students to qualify for advanced standing and/or college credit. These tests must be taken prior to enrollment. Applicants also may qualify for credit through CLEP (College Level Examination Program).

1. Advanced Placement Examinations (Optional)
   Applicants who wish to receive credit for college-level work completed in high school may do so by submitting scores on the College Entrance Examination Board's Advanced Placement Examinations. Examinations are given each May by high schools. Arrangements are made through high school counselors. Subject matter areas and the basis for granting credits are listed as follows:

Subject Area	Required Score	Credit Granted
Chemistry	Score of 3 or above	Chemistry 141
English	Score of 3 or above	Eng 131-132
	Score of 2	Eng 131 (Student receiving such credit must enroll in Eng 136)

Foreign Language	Score of 4 or 5	12 semester hours of foreign language
	Score of 3	Three semester hours of foreign language
American History	Score of 3 or above	History 231-232*
European History	Score of 3 or above	History 131-132
Biology	Score of 3 or above	Biology 141-142
Calculus		
AB Test	Score of 4 or above	Mth 1335, 148 or Mth 134, 1341 or Mth 1335, 236
BC Test	Score of 4 or above	Mth 1335, 148, 149
Physics B	Score of 3 or above	Physics 141-142
Physics C (Mechanics)	Score of 3 or above	Physics 140
Physics C (E & M)	Score of 3 or above	Physics 241
Art	Score of 3 or above	Art 131, 133
Music	Score of 3 or above	MLt 111, 112

2. Achievement Tests (Optional)

Students who have outstanding high school records or who have participated in accelerated programs are encouraged to take the College Entrance Examination Board's Achievement Tests in the corresponding subject matter areas. Students may enter advanced courses provided test results indicate they are qualified. Minimum scores are set by the University and students who qualify are notified. Upon the completion of the advanced course with a grade of "C" or better, college credit is granted as indicated in the following table.

Achievement Tests are given on all regularly scheduled test dates other than October. Application is made directly to CEEB.

Subject Matter Area	**CEEB Test Required**	**Credit Granted**
English	English Composition	Eng 131 if validated by completion of Eng 136 with a grade of "C" or better.
Foreign Lang	Spanish French German	0 to 12 semester hours depending on placement and validation.
Chemistry	Chemistry	Chem 141 if validated by completion of Chem 142 with a grade of "C" or better.
Mathematics	Level I	Up to 12 semester hours depending on placement and validation.
Physics	Physics	Physics 141 if validated by completion of Physics 142 or 241 with a grade of "C" or better.

3. College Level Examination Program (Optional)

Credit by examination also is available through CLEP (College Level Examination Program). Details in Academic Regulations section.

*State law requires three semester hours of classroom instruction in some phase of American History in addition to credit by examination.

REQUIREMENTS OF STUDENTS ENTERING FROM OTHER COLLEGES

To be eligible for unconditional admission, a transfer student must (1) be eligible to re-enter all colleges previously attended, and (2) have an over-all grade point average of C (2.0). Four grade points are counted for each semester hour completed with a grade of A, three for B, two for C, one for D and none for F.

The records of transfer applicants who meet requirement (1) above, but who are deficient in grade points, are evaluated for admission purposes on the same basis as if the work had been taken at Lamar. A student admitted on probation must remove deficiences in accordance with the provisions of the section on academic probation and suspension.

Transfer students who have earned less than 18 semester hours of transferable credit also must submit SAT and/or ACT scores, and meet the same requirements as a student entering directly from high school. The University reserves the right to require tests of any student if it appears that scores would be helpful in making the admission decision or would be beneficial for counseling purposes.

International students must meet all of the requirements in the section on International Student Admission.

All students are required to submit the prescribed health data on first enrollment. Records are considered to be obsolete after five years and must be resubmitted for continued enrollment after that time.

Transfer of Credit

Credit earned at another accredited institution is acceptable for transfer and may be used to meet degree requirements provided the courses are applicable to the curriculum in which the student enrolls. An over-all grade point average of C (2.0) is the acceptable academic standard of performance. A student who has accumulated a grade point deficiency at another institution(s) and who is admitted on probation, will be required to make up the deficiencies at Lamar. In order to graduate, a student must have a 2.0 grade point average on all work attempted, on all work attempted at Lamar, on all courses in the major, and on all courses which may be counted for the degree.

Students transferring from a junior college are limited to the transfer of 66 semester hours or to the number of hours required by this University during the freshman and sophomore years in the curriculum under which the student enrolls or to the number of hours listed as being acceptable for transfer in a published degree program.

Grades from other institutions are recorded as received. No grade is changed.

How to Apply for Admission

The following procedure should be followed in making application for admission. All credentials should be sent to the Office of Admissions and Records, Lamar University, Beaumont, Texas 77710.

1. Submit application for admission on the official form. Inclusion of a social security number is required on this form.
2. Submit official transcripts from each college previously attended. This requirement applies regardless of the length of time in attendance and regardless of whether credit was earned or is desired.
3. If entrance examination scores are required, take the prescribed entrance tests and/or have a record of test scores sent to the Office of Admissions and Records.

When to Apply

Application should be made well in advance — two or three months — of the proposed enrollment date, if possible.

The application form should be submitted before transcripts are sent. Transcripts normally should be sent after all work to be transferred is completed. A temporary may be granted if the time interval between the end of a semester elsewhere and the beginning of a subsequent semester at this University is too short for the transcript to be submitted prior to registration. Students on temporary admission, who are subsequently found to be ineligible for admission, will be withdrawn.

In some cases, questions regarding transfer need to be clarified while work is still in progress at another institution. Under these circumstances, the partial transcript should be submitted and a supplementary transcript furnished at the end of the semester.

FORMER STUDENTS RETURNING FROM ANOTHER INSTITUTION

Former Lamar students who have not been in attendance for one or more regular semesters must file for readmission by submitting the standard application for admission form.

A former student who has attended another college is required to submit a complete record of all work done subsequent to the last date of attendance at Lamar University, and to meet the academic requirements for other transfer students outlined in this catalog. The regular application for admission must be submitted.

SUMMER TRANSIENTS

Students in attendance at another college during the Spring Semester who wish to do summer work only at Lamar University, may be admitted as transient students. A student applying for admission under this classification is required to submit only the regular application for admission. No credentials are required unless specifically requested in individual cases. Transient students who later apply for regular long term admission must meet all entrance requirements and supply all necessary admission credentials. International students may not be admitted as transients.

ADULT NONDEGREE STUDENTS

A high school graduate who has not attended high school during the past three years and who is at least 21 years of age may enter Lamar University as an adult nondegree student by submitting his/her high school transcript, the special application for admission form and the required immunization record.

ADMISSION BY INDIVIDUAL APPROVAL

A non-high school graduate who is 19 years of age or older, and whose high school class has been graduated for at least one year, may apply for admission as an individual approval student. Applicants must furnish evidence of preparation substantially equivalent to that required of other applicants. They must possess the aptitude and

the seriousness of purpose to successfully pursue a college course of study.

Applicants are required (1) to take the entrance examination, (2) to submit a record of the high school work which was completed, and (3) to appear for a personal interview. Educational records and test scores must be on file well in advance of the proposed registration date. Arrangements for the interview should be made after records and scores are received by the University but well in advance of registration. Individual approval applications cannot be considered during or immediately prior to, the registration period.

INTERNATIONAL STUDENT ADMISSION

Applicants who attended foreign secondary schools, colleges or universities must furnish certified translations of their academic records. These records must show the ability to do above average work in an academic program. Scores of 500 or above on the Test of English as a Foreign Language (TOEFL) are required along with scores on the Scholastic Aptitude Test (SAT). SAT scores may be waived for students who have completed a post-secondary academic degree with above average marks.

International students who plan to transfer to Lamar University from another college or university in the United States must have completed at least two regular semesters with at least 14 semester hours of transferable work. An average of C (2.0) on all work attempted is required. English proficiency must be demonstrated by submitting scores of 500 or better on the TOEFL. Applicants may be required to submit recommendations from teachers or foreign student advisors. The usual transfer standards apply except that tests may be required if unconditional eligibility is not established.

International students must present proof of sufficient financial resources to meet the cost of attending Lamar University. Internationals also must present proof of adequate health insurance. All students are required to submit the official Health Data Form. Internationals who plan to drive an automobile in the State of Texas must have liability insurance.

Information on the SAT and TOEFL may be obtained by writing to the College Entrance Examination Board, Box 595, Princeton, New Jersey 08540, U.S.A. Scores must be received directly from the testing service. Photocopies will not be accepted.

Application forms, test scores, financial statement and complete educational records must be on file by the dates indicated: June 15 for Fall Semester; November 1 for Spring Semester; and March 15 for Summer Sessions.

Special application forms and details on the procedure to follow in making application for admission to Lamar University may be secured by writing to the Office of Admissions and Records.

Applicants accepted by Lamar University are required to attend a special orientation program for internationals new to the Lamar campus. Dates for the program will be indicated upon acceptance and noted on form I-20, "date of arrival." **Failure to attend the program will delay registration for one semester.** An orientation fee of $15 is charged and is payable to Lamar University, c/o Director of Orientation, P.O. Box 10007, Lamar U. Station, Beaumont, Texas 77710, U.S.A. The program is designed to facilitate a smoother, less problematic adjustment to the Lamar campus. All international students will be tested for English and speech proficiency. On the basis of these test scores, appropriate courses in English and/or speech will be required.

SPECIAL HIGH SCHOOL SENIOR PROGRAM —CREDIT-IN-ESCROW

The Credit-In-Escrow Program enables seniors-to-be to take university courses during the summer between the junior and senior year in high school. Provision also is

made for a high school senior to take a university course during the regular school year. Credit earned is held in escrow until after graduation, but then may be applied to university degree programs. Only students of academic ability are selected for the program. Special counseling is provided by the University. Enrollment may be for one or both Summer Sessions.

To be considered for selection for the program, an applicant must (1) have completed the junior year in an accredited high school; (2) have at least a B + average through the second quarter of the junior year of high school; (3) submit scores on the PSAT, SAT or ACT, and (4) be recommended by the high school counselor or principal. Only a limited number of applicants are taken into the program each year. Selection is made on an individual basis by the University. An eligible senior who lacks no more than three required academic credits for graduation may enroll during the regular school year for a maximum of four hours per semester if selected for participation.

Detailed information and special application and recommendation forms are available in the Admissions and Records Office.

Fees and Expenses

PAYMENT OF FEES

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

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

SUMMARY OF REGISTRATION EXPENSES

Each student must plan a budget carefully. It is possible to attend Lamar on a modest sum and yet participate in most phases of the university program. To assist in planning registration expenses, the following estimate is furnished as a guide:

Texas residents taking a 15 hour academic work load*:

Tuition	$60
Student Services Fee	30
General Use Fee	60
Setzer Student Center Fee	15
Student Health Fee	10
Parking Fee (if desired)	15
Health Insuance (if desired)	36
Books and Incidentals (estimated)	65
	$291
	+ lab fees

Part-time Student (Six semester hours):

Tuition	$50
Student Services Fee	15
General Use Fee	24
Setzer Student Center Fee	15
Student Health Fee	5
Parking Fee (if desired)	15
Books and Incidentals (estimated)	25
	$149
	+ lab fees

Tuition and general use fees vary with the semester hours carried so that the total may differ from this estimate.

*Tuition for Texas residents taking 12 hours or less is $50 per semester. Each additional semester hour is $4 per hour. A full-time student is one who takes 12 or more semester hours of course work.

SUMMARY OF FEES

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

Term	No. of Semester Hours	Tuition A	Tuition B	Tuition C	Student Services Fee	General Use Fee	Setzer Center Fee	Health Center Fee	Total Charge A	Total Charge B	Total Charge C
Each	1	$50	$ 40	$200	$ 2.50	$20	$15.00	$ 1	$ 88.50	$ 78.50	$238.50
Fall	2	50	80	200	5.00	20	15.00	2	92.00	122.00	242.00
or	3	50	120	200	7.50	20	15.00	3	95.50	165.50	245.50
Spring	4	50	160	200	10.00	24	15.00	4	103.00	213.00	253.00
Semester	5	50	200	200	12.50	30	15.00	5	112.50	262.50	262.50
	6	50	240	200	15.00	36	15.00	6	122.00	312.00	272.50
	7	50	280	200	17.50	42	15.00	7	131.50	361.50	281.50
	8	50	320	200	20.00	48	15.00	8	141.00	411.00	291.00
	9	50	360	200	22.50	54	15.00	9	150.50	460.50	300.50
	10	50	400	200	25.00	60	15.00	10	160.00	510.00	310.00
	11	50	440	200	27.50	66	15.00	10	168.50	558.50	318.50
	12	50	480	200	30.00	72	15.00	10	177.00	607.00	327.00
	13	52	520	200	30.00	78	15.00	10	185.00	653.00	333.00
	14	56	560	200	30.00	84	15.00	10	195.00	699.00	339.00
	15	60	600	210	30.00	90	15.00	10	205.00	745.00	355.00
	16	64	640	224	30.00	90	15.00	10	209.00	785.00	369.00
	17	68	680	238	30.00	90	15.00	10	213.00	825.00	383.00
	18	72	720	252	30.00	90	15.00	10	217.00	865.00	397.00
	19	76	760	266	30.00	90	15.00	10	221.00	905.00	411.00
	20	80	800	280	30.00	90	15.00	10	225.00	945.00	425.00
Each	1	$25	$ 40	$100	$ 2.50	$20	$ 7.50	$ 1	$ 56.00	$ 71.00	$131.00
Six-	2	25	80	100	5.00	20	7.50	2	59.50	114.50	134.50
Week	3	25	120	100	7.50	20	7.50	3	63.00	158.00	138.00
Summer	4	25	160	100	10.00	24	7.50	4	70.50	205.50	145.50
Session	5	25	200	100	12.50	30	7.50	5	80.00	255.00	155.00
	6	25	240	100	15.00	36	7.50	5	88.50	303.50	163.50
	7	28	280	100	15.00	42	7.50	5	97.50	349.50	169.50
	8	32	320	112	15.00	48	7.50	5	107.50	395.50	187.50
	9	36	360	126	15.00	54	7.50	5	117.50	441.50	207.50
	10	40	400	140	15.00	60	7.50	5	127.50	487.50	227.50

Code: **A.** U.S. citizens who are legal residents of Texas under tuition law; **B.** (1) U.S. citizens who are not legal residents of Texas under tuition law, and (2) aliens from non-exempt countries. **C.** Aliens: (1) from exempt countries, or (2) enrolled in a Texas state-supported college prior to June 16, 1975.

*Determination of legal residence for tuition purposes is made on the basis of statutes of the State of Texas.

TUITION AND FEES

Tuition is based upon the number of hours for which the student registers, and is determined by the student's classification as a Texas resident; a nonresident U.S. citizen; or a citizen of another country.*

Each student pays a Student Service Fee of $2.50 per semester hour, with a maximum of $30 in a long session.

Laboratory Fees

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

Private Lessons in Voice and Instrumental Music

One half-hour lesson per week	$18
Two half-hour lessons per week	36

Late Registration Fee

A charge of $5 is made during the first day of late registration. This fee increases by $2.50 per day to a maximum of $15 ($7.50, $10, $12.50, $15).

Parking Fee

Charges for parking on campus are made at registration. Automobile registration fees are as follows: Fall Semester, $15; Spring Semester, $10; Summer Session I, $6; Summer Session II, $4. Only one registration is required during an academic year, and a student's parking fee is honored until the end of Summer Session II.

Health and Accident Insurance

Health and accident insurance coverage is available at registration for students carrying nine or more semester hours. The fee is estimated at $42. This or similar insurance is required of all international students.

Special Fees

Fees will be set by the University for courses in which special plans must be prepared and specialists secured as instructors.

Exemption 1 — Scholarships to High School Honor Graduates

The highest ranking student in the graduating class of a fully accredited Texas high school will be entitled to a scholarship valued at $100. This scholarship must be used during the long session immediately following graduation. Details may be obtained from the Student Aid Office.

Exemption 2 — Veterans

Lamar is approved under all of the Veterans Educational Assistance programs for educational training of veterans of the U.S. Armed Forces.

Persons who were citizens of Texas at the time of entry into the Armed Forces, and who are no longer eligible for educational benefits provided for veterans of the United States, are exempt from tuition and laboratory fees. This applies to those who served in World War I, World War II, the Korean Conflict or the Vietnam War and were honorably discharged. To obtain this exemption, necessary papers must be presented prior to registration and approval obtained from the Office of Veterans' Affairs. The above exemption also extends to wives, children and dependents of members of the Armed Forces who were killed in action or died while in the service in World War II, the Korean Conflict or Vietnam War.

Students who expect to attend under some veterans' benefit plan should contact the Office of Veterans' Affairs 60 to 90 days prior to registration. The Office of Veterans' Affairs advises veterans on program and training opportunities, academic assistance and counseling. Veterans interested in information in these areas should visit this office in the Wimberly Student Affairs Building.

Refund of Fees

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

Fall or Spring Semester

1. Prior to the first class day, 100 per cent.
2. During the first five class days, 80 per cent.
3. During the second week of the semester, 70 per cent.
4. During the third week of the semester, 50 per cent.
5. During the fourth week of the semester, 25 per cent.
6. After the fourth week of the semester, none.

Summer Session

1. Prior to the first class day, 100 per cent.
2. During the first, second or third class day, 80 per cent.
3. During the fourth, fifth or sixth class day, 50 per cent.
4. Seventh class day and after, none.

Dropping Courses

All students who drop courses during the first 12 class days of the Fall or Spring Semester, or within the first four days of a Summer Session, and remain enrolled at Lamar University, will receive a refund on tuition and fees for that particular course or courses. These refunds will be made to the student four to eight weeks after the session begins.

All questions regarding refunds should be directed to the Finance Office.

Returned Check Fees

A student is automatically suspended from the University if a check is returned unpaid. The student may re-enter upon redemption of the check plus payment of the returned check fee of $5.

Miscellaneous Fees

Associate Diploma	$ 7.50
Certificate of Completion	7.50
Bachelor's Diploma	7.50
Master's Diploma	7.50

Bachelor's Cap and Gown Rental	9.00
Master's Cap, Gown and Hood Rental	12.00
Returned Checks	5.00
Re-entry Fee	5.00
Transcript Fee	2.00
Advanced Standing Examination (per course)	5.00
Photo Identification	2.00
Swimming Pools (suits and towels)	10.00

Fine and Breakage Loss

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

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

RULES AND REGULATIONS FOR DETERMINING RESIDENCE STATUS

The Texas law specifies that if there is any question as to the student's right to classification as a resident of Texas, it is the student's responsibility to (1) have his classification officially determined and (2) to register under the proper classification.

Pertinent sections of the Texas statutes governing residence for tuition purposes follow. More detailed information on both the law and its interpretations may be obtained from the Office of Admissions and Records.

Pursuant to Title 3, Texas Education Code. Effective Oct. 17, 1975

1 — Minors*

Statute: Section 54.052 (b) An individual, under twenty-one (21) years of age, who is living away from his family, and whose family resides in another state or has not resided in Texas for the 12-month period immediately preceding the date of registration shall be classified as a nonresident student;

Section 54.052 (c) An individual twenty-one (21) years of age or under whose family has not resided in Texas for the 12-month period immediately preceding the date of registration shall be classified as a nonresident student regardless of whether he has become the legal ward of residents of Texas or has been adopted by residents of Texas while he is attending an educational institution in Texas, or within a 12-month period before his attendance, or under circumstances indicating that the guardianship or adoption was for the purpose of obtaining status as a resident student;

Section 54.055 An individual 21 years of age or under whose parents were formerly residents of Texas is entitled to pay the resident tuition fee following the parents' change of legal residence to another state, as long as the individual remains continuously enrolled in a regular session in a state-supported institution of higher education.

2 — Residence of Individuals Over Twenty-One

Statute: Section 54.052 (d) An individual twenty-one (21) years of age or over who has come from outside Texas and who is gainfully employed in Texas for a 12-month period immediately preceding registration in an educational institution shall be classified as a resident student as long as he continues to maintain a legal residence in Texas; and

Section 54.052 (e) An individual twenty-one years of age or over who resides out of the state or who has come from outside Texas and who registers in an educational institution before having resided in Texas for a 12-month period shall be classified as a nonresident student.

Section 54.054 A nonresident student classification is presumed to be correct as long as the residence of the individual in the state is primarily for the purpose of attending an educational institution. After residing in Texas for at least twelve (12) months, a nonresident student may be reclassified as a resident student as provided in the rules and regulations adopted by the Coordinating Board, Texas College and University System. Any individual reclassified as a resident student is entitled to pay the tuition fee for a resident of Texas at any subsequent registration as long as he continues to maintain his legal residence in Texas.

*Subparagraph (d), Section 54.058, has been repealed by House Bill 736, 63rd Legislature, effective August 27, 1963.

3 — Married Students

Statute: Section 54.056 A nonresident who marries and remains married to a resident of Texas, classified as such under this Act at the time of the marriage and at the time the nonresident registers, is entitled to pay the resident tuition fee regardless of the length of time he has lived in Texas, and any student who is a resident of Texas who marries a nonresident is entitled to pay the resident tuition fee as long as he does not adopt the legal residence of the spouse in another state.

4 — Military Personnel and Veterans

Statute: 54.058 (a) Military personnel are classified as provided by this section in the following manner:

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

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

(d) If nonresident military personnel are attending an institution of higher education under a contract between the institution and any branch of the Armed Forces of the United States, in which the tuition of the member of the military is paid in full by the United States Government, the student shall pay the nonresident tuition fee;*

(e) A Texas institution of higher education may charge to the United States Government the nonresident tuition fee for a veteran enrolled under the provisions of a Federal law or regulation authorizing educational or training benefits for veterans;

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

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

5 — Employees of Institutions of Higher Education Other Than Students

Statute: Section 54.059 A teacher, professor, or other employee of a Texas institution of higher education is entitled to register himself, his spouse, and their children in a state institution of higher education by paying the tuition fee and other fees or charges required for Texas residents without regard to the length of time he has resided in Texas. A teacher, professor, or other employee of a Texas institution of higher education is any person employed at least one-half time on a regular monthly salary basis by a state institution of higher education.

6 — Student Employees

Statute: Section 54.051 (o) A teaching assistant, research assistant, or other student employee of any institution covered by this section is entitled to register himself, his spouse, and their children in a state institution of higher education by paying the tuition fees and other fees or charges required for Texas residents, without regard to the length of time he had resided in Texas; provided that said student employee is employed at least one-half time in a position which relates to his degree program under rules and regulations established by the employer institution. This exemption shall continue for students employed two consecutive semesters through the summer session following such employment if the institution is unable to provide employment and, as determined under standards established by the institution, if the employee has satisfactorily completed his employment.

7 — Competitive Scholarships

Statute: Section 54.051 (p) A nonresident student who holds a competitive scholarship of at least $200 for the academic year or summer for which he is enrolled and who is either a nonresident or a citizen of a country other than the United States of America is entitled to pay the fees and charges required of Texas residents without regard to the length of time he has resided in Texas, provided that he must compete with other students, including Texas residents for the scholarship and that the scholarship must be awarded by a scholarship committee officially recognized by the administration of the institution of higher education.

6 — Reciprocity Clause Applicable to Junior Colleges, Upper Level Institutions

Statute: Section 54.060. Resident of Bordering State: Tuition. The non-resident tuition fee prescribed in

*In accordance with provisions of Senate Bill 123, 63rd Texas Legislature, effective August 27, 1973, and with Attorney General's Opinion H-82, August 13, 1973, any reference to age "twenty-one" in these *Rules and Regulations for Determining Residency Status* should be interpreted to mean age "eighteen."

this chapter does not apply to a nonresident student who is a resident of a state situated adjacent to Texas and who registers in any Texas public junior college situated in a county immediately adjacent to the state in which the nonresident student resides. The nonresident junior college student described in this section shall pay an amount equivalent to the amount charged a Texas student registered at a similar school in the state in which the nonresident student resides.

9 — Citizens of Any Country Other Than the United States of America

Statute: Section 54.057 An alien who is living in this country under a visa permitting permanent residence or who has filed with the proper Federal immigration authorities a declaration of intention to become a citizen has the same privilege of qualifying for resident status for fee purposes under this Act as has a citizen of the United States. A resident alien residing in a junior college district located immediately adjacent to Texas boundary lines shall be charged the resident tuition by that junior college.

Statute: Section 54.051 (h) Tuition for students who are citizens of any country other than the United States of America is the same as tuition required of other nonresident students. However, the governing board of an institution of higher education may set a lower fee for a foreign student, based on financial need, as authorized by rules and policies of the Coordinating Board, Texas College and University System. The lower fee in any case shall be not less than $14 per semester credit hour, and the total of such charge shall be not less than $200 per semester or 12-week summer session, and not less than $100 per 6-week summer term. However, if a student is a citizen of a country that charges citizens of the United States tuition at publicly funded colleges and universities in an amount which is equal to or less than $200 per semester or 12-week summer session or comparable period, or $100 per 6-week summer term or comparable period, as determined by the Coordinating Board, Texas College and University System, the student shall be charged $14 per semester credit hour, but not less than $200 per semester or 12-week summer session nor less than $100 per six-week summer term.*

10 — Student Responsibilities

A. Student Responsibility to Register Under Proper Classification

The responsibility of registering under the proper residence classification is that of the student, and if there is any question as to right to classification as a resident of Texas, it is that student's obligation, prior to or at the time of registration, to raise the question with the administrative officials of the institution in which the student is registering and have such officially determined.

B. Notification Upon Becoming a Nonresident

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

11 — Official Change of Residence Status

A. Application for Reclassification

Every student classified as a nonresident student shall be considered to retain that status until he or she makes written application for reclassification in the form prescribed by the institution and is officially reclassified in writing as a resident of Texas by the proper administrative officers of the institution.

B. Reclassification as a Nonresident

Every person who has been classified as a resident of Texas shall be reclassified as a nonresident student whenever he or she shall report, or there is found to exist, circumstances indicating a change in legal residence to another state. If any student who has been classified as a resident of Texas shall be found to have been erroneously so classified, that student shall be reclassified as a nonresident and shall be required to pay the difference between the resident and nonresident fees those semesters in which he or she was so erroneously classified. In addition, the student shall be required to pay back all monies borrowed from the Texas Opportunity Plan Fund.

C. Reclassification as a Resident

If any student has been erroneously classified as a nonresident student and subsequently proves to the satisfaction of the appropriate officials of an institution of higher education that he or she should have been classified as a resident student, that students shall be reclassified as a resident of Texas and shall be entitled to a refund of the difference between the resident and nonresident fees for the semesters in which he or she was so erroneously classified.

12 — Penalties

Statute: Section 54.053 The governing board of each institution required by this Act to charge a nonresident tuition or registration fee is subject to the rules, regulations, and interpretations issued by the Coordinating Boad, Texas College and University System, for the administration of the nonresident tuition provisions of this Act. The rules, regulations, and interpretations promulgated by the Coordinating Board shall be furnished to the presidents or administrative heads of all Texas public senior and junior colleges and universities.

Section 54.061 The governing board of an institution of higher education may assess and collect from each nonresident student who fails to comply with the rules and regulations of the boards concerning nonresident fees a penalty not to exceed $10 a semester.

*These provisions apply only to foreign students who enter state colleges and universities for the first time after June 19, 1975.

Academic Affairs

COURSE

The unit of instruction for credit purposes is the course. Most courses meet three hours each week and have a credit value of three semester hours for one semester, or six hours for two semesters.

COURSE NUMBERING

Each course has an individual alpha-numeric code (such as Eng 333). The alpha part indicates the subject area. Each number contains three or more figures. The first digit indicates the rank of the course: 1 means that it is freshman level; 2, sophomore level; 3, junior level; and 4, senior level. The second figure indicates the number of semester hours credit. The third figure (or figures) indicates the order in which the course normally is taken. The letter a, b, c, or d following course numbers indicates partial credit in each case; full credit for such numbered courses will be granted only when the series is complete.

Applied music courses are numbered so that the second number indicates both semester hour credit and number of private lessons each week.

NEW COURSES

In order to meet changing educational requirements, the University reserves the right to add any needed courses at any time without regard to the listing of such courses in the catalog. It is expected that a listing of these courses will appear in the next catalog issue.

The right to change numbers in order to indicate changes in semester hours also is reserved for the reasons above.

SEMESTER HOUR

The unit of measure for credit purposes is the semester hour. One hour of recitation (or equivalent in laboratory work) each week usually is equal to one semester hour. For each classroom hour, two hours of study are expected. Two or more hours of laboratory work are counted equivalent to one classroom hour. For laboratory work which requires reports to be written outside of class, two clock hours are usually counted as one semester hour.

Maximum Course Loads

The normal course load in a regular semester is 15-18 semester hours; for a six week summer term 6-8 semester hours. Overloads must be approved by the student's academic dean. No student will be allowed to enroll for more than 21 semester hours regardless of the number of grade points earned the preceding semester.

REGISTRATION FOR CLASSES

Students will be permitted to attend class only when the instructor has received evidence of proper registration. Registration dates and deadlines are listed in the official University calendar. Students may add courses, make section changes, or drop courses only within the period specified in the calendar. A schedule of classes is prepared by the Office of Admissions and Records well in advance of a given semester.

Minimum Class Enrollment

The University reserves the right not to offer any course listed in this catalog if fewer than 12 students register for the course.

Auditing of Courses by Senior Citizens

Senior citizens, 65 years of age or older, may audit courses without the payment of fees on a space-available basis.

CLASS ATTENDANCE

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

Postponed Examinations

Arrangements for taking postponed examinations are made with the instructor concerned, but must be approved by the instructor's department head. Such arrangements should be made at least 48 hours before the examinations.

REPETITION OF A COURSE

A course may be repeated for additional credit only as specified by the official course description in the University Bulletin.

When a student repeats a course which may not be repeated for additional credit, the official grade is the last one made but the original grade remains on the student's record as a course taken and is included in the grade point average calculation.

ENGLISH REQUIREMENT

A full-time student (one taking 12 or more semester hours) must register for freshman English until credit for six semester hours has been earned. This policy does not apply during summer terms.

A student's use of English is subject to review prior to graduation. If found unsatisfactory, additional course work may be prescribed.

PHYSICAL ACTIVITY COURSE REGISTRATION REQUIREMENT

All full-time students (those taking 12 or more semester hours) must register for physical activity until they complete four semesters except as follows:

1. Those who are unable to participate in a regular or modified activity course because of physical handicaps (must have written exemption from the University physician).
2. Those who choose active participation in the marching band or AFROTC for four Fall Semesters.
3. Students who are 25 or more years of age may be exempted from this requirement at their option.
4. Veterans who have completed basic training as a part of their military service are exempt from the required freshman year courses in physical education, but must take two semesters of physical education at the sophomore level to complete the requirements for graduation.

Students exempted from the physical education requirement must submit elective hours approved by their major department in lieu of the requirement.

BIBLE COURSES

A student may register for as many as three semester hours of Bible study each semester for a total of two semesters. This total may be raised to four semesters with the approval of the student's counselor if the field of study warrants such elective choice.

COOPERATIVE PROGRAMS

A cooperative program is offered, to a limited number of qualified students, whereby the student spends alternate terms at work or study.

To remain in the program, students must maintain their grade point averages and perform in a manner satisfactory to both their employer and Lamar. Further information may be obtained from the Director of Cooperative Education, Box 10074, LU Station.

CHANGING SCHEDULES

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

DROPPING COURSES

After consultation with their advisor and/or department head, students may drop a course and receive a grade of "Q" during the first six weeks, (two weeks in the summer session) of the semester. For drops after this penalty-free period, grades are recorded as "Q" or "F" indicating that the student was passing or failing at the time of the drop.

A grade of "Q" may not be assigned unless an official drop has been processed through the Office of Admissions and Records. A student may not drop a course within seven calendar days of the beginning of final examinations or three calendar days before the end of a summer term.

INSTRUCTOR INITIATED DROP

When absences, other than approved absences, interfere seriously with the student's performance, the instructor may recommend to the department head that the student be dropped from the course. If this action is taken after the first six weeks of the semester, a grade of "F" may be recorded for the course. The student's major department will be notified that the student was dropped for the reason of excessive unexcused absences.

WITHDRAWALS

Students wishing to withdraw during a semester or summer term should fill out a Withdrawal Petition in triplicate in the office of their department head. Students must clear all financial obligations, and return all uniforms, books, laboratory equipment and other materials to the point of original issue. Three copies of the withdrawal form signed by the department head, the director of library services and an associate dean of student development, are presented to the Office of Admissions and Records by the student.

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

A student may not withdraw within seven calendar days of the beginning of final examinations or three calendar days before the end of a summer term. A student who leaves without withdrawing officially will receive a grade of "F" in all courses and forfeit all returnable fees.

Enforced Withdrawal Due to Illness

The director of the health center and the vice-president for student affairs, on the advice of competent medical personnel, may require withdrawal or deny admission of a student for health reasons (mental or physical).

TRANSFER FROM ONE DEPARTMENT TO ANOTHER

Students wishing to change their majors must have the approval of the head of the department of their former major area and approval of the head of the new department. These approvals must be in writing on the form entitled "Change of Major."

Interchange and Recognition of Credits

Credit earned in the respective colleges of the University, including the College of Technical Arts, may be applied to degree programs of the University when such credit is appropriate to established programs.

TRANSFER CREDIT FOR CORRESPONDENCE COURSES

Lamar does not offer courses by correspondence. However, a maximum of 18 semester hours of correspondence work from an accredited institution may be applied toward a bachelor's degree.

No correspondence course may be carried while a student is in residence without the permission of the student's department head. A permit signed by the department head must be filed in the Office of Admissions and Records prior to registration for the course.

A student may not: (1) register for, carry or complete a correspondence course during the last semester or Summer Session before graduation, nor (2) receive credit for any junior or senior course taken by correspondence, except in the following circumstances: (a) a course required for graduation is not offered by Lamar; (b) the student has a schedule conflict between required courses; (c) a nonresident senior who is six semester hours or less short of graduation and who has filed a statement of intent to complete work by correspondence.

This statement of intent must be approved by the department head and filed in the Office of Admissions and Records no later than the last date to apply for graduation.

Seniors must file correspondence transcripts 14 days before graduation.

Credit by correspondence for a course failed in residence will not be accepted toward graduation.

CREDIT BY EXAMINATION

Advanced Standing Examinations

Advanced standing examinations are intended only for those students who have had the equivalent, in formal or informal training, of the work being presented in the course in question. Credit may be granted to those who pass departmental advanced standing examinations with a grade of B or better. Normally, departmental examinations will be given only if CLEP subject examinations are not available.

To secure permission for such examinations, a student must obtain the written permission of the Dean of the College and the departmental head responsible for the course. A fee of $5 must be paid to the Finance Office. Forms are available in the office of the department head. Advanced standing examinations will not be approved for skill courses.

A student having received a grade (passing or failing) in a course may not take an advanced standing examination in that course.

College Level Examination Program (CLEP)

Lamar University awards credit on the basis of most of the Subject Examinations of the College Level Examination Program (CLEP). A complete list is available from the Admissions and Records Office. No credit will be awarded for the General Examination. The essay section of the English Composition Examination is required, but need not be taken in order to qualify for credit on other subject examinations.

Except for satisfying the coursework-in-residence and the state-mandated American History and American Government requirements, credit earned by examination is equivalent to credit earned by taking the course and may be used to satisfy bachelor's degree requirements. Credit will be awarded only when the student is already enrolled at Lamar at the time of the examination or when the student enrolls at Lamar after taking the examination.

The amount of credit awarded to a student who attended college prior to taking the examination will depend upon which college courses the student had completed before taking the examination. Credit will not be awarded if the student had received prior credit for the same course or its equivalent. Grades will not be assigned and hours will not be used in the computation of grade point averages.

A copy of "Policies Concerning Academic Credit and Placement on the Basis of the CLEP Subject Examinations" may be obtained from the Office of the Dean of Admissions and Records.

Academic Progress

CLASSIFICATION OF STUDENTS

Students are classified as freshmen, sophomores, juniors, seniors and post baccalaureate. For the purpose of determining eligibility to hold certain offices and for other reasons, officially enrolled students are classified as follows:

Freshman: has met all entrance requirements but has completed fewer than 30 semester hours.

Sophomore: has completed a minimum of 30 semester hours with 60 grade points.

Junior: has completed a minimum of 60 semester hours with 120 grade points.

Senior: has completed a minimum of 90 semester hours with 180 grade points.

Post baccalaureate: holds a bachelor's degree, but is not pursuing a degree program.

Full-Time Student: a student taking 12 or more semester hours (four or more in a summer term) is classified as a full-time student.

GRADING SYSTEM

A — Excellent
B — Good
C — Satisfactory
D — Passing
F — Failure
I — Incomplete
W — Withdrawn
Q — Course was dropped
S — Credit
U — Unsatisfactory, no credit
NG — No grade

The grade of **W** or **Q** is given if the withdrawal or drop is made before the penalty date (see Dropping Course) or if the student is passing at the time of withdrawal or drop.

The grade of **I** may be given when any requirement of the course, including the final examination, is not completed. Arrangements to complete deficiencies in a course should be made with the instructor.

Incomplete work must be finished during the next long semester, or the Office of Admissions and Records must change the **I** grade to the grade of **F**. The course must then be repeated if credit is desired.

An **I** grade also automatically becomes an **F** if the student reregisters for the course prior to removing the deficiencies and receiving a grade change.

The instructor may record the grade of **F** for a student who is absent from the final

examination and is not passing the course.

Semester grades are filed with the Office of Admissions and Records. A grade may not be recorded for a student not officially enrolled in a course during the semester covered. A grade may not be corrected or changed without the written authorization of the instructor giving the grade. The written instruction for a grade change should be accompanied by a statement explaining the reason for the change.

A student desiring to register for a course to receive a grade of NG must have the written approval of the academic dean and the department head prior to the twelfth class day.

GRADE POINT AVERAGE COMPUTATION

The grade point average is a measure of the student's overall academic performance and is used in the determination of academic standing, rank in class, eligibility for graduation, etc.

In order to compute grade averages, grade points are assigned to letter grades as follows: to the grade A, 4 points; to B, 3 points; to C, 2 points; to D, 1 point, and to F, I, S, U, NG, W, 0 points. The number of grade points earned in a course is obtained by multiplying the number of semester hours credit by the number of points assigned to the grade made in the course.

The grade point average is calculated by dividing the total number of grade points earned by the total number of semester hours attempted in courses for which the grades A, B, C, D, F and I are assigned. Thus, for grades, S, U, NG, W and Q, neither semester hours nor grade points are used in the computation of the grade point average. Hours attempted include all work taken whether passed, failed or repeated.

This method of calculating grade point averages will apply to all students in baccalaureate programs of study effective July 5, 1978. The University's former repeat policy will not apply to students in four year programs after this date; thus, the grade of a course repeated after July 5, 1978, may not be substituted for a prior grade.

Grade point averages for students in certificate, diploma and associate degree programs are calculated in the manner prescribed for baccalaureate programs, with one exception. A student in one of these programs who passes a course at the same institution where the student previously received a failing grade (F or U), will have only the passing grade and its associated grade points applied toward any certificate, diploma or associate degree. After the course is repeated, the student must file a request for a grade point adjustment with the Records Office. Any adjustment to a grade point average made during the time a student enrolled in an applicable course of study is disregarded once the student enters a four-year program.

ACADEMIC RECORDS AND TRANSCRIPTS

Academic records are in the permanent custody of the Admissions and Records Office. Transcripts of academic records may be secured by an individual personally, or will be released on the student's written authorization. Also see Academic General Information, this catalog.

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

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

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

FINAL GRADE REPORT

Reports on grades are mailed at the end of each semester or summer term. These reports include the semester grades and the grade point average for the semester and for all work attempted at the University.

DEAN'S LIST

At the end of each semester the Office of Admissions and Records prepares a list of all full-time (those who complete 12 or more semester hours) freshman and sophomore students who have earned for that semester a grade point average of 3.40 or above and junior and senior students who have earned for that semester a grade point average of 3.60 or above. This list is the Dean's List and is announced by the academic dean of each college.

SCHOLARSHIP HONORS

A chapter of Phi Kappa Phi, national honor society, was chartered in the spring of 1965. This honor society elects its membership from students who rank in the top 10 per cent of their class scholastically and are within a year of graduation from an undergraduate college. Membership is open to majors from all academic colleges.

Alpha Lambda Delta and Phi Eta Sigma, national honor societies for freshmen, select members in the Fall and Spring Semesters. A 3.5 average is required for membership.

A number of departmental and college honor societies also have chapters at the University.

SCHOLASTIC PROBATION AND SUSPENSION

Students are expected to make acceptable scholastic progress toward their degree objectives. A "C" is the minimum satisfactory grade and a "C" average or 2.0 grade point average (GPA), constitutes satisfactory performance. Since two grade points are awarded for each semester hour of "C", students are in good standing if they have earned at least twice as many grade points as semester hours attempted. The academic progress of a student with less than enough grade points for a "C" average is unsatisfactory and the student is on scholastic probation for as long as a deficiency exists. The grade point deficiency is the number of grade points less than is required for a "C" average, i.e. the number less than twice as many grade points as hours attempted.

All students with a grade point deficiency of 25 or more grade points at the end of the Fall and Spring Semesters shall be suspended for the following semester provided that no first time college student shall be suspended at the end of his first semester of attendance.

Students suspended from Fall and/or Spring Semesters by this action may, however, attend the Summer Session on probation. Students with a grade point deficiency less than 25 at the close of the Summer Session may register for the following Fall Semester but will be charged with a suspension.

Students returning from an academic suspension must continue to reduce their grade point deficiency every semester of enrollment until the deficiency is eliminated. Should students fail to reduce their deficiency in any one semester, they will be suspended, unless approved for probationary re-enrollment by the dean of their college.

The first academic suspension shall be for one long semester; the second for two long semesters; and the third for four long semesters and readmission only with special permission of the dean of the academic college.

A college may prescribe academic requirements for its majors in addition to the basic university grade point standard, with the approval of the vice-president for Academic Affairs. Students suspended under this provision may register in another college provided they meet the prescribed standards and are accepted through the normal change of major procedure. Students may not register for a 300 or 400 level course offered by the suspending college unless the course is required by their new curriculum.

ELIGIBILITY FOR EXTRACURRICULAR ACTIVITIES

An extracurricular activity is understood to be any activity representing the student body, any student organization, any department or division organization or any general activity representing the University.

Any full-time student not on disciplinary or scholastic probation, who is officially registered, is eligible to become a candidate and/or to hold student office or to represent the University in any extracurricular activity provided such student has a grade point average of at least 2.0 for both the total of college work completed at Lamar and that of the preceding semester.

For the purpose of establishing eligibility, two six-week summer terms may count as one semester.

Transfer students have the same eligibility as freshman students until completion of one semester.

ELIGIBILITY FOR INTERCOLLEGIATE ATHLETICS

A high school graduate who has been admitted as a regular student and who is registered for a minimum of 12 semester hours is eligible for intercollegiate athletics in the Southland Conference or the Texas Association for Intercollegiate Athletics for Women, in both of which Lamar University is a charter member.

For additional details on eligibility for intercollegiate athletics, the student is directed to make inquiry of the director of men's athletics or the director of women's athletics.

Degree Requirements

BACHELOR DEGREE — GENERAL

1. Remove all admission conditions.
2. Have the following minimum requirements:
   (a) 30 semester hours in residence at Lamar University. Twenty-four semester hours of this minimum must be earned after attaining senior classification, except for the special degree programs which apply to biology, law and medical technology.
   (b) a grade point average of at least 2.0 on all courses in the major field and a grade point average of at least 2.0 on all work attempted.
   (c) 120 semester hours not including required activity courses in health and physical education, marching band and AFROTC.
   (d) a major of 24 semester hours, 12 of which must be in advanced courses.
   (e) six semester hours in government.
   (f) six semester hours in American history.
   (g) nine semester hours in English, including six semester hours of freshman composition and three semester hours of literature.
   (h) four courses in mathematics, laboratory science or foreign language with no more than three courses in mathematics, laboratory science or foreign language.
   (i) four semesters of required physical activity and/or marching band and/or AFROTC.
   (j) six semester hours of electives outside the major field.
   (k) 30 semester hours on the junior and senior levels, with at least 18 being completed at Lamar University.
3. Complete the program of study as listed in the catalog.
4. No more than a total of 30 semester hours of correspondence and extension credit may be applied toward the bachelor's degree. Eighteen semester hours is the maximum for correspondence work only.
5. Make final application for graduation exercises and pay the designated fee.
6. Attend the official graduation exercises or receive prior approval from the Dean of Admissions and Records to be excused from them.

SECOND BACHELOR DEGREE

When another bachelor's degree is taken simultaneously, or has been taken previously, the second bachelor's degree may be granted upon the completion of all required work for the second degree. A total of 30 semester hours above the number required for the degree having the greater semester hour requirement must be completed at Lamar University.

BACHELOR OF ARTS DEGREE

1. Meet the University's general degree requirements for a bachelor's degree.
2. Complete the course numbered 232 in a foreign language.
3. Complete six semester hours of literature.
4. Complete the minor of 18 semester hours, six of which must be in advanced courses.
5. Meet the specific requirements of the selected program of study as listed in the department concerned.

BACHELOR OF SCIENCE DEGREE

BACHELOR OF BUSINESS ADMINISTRATION DEGREE

BACHELOR OF GENERAL STUDIES DEGREE

1. Meet the University's general degree requirements for a bachelor degree.
2. Meet the specific requirements of the selected program of study as listed in the department concerned.

SPECIAL DEGREE PROGRAMS

Law: In the preparation for the study of law, the student completes three years of work at Lamar and one year at an accredited law school. This plan has been approved by one or more recognized law schools of Texas.

Complete the special program for the Bachelor of Business Administration degree as outlined in the program of study shown in the College of Business section of this catalog.

Biology: A student may receive the degree of Bachelor of Science — biology major — after completion of one year in an approved college of dentistry or medicine.

The following minimums are required:

1. Complete 100 semester hours of the basic requirements for the Bachelor of Science degree. This includes all the required minimums except the total of 140 semester hours.
2. Complete at least 30 semester hours in an approved college of dentistry or medicine.
3. Apply for the degree by June 15 preceding the August graduation program.

ASSOCIATE OF ARTS DEGREE — (A.A.)

1. Remove all admission conditions.
2. Have the following minimum requirements:
   (a) 30 semester hours in residence at Lamar University. Twelve semester hours of this minimum must be earned after May 1972, and after reaching sophomore classification.
   (b) a grade point average of at least 2.0.
   (c) 60 semester hours not including required activity courses in health and physical education, marching band and AFROTC.
   (d) six semester hours in government.
   (e) six semester hours in American history.
   (f) nine semester hours of English, including six semester hours of freshman composition and three semester hours of literature.
   (g) four courses in mathematics, laboratory science or foreign language with no more than three courses in mathematics, laboratory science or foreign language.
   (h) two semesters of required physical activity and/or marching band and/or AFROTC.

(i) Complete the courses numbered 232 in a foreign language.

3. No more than a total of 15 semester hours of correspondence and extension credit may be applied toward the degree.
4. Make application for the Associate of Arts degree and pay all designated fees.

ASSOCIATE OF SCIENCE DEGREE — (A.S.)

1. Remove all admission conditions.
2. Have the following minimum requirements:
   (a) 30 semester hours in residence at Lamar University. Twelve semester hours of this minimum must be earned after May 1972, and after reaching sophomore classification.
   (b) A grade point average of at least 2.0 on all work attempted.
   (c) 60 semester hours not including required activity courses in health and physical education, marching band and AFROTC.
   (d) six semester hours in government.
   (e) six semester hours in American history.
   (f) nine semester hours of English, including six semester hours of freshman composition and three semester hours of literature.
   (g) four courses in mathematics, laboratory science or foreign language, with no more than three courses in mathematics, laboratory science or foreign language.
   (h) two semesters of required physical activity and/or marching band and/or AFROTC.
3. Complete an Associate of Science program of study as outlined in the catalog.
4. No more than a total of 15 semester hours of correspondence and extension credit may be applied toward the degree.
5. Make application for the Associate of Science degree and pay all designated fees.

ASSOCIATE OF APPLIED SCIENCE DEGREE — (A.A.S.)

1. Satisfy all admission requirements.
2. Complete an approved degree plan.
3. Have at least a 2.0 grade point average on all work submitted on the degree plan and a 2.0 on all courses in the major field submitted on the degree plan.
4. Complete 24 semester hours of major work at Lamar with 12 hours in 200 level courses.
5. Make final application for graduation and pay all fees by the deadline date as stated in the current catalog.

SECOND ASSOCIATE DEGREE

When another associate degree is taken simultaneously, or has been taken previously, the second associate degree may be granted upon the completion of all required work for the second degree. A total of 15 semester hours above the number required for the degree having the greater semester hours requirement must be completed.

GRADUATION

Application for Graduation

Applications for graduation must be filed with the Office of Admissions and Records. The current University Calendar contains exact dates.

Before final approval of these applications, the follow supplementary materials must be submitted:

1. Statements showing reasonable expectation of completion of degree requirements by graduation time.
2. Transcript showing grade point average of at least 2.0 on all courses taken and applied to meet degree requirements. A course is counted each time taken whether failed or passed.
3. Receipt showing payment of cap and gown and diploma fees.
4. Clearance of all financial and property matters to date.
5. Approval of the department sponsoring the student.

The application of a student lacking a grade point average of 2.0 on either overall or in the student's major field, will be removed from the graduation list at the beginning of the semester.

If a student under such condition does complete all degree requirements, the student may apply for a statement of such completion and appear for the next graduation date.

The student is responsible for making the application, for securing official advisement about study plans for the last two semesters, and for checking compliance with all degree requirements with the Office of Admissions and Records.

Graduation Under a Particular Catalog

A student normally is entitled to graduate under the degree provisions of the catalog in effect at the time of the student's first completed semester of enrollment with these exceptions:

A catalog more than seven years old shall not be used.

The program of the student who interrupts enrollment (for reasons other than involuntary military service) for more than one calendar year shall be governed by the catalog in effect at the time of the student's re-entrance to the University. The student who interrupts enrollment for involuntary military service must re-enroll within one year from the date of separation from military service in order for this provision to apply. For these purposes, enrollment shall be defined as registration for and successful completion of at least one course during an academic term. A student forced to withdraw for adequate cause before completion of a course may petition for a waiver of this provision at the time of withdrawal.

The program of the student who changes major from one department to another within the University shall be governed by the degree requirements in effect at the time the change of major becomes effective.

At the discretion of the dean, the student will be required to comply with all changes in the curriculum made subsequent to the year in which the student is enrolled. Deletions and additions of courses will be of approximately equal credit so that no student will have an overall appreciable increase of total credits required for graduation.

Any first-time college student who entered a junior college on or after September 1, 1968, can qualify, upon transfer to Lamar University, to graduate under the Lamar University catalog in effect when the student entered the junior college if the core curriculum provisions of the Coordinating Board are followed. Students are subject to the requirement that if they interrupt their studies for more than one calendar year at the junior college or before transfer to Lamar University, they must qualify for graduation under the catalog in effect when they return to the junior college or matriculate at Lamar University. This policy became effective for the year 1974-75.

GRADUATION HONORS

To be designated as honor graduates, members of the graduating class must (1) have completed at least 60 semester hours at Lamar University, (2) have a grade point average of at least 3.5 for all course work attempted at Lamar as well as a 3.5 on the combination of work at Lamar and all attempted work at other institutions attended. A grade point average of 3.5 to 3.64 qualifies for "honors," 3.65 to 3.79 for "high honors," and 3.80 to 4.00 for "highest honors."

Grades made the semester of graduation are included in the calculation of grade point averages for honors. Recognition of honor graduates at the commencement exercises, however, will of necessity be limited to those who have the qualifying grade point average at the end of the semester or term preceding graduation. Both diplomas and permanent records indicate graduation honors.

Academic General Information

CHANGE OF ADDRESS OR NAME

Students are responsible for all communications addressed to them at the address on file in the Student Affairs Office and in the Office of Admissions and Records. Any student who moves during a semester must immediately register his change of address in the office of the dean of student development and in the office of Admissions and Records. Change of address forms are available in the Office of Admissions and Records.

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

OFFICIAL SUMMONS

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

ACADEMIC ADVISORS

Each student is assigned an academic advisor within the student's major department. The advisor assists the student in designing a program of study that meets the requirements of the department and guides the student in the proper sequencing of courses. It is the responsibility of each student to schedule regular appointments with the advisor.

Guidance sessions insure that a program of study is pursued in proper sequence and that academic progress is maintained by the student. Toward that end, academic departments maintain a degree plan for each student who is regularly enrolled in the University and is taking courses pursuant to a degree.

Many students experience difficulties in deciding upon their major field of study. The Counseling and Testing Center in the Wimberly Student Affairs Building has material and staff available to assist students in their decisions. In addition, the Mary and John Gray Library maintains an up-to-date occupations section which is available to students undecided about their careers.

EDUCATIONAL RECORDS AND STUDENT RIGHTS

The following information concerning student records maintained by Lamar University is published in compliance with the Family Education Rights and Privacy Act of 1974 (PL 93-380).

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

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

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

The release of information to the public without the consent of the student will be limited to the categories of information which have been designated by the University as directory information and which will be routinely released. The student may request that any or all of this information be withheld from the public by making written request to the Admissions and Records Office. The request must be made by the last official day to register for a given session and applies to that session only. Directory information includes name; current and permanent address; telephone listing; date and place of birth; sex; marital status; country of citizenship; major and minor; semester hour load; classification; class schedule; eligibility for and participation in officially recognized activities and sports; weight and height of members of athletic teams; dates of attendance; degrees and awards received, with dates; previous educational agencies or institutions attended.

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

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

STUDENT DEBTS

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

Students and student organizations are expected to honor contractual obligations promptly, but in case of flagrant disregard of such obligations the vice-president for student affairs will take appropriate action.

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

Student Affairs

COUNSELING AND TESTING CENTER

Lamar University maintains a Counseling and Testing Center to serve students encountering educational, social or personal difficulties as well as provide testing services. The center is staffed with a fully-trained and qualified psychologist and counselors and a psychometrist to assist in the resolution of student problems and questions.

While the Counseling Office does not address problems of a long-term therapeutic nature, students encountering difficulties are encouraged to consult the office on a no-charge basis. All contacts are maintained as confidential and there are no entries made in the student's records. In addition to counseling, the office maintains a library to assist students in making decisions concerning choices of majors and careers.

The Testing Office coordinates required testing by Lamar University and provides individual testing services which include administering and interpreting appropriate aptitude, vocational interest, and personality tests as requested by the Counseling Center staff. Non-students in need of testing services pay a fee dependent upon the program and type of test taken. The Testing Office also acts as a National Testing Center for programs such as the Graduate Record Examinations, Law School Admission Test, National Teacher Examinations, Graduate Management Admission Test, SAT, ACT, CLEP (advanced standing test), GED (high school equivalency test), and numerous other tests. Information and application forms concerning these tests may be obtained from the Testing Office.

The Counseling and Testing Center is located in the Wimberly Student Affairs Building and observes the office hours of the University. A staff member is also available until 8 p.m. Monday through Thursday for the benefit of students who are attending evening classes.

STUDENT CONDUCT

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

Student discipline at Lamar is based on an educational philosophy of helping students grow and mature into responsible citizens. When a student behaves in a manner which might require disciplinary action, a careful investigation of all facts is made and the student afforded every opportunity to assist in arriving at just and equitable decisions. Counseling, conferences with parents and/or instructors, conferences with peer groups and other techniques as may seem appropriate, may be employed in making discipline an educational experience.

Disciplinary Action

A student is subject to disciplinary action for unacceptable behavior, as outlined in the *Student Handbook* under "Student Conduct and University Discipline." The dean of Student Development may classify behavior as unacceptable and may refer the case to the proper judicial body for investigation and decision. The student has the privilege of appealing the decision to the University Discipline Committee. This appeal is made through the Office of the Dean of Students and the action of the Discipline Committee is subject to review by the vice-president for Student Affairs.

Hazing

Lamar University is opposed to hazing in all of its various forms and will discipline all offenders in the spirit of statutes governing this offense, as set forth in Chapter 4-A of Title 15 of Vernon's Statutes in the State of Texas.

Penalty for False Statements

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

ALUMNI ASSOCIATION

This association of former students of Lamar, including graduates and ex-students, is active on a year-around basis. The executive director of the association maintains an office in the Alumni House, located at the corner of Georgia and Cunningham Streets.

HEALTH CENTER

The University 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 University physician or of nursing care.

It is not possible for the University to provide unlimited medical service. Special medicines, examinations, treatments, X-rays and laboratory tests are not furnished. No charge is made, however, for up to 10 days care each semester in the Health Center.

All students pay a Health Service Fee of $1 per semester hour with a maximum of $10 for each of the Fall and Spring Semesters, and a maximum of $5 for each of the Summer Sessions. This fee will be used only for health services. Vaccines, serums and gamma globulin will be given in the Health Center free of charge. Pre-admission vaccinations are not included. All drugs prescribed and dispensed in the Health Center are free of charge except for a limit of one prescription refill per illness or accident. The first $100 of costs for emergency care of accidental injuries sustained on the campus and treated in a local hospital or doctor's office will be paid from Student Health fees. For services in the Health Center, each student must present his or her student services card.

The Health Center, located on East Virginia St. near Combs Hall, is adequately staffed and equipped for treating most illnesses and injuries. The center does not provide care for students requiring surgery or the services of specialists. In these cases, every effort will be made by the physician or nurse to notify the parents or guardian of the student's needs.

The University 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 or near Beaumont. When the University is not in session, the Student Health Center is not responsible for a student's health care.

The University is not under obligation to provide hospital services elsewhere if the Health Center is filled to capacity. The Health Center, however, has a sufficient number of beds for all normal needs.

Students who are ill should report promptly to the center for medical care.

HIGH SCHOOL RELATIONS, ORIENTATION AND RECRUITMENT

The Office of High School Relations and Recruitment, located in Room 209 of the Wimberly Student Affairs Building, provides complete admissions counseling for entering students. Professionally trained personnel assist prospective students in assimilating all admission credentials so that the transition into a college environment can be made as smooth and problem-free as possible. The office also is responsible for coordinating special days, clinics and institutes on campus as well as arranging for student tours and college day/night visits. Orientation programs for entering freshmen, new international students and college transfers are coordinated here as well. All initial inquiries to the University should be made to this office by writing P.O. Box 10007, Lamar University Station, Beaumont, Texas 77710 (713/838-7516).

IMPROVEMENT OF LEARNING SKILLS

Carefully selected and trained student counselors under the direct supervision of the Director of Retention conduct a systematic instructional program designed to provide students with the opportunity to develop higher-level study skills necessary for satisfactory performance in college courses. The course is organized around the three major elements which contribute to effective academic adjustment — study motivation, study organization and study techniques.

Any student, regardless of SAT or ACT score, high school rank, grade point average or classification is eligible to take the course.

Students who desire more information should contact the Director of Retention, Galloway Business Building, Room 102.

PARKING REGULATIONS

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

PLACEMENT CENTER

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

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

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

PUBLICATIONS

Student-run publications include the *University Press*, a student newspaper published twice a week during the long terms; *The Cardinal*, a full-feature magazine published once a semester; *Pulse*, a literary magazine of student work; and *The Clue*, a course guide for students, published once a year.

Offices for *University Press* and *The Cardinal*, both of which serve as training media for students interested in journalism, are at 200 Setzer Center. *Pulse* offices are located in Room 03 of the Liberal Arts Building. *The Clue*, published by the Student Government Association, is available throughout the year in their office, 211 Setzer Center.

The *Student Handbook*, published by Student Affairs, is designed by the *University Press* and *Cardinal* staff. It is available at registration and at other times in 116 Wimberly Student Affairs Building or 200 Setzer Center. The *Student Directory*—containing a listing of the names, addresses and telephone numbers of students, faculty and administrators—is also available.

RELIGIOUS CENTERS

Several denominations provide a full-time ministry to the campus and have established student centers adjacent to the campus.

In addition to credit Bible courses, the centers offer opportunities for worship, noncredit study and counseling to aid the student in developing a meaningful context for his university years.

SETZER STUDENT CENTER

The Richard W. Setzer Student Center provides facilities for leisure-time recreation and is the campus center for many extracurricular activities. Completed in 1971 at a cost of $2,800,000, the Center includes a games area, TV rooms, check cashing/ticket sales, music listening room, snack bar, a pub, graphics, reservations office, video lounges, a ballroom, various sized meeting rooms and lounges. The Center houses the Setzer Student Center Council, Student Government Association, Interfraternity Council, Recreational Sports Office and the various staff members who work with these organizations and many others.

Setzer Student Center Council

The Setzer Student Center Council (SSCC) is the student organization responsible for providing the campus with a variety of programs and extracurricular activities, using the Center for the majority of its functions.

The SSCC is comprised of 10 committees: concert, performing arts, public relations, forum, film, coffeehouse, recreation, social, video tape and travel. The committees are open to all university members.

Student Government Association

Any full-time student can be a member of the Student Government Association. President and representatives are elected annually in a student body election. Vice president secretary and treasurer, are elected by the representatives of Student Government Association. Along with the Setzer Student Center Governing Board, the

SGA offers the student an opportunity to promote and to participate in self government and to participate in the management of a well-rounded program of student activities. Further information about student government may be found in the Student Handbook.

Student Organizations

More than 115 student organizatons currently active at Lamar offer student membership opportunities in one or more of the service, professional, religious, mutual interest, honor, sorority, fraternity or recreational groups. Participation in student organizational activity enhances the education of students, who are strongly encouraged to affiliate with the organization(s) of their choice and participate in the programs.

Recreational Sports

All faculty, staff and currently enrolled students have access to the recreational facilities and may participate in the wide variety of activities that are offered. The Recreational Sports Office is responsible for organizing the activities which are arranged into three different levels of involvement and competition.

The Recreation Program offers the use of the University's facilities for free time recreation. Published schedules and reservations allow the student, faculty or staff member to exercise and enjoy competition with friends at a leisurely pace. Sports equipment is available to be checked out for overnight and weekend excursions or club activities.

The Intramural Program provides an opportunity to participate in supervised. competitive sports between groups within the University community. Persons not involved in varsity athletics are given further opportunity to develop skills learned at the high school level. Organizations may place teams in the All-Sports Division, which consists of competition in 25 different sports, or choose the Independent Division in which specialization in one or more sports may be chosen. The stated purpose of the Intramural Program is to promote human understanding, fair play and behavioral control through the inter-relationships that occur in athletic competition.

Sports Clubs are made up of individuals interested in a specific sport and seek competition beyond the boundries of the University. Further information on any facet of the Recreational Sports Program may be obtained from room 212 of the Setzer Student Center.

STUDENT HOUSING

The student housing program is designed to supplement the academic program by providing opportunities for social and intellectual development and recreation in a pleasant living environment. The University recently completed a multi-million dollar renovation program, making its residence halls among the most modern in Texas. A variety of living styles designed with most of the conveniences of an apartment and all the advantages of campus living include modern furniture, semi-private rooms, carpet, central heating and air conditioning and various color schemes. Residence halls are well staffed to assist with programs and to serve as advisors and counselors to the residents.

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

It is recommended that freshmen who do not live with parents or other relatives reside on the campus since the adjustment from high school to college frequently is difficult for the first-year student. In a residence hall, students have access to the library, to contacts with upperclassmen in their major fields and to professional counseling.

Reservations, Assignments and Fees

To reserve a room in the residence halls or an apartment, write to the Housing Office. A check or money order for $30 must accompany the reservation request. Reservations may be cancelled with full refund until three weeks prior to the first day of classes. No refunds will be issued on cancellations received after this date.

All unclaimed rooms will be declared vacant and the depoist forfeited at 6 p.m. on the last day of regular registration unless the student gives the Student Housing Office written instructions to hold the room for a longer period. Residents will receive deposit refunds, less any breakage or cleaning charges, at the end of a semester on proper withdrawal from the housing unit. The deposit will not be refunded if the student moves from the housing system prior to the end of a semester.

Assignments

Permanent assignments cannot be made until the student reports for check-in. The University reserves the right to assign students to specific apartments, residence halls and rooms. The University also reserves the right to consolidate residents in order to achieve maximum utilization of facilities. Students may request certain apartments, dormitories and rooms, and all possible consideration will be given each request. However, all assignments are made based on the date of deposit.

Dining Halls

Dining halls are located on the main campus (see map on page 4) and in Brooks-Shivers Hall. Snack bars, located in the Setzer Student Center and Beeson Technical Arts Building, provide sandwiches, soft drinks and light lunches. Commuter students also may use the snack bars and the main dining hall. A schedule of serving hours may be obtained from the Housing Office.

All resident students are required to be on a University Board Plan.

Fees

Room and Board fees may be made in one, two or three payments as outlined on schedule furnished by the Housing Department. Statements will not be mailed to students or parents and a $5 late fine will be charged for failure to comply with establish schedule. Failure to pay all room and board fees by the first day of the last month of the semester will result in suspension.

For additional information and application forms, write: Student Housing Office — Lamar University Station, Box 10041 — Beaumont, Texas 77710.

FINANCIAL AIDS AND AWARDS

Financial assistance in the form of scholarships, grants, loans and employment is available to a number of qualified students. Information regarding programs and eligibility criteria can be obtained from the Office of Student Aid, P.O. Box 10042, Lamar Station, Beaumont, Texas 77710.

When to Apply

Applications should be completed by March 1 for the following academic year. Notification of awards will be mailed in late spring and early summer. The university

will continue to award student aid as long as funds are available. The most desirable types of aid, however, are normally expended early. Therefore, students should make every effort to meet the March 1 deadline.

How to Apply

Lamar University requires that all students applying for aid file the General Application for Student Aid. Students wishing to be considered for scholarships only should specify this on the General Application. Students should be aware that scholarship funds are limited and recipients normally must have a grade point average in excess of 3.00 to be considered.

Students wishing to apply for grants, loans and/or work-study employment must also file the Financial Aid Form with the College Scholarship Service to determine the degree of need. Since the processing of this form requires between three and four weeks those students planning to meet the March 1 deadline should file about February 1.

After the application is complete the Student Aid Office will consider the student's academic record and potential as well as substantiated degree of need. The amount and type of assistance will be determined by the staff of the Student Aid Office.

Minimum Qualifications

Scholarship awards to entering freshmen are determined by the applicant's scores on the Scholastic Aptitude Test (SAT) or American College Testing Program (ACT) and high school class rank. Scholarship awards for upperclassmen are determined by their cumulative grade point average at the college level. Scholarship applicants must have a combined score of 900 on the SAT or composite score of 20 on the ACT plus a grade point average in excess of 2.5 to be eligible for a university administered scholarship.

Those applying for need-based grants, loans or work-study employment have their eligibility established by the Financial Aid Form.

It should be noted that applicants should arrange to have SAT or ACT test scores on file with Lamar University Admissions Office and have the General Application and Financial Aid Form calculation on file in the Student Aid Office. Freshmen may be able to obtain required forms from their high school counselors or directly from the Student Aid Office, P.O. Box 10042, Beaumont, Texas 77710. Students currently enrolled at Lamar may obtain the forms from the Student Aid Office, Wimberly Student Affairs, Room 216. Students must re-apply each year for consideration for continued assistance. An additional General Application is required for the summer sessions.

Grants

The Basic Educational Opportunity Grant (BEOG) is the foundation source for all other aid programs. All applicants are required to submit the Student Eligibility Report for the Basic Grant except those applying for scholarships only. No other need based assistance (grants, loans, work-study) can be awarded until the student's eligibility for the Basic Educational Opportunity Grant is determined. The filing of the Financial Aid Form should cause the BEOG Student Eligibility Report to be sent to the student's address. The student should then send the Student Eligibility Report to the Student Aid Office for an estimated grant amount to be determined. The final Basic Grant will be determined at the time of enrollment.

Other grants are the Supplemental Educational Opportunity Grant, the Texas Public Education Grant (TPEG) and the State Student Incentive Grant (SSIG). Students with exceptional need as determined by the Financial Aid Form may be awarded one of these grants.

Scholarships

Scholarships are funds which cover a portion of the student's expenses. Scholarships at Lamar University are of two types: those administered solely by the university, including the selection of recipients, and those administered by the university at the request of donors who select the recipients themselves. The scholarship program at Lamar University is financed solely by public donation. Half of the scholarship is disbursed for the fall term and the remaining half for the spring semester.

Loans

Lamar University provides both short-term and long-term loans. Short-term loans are designed to cover emergency situations and must be repayed within the semester in which the loan is made. Long-term loans with repayment after graduation may be obtained under such programs as the National Direct Student Loan Program, the Federally Insured Student Loan Program, and the Hinson-Hazelwood College Student Loan Act. Those interested in one of these loan programs should contact the Student Aid Office for information and application forms.

Employment

Employment opportunities under the College Work Study Program and other employment programs of the University, are available to Lamar students as part of the financial assistance program. The University, local businesses and industries provide a number of part-time jobs which enable students to earn part or all of their expenses while attending the University.

Valedictorians

Valedictorians from accredited high schools of Texas are entitled to an exemption from payment of tuition for the two regular semesters immediately following graduation. Fees are not exempt. During registration, valedictorians should report to the scholarship station for fee adjustments. The names of valedictorians of all Texas high schools are certified by principals to the Texas Education Agency and the list is supplied to the University for reference.

Students with Physical Handicaps (Vocational Rehabilitation)

The Texas Rehabilitation Commission offers assistance for tuition and nonrefundable fees to students who have certain disabling conditions, provided their vocational objectives have been approved by a TRC counselor. Examples of such conditions are orthopedic deformities, emotional disorders, diabetes, epilepsy, heart conditions, etc. Other services also are available to assist the handicapped student to become employable. Application for such service should be made at the Texas Rehabilitation Commission, Beaumont District Office, 1110 Goodhue Building, Beaumont, Texas 77701.

College of Business

Departments: Accounting, Business Administration, Economics, Office Administration

John A. Ryan, Ph.D., Dean

Alfred F. Steiert,
Graduate Coordinator

Charles F. Hawkins,
Director of Research Services

Joel L. Allen,
Director of J.D. Landes Center for Economic Education

Ann D. Jones,
Director of Advising Center

Janet Hooks, Secretary

Peggy Bailey, Secretary

The College of Business was established by the University in 1972. Prior to this time, degrees in business and economics were granted by the Division of Business which was established in 1951 and the School of Business established in 1954.

The College of Business is organized into four departments: Accounting, Business Administration, Economics and Office Administration. The Bachelor of Business Administration degree is granted in all areas. A Bachelor of Arts degree is also granted in Economics. A three-year program especially designed for pre-law students is offered in the area of General Business.

The Master of Business Administration degree program also is offered. Details may be found in the Graduate Bulletin.

Objectives

Members of the faculty of the College of Business believe that the education of the modern business man and woman should include a well-rounded general education as well as professional study to provide a thorough understanding of environment and heritage. Such an understanding is necessary if American industries are to meet their responsibilities in a changing social and industrial order.

Of equal importance is the business graduate's understanding of the social, legal, governmental and economic framework within which the American industrial organizations exist and operate. The general educational requirements are patterned to develop such understandings.

The professional programs offered reflect the belief that application as well as theory should be the proper concern of the undergraduate student. A common body of fundamental business and economics theory, principles and techniques is presented in the core pattern of business subjects. These theories and principles are developed along with certain basic quantitative tools of analysis and communication as preparation for the specialized professional courses.

Regardless of a graduate's position in the business world, he or she will need to understand the interaction of all areas and functions of business operations. The

development of such basic business understandings is the objective of the core courses in business and economics required of all business graduates.

The specialized professional preparation of the student provides opportunities for study in a particular field of interest. It prepares a graduate to assume a position of responsibility in business, public service or education.

The attainment of these objectives requires not only a given pattern of courses but also successful teaching and research. In classroom presentation, the College utilizes many approaches including lecture, discussion, case method, individual research projects, etc. Lower level courses are presented primarily from historic and descriptive points of view, while the upper level courses are designed to develop the student's ability to analyze and utilize research findings in problem-solving situations.

Degrees

The Bachelor of Business Administration curriculum consists of three distinct phases: non-professional education, professional specialization and electives.

The degree will be awarded upon the completion of the following:

I. Curriculum Requirements:

A. Non-professional education courses:
Eco 131, 132 — Principles of Economics
English Composition — six semester hours
Government 231, 232 — American Government
Sophomore American History — six semester hours
Literature — three semester hours
Mth 134, 1341 — Algebra and Elements of Analysis or Mth 236 & 237 — Calculus I and II
Four semesters of required physical activity and/or marching band and/or AFROTC
Laboratory Science — eight semester hours
Soc, Phl, Ant or Psy — three semester hours
Spc 131 — Speech Communication or
Spc 331 — Business and Professional Speech
Approved non-professional education electives — 12 semester hours — not to exceed six semester hours in any subject area.

B. Pre-Professional courses:
CS 133 — Introduction to Computer Programming
BA 230 — Computer Programming (Fortran)

C. Professional core courses*:
Acc 231, 232 — Principles of Accounting
BA 331 — Business Law
BA 332 — Principles of Finance
BA 334 — Principles of Marketing
BA 335 — Principles of Management
BA 3301, 3302 — Business Statistics
BA 3303 — Production Management
BA 4314 — Administrative Policy
Eco 334 — Macro Eco or
Eco 339 — Eco of Firm
OA 334 — Business Communications

D. Professional Specialization (18-24 semester hours):

*Slightly different program of courses required by the Department of Office Administration for students planning to secure teacher certification. See Department of Office Administration in this bulletin.

Acc Major (24 sem. hours)

Acc 331, 332 — Inter Acc
Acc 334 — Cost Acc
Acc 338, 339 — Tax Acc
Acc 430 — Auditing
Acc 431 — Adv Acc
Eco 339 — Eco of Firm

Marketing Major (21 sem. hours)

BA 4303 — Quan Tech in Mkt or
BA 4312 — Intnl Mkt
BA 338 — Principles of Retailing
BA 339 — Mkt Promotion or
BA 4313 — Buyer Behavior
BA 4310 — Mkt Mgmt
BA 4318 — Mkt Research
BA 4319 — Adv Mkt Prob

Economics Major (24 sem.hours)

Eco 333 — Inter Theory
Eco 332 — Money & Banking
Eco electives — 12 sem. hours
Eco. 334 — Macro
Eco 339 — Eco of Firm

Management Major (21 sem. hours)

Acc 334 — Cost Acc
BA 336 — Per Management
BA 3311 — Labor Law or
Eco 336 — Survey of Labor Economics
BA 4310 — Mkt Mgmt
BA 4315 — Budgetary Control
BA 4303 — Quant Tech in Mkt or
BA 4308 — Org Behavior

Finance Major (21 sem.hours)

BA 333 — Insurance
Eco 332 — Money & Banking
BA 3315 — Financial Analysis
BA 4305 — Real Estate
BA 4306 — Financial Markets
BA 4307 — Financial Institutions
BA 437 — Investments

Office Administration Major (23 sem. hours)

BA 336 — Per Management
Eco 334 — Macro Eco or
Eco 339 — Eco of Firm
OA 123 — Inter Typing
OA 222 — Prod Typing
OA 332 — Diet & Trans
OA 341 — Sec Off Procedures
OA 363 — Adv Shorthand

General Business Major (18 sem. hours)
Business Concentration I

BA 333 — Insurance
BA 336 — Personnel Management
BA 4305 — Real Estate
BA 4310 — Marketing Management
BA 437 — Investments or
BA 3315 — Financial Analysis
Acc 334 — Cost Accounting or
Acc 338 — Taxation Accounting
Eleven semester hours of advanced courses in College of Business.

Advertising Communication Concentration II

Com 131 — Introduction to Mass Communication
Com 431 — Laws and Ethics of the Mass Media or Art 3343 — Graphic Design III
Art 233 — Design III
Art 237 — Graphic Design I
Art 3333 — Graphic Design II
Com 3383 — Broadcast Advertising or
BA 339 — Marketing Promotion
Eleven semester hours of advanced courses in College of Business.

Industrial Engineering Concentration III

IE 330 — Industrial Engineering
IE 333 — Engineering Economy
Egr 339 — Materials Science and Manufacturing Processes
IE 432 — Statistical Decision Making for Engineers
IE 435 — Production and Inventory Control
IE 437 — Operations Research
Eleven semester hours of advanced courses in College of Business.

Computer Science Concentration IV

CS 230 — RPG Programming
BA 330 — Computer Applications in Business or CS 3304 — Cobol Programming
CS 3302 — Functional Characteristics of Digital Computers
CS 4305 — Introduction to Information Structures
CS 4306 — Techniques of Information Processing and Retrieval
BA 4317 — Computers in Business Management or
BA 4303 — Quantitative Techniques in Marketing or
BA 4316 — Business Simulation, Modeling, and Decision Theory
Eleven semester hours of advanced courses in College of Business.

Retail Merchandising Concentration V

HEc 132 — Clothing Selection and Construction
HEc 231 — Textiles
HEc 232 — Dress Design
HEc 331 — Advanced Clothing Construction

HEc 434 — Fashion and Production
HEc 436 — Home and Fashion Merchandising
Eleven semester hours of advanced courses in College of Business.

Pre-law Concentration VI

Acc 338 — Taxation Accounting
Acc 339 — Taxation Accounting
BA 333 — Insurance or BA 4305 — Real Estate
BA 3315 — Financial Assistance or Eco 336 — Survey of Labor Economics
BA 434 — Advanced Legal Principles
BA 4320 — Small Business Enterprise

Nine semester hours of advanced courses in College of Business.

E. Approved electives to complete a total of 128 semester hours.

II. A minimum grade point average of 2.00 in all business and economic subjects.

III. A minimum grade point average of 2.00 in all work required for degree.

IV. Application for the degree must be made through the Office of the Dean of Business.

The **Bachelor of Arts** degree in economics will be awarded upon completion of the following requirements:

I. The specific course requirements as set forth in the Department of Economics for the degree (see Department of Economics in this catalog.)

II. A minimum grade point average of 2.00 in all economics courses.

III. A minimum grade point average of 2.00 in all work required for the degree.

IV. A minimum of 122 semester hours exclusive of physical education and band.

V. A minimum of 30 semester hours in the field of economics.

VI. A minor of 18 semester hours, six of which must be 300 or 400 level courses.

Requirements for the **Master of Business Administration** degree are given in detail in the Graduate Bulletin.

Selection of a Major

Every candidate for a degree must choose a major field in the College of Business. This choice must be made before the beginning of the junior year and is subject to the approval of the head of the department of the major field.

Department of Accounting

Department Head — R.O. Bennett. *Professors* — R.O. Bennett, J.D. Landes, M.W. Veuleman. *Associate Professors* — H.A. Barlow, Elvis C. Davis, W. Fred Farrar, R.W. Jones. *Assistant Professors* — Jean M.Hudson, O.S. Lee. *Secretary* — Donna Barrett

Business and industry are controlled largely through the findings of adequate accounting systems. Accounting is concerned with the analytical recording of transactions related to a large variety of business, institutions and industries, including interpretations of resulting data. Decisions and policies of significance are based on information obtained through the medium of accounting procedures.

The program in accounting is designed for those student seeking career in either private or public accounting.

Recommended Program of Study Bachelor of Business Administration — Accounting Major

First Year

CS 133—Int to Comp Prog	3
Eng—Composition	6
Mth 134, 1341 (or Mth 236, 237)	6
Laboratory Science	8
Eco 131, 132—Prin	6
PE—Activity (2 semesters)	2
	31

Second Year

Acc 231, 232—Prin	6
BA 230—Comp Prog—Frontran	3
Soc, Phl, Psy or Ant	3
Spc 131	3
Eng—Literature	3
Gov 231, 232—Am Govt	6
Soph Am Hist	6
PE—Activity (2 semesters)	2
Electives	3
	35

Third Year

Acc 331, 332—Interm	6
Acc 338, 339—Tax Acc	3
BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 3301, 3302 Bus Ststcs	6
BA 3303—Prod Mgmt	3
BA 334—Marketing	3
Electives	5
	32

Fourth Year

Acc 430—Auditing	3
Acc 431—Advanced	3
Acc 334—Elem Cost	3
BA 335—Prin of Mgmt	3
BA 4314—Admin Policy	3
Eco 339—Eco of Firm	3
OA 334—Bus Comm	3
Electives (College of Business)	6
	27

Accounting (Acc)

230 — Income Tax (3:3:0)*

A survey of the Internal Revenue Code with useful applications for the individual and small corporate taxpayer. Includes the preparation of individual and corporation tax forms and related schedules. For non-accounting majors.

231 — Principles of Accounting (3:3:0)

Concepts and procedures of financial accounting. First, the information gathering, analysis, recording and reporting functions inherent in the complete accounting cycle. Second, the balance sheet areas of asset measurement, liability accounting and corporate owner's equity accounting.

232 — Principles of Accounting (3:3:0)

A continuation of Acc 231 with additional financial accounting and concepts, procedures and uses of managerial accounting. First, a review and elaboration of accounting principles and specialized accounting topics. Second, cost and managerial accounting with basic cost systems, budgeting and special analyses for management. Prerequisite: Acc 231 with grade of C.

331 — Intermediate Accounting (3:3:0)

Analysis of special problems and theories of current assets and corporation accounting: capital stock; surplus and dividends; treasury stock; cash; receivables; inventories; net income concepts; corrections of prior year's earnings. Prerequisite: Acc 232.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

332 — Intermediate Accounting (3:3:0)
Continuation of Acc 331 with emphasis on the interpretation of data relative to managerial decisions: investments; fixed assets; liabilities and reserves; analysis of operations; ratios; statement of application of funds. Prerequisite: Acc 331 with grade of C.

334 — Cost Accounting (3:3:0)
Job order and process cost approach to the control of manufacturing operation: material; labor; overhead allocation; departmentalization; budgeting; data presentation. Prerequisite: Acc 232.

338 — Taxation Accounting (3:3:0)
Provisions of the income tax code as applied to individuals: taxable income; gains and losses; capital gains; dividends; expenses; itemized deductions; depreciation; losses; standard deduction. Prerequisite: Acc 232.

339 — Taxation Accounting (3:3:0)
Provisions of the income tax code as applied to proprietorships, partnerships, estates, trusts and corporations; withholding; inventory; installment sales; reorganizations; filing returns; refunds; social security taxes; estate taxes; gift taxes. Prerequisite: Acc 338.

430 — Auditing (3:3:0)
Principles and procedures applied by public accountants and auditors in the examination of financial statements and accounts: verification of data; audit working papers; reports; types of audits; procedures. Prerequisite: Acc 332 with grade of C.

431 — Advanced Accounting (3:3:0)
Analysis of special problems and theories relative to partnership operations: receivership; estates and trusts; branch operations; consolidated statements. Prerequisite: Acc 332 with grade of C.

433 — C.P.A. Review (3:3:0)
Preparation for candidates for the Certified Public Accountants' examination through review and study of problems and questions relative to the examination. Prerequisite: Consent of Instructor.

434 — Advanced Cost Accounting (3:3:0)
Standard costs; budgeting and control of manufacturing costs, reporting for managerial evaluation. Prerequisite: Acc 334.

435 — Accounting Systems (3:3:0)
Analysis of theoretical models illustrating structure, design and installation of specific accounting systems with emphasis on computer applications. Prerequisite: Acc 232.

437 — Municipal and Governmental Accounting (3:3:0)
Special procedures for enterprises operating under appropriated budgets with attention given to federal, state, municipal governmental units; bond funds; special assessment funds; general funds; budgets; financial statements. Prerequisite: Acc 232.

Department of Business Administration

Department Head — Charles D. McCullough. *Professors* — Richard T. Cherry, C. D. Kirksey. *Associate Professors* — Larry T. Patterson, Larry W. Spradley, David G. Taylor, Donald E. Williams. *Assistant Professors* — Melvin F. Brust, David W. Cabell, George R. Goetz, Ann Jones, Walter D. Snider, Alfred F. Steiert, Robert A. Swerdlow, Bob Wooten. *Instructors* — Stephen C. Caples, Paul W. Guy*. *Adjunct Instructor* — Vicky Farrow. *Management-Finance Coordinator* — Bob Wooten. *Secretaries* — Brenda Levy, Margaret Van Hess

The Department of Business Administration offers the following fields of study: finance; general business with six concentrations; management and marketing.

Finance

The finance program is designed in such a way that a graduate of the program will have a broad education in the financial aspects of our economy and will be qualified for a wide variety of positions in financial institutions and financial departments of business firms.

General Business

The general business curriculum enables a student to receive an education in the fundamentals of business and at the same time diversify into a secondary field of concentration. Four of the six fields of concentration available to a student are outside the College of Business. The six fields of concentration include: Business Concentration, Advertising Communication Concentration, Industrial Engineering Concentration, Computer Science Concentration, Retail Merchandising Concentration, Pre-law Concentration.

Management

The purpose of the management curriculum is to give the student an understanding of the fundamentals of management and the relationship between all functional areas of business control. This program will equip the student to advance more rapidly to an executive position in industry. A student may specialize in personnel management or in production management by exercising given options in the pattern of course work required.

Marketing

The marketing curriculum provides information concerning buying, transporting and selling of goods as now performed by the service organizations in our economy. Over one-fourth of all the employed workers in America are engaged in some phase of marketing. This field has countless opportunities for specialists.

Pre-law

The Department of Business Administration offers a four-year program especially designed for law students. Students completing the program may enter directly into the law school of their choice.

*On leave

Recommended Programs of Study

Bachelor of Business Administration — Finance Major

First Year

CS 133—Int to Comp	3
BA 230—Comp Prog-Fortran	3
Eco 131, 132—Prin	6
Eng—Composition	6
Mth 134, 1341—Alg & Analysis or Mth 236 & 237—Calculus I and II	6
Laboratory Science	8
PE—Activity	2
	34

Second Year

Acc 231, 232—Prin	6
Soc, Phl, Ant or Psy	3
Spc 131 or 331	3
Eng—Literature	3
Gov 231 and 232	6
Soph Am His	6
PE—Activity	2
	29

Third Year

BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 3301, 3302 Bus Ststcs	6
BA 334—Prin of Marketing	3
BA 335—Prin of Management	3
BA 3315—Fin. Analysis	3
BA 437—Investments	3
Eco 332—Money & Banking	3
BA 3303—Production Management	3
*Elective (non-business)	3
	33

Fourth Year

BA 333—Insurance	3
BA 4305—Real Estate	3
BA 4306—Financial Mkts	3
BA 4307—Financial Inst	3
OA 334—Bus Communications	3
BA 4314—Administrative Policy	3
Eco 334—Macro Eco or Eco 339—Eco of the Firm	3
*Elective (non-business)	6
Elective (College of Business 300 or 400 Level)	5
	32

*PE—Activity not acceptable.

Bachelor of Business Administration — General Business Major

Business Concentration — Plan I

First Year

CS 133—Intro to Comp	3
BA 230—Comp Prog-Fortran	3
Eco 131 and 132—Prin	6
Eng—Composition	6
Mth—134, 1341 or 236, 237	6
Laboratory Science	8
PE—Activity	2
	34

Second Year

Acc 231, 232—Prin	6
Soc, Phl, Ant or Psy	3
Spc 131 or 331	3
Eng—Literature	3
Gov 231 and 232	6
Soph Am His	6
PE—Activity	2
*Electives (non-business)	3
	32

Third Year

BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 334—Prin of Marketing	3
BA 335—Prin of Mgmt	3
BA 3301, 3302—Bus Statistics	6
BA 3303—Prod Management	3
OA 334—Bus Comm	3
*Electives (non-business)	3
Electives (College of Bus 300 or 400 Level)	6
	33

Fourth Year

Acc 334 or 338	3
BA 333—Insurance	3
BA 4314—Admin Policy	3
BA 336—Personnel Mgmt	3
BA 4305—Real Estate	3
BA 4310—Mktg Mgmt	3
BA 437—Investments or BA 3315—Fin Analysis	3
Eco 334—Macro Eco or Eco 339—Eco of the Firm	3
Electives (College of Bus 300 or 400 Level)	5
	29

*PE—Activity not acceptable.

Advertising Communication Concentration — Plan II

First Year

CS 133—Intro to Comp	3
BA 230—Comp Prog-Fortran	3
Eco 131 and 132—Prin	6
Eng—Composition	6
Mth—134, 1341 or 236, 237	6
Laboratory Science	8
PE—Activity	2
	34

Second Year

Acc 231, 232—Prin	6
Soc, Phl, Ant or Psy	3
Spc 131 or 331	3
Eng—Literature	3
Gov 231 and 232	6
Soph Am His	6
PE—Activity	2
*Electives (non-business)	3
	32

Third Year

BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 334—Prin of Mktg	3
BA 3301, 3302—Bus Statistics	6
BA 3303—Prod Mgmt	3
OA 334—Bus Comm	3
Com 131—Intro to Mass Comm	3
*Electives (non-business)	3
Electives (College of Bus 300 or 400 Level)	5
	32

Fourth Year

BA 335—Prin of Mgmt	3
BA 4314—Admin Policy	3
Eco 334—Macro Eco or Eco 339—Eco of the Firm	3
Art 233—Design III	3
Art 237—Graphic Design I	3
Art 3333—Graphic Design II	3
Comm 3383—Intro to Advertising or BA 339—Mkt Promotion	3
Comm 431—Law & Ethics of Mass Media or Art 3343—Graphic Design III	3
Electives (College of Bus 300 or 400 level)	6
	30

Industrial Engineering Concentration — Plan III

First Year

CS 133—Intro to Comp	3
BA 230—Comp Prog-Fortran	3
Eco 131 and 132—Prin	6
Eng—Composition	6
Mth—134, 1341 or 236, 237	6
Laboratory Science	8
PE—Activity	2
	34

Second Year

Acc 231, 232—Prin	6
Soc, Phl, Ant or Psy	3
Spc 131 or 331	3
Eng—Literature	3
Gov 231 and 232	6
Soph Am His	6
PE—Activity	2
*Electives (non-business)	3
	32

Third Year

BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 334—Prin of Marketing	3
BA 3301, 3302—Bus Statistics	6
BA 3303—Prod Mgmt	3
OA 334—Bus Comm	3
IE 330—Intro Ind Egr	3
*Electives (non-business)	3
Electives (College of Bus 300 or 400 Level)	5
	32

Fourth Year

BA 335—Prin of Mgmt	3
BA 4314—Admin Policy	3
Eco 334—Macro or Eco 339—Eco of the Firm	3
Egr 339—Matl Sci and Mfg Proc	3
IE 333—Egr Eco	3
IE 432—Egr Statistics	3
IE 435—Prod & Inv Cont	3
IE 437—Op Research	3
Electives (College of Bus 300 or 400 Level)	6
	30

*PE—Activity not acceptable.

Bachelor of Business Administration — Marketing Major

First Year

CS 133—Intro to Comp	3
BA 230—Comp Prog-Fortran	3
Eco 131 and 132—Prin	6
Eng—Composition	6
Mth 134, 1341 or 236, 237	6
Laboratory Science	8
PE—Activity	2
	34

Second Year

Acc 231, 232—Prin	6
Soc, Phl, Psy or Ant	3
Spc 131 or 331	3
Eng—Literature	3
Gov 231 and 232	6
Soph Am His	6
PE—Activity	2
*Electives (non-business)	3
	32

Third Year

BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 334—Prin of Marketing	3
BA 335—Prin of Mgmt	3
BA 3301, 3302 Bus Ststcs	6
Eco 334—Macro Eco or Eco 339—Eco of the Firm	3
OA 334—Bus Communications	3
*Electives (non-business)	6
	30

Fourth Year

BA 338—Principles of Retailing	3
BA 4303—Quant Tech in Mkt or BA 4312—International Mkt	3
BA 339—Marketing Promotion or BA 4313—Buyer Behavior	3
BA 4310—Mktg Mgmt	3
BA 4314—Adm Policy	3
BA 4318—Mkt Research	3
BA 4319—Adv Mktg Problems	3
BA 3303—Production Management	3
Electives (College of Business 300 or 400 Level)	8
	32

*PE—Activity not acceptable.

BUSINESS ADMINISTRATION (BA)

230 — Elementary Fortran Applications to Business (3:3:0)*
To familiarize business students with elementary applications of Fortran as needed in special business situations. Prerequisite: CS 133.

330 — Computer Applications in Business Cobol (3:3:0)
Emphasis on utilizing the resources of Cobol in business applications such as payrolls, accounts receivable and payable, invoice extensions, tax accounting problems and invoice updating. Prerequisite: CS 133.

331 — Business Law (3:3:0)
A survey of the legal environment and its impact upon business. Nature and sources of law, administrative and enforcement agencies, and governmental regulation. A student is given an awareness of the legal framework of common business transactions.

332 — Principles of Finance (3:3:0)
A survey of the field of business finance. Financial planning; administration and control of financial activities; short-term and long-term financing; advantages and disadvantages of the various business organizations; security markets; commercial banking systems; Federal Reserve System; financial reorganization. Prerequisites: Acc 231 and Acc 232.

333 — Insurance (3:3:0)
Application of fundamental principles to life, property and casualty insurance. Contracts: premiums; legal statutes; risk; programming.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

334 — Marketing (3:3:0)
A description and analysis of business activities designed to plan, price, promote and distribute products and services to customers. Topics studied include the marketing environment, consumer buying habits and motives, types of middlemen, marketing institutions and channels, governmental regulations, advertising and current marketing practices. Prerequisite: Eco 132 or 233.

335 — Principles of Management (3:3:0)
Introduces and emphasizes the application of behavioral disciplines and principles of management to promote fundamental understanding of operating systems. Demonstrates the awareness of what managers should do or be aware of in the pursuit of good organizational performance. Prerequisites: Eco 132 and Acc 232.

336 — Personnel Management (3:3:0)
A behavioral approach to the management of the human resource in business enterprise. The fundamentals of human relations and organizational behavior will be used to structure an understanding of the managerial problems of recruitment, selection, training, promotion and termination of personnel. Supervision of the work force will be considered as an examination of theories of motivation, communication and leadership. Prerequisite: BA 335.

337 — Professional Salesmanship (3:3:0)
A survey of modern salesmanship as applied to selling of tangibles and intangibles. The salesman in relation to his/her firm, goods and customers; sales psychology; classroom sales demonstrations.

338 — Principles of Retailing (3:3:0)
A comprehensive introduction to large scale retailing with emphasis on layout, merchandise management, pricing, inventory control and retail promotion. Prerequisite: BA 334.

339 — Marketing Promotion (3:3:0)
An overview of the broad field of advertising. Creation of primary and selective demand, promotional program selection, media selection and determination of advertising effectiveness and coordination of the promotional mix.

3301 — Business Statistics (3:3:0)
Introduction to the quantitative methods of analysis as applied to business problems. Collection of data; charts and tables; analysis; presentation; frequency distribution; averages; dispersion; index numbers; secular trend; seasonal variation and cyclical fluctuation.

3302 — Business Statistics (3:3:0)
Continuation of BA 3301 including the theory and practical application of normal curve, probable error and sampling. Correlation and regression; probability theory and models; statistical inference, tests of hypotheses; sample survey methods and statistical quality control.

3303 — Production Management (3:3:0)
A survey of the production function and the analytical tools used to solve problems associated with the development and operation of a production system. Analytical tools include: linear programming, critical path scheduling, waiting line, statistical quality control and forecasting. Prerequisites: BA 3301 and BA 335.

3311 — Labor Law (3:3:0)
Historical interpretations and present provisions of regulations governing labor. Common law; state and federal statutes; Fair Labor Standards Act; workmen's compensation; social security; liability; United States Department of Labor; social legislation.

3312 — Computer Applications in Business (Fortran) (3:3:0)
Emphasis on utilizing the resources of Fortran in statistical and other business applications, such as measures of central tendency and dispersion,

amortization schedules, depreciation and correlation analysis. Prerequisite: BA 230.

3315 — Financial Analysis (3:3:0)
A professional finance course, building on the broad familiarization with financial management principles and issues covered in BA 332 (Principles of Finance).

4111 — Special Problems in Business (1:A*:0)
It involves investigation into special areas in business under the direction of a faculty member.

4211 — Special Problems in Business (2:A*:0)
It involves special areas in business under the direction of a faculty member.

434 — Advanced Legal Principles (3:3:0)
Dealing in detail with the applicable statutes governing sales, real property, bank deposits and collections, letters of credit, bulk transfers, documents of title and secured transactions, with particular emphasis given to the effect of the Uniform Commercial Code. Prerequisite: BA 331.

437 — Investments (3:3:0)
An appraisal of investment, alternatives in financial markets. Markets; securities; methods of analysis; investment programming. Prerequisite: BA 332.

438 — Petroleum Law (3:3:0)
Survey of the legal factors involved in oil and gas ownership and production. Topics include rights and duties of the landowner; rights and duties of the producer and other parties to a lease; oil and gas leases; types of property interests in oil and gas leases; basics of pooling and utilization and problems commonly encountered in conveying of rights and ownership. Prerequisite: BA 331.

4303 — Quantitative Techniques in Marketing (3:3:0)
Topics include Bayesian inference, payoff tables, sample design, analysis of variance, and logarithmic and multiple correlation and regression analysis. Prerequisite: BA 3302.

4305 — Real Estate (3:3:0)
A survey of real estate principles and practices, including the law of real property, real estate appraisal, marketing and finance.

4306 — Financial Markets (3:3:0)
The course is designed to develop a professional understanding of the nature and operations of financial markets.

4307 — Financial Institutions (3:3:0)
A survey of the operating characteristics, sources and uses of funds and regulatory environment of the major financial institutions in the U.S. economy.

4308 — Organizational Behavior (3:3:0)
A survey of organization theory with emphasis on behavioral aspects.

4309 — Industrial Marketing (3:3:0)
A comprehensive analysis of problems involved in marketing industrial goods with emphasis on market characteristics, purchasing and distribution systems, promotion mix and marketing strategy. Prerequisite: BA 334.

4310 — Marketing Management (3:3:0)
The planning and execution of various marketing activities from the managerial viewpoint are presented, *viz:* determining the basic product (or service) market analysis, price policies, product promotion, management of the sales force and sales analysis and physical distribution with the logistics system concept. Prerequisite: BA 334.

4311 — Special Problems in Business (3:A*:0)
It involves investigation into special areas in business under the direction of a faculty member.

*Arranged

4312 — International Marketing (3:3:0)
A survey of international marketing, world markets, political restraints in trade and international marketing principles.

4313 — Buyer Behavior (3:3:0)
Acquaints the student with consumer behavior models and behavior research techniques.

4314 — Administrative Policy (3:3:0)
Fundamental considerations and procedures followed in business policy formulation and administration. Managerial structure; company objectives; coordination of departmental policies; organization of personnel; reappraisals. Prerequisites: BA 335 and senior standing in the College of Business.

4315 — Budgetary Control (3:3:0)
Theories, problems and techniques of internal financial and budgetary controls. Financial planning; budgetary construction; evaluation; performance rating; replanning. Prerequisite: BA 335.

4316 — Business Simulation, Modeling and Decision Theory (3:3:0)
The use of the computer in the solution of problems concerning pricing, inventory control, production scheduling, sales forecasting and related business decisions. Prerequisites: BA 3302 and BA 230.

4317 — Computers in Business Management (3:3:0)
Concepts of computers, information systems, capabilities and limitation, managerial implications in the introduction and use of computers, feasibility study and evaluation of computer systems. Methods of data storage, display and retrieval. Prerequisite: CS 133 and BA 230.

4318 — Marketing Research (3:3:0)
The importance and use of marketing reearch in U.S. business is stressed. A detailed analysis made of each marketing research step from the formulation of the problem to the preparation of the research report and follow-up. The basic research methods (survey, observational and experimental) are presented. Prerequisite: BA 334, 3302.

4319 — Advanced Marketing Problems (3:3:0)
Oral and written cases in the area of marketing management and marketing strategy are utilized (organization, product lines, pricing, channels of distribution, selling, etc.) Emphasis is placed on simulated problem solving and decision making in the marketing environment. Prerequisite: BA 334, 4310.

4320 — Small Business Enterprise (3:3:0)
Designed to give the student actual experience in the management of a small business. Student is assigned to a local business as a "student-consultant." The student is required to submit a report outlining the problems of the business and recommended solutions. Prerequisite: BA 3302 and senior standing in the College of Business.

4411 — Special Problems in Business (4:A*:0)
It involves investigation into special areas in business under the direction of a faculty member.

Department of Economics

Department Head — Sam F. Parigi, *Professors* — Charles A. Partin. *Associate Professors* — Charles F. Hawkins, Hi K. Kim, James M. Pearson, *Assistant Professor* — Joel L. Allen. *Adjunct Instructor* — Charlene R. Owens. *Secretaries* — Brenda Owen, Kelly Hoekstra

*Arranged

The Department of Economics offers two degrees:

Bachelor of Business Administration: Recommended to the student who desires a thorough grounding in business courses to augment the Economics knowledge which is necessary for understanding the complexities of modern business, government and non-profit organizations.

Bachelor of Arts: Recommended to the student particularly interested in working abroad, seeking the Doctor of Philosophy degree or desiring a supportive minor in another interest area such as mathematics, sociology, government or education.

Representative employment opportunities for both degrees are found in banking, government, industrial relations, management, research and forecasting, communications, international trade and sales.

Teacher Certification — Economics

Students of secondary education wishing to certify in Economics as a teaching field, see Department of Secondary Education in this bulletin.

J. D. Landes Center for Economic Education

Director — Joel L. Allen

The Center for Economic Education, established in January 1976, offers programs in economic education for elementary, secondary and college teachers, and business, professional and civic groups. The purpose of the Center is to institute, develop and promote programs which will increase economic understanding in cooperation with teacher education, other university or community programs.

Center services include: community and consultant services for workshops, institutes, conferences; materials and teaching aids development, curriculum design and integration; economics courses for prospective and in-service teachers, university students and other interested adults, area business, professional and civic groups.

The Lamar University Center for Economic Education is a division of the Department of Economics, College of Business and is affiliated with the Joint Council and the Texas Council on Economics Education.

Recommended Program of Study

Bachelor of Business Administration — Economics Major

Requirements:

1. Complete 122 semester hours exclusive of PE or Band.
2. Complete 30 semester hours in the field of Economics.

First Year	
Eco 131, 132—Prin	6
Eng—Composition	6
Mth 134 & 1341—Alg & Analy or Mth 236 & 237—Calculus I & II	6
Laboratory Science	8
CS 133—Intro to Comp Prog	3
PE—Activity	2
	31

Second Year	
Acc 231, 232—Prin	6
BA 230	3
Eng—Literature	3
Gov—231, 232	6
His—Soph Am His	6
PE—Activity	2
Soc, Phl or Ant	3
Spc 131	3
	32

Third Year

BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 334—Marketing	3
BA 3301, 3302—Bus States	6
Eco 333—Interm Theory	3
Eco 334—Macro Eco	3
Eco 339—Eco of Firm	3
*Electives	9
	33

Fourth Year

Eco 332—Mon & Bkg	3
BA 335—Prin of Mgmt	3
BA 3303—Production Mgmt	3
BA 4314—Admin Policy	3
OA 334—Bus Commun	3
*Electives	15
	30

*Electives must include 12 semester hours of advanced courses in economics, and six semester hours of approved, advanced electives.

Bachelor of Arts — Economics Major

Requirements:

1. Complete 122 semester hours exclusive of PE or Band.
2. Complete 30 semester hours in the field of economics.
3. Complete a minor of at least 18 semester hours, six of which must be in advanced courses.

First Year

Eco 131, 132—Prin	6
Eng—Composition	6
Mth 134 & 1341—Alg & Analysis or Mth 236 & 237—Calculus I & II	6
Laboratory Science	8
PE—Activity	2
Elective	3
	31

Second Year

Eng—Literature	3
Foreign Language	6
Gov 231, 232	6
His—Soph Am His	6
CS 133—Intro to Comp Prog	3
BA 230—Comp Prog	3
PE—Activity	2
Elective	3
	32

Third Year

Eco 333—Interm Theory	3
Eco 334—Macro Eco	3
Eco 339—Eco of Firm	3
BA 3301, 3302—Ststcs	6
OA 334—Bus Commun	3
Foreign Language	6
Electives	9
	33

Fourth Year

Eco 332—Mon & Bkg	3
Eco 433—His of Eco Thot	3
*Electives	24
	30

*Electives include nine semester hours of advanced courses in economics, and six semester hours of approved, advanced electives.

ECONOMICS (Eco)

131 — Principles (3:3:0)*

Introduction of resources; determination of output and prices; distribution; and managerial economics.

132 — Principles (3:3:0)

Emphasizes monetary theory; national income analysis; fluctuation and growth; public finance; international trade; and current economic problems.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

230 — Current Economics Issues (3:3:0)
A survey of current economic issues and problems: energy, environment, inflation, unemployment, tax structures, organization of industries and markets and consumerism. Issues discussed will vary in order to emphasize topics of greatest concern. Course may be taken for credit by majors or non-majors.

233 — Principles and Policies (3:3:0)
Comprehensive introduction to economic principles and problems for non-business students. Resource utilization; price determination; distribution of income; fiscal and monetary problems; economic growth.

331 — Economics of Entrepreneurship (3:3:0)
Comprehensive analysis and practice exercises in entrepreneurship. Studies include demand analysis; pragmatic economic feasibility studies; identification and use of resources; function and use of profits. Prerequisite: 6 hours of Economics.

332 — Money and Banking (3:3:0)
Functions and policies of the American monetary and banking system. Commercial banking; Federal Reserve System; monetary theories and policies; economic stabilization and growth. Prerequisites: 6 hours of Economics.

333 — Intermediate Theory (3:3:0)
Economic analysis and methodology. Distribution theory; price theory; pure and imperfect competition. Prerequisite: Eco 131.

334 — Macro Economics (3:3:0)
A descriptive-analytical approach to the dynamic forces that influence the aggregate level of economic activity. Income and employment determinants; levels of income and employment, stabilization theory; investment and income relationship; monetary and fiscal policies. Prerequisite: Eco 132.

335 — International Trade (3:3:0)
Theories, practices and problems involved in international commerce between nations. Bases of trade; tariffs; exchange controls; international monetary policies; current problems. Prerequisite: 6 hours of Economics.

336 — Survey of Labor Economics (3:3:0)
Past development and present organizational structure of the labor movement in America and its impact on the industrial society. Labor markets; collective bargaining; wages; economic insecurity; labor legislation; governmental policies. Prerequisite: 3 hours of Economics or approval of the instructor.

337 — Public Finance (3:3:0)
Study of the constitutional, administrative and economic aspects of governmental fiscal activities; government debt; intergovernmental fiscal relations; federal, state and local taxes. Prerequisite: 6 hours of Economics.

339 — Economics of the Firm (3:3:0)
The application of the techniques of economic analysis to managerial problems of business enterprises utilizing a problem-case study approach. Goals of the business; business forecasting; demand analyses; cost analyses; game theory; pricing policies; governmental relations. Prerequisites: Eco 131.

4101, 4201, 4301, 4401, 4501, 4601 — Institute in Economics (1-6:1-6:2-4)
Institutes are designed to advance the professional competence of participants. The description of the area of study of each institute will appear on the printed semester schedule. When courses are conducted in sufficiently different areas and with the approval of the department head, a participant may repeat the course for credit.

4111, 4211, 4311, 4411, 4511, 4611. Problems in Economics (1-6:A*:0)
Investigation into special areas in economics under the direction of a faculty

*Arranged

member. This course may be repeated for credit when topics of investigation differ.

430 — **Regional and Urban Economics (3:3:0)**
Analysis of regional development and industrial location; economic problems of urban areas in financing and supplying services at adequate levels. Prerequisite: 6 hours of Economics.

431 — **Monetary Theory (3:3:0)**
An analytical, institutional, historical and empirical analysis of monetary theory, and its interrelations with the generally accepted economic goals. Prerequisite: Eco 132, 332, or 334 or approval of instructor.

433 — **History of Economic Thought (3:3:0)**
Historical development of economic thought from primitive periods to the present. Classical; historical; socialist; neoclassical; institutional thought.

434 — **Economic Development (3:3:0)**
Introduction to the theories and history of economic growth and development applicable to advanced and emerging economies; analysis of processes of growth including cultural, technological and economic factors; identification of problem areas with policy implications. Prerequisite: 3 hours of Economics.

435 — **Comparative Economic Systems (3:3:0)**
A critical analysis of the basic theories and institutions of economic systems including a comparison of the American system with other existing systems. Capitalism; socialism; communism. Prerequisite: 3 hours of Economics.

436 — **Business Cycles (3:3:0)**
The nature and causes of business cycles. Cyclical theories; business fluctuations; forecasting stabilization; current problems. Prerequisite: 6 hours of Economics.

438 — **Economics of World Resources (3:3:0)**
The world's physical and economic resources and their relationship to man's well being. Interrelationships between resources and industries, commerce and investments at the national and international level. Implications of government regulations on resource use and economic development.

439 — **Mathematical Economics (3:3:0)**
A formulation of economic theory in mathematical terms. Special attention is given to general equilibrium analysis; interindustry economics and activity analysis. Prerequisite: Eco 131, 132, Mth 1341 or differential and integral calculus.

4315 — **Government and Business (3:3:0)**
Promotion, regulation and restriction of business enterprises by government. Regulatory agencies; antitrust laws; consumerism; transportation; industrial organization and concentration and the Eco-legal environment.

Department of Office Administration

Department Head — Nancy S. Darsey. *Associate Professor* — Kathryn White. *Assistant Professors* — Jean Dorrell, Robert Mitchell, Carol Ann Sassin, Jeannette Vaughn. *Secretaries* — Michelle Kirkland, Mary Villarreal.

The Department of Office Administration offers a four-year program leading to the degree of Bachelor of Business Administration. The general and specific requirements of the four-year curricula furnish a broad preparation and a highly specialized proficiency in the professional secretarial field.

A major in Office Administration may be combined with courses in education. This plan will qualify a graduate for a teacher's certificate.

The Department also offers a two-year program for students who do not desire to follow any degree plan. The two-year curriculum is designed to develop competence in typewriting, shorthand, computer programming, clerical record keeping and business correspondence. Successful students are prepared to pass civil service examinations and the employment tests given by large business and industrial offices. A Certificate of Completion is awarded.

Students should consider the many advantages of office administration. This field can be particularly rewarding because of its unlimited promotional opportunities, especially in the area of office management. Many successful persons in positions of leadership began their business careers as secretaries, business education teachers or assistants to office managers.

Recommended Program of Study

Plan I — This program is designed for those students seeking professional careers in secretarial and office administration.

First Year

CS 133—Comp Prog	3
Eco 131, 132—Prin	6
Eng—Composition	6
Laboratory Science	8
Mth 134 & 1341—Algebra & Analysis or Mth 236 & 237—Calculus I & II	6
OA 123—Interm Typing	2
PE (2 semesters)	2
	33

Second Year

Acc 231, 232—Prin	6
BA 230—Comp Prog	3
Eng—Literature	3
Gov 231, 232	6
Soph Am His	6
Spc 131	3
Elective	3
PE (2 semesters)	2
	32

Third Year

BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 334—Marketing	3
BA 335—Prin of Mgmt	3
BA 3301, 3302—Bus Ststcs	6
BA 3303—Production Mgmt	3
OA 363—Adv Shorthand	6
Electives	6
	33

Fourth Year

BA 336—Personnel Mgmt	3
BA 4314—Admin Policy	3
Eco 334—Macro Eco or Eco 339—Eco of Firm	3
OA 222—Prod Typing	2
OA 332—Dict & Trans	3
OA 334—Bus Commun	3
OA 341—Sec Off Proc	4
Soc, Phl or Ant	3
Electives	6
	30

Plan II — This program is designed for those who wish to qualify for a provisional teacher's certificate — secondary — with a teaching field in business education.

First Year

CS 133—Comp Prog	3
Eco 131, 132—Prin	6
Eng—Composition	6
Laboratory Science	8
Mth 134 & 1341—Algebra & Analysis or Mth 236 & 237—Calculus I & II	6
OA 123—Interm Typing	2
PE (2 semesters)	2
	33

Second Year

Acc 231, 232—Prin	6
Eng—Literature	6
Gov 231, 232	6
Soph Am His	6
Spc 131	3
Elective	3
PE (2 semesters)	2
	32

Third Year

BA 331—Bus Law	3
BA 332—Prin of Finance	3
BA 334—Marketing	3
BA 335—Prin of Mgmt	3
BA 3301—Bus Ststcs	3
Edu 331—Foundations	3
Edu 332—Edu Psy	3
Edu 338—Cur Mat Eval	3
OA 363—Adv Shorthand	6
Elective (Restricted)	3
	33

Fourth Year

BA 3303—Production Mgmt	3
BA 4314—Admin Policy	3
Edu 438—Classroom Mgmt	3
Edu 462—Stu Teaching	6
OA 222—Prod Typing	2
OA 332—Dict & Trans	3
OA 334—Bus Commun	3
OA 341—Sec Off Proc	4
OA 438—Bus Edu Methods	3
Elective	3
	33

Two-Year Certificate of Completion Program in Office Administration

First Year

Eng—Composition	6
Mth 134 & 1341—Alg & Analysis or Mth 236 & 237—Calculus I & II	6
OA 123—Interm Typing	2
OA 125—Records	2
OA 222—Prod Typing	2
OA 363—Adv Shorthand	6
Spc 131	3
PE (2 hours)	2
Elective	2
	31

Second Year

Acc 231, 232—Prin	6
CS 133—Comp Prog	3
BA 331—Bus Law	3
Eco 131, 132—Prin	6
Eng—Literature	3
OA 231—Sec Commun	3
OA 332—Dict & Trans	3
OA 341—Sec Off Proc	4
	31

OFFICE ADMINISTRATION (OA)

121 — Beginning Typewriting (2:1:2)*
Introduction to the touch system on electric typewriters. Simple letter forms; manuscripts; tabulations.

122 — Typewriting (2:1:2)
Emphasis on speed and accuracy in preparation of production units. Letters; rough drafts; manuscripts; tabulations; timed writings. Prerequisite: OA 121 or equivalent.

123 — Intermediate Typewriting (2:1:2)
High standards of speed and accuracy. Timed writings; specific letter forms; tabulations; rough drafts; financial and legal forms; manuscripts; business forms and reports. Prerequisite: OA 122 or equivalent.

125 — Records Management (2:1:2)
Methods and procedures in classifying and storing business records. Filing systems; records management and retention; storage equipment and supplies.

222 — Production Typewriting (2:1:2)
Speed production of office-style material. Business forms; statistical tables; financial statements; legal documents; reports; correspondence. Prerequisite: OA 123 or equivalent.

231 — Secretarial Communications (3:3:0)
Practical secretarial projects emphasizing use of functional English in correspondence; good judgment in other secretarial communications. Limited to students pursuing two-year certificate program.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

233 — **Beginning Shorthand** (3:2:2)
Introduction of either Gregg Diamond Jubilee or Century 21 Shorthand. Reading; writing; theory principles; brief or speed forms; previewed dictation.

234 — **Intermediate Shorthand** (3:2:2)
Intensification of shorthand reading and writing skills. Brief form or speed and theory review; speed-building dictation; pretranscription practice. Prerequisite: OA 233 or equivalent.

261 — **Beginning Shorthand** (6:4:4)
Intensive introduction to either Gregg Diamond Jubilee Shorthand or Century 21 Shorthand. (OA 261 equivalent to OA 233 and OA 234) Reading; writing; theory principles; brief or speed forms and theory; previewed dictation; pretranscription practice.

332 — **Dictation and Transcription** (3:3:0)
Stress on building shorthand speed and improving mailable-letter transcription skill. Vocabularly development; sustained dictation; volume production. Prerequisite: OA 363 or equivalent.

334 — **Business Communications** (3:3:0)
Theories, practices and problems involved in communications in business and industry with emphasis on use of practical psychology, good judgment. Letters; reports; memoranda. Prerequisites: Junior standing preferable; practical knowledge of touch typewriting helpful.

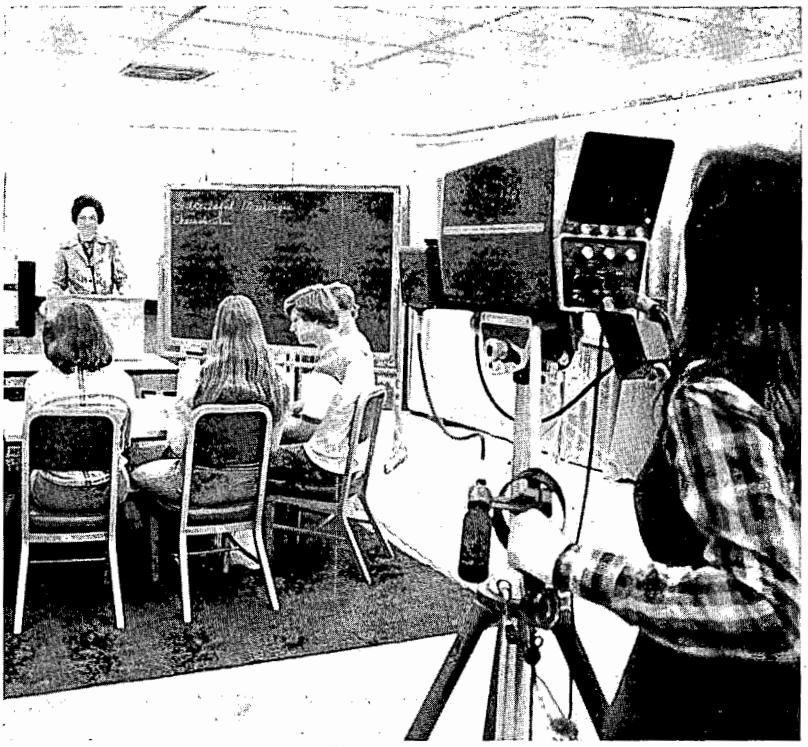
341 — **Secretarial Office Procedures** (4:3:2)
Capstone office administration course. Analysis of responsibilities and duties of the administrative secretary. Procedures; work simplification; supervision; office etiquette and ethics; sources of information.

363 — **Advanced Shorthand** (6:4:4)
Improvement of ability to take dictation and transcribe mailable copy. Theory principles; brief or speed form derivatives; vocabulary development; speed building; mailable transcription; office-style dictation. Prerequisite: OA 234 or equivalent.

431 — **Office Management** (3:3:0)
Administrative management of business offices. Employee leadership, training, supervision and motivation; information systems; office location and layout; selection of equipment and supplies; office cost control.

432 — **CPS Review** (3:3:0)
A comprehensive review of the six subject matter areas covered by the Certified Professional Secretary examination. Individual research; group projects; discussion; sample examinations. Recommended for candidates sitting for CPS examination.

438 — **Business Education in the Secondary School** (3:3:0)
Theories, methods and materials in business education with emphasis on motor-skill subjects. Practices; procedures; evaluation; facilities; literature; research problems.



College of Education

Departments: Elementary Education, Secondary Education, Special Education, Health and Physical Education, Home Economics

M. L. McLaughlin Ed.D., Dean
Vernon H. Griffin, Ed.D., Director of Certification and Graduate Studies
E. Lee Self, Ph.D., Director of Student Teaching
Nelda Castleman, Secretary

The College of Education was established in 1959 and includes the departments of Elementary Education, Secondary Education, Special Education, Health and Physical Education for Men, Health and Physical Education for Women and Home Economics.

Providing education for prospective teachers is a tradition of the University. Non-teaching specialties in home economics and health and physical education are more recent offerings representing diversification and growth of the College of Education.

Degree and certification programs are described in separate departmental sections of this catalog.

Information concerning graduate programs may be obtained in the Graduate Bulletin.

DEGREES OFFERED

Bachelor of Science with majors in the following fields:

- Elementary Education
- Secondary Education
- Special Education
- Health Education
- Home Economics
- Physical Education
- Dance

Bachelor of Arts with a major in Dance

Associate of Science for Paraprofessionals

OBJECTIVES

The faculty of the College of Education plans its curricula to provide graduates with solid academic foundations. This general education provides background in the social, economic and cultural aspects of contemporary life and is designed to give prospective teachers more understanding and wider experience on which to base their teaching careers.

Professional education programs have been built on a broad use of theory and principles which consider but do not emphasize techniques, so that practitioners may grow and develop with changes in theory and technology.

The faculty integrates academic and professional study through lectures and discussions, through the observation of children in the teaching-learning process, through supervised student teaching and through the utilization of the best available equipment and materials.

Teacher Education — A Shared Responsibility

The prepration of teachers is a responsibility that is shared by all of the colleges of the University. Policies concerning teacher education programs and the actual curriculum requirements in each program are determined by the Teacher Education Council. This Council is composed of faculty members who represent the various departments of the University offering teacher education programs. Within the framework of the policies established, the College of Education coordinates all teacher education programs throughout the institution.

Teacher Education Programs

Lamar University provides undergraduate programs of teacher education which fulfill the curriculum requirements for the following Provisional Certificates in the State of Texas: elementary education, secondary education, generic special education, mental retardation, physically handicapped/minimal brain injury, emotionally disturbed, language and/or learning disabilities, early childhood/exceptional children, education of the deaf, speech and hearing therapy, driver education, all-levels music, all-levels art, kindergarten education and vocational home economics.

Information concerning graduate teacher education programs and professional certification may be found in the Graduate Studies Bulletin.

Admission to Teacher Education

Application for admission to the teacher education program is made at the beginning of the junior year. Applications are made during the time students are enrolled in Education 331 or 332 (transfer students who have had one or more courses in educa-

tion must apply directly to the chairman of the selection committee). To be eligible for Education 331 or 332 (or the first course in education taken at Lamar University, in the case of transfer students), the student must present a 2.0 (C) overall grade point average in courses taken at Lamar. The student also must have successfully completed 60 hours, including the required 100 level courses in English and mathematics listed in Academic Foundations.

Prior to admission, students must demonstrate ability to write clear and correct English. Students may, at the discretion of the teacher education selection and retention committee, be required to pass examinations in speech, hearing and general physical health. Additional admission standards are set by the selection and retention committee, as approved by the Teacher Education Council.

Admission to Student Teaching

Students wishing to enroll in student teaching must be selected and approved in order to be eligible to register for this course. Applications for student teaching must be submitted to the director of student teaching by May 1, prior to the academic year for which student teaching is planned. This includes applications for the Spring Semester as well as applications for the Fall. Failure to follow this procedure may delay admission to the student teaching program by at least one semester.

In order to qualify for student teaching, students must meet the following standards:

(1) Be of senior standing.
(2) Possess a grade point average of 2.0 in all work taken at Lamar, in all subject areas in which he/she intends to teach and in all professional education courses completed.
(3) Have completed adequate hours and courses in content areas in which he/she is certifying to teach.
(4) Have completed all prerequisite courses in professional education.
(5) Be formally admitted to the teacher education program.
(6) Be approved by the director of student teaching.
(7) Have completed six semester hours in education courses at this University prior to student teaching.
(8) Have completed six hours in each teaching field (secondary), or in the area of specialization (elementary), at this University prior to student teaching (unless this requirement has been waived in writing by each of the concerned department heads).

Certification Policies

To be recommended for a teaching certificate, the applicant must present:

1. A grade point average of 2.0 (C) in all work undertaken at Lamar, 2.0 in elementary school specialization or in each teaching field and 2.0 in the professional education courses relevant to the certificate.
2. A minimum of six hours in residence at Lamar in professional education courses.
3. A minimum of six hours in residence at Lamar.
   a. In each teaching field for secondary education (unless this requirement is waived in writing by the head of the department).
   b. In the area of specialization for elementary education (unless this requirement is waived in writing by the head of the department).

Provisional Certificate and Degree Requirements

Provisional Certificate programs are offered in elementary education, secondary education, special education-generic, vocational home economics, all-levels art, all-

levels music and all-levels speech and hearing therapy. Provisional Certificate endorsements are available in driver education, kindergarten education and in several areas of special education. Information concerning these programs may be found in the following paragraphs or in departmental sections of this catalog.

Provisional Certificate requirements and requirements for professional education degrees are identical. Each program is composed of four parts: (1) academic foundations, (2) academic specialization, (3) professional developent, and (4) free electives. Programs require the completion of 126 to 132 semester hours.

Academic foundation requirements for certificate programs are described below. Other requirements are outlined under the departmental sections of the catalog.

Academic Foundations (54 to 60 semester hours)

The academic foundation program that is outlined below is required of all students working toward Provisional Certificates at this university. Within the general framework shown, some course selections may be governed by the type of certification or degree obtained. Where appropriate, a maximum of six semester hours (eight in science) taken in academic foundations may be included in any one teaching field.

1. Required core courses ..... 42 hours
   - English — Composition ..... 6 hours
   - Eng — Literature ..... 6 hours
   - Mth ..... 6 hours
   - Science — Laboratory (same science) ..... 8 hours
   - Gov 231 — Intro Am Gov I ..... 3 hours
   - Gov 232 — Intro Am Gov II ..... 3 hours
   - His — Sophomore American History ..... 6 hours
   - PE Activity (four semesters) ..... 4 hours

   42 hours

2. Foundations electives and degree requirements ..... 12 to 18 hours

   These hours must be selected from approved courses in the following groups with courses included from a minimum of three groups:

   - Group I: English, Foreign Language, Philosophy, Bible.
   - Group II: Art, Music, Speech.
   - Group III: Biology, Chemistry, Mathematics, Geology, Physics.
   - Group IV: History, Government, Economics, Geography.
   - Group V: Sociology, Anthropology, Psychology.

SPECIAL CERTIFICATES AND ENDORSEMENTS

All-levels Art degree and certificate. Described in the "Art" section of this catalog.

Athletic Training. Described in the "Department of Health and Physical Education for Men" section of this catalog.

Driver education endorsement. Described in the "Department of Health and Physical Education for Men" section of this catalog.

Kindergarten education endosement. Described in the "Elementary Education" section of this catalog.

All-levels Music degree and certificate. Described in the "Music" section of this catalog.

Special education certificate endorsements. Described in the "Special Education" section of this catalog.

Education of the deaf and speech and hearing therapy. Described in the "Communication" section of this catalog.

Vocational Home Economics degree and certificate. Described in the "Home Economics" section of this catalog.

Certification for Persons with Bachelor's Degree (or higher) Who Are Not Certified to Teach in Texas

1. Information concerning these certification plans is available in the office of the Dean of the College of Education.
2. Persons with degrees from Texas colleges apply directly to the Dean of the College of Education for certification.
3. Persons with degrees from out-of-state colleges apply to the Texas Education Agnecy for certification.

Certification for Persons With Texas Teaching Certificates Who Desire Additional Endorsements

Those persons with elementary certificates who desire secondary certification, those with secondary certificates who desire elementary certification, and those with elementary or secondary certificates who desire additional endorsements may obtain information from the Dean of the College of Education.

Professional Certificates

Requirements for Professional Certificates are described in the Graduate Bulletin.

Department of Elementary Education

Accredited by the National Council for the Accreditation of Teacher Education

Department Head — Charles M. Burke. *Professors* — Betty F. Coody, Vernon H. Griffin, W. Richard Hargrove, Bradley B. Hogue, Conrad D. Mang, Marvin L. McLaughlin. *Associate Professors* — Edward R. McIntosh, David Nelson. *Assistant Professors* — Sally Nielsen, Sarah Sims Matheny. *Instructor* — Meredith Fitzgerald. *Secretary* — Mary Kneitz

Bachelor of Science in Education — Elementary

The Bachelor of Science degree in Elementary Education as described below is designed to meet the requirements for a Provisional Elementary Teaching Certificate in the State of Texas. The persons who major in elementary education also may receive a certificate endorsement to teach one or more special education fields, kindergarten and driver education by meeting the additional curriculum requirements as described in other sections of this catalog.

In addition to completing the required academic foundations program (previously described), students must fulfill the requirements in the area of specialization, professional education and elective courses. This plan allows an overlap of six semester hours between academic foundations and the area of specialization, thus allowing 12 semester hours of free electives. If the area of specialization is in a discipline other than English, mathematics, science or history, the free electives may be reduced to six semester hours.

Academic Foundations (54-60 Semester Hours)

Described in prior section

Academic Specialization (36 Hours)

A. Specialization in the area (18 hours, nine advanced, except in generic special education, life-earth science and home economics which require 24). Courses must be in one of the following areas: art, drama, economics, English, one foreign language, generic special education, history, home economics, life-earth science, mathematics, music, physical education, psychology, reading, one science, sociology or speech. Courses may include six hours (eight in science) taken as part of the academic foundations. A listing of course sequences is available in the office of the head of the Department of Elementary Education.

B. Work in a combination of subjects (18 semester hours).
   Geo 237 — Physical Geography
   Art 3371 — Elementary Art Education
   Spc 333 — Interpretation of Children's Literature or
   The 336 — Creative Dramatics
   MPE or WPE — Physical Education in Elementary School
   MEd 131 — Elements of Music
   His 134 — History of Texas

Professional Development (30 semester hours)

Edu 331 — Foundations in Education
Edu 332 — Educational Psychology
Edu 333 — Language Arts in the Elementary School
Edu 334 — Child Development and Evaluation
Edu 335 — Arithmetic in the Elementary School
Edu 339 — Reading in the Elementary School
Edu 434 — Classroom Management
Edu 437 — Science & Social Studies in the Elementary School
Edu 465 — Student Teaching in the Elementary School

Free Electives (six semester hours)

A minimum of six semester hours are to be chosen by the student as free electives.

Recommended Program of Study

The elementary education degree and certification requirements are shown in outline form below, comprising a desirable sequence of courses.

First Year		Second Year	
Eng—Composition	6	Eng Literature	6
Science—Laboratory	8	Sophomore American His	6
Mth 135, 136—Con Mth	6	Gov 231—Intro Am Gov I	3
MEd 131—Ele of Music	3	Gov 232—Intro Am Gov II	3
His 134—Texas	3	Science	3
PE—Activity	2	PE 339—PE in Elem Sch	3
Acad Found—Elect	3	PE—Activity	2
Geo 237	3	Specialization	3
	—	Mth 3313—Mod Ele Geom	3
	34		—
			32

Third Year

Art 3371—Elem Schl Art	3
Edu 331—Foundations	3
Edu 332—Edu Psy	3
Edu 333—Lang Arts	3
Edu 334—Child Dev & Eval	3
Edu 335—Arith in Elem Sch	3
Edu 339—Read in Elem Sch	3
Edu 434—Clsrm Mgt	3
Spc 333—Interp Child Lit	3
Area of Specialization	9
	36

Fourth Year

Edu 437—Sci & Soc Stud	3
Edu 465—Student Teaching	6
Area of Specialization	6
Acad Found—Elect	9
Free Electives	6
	30

Course descriptions may be found following the section describing the Secondary Education Department.

Kindergarten Certificate Requirements

Kindergarten education may be added as an additional endorsement to the Provisional Elementary Certificate and is based on the successful completion of the courses listed below.

Edu 4302 — Early Childhood Development	3
Edu 4303 — Instruction in Early Childhood	3
Edu 4304 — History and Philosophy of Kindergarten	3
Edu 463 — Student Teaching (three hours Elementary, three hours Kindergarten)	6
Total	15

Students who do not plan to do student teaching in kindergarten can certify after taking 12 hours of Kindergarten Education and after teaching one year in an accredited kindergarten.

Kindergarten certification course work can be obtained on the Master's degree in Elementary Education. See the Graduate Bulletin for further information.

An Early Childhood/Exceptional Children certificate is obtainable. For details see Special Education section of this bulletin.

Department of Secondary Education

Accredited by the National Council for the Accreditation of Teacher Education

Department Head — Richard E. Swain, III. *Professors* — Howard W. Adams, David L. Bost, Kenneth R. Briggs, Harvey C. Johnson, E. Lee Self. *Associate Professors* — D. L. Hybarger, Phillip B. Snyder, W. H. Stanley. *Assistant Professors* — Sandra Lee Haven, Jerry R. Tucker, Curtis E. Wills. *Department Secretary* — Diana Eastep. *Secretary for Student Teaching* — Dianne Gotcher. *Certification Secretary* —Lena Francis.

Bachelor of Science in Education — Secondary

The Bachelor of Science degree in Secondary Education is designed to meet the requirements for the Provisional Secondary Certificate in the State of Texas. Those who complete the requirements for the degree will be eligible for certification in the particular teaching fields selected (or single field as explained previously in certification requirements). Persons who certify in secondary education may, through planning the use of electives or taking additional work, receive certificate endorsements

qualifying them to teach in one or more areas of special education or driver education. Attention is called to the fact that students may qualify for a certificate to teach in secondary education or by fulfilling certification requirements while obtaining a degree in a specific discipline. Some programs are available through only one of the above avenues, as shown below:

Bachelor of Science in Secondary Education

Art
Biology
Chemistry
Communication (Journalism)
Computer Science
Dance
Earth Science
Economics
English (second field only)
French
General Science
Government
Health Education
History
Life-Earth Science Middle School
Mathematics
Physical Education (Men)
Physical Education (Women)
Physical Science
Physics
Psychology
Social Studies
Sociology
Spanish
Special Education — Generic (second field only)
Speech
Theater

Bachelor's Degree in a Particular Discipline

Art (all levels)
Business (Office Administration)
Communication (Journalism)
Dance
English
French
Government
Health Education
History
Home Economics
Mathematics
Music (all levels)
Physical Education
Physics
Spanish
Special Education — Generic
Speech
Theater

In addition to completing the academic foundations program (described previously in the explanation for certification), students must fulfill the requirements in the areas of specialization, professional education and elective courses. These plans allow for an overlap of six semester hours (eight in case of sciences) taken in academic foundations which may be included in any one teaching field. This allows an incrase of free electives to 12 semester hours if there is an overlap in one field (14 in the area of science) and to 18 semester hours (20 if one field is science) if there is an overlap in each field. Of course, if there is no overlap between the academic foundations and the teaching fields, the free electives are limited to six semester hours. The requirements are explained in the four following areas.

1. **Academic Foundation (54-60 Semester Hours)**
   Described in introductory section for College of Education.
2. **Academic Specialization (48 Semester Hours — Minimum)**
   All curricula leading to certification in secondary fields require a minimum of 24 semester hours (12 advanced) in each of the two teaching fields or a minimum of 48 semester hours (18 advanced) in a single area of specialization. All programs at this University except office administration, general science, home economics, all-levels art, all-levels music and social studies require two teaching fields.

Students certifying under Plan I (two teaching fields) are required to select one academic field as being of greatest interest. Details concerning specific requirements in the various specialization areas may be found in the sequence below:

Art Specialization: (24 semester hours) Art 131, 133, 134, 231, 3381, 4341, 4371, 4381. (Academic foundation must include Art 235 and Art 236).

Art (All Levels) Specialization: (48 semester hours) Art 131, 132, 133, 134, 231, 233, 235, 236, 3371, 3381, 4331, 4341, 4371, 4381, plus six hours of Art electives from 300 or 400 level courses).

Biology Specialization: (24 semester hours) Bio 245, 345, 347, 346 or 441, 444, plus four hours to be selected from: Bio 440, 4402, 442, 443, 445, 446, 447, 449. Bio 141 and 142 must be included in Foundation Core; also Chem 141, 141 or 143, 144 required as Foundation electives.

Business Education — Office Administration (Plan II — Composite Field) Specialization: (53 semester hours) Acc 231, 232, BA 331, 332, 334, 335, 3301, 3303, 4314, CS 133, OA 123, 222, 332, 334, 341, 363, 438.
(Academic Foundations must include Eco 131, 132, Spc 131, plus three hours).

Chemistry Specialization: (24 semester hours) Chm 141, 142, 333, 343, plus nine additional hours. The nine additional hours must include five advanced hours.

Computer Science Specialization: (24 semester hours) CS 131, 132, 3302, 3304 or 4307, 4321, plus nine hours to be selected from: CS 3305, 4302, 4305, 4306, 4308. Foundation electives must include Mth 236 and 237 or Mth 139 and 231 if not taken in required core.

Dance Specialization: (24 semester hours) Dan 1263 or 1264, 1283 or 1284, 2221 or 2222, Dan 3301 or WPE 236, WPE 333, Dan 335, 336, 434, 439. Foundation program must include Bio 141-142, 330, WPE 123, 2251, Dan 127, 129 or 1252 or 1253.

Drama (See Theater)

Earth Science Specialization: (24 semester hours) Geo 141, 142, 237, 336, 4350, 4370, 4380, 418. Physics 137 — Astronomy is required in the Foundation Area.

Economics Specialization: (24 semester hours) Eco 131, 132, 333, 334, plus 12 semester hours selected from any 300 or 400 level Eco course. (When selected as area of greatest interest program must include BA 3301 and 3302).

English Specialization: (27 semester hours) Six hours of sophomore literature; nine hours of advanced British Literature; six hours of advanced American Literature; Eng 3321; Eng 334 or 430 or 3312. Foundations programs must include a foreign language through 232 for students who had foreign language in high school and a foreign language through 132 for students who had no foreign language in high school. (When selected as area of greatest interest, program must include a foreign language through 232).

French Specialization: (24 semester hours) Fre 131, 132, 231, 232, 330, 337, 338, plus three hours of advanced French.

General Science (Plan II — Composite Field) Specialization: (50 semester hours) Bio 141, 142, Chm 141 or 143, Chm 142 or 144, Geo 141, 142, Phy 141 or 143, Phy 142 or 144, plus 18 hours of advanced science courses.

Government Specialization: (24 semester hours) Gov 233 and at least one advanced Government course from each of five fields: American government; political philosophy; international relations; comparative government; public administration. (See Government Department in this catalog for listing of courses.) Also required: Gov 231 and Gov 232, which are included in core requirements of academic foundations. (When selected as area of greatest interest, program must include a foreign language through 232.)

Health Education Specialization: (24 semester hours) HEd 131, 133, 234, 331, 337, 434, 437. Foundations program must include Bio 141, 142.

History Specialization: (24 semester hours) His 131, 132, six hours advanced American History, six hours advanced World History, plus His 231, 232 which are included in foundations program. (When selected as area of greatest interest program must include History 339 and Foreign Language through 232.)

Home Economics (Vocational) Specialization: (48 semester hours) See Home Economics section of this catalog for complete description of certification plan in this area.

Journalism (Communication) Specialization: (24 semester hours) Com 133, 231, 232, 333, 3381, 431, 432, 4382. (When selected as area of greatest interest must include Com. 131).

Life-Earth Science Middle School Specialization: (24 semester hours) Bio 141, 142; Geo 141, 142; plus eight additional hours, six must be advanced, to be selected from: Bio 240, 245, 345, 346, 347, 444, 446; Geo 237, 336, 4350, 4370, 4380, 418. (Foundation electives must include Phy 137.)

Mathematics Specialization: (27 semester hours) Mth 111, 148, 149, 234, 3311, 330 or 338, 333 or 334, 335 or 336 or 337, and Computer Science 131.

Music (All Levels) See Music Department in this catalog.

Physical Education (Men) Specialization: (24 semester hours) MPE 132, 231, 236, 331 or 332, 333, 336, 436, plus three elective hours in MPE from: MPE 237, 331 or 332, 335, 431, 432, 433 and 435. (Foundations program must include Bio 141, 142. When selected as area of greatest interest program must include Bio 330 and Spc 131.)

Physical Education (Women) Specialization: (24 semester hours) WPE 132, 235, 236, 333, 336, 432, 433, plus 3 hours advanced electives. Foundations program must include Bio 141, 142; WPE 123, Dan 127 or 1281, and six hours from WPE 123, 223, 226, 229, 2201. (When selected as area of greatest interest program must include Bio 330.)

Physical Science Specialization: (28-30 semester hours) Chm 141, 142, Phy 141, 142; plus 12 hours to be selected from: Chm 333, 341, 342, 4401, 438; Phy 330, 335, 324, 414 or 415, 416 or 417; or Phy 143, 144; plus six advanced hours to be selected from: Chm 333, 341, 342, 4401, 438; Phy 330, 335, 324, 414 or 415, 416 or 417. (Foundation electives must include Mth 148 and 149 if not taken in required core.)

Physics Specialization: (24 semester hours) Phy 141, 142, 448 or Phy 140, 241, 242, 333, 335; plus six hours to be selected from 324, 346, 338, 436, 414, 416 and 417. Foundations program must include Mth 148, 149, 241, 331, Chm 141, 142.

Psychology Specialization: (24 semester hours) Psy 131, 235, 432, 436, 330 or 435, 332 or 337, 333 or 434, 336 or 433.

Social Studies (Plan II — Composite Field) Specialization: (48 semester hours)

A. Thirty semester hours: six hours economics, six hours geography, six hours sociology, six hours advanced government, six hours advanced American history.
B. Twelve semester hours: selected from one of the following: Non-U.S. History, advanced government, sociology and economics (at least six hours advanced).
C. Six semester hours: selected from one of the fields not selected in "B" above (must be advanced).

Sociology Specialization: (24 semester hours) Soc 131, 132, 438, 439; plus 12 hours (six advanced) from 231 or 339; 230 or 431; 233 or 432; and 332 or 336.

Spanish Specialization: (24 semester hours) Spa 131, 132, 231, 232, 330, 335, plus six hours of advanced Spanish.

Special Education-Generic Specialization: (24 semester hours) SpEd 2301, 2302, 3304, 3305, 4307, 4308, 4309, 4310. (See Special Education section of this bulletin for details).

Speech Specialization: (25 semester hours) Spc 132, 222 (two semesters required), 235,

238, 434, 438, 439 plus three hours selected from 332, 334 or 4371. (When selected as area of greatest interest foundations program must include Spc 131 and 233.)

Theater (Drama) Specialization: (25 semester hours) The 231, 237, 335, 4311, 4312, 437, 431, plus 210-Workshop (4 semesters required) (When selected as area of greatest interest foundations program must include Spc 1311.)

3. **Professional Development** (18 semester hours)
   Edu 331 — Foundations in Education
   Edu 332 — Educational Psychology
   Edu 338 — Curriculum, Materials and Evaluation in the Secondary School
   Edu 438 — Classroom Management
   Edu 462 — Student Teaching in the Secondary School
4. **Free Electives** (six semester hours)
   A minimum of six semester hours are to be chosen by the student as free electives.

Recommended Program of Study

The secondary education degree and certification requirements are shown in outline form below. Many variations based upon the choice of the two teaching fields, overlaps of teaching field and academic foundation requirements, and plan for use of academic foundation electives and free electives make the outline flexible to meet individual student needs. The outline does comprise a desirable sequence of courses:

First Year

Eng—Composition	6
Math	6
Science—Laboratory	8
PE—Activity (2 sem)	2
First Teaching Field	3
Second Teaching Field	3
Acad Found—Elect	6
	34

Second Year

Eng—Literature	6
Six hours of Sophomore American History from: 231, 232, 233, 234, 235, 236	6
Gov 231 and 232	6
PE—Activity (2 sem)	2
First Teaching Field	6
Second Teaching Field	6
Acad Found—Elect	3
	35

Third Year

Edu 331—Foundations	3
Edu 332—Edu Psy	3
Edu 338—Cur & Mth	3
First Teaching Field (6 hrs advanced)	9
Second Teaching Field (6 hrs advanced)	9
Acad Found—Elect	6
	33

Fourth Year

Edu 438—Classroom Mgt	3
Edu 462—Student Teaching	6
First Teaching Field—Adv	6
Second Teach Field—Adv	6
Acad Found—Elect	3
Free Electives	6
	30

ELEMENTARY AND SECONDARY EDUCATION (Edu)

1201 — Improvement of Learning Skills (2:1:2)*
Emphasis will be placed on developing skills in the following areas: 1) improving scholastic motivation, 2) managing time, 3) improving conception and memory, 4) taking class notes, 5) improving interpersonal relations, 6) formal writing, 7) taking exams and making oral reports, 8) read-

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

ing textbooks and general library utilization. Not applicable to TEA certification plans.

2301 — Peer Advisor-Counselor Training (3:2:2)
Designed primarily for those who will be learning about systematic helping and interpersonal relating by practicing the skills that constitute the helping process. Content based on learning theory, social-influence theory, behavior-modification principles and practice, and skills-training and problem-solving methodologies. Not applicable to TEA certification plans. Prerequisite: Permission of instructor.

231 — Instructional Media in the Classroom (3:3:0)
The course is designed to familiarize students with the many types of instructional media and teaching machines found in modern classrooms, including development and construction of typical made teacher materials.

232 — Foundations of Reading Instruction (3:3:0)
An orientation to background, terminology and programs for the teaching of reading. Designed to give an overview of the history of the English language, the reading process and the psychology of reading instruction. Prerequisite: Sophomore standing.

233 — Reading Skills (3:3:0)
Analysis of scope and sequence of reading skills with teaching strategies for developmental reading and reading in the content areas. Prerequsite: Sophomore standing.

331 — Foundations of Education (3:3:0)
Focuses on the historical, philosophical, organizational, professional and cultural-ethic components of American education with particular emphasis on awareness and understanding of specific needs of children and youth of various cultural-ethic components. Selective field experiences required.

332 — Educational Psychology (3:3:0)
Principles and psychological problems involved in education with emphasis on learning theories and the practical application of psychological principles to teaching.

333 — Language Arts in the Elementary School (3:3:0)
The study and use of materials and techniques in the teaching of oral and written communication. Prerequisite: Edu 331.

334 — Child Development and Evaluation (3:3:0)
Principles of growth and development. Measurement and evaluation of learning.

335 — Arithmetic in the Elementary School (3:3:0)
A study of the content, materials and methods used in teaching arithmetic. Prerequisite: Edu 331.

336 — Children's Literature (3:3:0)
A study designed to provide students with information about children's books, periodicals and related media and their use with children. Techniques and materials for motivating children to develop a continuing interest in reading. Prerequisite: Junior standing.

337 — Materials and Resources for Teaching Reading (3:3:0)
A concentration on planning, producing, selecting, organizing and evaluating instructional materials and equipment to be used in teaching reading. Prerequisite: Edu 233 or Edu 339.

338 — Curriculum, Materials and Evaluation in the Secondary School (3:3:0)
The structure and organization of the curriculum, materials used and types of evaluation utilized. Prerequisite: Edu 331.

339 — Reading in the Elementary School (3:3:0)
Methods and materials for teaching reading in the elementary school. Emphasis upon the placement of materials and lesson planning. Prerequisite: Edu 331.

431 — Diagnostic-Prescriptive Techniques in the Teaching of Reading (3:3:0)
Techniques for ascertaining reading strengths and weaknesses. Planning

and implementing instruction to meet individual needs. Prerequisite: Junior standing, 3 hours from Edu 233, 337, Edu 339.

432 — Educating the Culturally Different (3:3:0)
Delineates personal characteristics and the affective domain of the culturally different and identifies educational strategies applicable to the teaching process.

433 — Teaching Media and Audio-Visual Technology (3:3:0)
Observation, demonstration and practice in utilizing modern teaching media, including teaching machines and programming.

434 — Classroom Management — Elementary (3:3:0)
A study of problems relating to classroom management and curriculum. Prerequisite: Edu 331 and 332.

435 — Individualized Instruction Through Technology (3:3:0)
Individualized instruction as the basic conceptual tool for the study, personalization and production of actual materials and modules useful in traditional and performance based instruction. The course will be conducted as a practicum in the theory and practice of individualized instruction.

436 — Student Teaching in the Kindergarten (3:A*:0)
Supervised observation and teaching in the kindergarten. Three hours in kindergarten classrooms five days per week for eight weeks.

437 — Science and Social Studies in the Elementary School (3:3:0)
Content, methods and materials for teaching science and social studies in the elementary school. Prerequisite: 331 and 332.

438 — Classroom Management — Secondary (3:3:0)
Organization of subject matter, lesson planning, classroom management and general methods of teaching. Prerequisite: Edu 338.

439 — Reading Practicum (3:3:0)
Participation in a directed field experience. The students will work with typical class, groups and individuals in the application of concepts, skills and techniques. Prerequisite: 12 semester hours of reading including Edu 337 or by special permission of the department head.

462 — Student Teaching in the Secondary School (6:A*:0)
Supervised observation and teaching in the secondary school. Prerequisite: Edu 438. Three hours in secondary classroom 5 days per week for 16 weeks.

463 — Student Teaching — Special (6:A*:0)
Special student teaching situations designed for students working toward all-level certificates, special education, kindergarten education and speech and hearing. Prerequisite: Edu 434 or 438. Class: the number of hours equivalent to 15 hours per week for 16 weeks.

465 — Student Teaching in the Elementary School (6:A*:0)
Supervised observation and teaching in the elementary school. Prerequisite: Edu 434. Class: 3 hours in elementary classrooms 5 days per week for 16 weeks.

4101, 4201, 4301, 4601 — Institute or Workshop in Education (1-6:1-6:0)
A number of institutes or workshops are designed to advance the professional competence of teachers. For each, a description of the particular area of study will be indicated. May be repeated for credit when nature of workshop or institute differs sufficiently from one previously taken.

4302 — Early Childhood Development (3:3:0)
A study of the psychological development of children from birth to age six, with recognition given to their basic needs. Includes some of the appropriate educational experiences for the early years.

4303 — Instruction in Early Childhood (3:3:0)
A comprehensive study of methods and materials for preschool and kindergarten-age children. Focus on oral language experiences, science and mathematics concepts and creative expression.

*Arranged

4304 — History and Philosophy of the Kindergarten (3:3:0)
A comparative study of the early childhood educational movements of the past and their impact on present and future programs.

4305 — Seminar in Early Childhood Educational Research (3:3:0)
A survey of research studies in learning theory and in instructional practices for young children.

4306 — Special Topics (3:3:0)
Significant topics in Elementary. Secondary and Special Education. The description of the particular area of study will appear on the printed semester schedule. A student may repeat for a maximum of six semester hours when the area of study is different.

4336 — Methods of Teaching Secondary School Science (3:3:0)
A study of modern inquiry methods common to the separate secondary science disciplines. Emphasis is placed upon the investigative or discovery approach to science instruction.

4337 — Tests and Measurements (3:3:0)
Principles of human measurement and evaluation. Familiarity with most used tests and evaluation procedures in educational settings.

Department of Special Education

Department Head — Monty Sontag, *Associate Professor* — Les Sternberg. *Assistant Professors* — Fara M. Goulas, James E. Lane, Norma Tompkins. *Secretary* — Karen Sanders.

Bachelor of Science in Education — Special Education

Students may secure the Bachelor of Science degree in Special Education-Generic and at the same time certify for a Provisional Certificate — Secondary with a teaching field in Special Education-Generic. The Generic Program will train special educators who can meet the demands of Comprehensive Special Education in the State of Texas. The preparation is broader and more flexibile than for those whose training is based on disability categories.

With successful completion of the degree requirements, the student may apply for a Special Education-Generic Certificate, and one additional Provisional Cetificate endorsement in a Special Education categorical area, e.g., mental retardation, physically handicapped/minimal brain injury, language and/or learning disabilities and emotionally disturbed. Teachers holding any of these described certificates or endorsements may be assigned to any level of a special education instructional program.

Specific information conerning the program may be obtained from the Department of Special Education.

Special Education-Generic and Categorical Certificate Requirements

A student may complete the requirements for Special Education Certification within the Elementary or Secondary Education undergraduate program. It is also possible to obtain certification in conjunction with or following the completion of an Elementary, Secondary, All-Levels, Vocational Homemaking, Deaf Education or Speech/Hearing Program.

Certification may be obtained in Special Education-Generic or in the area of mental retardation, physically handicapped/minimal brain injury, emotionally disturbed, language and/or learning disabilities and early childhood/exceptional children.

To obtain certification in one or more areas of Special Education, students follow the same curriculum that is outlined for elementary or secondary teachers along with the selected Special Education sequence.

Select courses in the Generic series are considered acceptable substitutions for categorical needs when the categorical requirements are unavailable. Specific information concerning these substitutions may be obtained from the Department of Special Education.

The Special Education categorical requirements are as follows:

Mental Retardation

SpEd 2301 — Foundations of Special Education
SpEd 3311 — Identification and Habilitation of the Mentally Retarded
SpEd 430 — Education of the Mentally Retarded
SpEd 431 — Psychology of Exceptional Children
Edu 463 — Student Teaching — Special

Physically Handicapped/Minimal Brain Injury

SpEd 2301 — Foundations of Special Education
SpEd 3312 — Education of the Physically Handicapped
SpEd 431 — Psychology of Exceptional Children
SpEd 439 — Methods and Materials for Learning Disabilities
Edu 463 — Student Teaching — Special

Emotionally Disturbed

SpEd 2301 — Foundations of Special Education
SpEd 3313 — Behavioral Characteristics and Learning Procedures of the Emotionally Disturbed
SpEd 4314 — Educational Needs of the Emotionally Disturbed
SpEd 4310 — Practicum in Instructing the Exceptional Individual
Edu 463 — Student Teaching — Special

Language and/or Learning Disabilities

SpEd 2301 — Foundations of Special Education
SpEd 3316 — Identification of Language and Learning Disorders
SpEd 439 — Methods and Materials for Learning Disabilities
SpEd 4310 — Practicum in Instructing the Exceptional Individual Disorders
Edu 463 — Student Teaching — Special

NOTE: Six additional semester hours are required for L/LD certification. A three semester hour course with a learning theory component, e.g., Edu 332, Edu 535 or Psy 436 and a course in Child Development and Evaluation, e.g., Edu 334 or Edu 534, must be completed.

Early Childhood/Exceptional Children

Select three hours from one of the following:
SpEd 2301 — Foundations of Special Education
SpEd 5361 — Survey of Learning Potentials of Exceptional Children

Select three hours from one of the following:
SpEd 3304 — Educational Needs of the Exceptional Individual
SpEd 4308 — Appraisal Processes in Programming for the Exceptional Individual
SpEd 4309 — Instruction of the Exceptional Individual

Select six hours from two of the following:
Edu 4302 — Early Childhood Development
Edu 4303 — Instruction in Early Childhood
Edu 4304 — History and Philosophy of the Kindergarten
Edu 4305 — Seminar in Early Childhood Educational Research
Edu 5351 — Advanced Study in Early Childhood Curriculum
Edu 5352 — Creative Activities in Early Childhood Education

Multiple Special Education Certification

An additional six to 12 hours from categorical certification programs for mental retardation, physically handicapped/minimal brain injury, language and/or learning disabilities or emotionally disturbed over and above the hours required for the completion of one area will entitle the student to two or more certificates in Special Education along with certification in any major area in which a student has or is obtaining a valid Texas Teacher Certificate.

Any of the courses may be taken as elective hours by students who do not wish to certify in any of the Special Education areas. Additional information may be obtained from the head of the Department of Special Education.

Educational Diagnostician And Special Education Supervisor

These are graduate programs and fulfill requirements for a Professional Certificate. Additional information may be found in the Graduate Bulletin; however, students may use SpEd 431G, 436G, 438G, 439G, 4101G, 4201G, 4301G, 4307G, 4308G, 4309G and 4601G as a part of these programs with prior approval from the head of the Department of Special Education.

Student Teaching in Special Education

A student may complete the Special Education requirements while an undergraduate by enrolling in Education 463, Student Teaching-Special. The student teaching assignment will then be divided between a regular and a Special Education program in the area in which certification is being sought.

After the receipt of a valid Texas Teacher Certificate the student may then apply for certification in the area(s) of Special Education without having to do student teaching if appropriate courses were completed. Applications are made in the office of the director of certification.

Recommended Program of Study

Bachelor of Science in Education — Special Education

The Bachelor of Science in Education-Special Education degree, with Generic certification requirements, is shown below. Variations to meet individual student needs in the program of study are possible. Specific information may be obtained from the Department of Special Education.

First Year	
Eng-Composition	6
Math	6
Science-Laboratory	8
PE—Activity (1 per sem)	2
Second Teaching Field	6
Acad Found-Elect	6
	34

Second Year	
Eng-Literature	6
Soph American His	6
Gov 231-Intro American Gov I	3
Gov 232-Intro American Gov II	3
PE—Activity (1 per sem)	2
SpEd 2301-Foundations	3
SpEd 2302-Ident Excp Ind	3
Second Teaching Field	6
Acad Found-Elect	3
	35

Third Year

Edu 331-Foundations	3
Edu 332-Edu Psy	3
Edu 338-Cur & Mth	3
SpEd 3304-Edu Needs Excp Ind	3
SpEd 3305-Rdng/L.A. Excp Lrnr	3
SpEd 4307-Prctm Rdng/L.A. Excp	3
Second Teaching Field (Adv)	6
Acad Found-Elect	3
Free Electives	6
	33

Fourth Year

Edu 438-Clasrm Mgmt	3
SpEd 4308-Apprsl Proc Excp	3
SpEd 4309-Instrn Excp Ind	3
SpEd 4310-Prctm Instrn Excp	3
Edu 463-Stdnt Tchng	6
Second Teaching Field (Adv)	6
Free Electives	6
	30

Recommended Programs of Study

Certification in Special Education-Generic with a Bachelor of Science Degree in Elementary Education.

The Bachelor of Science Degree in Elementary Education, with Special Education-Generic as an Area of Specialization, is shown below. Variations to meet individual student needs in the program of study are possible. Specific information may be obtained from either the Department of Elementary or Special Education.

First Year

Eng-Composition	6
Science-Laboratory	8
Mth 135, 136-Contemp Mth	6
MEd 131-Elem of Music	3
His 134-Texas	3
PE—Activity (1 per sem)	2
Acad Found-Elect	3
Geo 237 or 238-Physical/Cultural	3
	34

Second Year

Eng-Literature	6
Soph American His	6
Gov 231-Intro American Gov I	3
Gov 232-Intro American Gov II	3
PE—Activity (1 per sem)	2
SpEd 2301-Foundations	3
SpEd 2302-Indent Excp Ind	3
Mth 3313-Mod Elem Geom	3
Science	3
	32

Third Year

SpEd 3304-Edu Needs Excp Ind	3
SpEd 3305-Rdng/L.A. Excp Lrnr	3
SpEd 4307-Prctm Rdng/L.A. Excp	3
PE 335 or 339-Atypical/Elem Schl	3
Art 3371-Elem Schl Art	3
Edu 331-Foundations	3
Edu 332-Edu Psy	3
Edu 333-Lang Arts	3
Edu 334-Chld Dev & Eval	3
Edu 335-Arthm in Elem Schl	3
Edu 339-Rdng in Elem Schl	3
Free Elective	3
	36

Fourth Year

SpEd 4308-Apprsl Proc Excp	3
SpEd 4309-Instrn Excp Ind	3
SpEd 4310-Practm Instrn Excp	3
Spc 333-Intrp Chld Lit	3
Edu 437-Sci & Soc Stdy	3
Edu 434-Clasrm Mgmt	3
Edu 463-Stdnt Tchng	6
Acad Found-Elect	3
Free Electives	3
	30

Associate of Science Degree — Education (For Paraprofessionals)

The Associate of Science in Education (for Paraprofessionals) is administered by the Department of Special Education.

Students completing this program will be prepared to function as instructional aides in a variety of public school and other programs directly concerned with the education of children. The total hours completed in this degree are acceptable toward a Bachelor of Science in Education Degree if that is the student's objective.

Recommended Program of Study

The Associate of Science Degree in Education is shown below. Variations to meet individual student needs in the program of study are possible. Specific information may be obtained from the Department of Special Education.

Eng-Composition	6
*Math/Lab Science/Foreign Lang	6-8
Soph American His	6
PE—Activity (1 per sem)	2
Psy 234 or 235-Chld/Adol Psy	3
SpEd 2301-Foundations	3
Free Elective	6
	32-34

Eng-Literature	3
*Math/Lab Science/Foreign Lang	6-8
Gov 231-Intro American Gov I	3
Gov 232-Intro American Gov II	3
Edu 231-Instrc Media	3
SpEd 2302-Ident Excp Ind	3
SpEd 3305-Rdng/L.A. excp Lrnr	3
Free Elective	6
	30-32

*Four courses, with no more than three courses in any one area.

SPECIAL EDUCATION (SpEd)

2301 — Foundations of Special Education (3:3:0)*
An orientation to background, terminology and programs for those who are exceptional. Designed as an overview of Special Education. A first course for those planning to certify in Special Education.

2302 — Identification and Characteristics of the Exceptional Individual (3:3:0)
Principles of normal and abnormal child growth and development. Nature and causes of behavioral and physical characteristics and basic techniques of management.

3304 — Educational Needs of the Exceptional Individual (3:3:0)
Evaluation and application of various techniques for determining educational needs of the exceptional individual and general instructional arrangement considerations.

3305 — Instructional Alternatives for Teaching Reading and Language Arts to the Exceptional Learner (3:3:0)
Identification of skill deficiencies, modification of curriculum, designing and implementation of instructional strategies for pupils evidencing disabilities in reading and language arts.

3311 — Identification and Habilitation of the Mentally Retarded (3:3:0)
Nature and causes of mental retardation, physical and mental characteristics; the organization and administration of classes; evaluation, integration

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

and adaptation of the program to meet socio-economic needs. Includes experience in observing the behavior of mentally retarded children.

3312 — Education of the Physically Handicapped (3:3:0)
Description and characteristics of children with physical disabilities. Consideration of etiological factors and limitations in regular and special classes, hospital and homebound instruction. Includes experience in observing the behavior of physically handicapped children.

3313 — Behavioral Characteristics and Learning Procedures of the Emotionally Disturbed (3:3:0)
The principles of normal and abnormal child growth and development, including biological and socio-cultural determinants of growth; classification and description of relevant psychological terminology as related to the behavior of the emotionally disturbed.

3316 — Identification of Language and Learning Disorders (3:3:0)
The identification of specific behavioral characteristics that interfere with adequate learning, with special emphasis on techniques to alter behavior. Discussion and presentation of theories of perception and cognition.

3317 — Learning Potentials in the Severely and Profoundly Handicapped (3:3:0)
Determining the degree of modifiability of pupil behaviors. Identifying functional levels, individual project.

3318 — Practicum in Learning Potentials (3:3:0)
Application of assessment procedures to be used with the severely and profoundly handicapped. Emphasis on both formal and informal measures. Formulation of educational programs from assessment. Individual projects.

430 — Education of the Mentally Retarded (3:3:0)
Problems of the selection, preparation, development and use of curriculum materials. Use of resources, selection of equipment, employment opportunities and a review of recent research. Includes experience in observing and modifying the behavior of mentally retarded children.

431 — Psychology of Exceptional Children (3:3:0)
Social and emotional characteristics and adjustment problems of children and youth who are exceptional.

436 — Education of Gifted Children (3:3:0)
Identification, programs, guidance and administrative structure for gifted children.

438 — Instructional Processes with the Severely and Profoundly Handicapped (3:3:0)
Translating the behaviors of the severely and profoundly handicapped into developmental categories and applied instructional modification processes.

439 — Methods and Materials for Learning Disabilities (3:3:0)
Classroom management and teaching procedures for children with language and/or learning disabilities. Various learning theories are presented.

4101, 4201, 4301, 4601 — Institute or Workshop in Special Education (1-6:1-6:0)
A number of workshops are designed to advance the professional competence of teachers. For each, a description of the particular area of study will be indicated. May be repeated for credit when nature of workshop or institute differs sufficiently from one previously taken.

4111, 4211, 4311 — Individual Study in Special Education (1-3:A:0)**
Investigation into special areas in special education under the direction of a faculty member. This course may be repeated for credit when topics of investigation differ. Prerequisite: Consent of department head.

4306 — Special Topics (3:3:0)
Significant topics in Special Education. The description of the particular area of study will appear on the printed semester schedule. A student may repeat for a maximum of six semester hours when the area of study is different.

4307 — Practicum in Instructional Alternatives in Reading and Language Arts for the Exceptional Learner (3:A:0)**
Practicum experience in the identification and instruction of pupils evidencing disabilities in reading and language arts. Prerequisite: SpEd 3305 or instructor's approval.

4308 — Appraisal Processes in Programming for the Exceptional Individual (3:3:0)
Formal and informal methods of appraising the educational needs of the exceptional learner and the use of interpretative data to prescribe appropriate curriculum modification, instructional materials, teaching strategies and classroom management.

4309 — Instruction of the Exceptional Learner (3:3:0)
Classroom management, teaching strategies, instructional materials for the exceptional learner. Various approaches and rationales are presented.

4310 — Practicum in Instructing the Exceptional Individual (3:A:0)**
Practicum experience with the exceptional learner. Includes identification, interpretation of data, development of instructional goals and implementation of instructional objectives. When experience is with emotionally disturbed it includes at least 54 contact clock hours of work.

4314 — Educational Needs of the Emotionally Disturbed (3:3:0)
Programming possibilities based on the characteristics and severity of the individual's emotional problems. Integration of knowledge and competencies to provide an instructional program to meet the needs of emotionally disturbed children.

Department of Health and Physical Education for Men

Department Head — J.B. Higgins. *Director of Academic Programs* — L.A. Yates. *Director of Required Activity Programs* — Vernon R. Crowder. *Assistant Professors* — Raymond L. Fletcher, Sidney Jolly, John E. Payton, Dan Rogas, William L. Worsham. *Instructors* — James P. Gilligan, Ronald L. Wesbrooks, Paul T. Zeek. *Lecturers* — John Barr, Milas Kennington, Kenith Pope, Billy D. Tubbs, Timothy Thomas, Dennis Walsh. *Secretary* — Susie Fortenberry.

Recommended Program of Study

The following degree program fulfills curriculum requirements for the Provisional Teaching Certificate — Secondary — in the State of Texas.

Bachelor of Science In Physical Education (Men)

First Year		Second Year	
Eng—Composition	6	Eng—Literature	6
Bio 141-142—Gen Biology	8	Gov 231-232	6
Mth	6	Soph American History	6
Spc 131—Spc Comm	3	MPE 231-bio Mechanics	3
MPE 132M—Principles	3	PE Soph Activity	4
MPE 236M—PE Sec Sch	3	*Elective	9
PE—Activity	2		—
*Electives	3		34
	—		
	34		

**Arranged

Third Year

Bio 330—App Anat and Kinesiol	3
Edu 331—Foundation	3
Edu 332—Edu Psy	3
Edu 338—Curr Mat-Sec Sch	3
MPE 331—Coaching-Major Spt or MPE 332—Coaching-Major Spt	3
MPE 333—Physiology of Exer	3
MPE 336—Tests — Msrments	3
*Electives	12
	33

Fourth Year

Edu 438—Classroom Mgt Sec	3
Edu 462—Stu Tching Sec Sch	6
MPE—Advanced Elective	3
MPE 436—Org and Admin	3
*Electives	15
	30

*Electives must include the following:

1. An approved additional teaching field of 24 semester hours (Consult this catalog, Department of Secondary Education, for requirements for additional teaching fields)
2. Nine semester hours of electives from the five groups described under "Academic Foundations" with courses included from a minimum of three groups.

PHYSICAL EDUCATION (MPE)

Activity Courses for Men

111 — Concepts of Physical Fitness (1:1½:1½)*
First activity course required of all men students seeking a degree at Lamar. Nine weeks of lecture on the concepts of physical fitness followed by an individualized fitness program and pre and post testing. May be repeated for credit.

112 — Freshman Activity (1:0:3)
Continuation of first year physical education program. Nine weeks of recreational activity in one sport or activity of the student's choice. Fulfills second semester requirement. Prerequisite: MPE 111.

113 — Freshman Activity (1:0:3)
Continuation of first year physical education program. Nine weeks of recreational activity in one sport or activity of the student's choice. Fulfills second semester requirement. Prerequisite: MPE 111.

221-222 — Sophomore Activity (2:3:0)
Continuation of required physical education activity in the second year of the program. Consists of instruction in fundamentals, rules and participation in selected team, dual and individual sports and activities of the students' choice. Prerequisite: MPE 111. May be repeated for credit.

2200 — Modified Activity (2:1:2)
Modified or special exercise programs and selected game fundamentals for those individuals who, for physical limitations, are unable to take regular activity courses. May be repeated for credit.

2201 — Intermediate Swimming — (2:1:2)
Optional activity in the physical education program. Lecture, demonstration and practice in the fundamentals of swimming. Prerequisite: MPE 111 and demonstrated ability to swim.

2202 — Senior Life Saving (2:1:2)
Optional activity in the physical education program. Lectures, demonstrations and practice in the techniques of lifesaving. Prerequisite: Demonstrated swimming ability.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

2203 — Water Safety Instruction (2:1:2)
Optional activity in the physical education program. Organization, conditioning and preparation of students in the required swimming and lifesaving skills. Advanced students may qualify for American Red Cross Water Safety Instructor. Prerequisite: Current Red Cross Senior Lifesaving Certificate.

2204 — Strength Training (2:1:2)
Optional activity in the required program. Individually structured isotonic strength training program using weights and weight room equipment. May be repeated for credit. Prerequisite: MPE 111.

2205 — Strength Training for Athletes (2:1:2)
Optional activity in the required program. Advanced, intensified strength training program for athletes utilizing specialized programs for different sports. Prerequisite: varsity athlete. May be repeated for credit.

2206 — Intermediate Tennis (2:1:2)
Instruction and practice in the basic strokes, elements and basic game strategy of tennis. Prerequisite: MPE 111. May be repeated for credit.

2207 — Handball and Racquetball (2:1:2)
Instruction and practice in beginning through advanced skills in handball and racquetball. Emphasis on teaching techniques and skill progression. Prerequisite: MPE 111. May be repeated for credit.

2208 — Advanced Baseball (2:1:2)
Instruction and practice in the advanced techniques, skills and organization of baseball for players and potential coaches. Prerequisite: MPE 111. May be repeated for credit.

2209 — Advanced Basketball (2:1:2)
Instruction and practice in the advanced techniques, skills and organization of basketball for players and potential coaches. Prerequisite: MPE 111. May be repeated for credit.

2210 — Golf (2:1:2)
Instruction and practice in beginning through advanced golf skills. Emphasis on teaching technique and progression of skill. Prerequisite: MPE 111. May be repeated for credit.

2211 — Gymnastics (2:1:2)
Instruction and practice in gymnastic skills to include spotting techniques, class organization and movement principles. Prerequisite: MPE 111. May be repeated for credit.

2212 — Martial Arts (2:1:2)
Instruction and practice in the beginning skills of unarmed defense as a sport. Not designed for the advanced student. Prerequisite: MPE 111. May be repeated for credit.

PROFESSIONAL COURSES

132 — Principles (3:3:0)
Definition, terminology, aims, objectives, history and principles of physical education, health education, recreation and safety. A survey course of the nature of the fields and specialized areas within the professional field with opportunities for self-evaluation in the professional competencies expected of personnel in the profession. May be used to satisfy part of requirements for Teacher's Certificate.

231 — Biomechanics of Exercise and Sport (3:3:0)
An introduction into the nature of motor skills. Emphasis is placed on analyzing and evaluating human motion in various forms of physical activity.

236 — Physical Education in the Secondary School (3:3:0)
Theory, methods and materials for instruction of physical education at the secondary level with stress on individual, team, recreational and carry-over type games and sports for later adult life participation. Classroom and field laboratories for demonstrations and practice included. Prerequisite: MPE 132.

237 — Athletic Training and Conditioning (3:3:0)
A study of training and conditioning methods for the individual and team; arrangement and care of training room; care and prevention of athletic injuries. Prerequisite: Bio 141-142.

330 — Safety and First Aid (3:3:0)
A survey of safety and first aid. Includes traffic safety and safety at home, work, school and play. Includes the scope, needs and limitations of first aid with laboratory training in the techniques and methods of treatment of injuries.

331 — Coaching Major Sports — Football and Basketball (3:3:0)
The fundamentals, theory, history, development and modern techniques of football and basketball. Lectures and demonstrations in coaching methods and techniques. Prerequisite: 9 semester hours in physical education.

332 — Coaching Major Sports — Baseball and Track (3:3:0)
The fundamentals, theory, history, development and modern techniques in baseball and track. Lectures and demonstrations in coaching methods and techniques. Some laboratory experience required in track phase of the course. Prerequisite: 9 semester hours in physical education.

333 — Physiology of Exercise (3:3:0)
Muscular, nervous, circulatory and respiratory systems as related to exercise. Experiments on human subjects are used. Prerequisite: Bio 141, 142 and 330.

334 — Driver Education (3:3:0)
Traffic rules and regulations and the basic facts concerning the cause and prevention of accidents. The course includes behind-the-wheel training in the use of the training automobile while instructing students. For teaching professional students how to teach driver education. Prerequisite: Texas Driver's License.

335 — Organization and Administration of Intramural Sports (3:3:0)
Theory and practice of organizing and administering the intramural sports program. Includes problems in scheduling, financing, promotion, activities, officiating, classification of students and evaluation of the program.

336 — Tests and Measurements (3:3:0)
Use, interpretation, evaluation and administration of tests peculiar to health and physical education; application of elementary statistical procedures. Prerequisite: junior standing.

339 — Physical Education in the Elementary School (3:3:0)
The theory and practice of teaching physical education activities in the elementary grades. Classroom instruction and field laboratory assignments are included for demonstration and practice. Stress is placed on games of low organization. Classified as elementary physical education for purposes of teacher certification.

416 — Student Teaching in Driver Education (1:1:0)
Supervised observation and teaching of driver education in actual class and behind-the-wheel training. Prerequisite: MPE 330 and MPE 334.

430 — Problems in Physical and Health Education, Recreation and Safety (3:A*:0)
Special problems in physical and health education, recreation and safety are assigned to individual students or to groups of students. Assignments are made and consultations are held. Enrollment by prior approval from department head. Class: by consultation.

431 — Recreation Leadership (3:3:0)
A survey of the field of recreation with stress on playground and manage-

ment, program making, observation and practice in activities and methods, leadership and skills. Includes problems in the promotion of recreation in the community. Offered summer session only. Prerequisite: 15 hours in physical education.

432 — Officiating Football (3:3:0)
A study of the rules and their interpretation and of the mechanics of officiating. The course is designed to develop the skill and knowledge required in officiating football.

433 — Officiating Basketball (3:3:0)
A study of the rules and their interpretation and of the mechanics of officiating. The course is designed to devleop the skill and knowledge required to officiate basketball.

435 — Adapted Physical Education (3:3:0)
Diagnosis and recognition of remedial cases. Instructional and remedial activities for individuals needing modified or special exercise programs. Prerequisite: 12 hours in physical education, Bio 141-142 and 330.

436 — Organization and Administration of Physical and Health Education and Athletics (3:3:0)
Administration procedures in setting up and conducting programs in physical education, health education and intramural athletics. A survey of types of programs, administrative organizations, scope, personnel, policies, functions and duties of supervision, related problems in the three areas. Prerequisite: 15 hours in physical education.

4301 — Workshop in Physical Education (3:3:0)
A number of Workshops are designed to advance the professional competence of teachers. For each, a description of the particlar area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

Athletic Training Specialization

Certification and licensing of athletic trainers is available through meeting the following:

1. Teacher certification with a teaching field in HPE and a second teaching field.
2. N.A.T.A. Certification upon passing certification examination.
3. Licensed Athletic Trainer by State of Texas upon passing state board examination.

Further information may be secured through the Department of HPE for Men. Application must be made through the athletic trainer as the number of students is limited.

Driver Education Certification Requirements

Certification to teach driver education is available as a special designation on an existing Texas Teaching Certificate. Specific course requirements are as follows:

MPE 330 — Safety and First Aid
MPE 334 — Driver Education
MPE 416 — Student Teaching in Driver Education

*Arranged

Department of Health and Physical Education for Women

Department Head — Belle M. Holm. *Director of Professional Programs* — Alice C. Bell. *Director of Aquatics Division* — Milas Kennington. *Director of Dance Division* — Rebecca O. Hill. *Director of Graduate Division* — V. Raye Holt. *Director of Health Division* — Alice C. Bell. *Director of Physical Education Division* —Mildred A. Lowrey. *Director of Service Division* — Mary Jane Haskins. *Professor* — Mary Jane Haskins. *Associate Professors* — Alice C. Bell, V. Raye Holt, Mildred A. Lowrey. *Assistant Professors* — Rae R. Gremillion, Rebecca O. Hill, Patricia A. Park. *Instructors* — Gilda Gant, Karen Greenockle, Nancy Howe, Rosario Petty. *Lecturers* — Julio de Bittencourt, Cynthia Russo, Linda R. Thomas. *Secretaries* — Deborah Kennington, Patricia George, Stephanie Caveness.

The Department of Health and Physical Education for Women provides several career options for students. Three teacher education certification programs are offered: dance education (coed), health education (coed) and women's physical education. Three programs of study are available which do not lead to teacher certification: dance education (coed), health education (coed) and recreation education (coed). Undergraduate programs lead to a Bachelor of Science degree in Health Education, Physical Education, Dance or a Bachelor of Arts degree in Dance. Graduate programs leading to a Master of Science degree are described in the Graduate Bulletin.

The general physical activity four semester program for all university students provides a varied selection of activities which include aquatics, dance and sports. The activity program is designed to enhance the general education objectives of the University.

Bachelor of Science Recommended Programs of Study

Dance Education

The dance division offers two programs of study. A student choosing a public school teaching career should follow the certification program which leads to certification to teach dance plus an approved additional teaching field at the secondary level. A student selecting the non-certification program prepares for a career in private studio teaching, administration or professional performance.

Dance Education (Certification Program)

First Year	
Bio 141-142—General	8
Eng.—Composition	6
Mth.	6
Dan 127—Folk Dance	2
WPE 123—Basic Movement Fundamentals	2
Dan 129 or Dan 1252/1253	2
*Elective	3
Dance Elective—Ballet or Modern	4
	33

Second Year	
Eng.—Literature	6
His. (Soph. American History)	6
Gov. 231-232	6
WPE 2251—Tumbling & Gymnastics	2
Second Teaching Field	9
Dance Elective—Ballet or Modern	4
	33

Third Year

Bio 330—Anatomy	3
Edu 331—Foundations	3
Edu 332—Educational Psychology	3
Edu 338—Curriculum	3
WPE 333—Physiology of Exercise	3
Dan 3301 or WPE 236—Theatre Dance Forms or Dir. Co-cur. Activities	3
Dan 335—Principles of Creative Dance	3
Dan 2221 or 2222—Ballet Co. or Modern Dance Co.	2
Second Teaching Field	6
Dance Elective—Ballet or Modern	4
	33

Fourth Year

Edu 438—Classroom Management	3
Edu 462—Student Teaching	6
Dan 336—Choreography and Dance Production	3
Dan 434—Methods and Materials in Dance Education	3
Dan 439—History and Theory of Dance	3
Second Teaching Field	9
*Electives	6
	33

Total — 132 hours

In order to develop and maintain a high technical level, dance education majors are required to take ballet technique or modern dance technique daily each semester.

Dance Education (Non-certification)

The dance education major prepares the student for private studio administration, teaching and professional performance.

First Year

Bio 141-142	8
Dan 1261, 1262, 1263 or 1264 Ballet Technique	2
Dan 127—Folk Dance	2
Dan 1281, 1282, 1283 or 1284 Modern Dance	2
Eng—Composition	6
Mth or Foreign Language	6
MEd 131—Element of Music	3
WPE 123—Basic Movement	2
	31

Second Year

Eng—Literature	6
Gov 231-232	6
His—Sophomore Amer. History	6
WPE 2251—Tumbling & Gymnastics	2
Dan 129—Tap Dance	2
Dan 2221—Ballet Company	2
Dan 2222—Modern Dance Company	2
Dan 2223, 1253 or 2260—Ensemble, Jazz or Musical Comedy	2
*Electives	6
	34

Third Year

Bio 330—Anatomy	3
Art 139, 235 or 236—Art Appreciation or Art History	3
WPE 333—Physiology of Exercise	3
Dan 3301—Theatre Dance Forms	3
Dan 335—Principles of Creative Dance	3
*Electives	18
	33

Fourth Year

Dan 336—Choreography and Dance Production	3
Dan 430 or 4301—Individual Study in Dance Education or Workshop in Dance Education	3
Dan 434—Methods and Materials in Dance Education	3
History and Theory of Dance	3
*Electives	18
	30

Total — 128 semester hours

*Electives should include the following:
1. A related arts minor program of 18 semester hours approved by counselor.
2. A related elective program of 15 semester hours guided by counselor.

In order to develop and maintain a high technical level, dance education majors are required to take ballet technique or modern dance technique daily each semester.

Bachelor of Art — Dance Major

Same as the above program except for the completion of the course numbered 232 in a foreign language.

Health Education

The health education program of study offers two options for a career in health. A student choosing a teaching career should follow the certification program which leads to certification to teach health plus an approved additional teaching field at the secondary level. A student selecting the non-certification program prepares for a career in health agencies and municipal health departments.

Health Education (Certification Program)

First Year

WPE Activity	2
Bio 141-142—General	8
Elective	3
Eng—Composition	6
HEd 131—Emergency Care, Safety and Survival	3
HEd 133—Personal Health	3
Mth	6
Academic Foundation—Elective	3
	34

Second Year

WPE Activity	2
Acad Found—Elect	6
Eng—Literature	6
Gov. 231-232	6
HEd 234—Public and Consumer Health	3
HEd 237—Health Education in the Secondary School	3
His—Sophomore American History	6
	32

Third Year

Bio 330—Anatomy	3
Edu 331—Foundations	3
Edu 332—Educational Psychology	3
Edu 338—Curriculum	3
Elective	3
HEd 331—Measurement in Health	3
HEd 337—Contemporary Health Problems	3
Second Teaching Field	12
	33

Fourth Year

Edu 438—Classroom Management	3
Edu 462—Student Teaching	6
Acad Found—Elec	6
HEd 434—Health and Human Ecology	3
HEd 437—Health Science and Epidemiology	3
Second Teaching Field	12
	33

Total — 132 semester hours

*Academic foundation program (required and electives) may not include more than six semester hours (eight in science) overlap with any teaching field.

Health Education (Non-certification)

First Year

Activity 111	1
Bio 141-142—General	8
*Elective	3
Eng—Composition	6
HEd 131—Emergency Car, Safety and Survival	3
HEd 133—Personal Health	3
Mth	6
Psy 131—Introduction to Psychology	3
WPE 123—Basic Movement Fundamentals	2
	35

Second Year

Activity 112	1
Eco 233—Principles and Policies	3
*Elective	3
Eng—Literature	6
Gov 231-232	6
HEd 234—Public and Consumer Health	3
HEd 237—Health Education in the Secondary School	3
His—Sophomore American History	6
WPE 225—Lifesaving	2
	33

Third Year

Bio 330—Anatomy	3
*Electives	14
Gov 3316—Introduction to Public Administration	3
HEd 337—Contemporary Health Problems	3
Spc 238—Argumentation and Debate	3
WPE 333—Physiology of Exercise	3
	29

Fourth Year

*Electives	14
HEd 430—Individual Study in Health Education	3
HEd 4301—Workshop in Health Education	3
HEd 434—Health and Human Ecology	3
HEd 437—Health Science and Epidemiology	3
Soc 437—Public Opinion	3
	29

Total — 126 semester hours

*Electives should include the following:
1. A related minor of 18 semester hours approved by counselor.
2. A related elective program of 16 semester hours guided by counselor.

Women's Physical Education

The women's physical education program of study prepares the student for a teaching career in women's physical education in secondary schools or for students who plan to continue the study of women's physical education for an advanced degree. A companion program of specialization in elementary physical education is available through the Bachelor of Science in Elementary Education (see Department of Elementary Education in this catalog for further information).

Women's Physical Education (Certification Program)

First Year

Activity selected from WPE 123, 223 228, 229, 2201	2
Bio 141-142—General	8
Eng—Composition	6
Mth	6
WPE 132—Intro to Phy Edu	3
WPE 2251—Tumb and Gym	2
Dan 127 or 1281—Folk or Modern	2
Electives	3
	32

Second Year

Activity selected from WPE 123, 223, 228, 229, 2201	4
Eng—Literature	6
Gov. 231-232	6
His—Soph American History	6
WPE 236—Dir Co-Cur Activities	3
WPE 235—Hist & Philos of PE	3
Electives	5
	33

Third Year

Bio 330—Anatomy	3
Edu 331—Foundations	3
Edu 332—Edu Psy	3
Edu 338—Curr Mat	3
WPE 333—Physio of Exercise	3
WPE 336—Tech & Curr Phy Edu	3
Electives	4
Second Teaching Field	12
	34

Fourth Year

Edu 438—Classroom Mgt	3
Edu 462—Stu Teaching	6
WPE 432—Meas & Eval Phy Edu	3
WPE 433—Motor Learning	3
WPE Adv Elective	3
Electives	3
Second Teaching Field	12
	33

Total — 132 semester hours

Recreation Education

The recreation education program of study offers three options for a career in recreation. The student majoring in recreation may specialize in (1) municipal recreation, (2) private golf and tennis club management and teaching or (3) the professional circuit performer in women's golf or tennis.

Recreation Education (Non-certification)

First Year

Bio 141-142—General	8
Hum 130—Appreciation of Art and Music	3
Eng—Composition	6
His—Sophomore American History	6
Spc 131—Speech Communication	3
WPE 111—Activity	1
WPE 112—Activity	1
WPE 123—Basic Movement Fundamentals	2
WPE 132—Principles of Physical Education	3
	33

Second Year

Eng—Literature	6
Gov. 231-232	6
Mth	6
MEd 131—Elements of Music	3
WPE 127 or 129—Folk Dance/ Tap Dance	2
WPE 221—Activity	2
WPE 222—Activity	2
WPE 223 or 224—Basketball and Volleyball/Flag Football and Softball	2
WPE 225—Lifesaving	2
WPE 2251—Tumbling and Gymnastics	2
	33

Third Year

Bio 330—Anatomy	3
Eco 233—Principles and Policies	3
*Electives	16
Gov 339—Urban Politics	3
HEd 131 or WPE 333—Emergency Care, Safety and Survival/Physiology of Exercise	3
WPE 227 or 2201—Badminton/ Tennis	2
WPE 335 or 339—Physical Education and Recreation for the Atypical Child/Physical Education in the Elementary School	3
	33

Fourth Year

*Electives	18
WPE 236, 336 or 433—Directing Co-Curriculum Activities/Techniques and Curriculum in Physical Education/ Motor Learning	3
WPE 430—Individual Study in Physical Education	3
WPE 431—Introduction to Community Recreation	3
	27

Total — 126 semester hours

*Electives should include the following:
1. A related minor of 18 semester hours approved by counselor.
2. A related elective program of 16 semester hours guided by counselor.

DANCE EDUCATION (Dan)

Director — Rebecca O.Hill

1251, 1252, 1253 — Jazz (2:1:2)*
Instruction and practice in jazz dance. May be repeated for credit.

1261, 1262, 1263, 1264 — Ballet Technique (2:1:2)
Instruction and practice in ballet technique. Emphasis is placed upon accurate technique and placement. May be repeated for credit.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

127 — Folk Dance (2:1:2)
Instruction and practice in beginning folk dance. Emphasis is placed upon the historical and cultural background of the various national dances.

1281, 1282, 1283, 1284 — Modern Dance Technique (2:1:2)
Instruction and practice in the techniques of modern dance and composition. May be repeated for credit.

129 — Tap Dance (2:1:2)
Instruction and practice in beginning tap dance.

2221 — Ballet Company (2:0:6)
The instruction, rehearsal and production of classical ballets. May be repeated for credit.

2222 — Modern Dance Company (2:0:6)
The instruction, rehearsal and production of modern dance and jazz works. May be repeated for credit.

2223 — Dance Ensemble (2:0:6)
The instruction, rehearsal and production of various and divergent dance forms. May be repeated for credit.

2260 — Musical Comedy Dance (2:0:6)
A laboratory course providing both background study and practical work in the specialized field of musical comedy including participation in the presentation of a full production. Open by audition or by consent of the instructor to students from all departments who are interested in dance as applied to musical comedy. May be repeated for credit.

3301 — Theater Dance Forms (3:1:2)
Instruction, study and practice of the various dance forms utilized in the theater.

335 — Principles of Creative Dance (3:3:0)
Theory and practice of instructing creative dance. Emphasis is placed on positive reinforcement of the student as an individual and leading the student to gather self-expression in a dance/movement activity.

336 — Choreography and Dance Production (3:2:1)
Principles of the art of choreography and the study of the various facets utilized in dance production.

4101 — Workshop in Dance Education (1:1:0)
A number of workshops are designed to advance the professional competence of dance teachers. For each, a description of the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

4201 — Workshop in Dance Education (2:2:0)
A number of workshops are designed to advance the professional competence of dance teachers. For each, a description of the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

4301 — Workshop in Dance Education (3:3:0)
A number of workshops are designed to advance the professional competence of dance teachers. For each, a description of the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

430 — Individual Study in Dance Education (3:A:0)**
Selected problems in Dance Education. Prerequisite: Senior standing and consent of department head. May be repeated for credit. Class by consultation.

434 — Methods and Materials in Dance Education (3:3:0)
Objectives, methods and techniques of teaching dance. Classroom instruction and field laboratory assignments are included for demonstration and practice.

*Arranged

439 — **History and Theory of Dance (3:3:0)**
Chronological summary of characteristics and forms of dance from primitive rites to contemporary art forms; origins and evaluation of classic and contemporary dance forms.

HEALTH EDUCATION (HEd)

Director — Alice C. Bell

131 — **Emergency Care, Safety and Survival (3:3:0)**
Standard American Red Cross First Aid certification course, plus the Public Health Service Office of Civil Defense Medical Self-Help course and Safety Education. Among specific course requirements is one field trip.

133 — **Personal Health (3:3:0)**
A study of body organs and diseases, systems, physical and mental health concepts, knowledges and appraisal of individual health. Designed to extend the students' skills in using facts to arrive at well informed decisions concerning their own personal health.

234 — **Public and Consumer Health (3:3:0)**
Traditional and modern methods of meeting public and consumer health needs; investigation and analysis of public and consumer health problems; functions and organization of consumer services at the local, state, regional and national levels.

237 — **Health Education in the Secondary School (3:3:0)**
Presentation of health media in conjuntion with curriculum design and teaching methods. Emphasis placed upon the conceptual approach to teaching health education. Competencies regarding ten selected conceptual areas within the scope of health education are stressed.

331 — **Measurement and Evaluation in Health Education (3:3:0)**
Designed to provide the student with the understandings and tools needed to evaluate the secondary students' health status and progress within the school health program. Special emphasis placed upon competencies in detection and referral procedures for individual health appraisal. Evaluative measures and resources within schools and communities will be studied.

337 — **Contemporary Health Problems (3:3:0)**
The course deals with problems associated with current health issues which are related to individual and social adjustment in society. Emphasis will be placed upon social and psychological factors which promote successful interpersonal and family relationships.

338 — **Health Education in the Elementary School (3:3:0)**
Includes health problems and interests of elementary school children, the promotion of the healthful school environment, understanding of health appraisal of school children and the conceptual approach to curriculum construction.

4101 — **Workshop in Health Education (1:1:0)**
A number of workshops are designed to advance the professional competence of teachers. For each description, the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

4201 — **Workshop in Health Education (2:2:0)**
A number of workshops are designed to advance the professional competence of teachers. For each description, the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

4301 — Workshop in Health Education (3:3:0)
A number of workshops are designed to advance the professional competence of teachers. For each description, the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

430 — Individual Study in Health Education (3:A*:0)
Selected problems in health. Prerequisite: senior standing and consent of department head. May be repeated for credit. Class by consultation.

434 — Health and Human Ecology (3:3:0)
Emphasis on the human organism with the many aspects of environment and the implications in each area with regard to health. The course will cover aspects of air, land and water pollution with major sources of pollution being designated and categorized into the areas of transportation, industry, power plants, refuse disposal and recreational contributions.

437 — Health Science and Epidemiology (3:3:0)
A study of infectious and non-infectious diseases. The course treats epidemiology as a basic science of preventive medicine as well as the study of occurrence of disease in human populations.

WOMEN'S PHYSICAL EDUCATION (WPE)

Director — Mildred A. Lowrey

Professional Courses

123 — Basic Movement Fundamentals (2:3:0)
Study of joint actions, balance, locomotor forms, rhythm, force production and object projection. Introductions to movement patterns basic to sport or dance with accompanying movement analysis.

132 — Introduction to Physical Education (3:3:0)
Introduction to modern elementary and secondary physical education and to specialized related areas. Includes definitions, terminology, aims and objectives of physical education.

2201 — Tennis (2:1:2)
Instruction and practice in beginning through advanced tennis skills with emphasis on teaching technique and progression of skills. May be repeated for credit.

223 — Volleyball (2:1:2)
The development of knowledge and skills in individual fundamentals, techniques, training and team play. Emphasis on teaching, coaching and officiating methods.

224 — Soccer and Softball (2:1:2)
Instruction in the skills and knowledge of soccer and softball. Teaching methods and organization of outdoor field sports.

2251 — Tumbling and Gymnastics (2:1:2)
Development of tumbling skills with knowledge of movement principles, spotting techniques and class organization. Instruction and practice on gymnastics apparatus and floor exercise. Emphasis on spotting techniques and teaching methods. May be repeated for credit.

227 — Badminton (2:1:2)
Instruction and practice of beginning through advanced badminton techniques. Emphasis on organization and teaching methods of indoor racket sports.

*Arranged

228 — Track and Field (2:1:2)
Instruction in the skills and knowledge of track and field. Emphasis on teaching and coaching methods.

229 — Basketball (2:1:2)
The development of knowledge and skills in individual and team drills and skills. Emphasis on teaching and coaching methods.

235 — History and Philosophy of Physical Education (3:3:0)
History of Physical Education, sport and dance. Sport and dance as cultural functions; and philosophies and their influence on physical education.

236 — Directing Co-Curricular Activities (3:3:0)
Direction of dance-drill teams, cheerleaders, intramural sports programs and coaching interscholastic sports for girls.

333 — Physiology of Exercise (3:3:0)
The application of physiological principles applied to muscular activity. Prerequisites — Bio 141-142 (General Biology) and Bio 330 (Applied Anatomy and Kinesology).

335 — Elementary Physical Education and Recreation for the Atypical Child (3:3:0)
The physical, mental, emotional and social traits of atypical children as they relate to motor learning. The effects of traits on motor learning. The objectives, programs and techniques and activities of instruction. Lectures, laboratory and observation.

336 — Techniques and Curriculum in Secondary Physical Education (3:3:0)
Study of and clinical experience in planning and guiding learning of movement activities. Includes presentation methods from command to problem solving and use of instructional materials and media.

339 — Physical Education in the Elementary School (3:3:0)
The theory of teaching physical education activities in the elementary grades. Classroom instruction and field laboratory assignmetns are included for demonstration and practice. Stress is placed on games of low organization. Classified as elementary physical education for purpose of teacher certification.

4101 — Workshop in Physical Education (1:1:0)
A number of workshops are designed to advance the professional competence of teachers. For each description, the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

4201 — Workshop in Physical Education (2:2:0)
A number of workshops are designed to advance the professional competence of teachers. For each description, the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

4301 — Workshop in Physical Education (3:3:0)
A number of workshops are designed to advance the professional competence of teachers. For each description, the particular area of study will be indicated. May be repeated for credit when nature of workshop differs from one previously taken.

430 — Individual Study in Physical Education (3:A*:0)
Selected problems in Physical Education. Prerequisite: Senior standing and consent of department head. May be repeated for credit. Class by consultation.

431 — Introduction to Community Recreation (3:3:0)
Foundations of organized recreation; backgrounds and theories, objectives and principles; social and economic factors; public, private and commercial interests; recreation and social institutions.

432 — Measurement and Evaluation Procedures in Physical Education (3:3:0)
Study of purposes and methods of evaluation in the physical education

*Arranged

program. Includes construction of evaluation instruments, experience in test administration and the use of elementary statistical procedures in test score interpretations and research.

433 — Motor Learning (3:3:0)
Principles of neuromuscular control mechanisms and correlates of movement behavior and motor learning. Presentation of materials dealing with the learning process, aspects of the learner, variables influencing the state of the performer and application of these concepts to the teaching of motor skills.

AQUATICS (WPE)

Director — Milas Kennington

120 — Swimming (2:1:2)
Demonstrations, lectures and practice in the basic techniques of swimming and water safety skills. May be repeated for credit.

121 — Swimming and Diving (2:1:2)
Demonstrations, lectures and practice in the techniques and analysis of selected swimming strokes and dives.

220 — Advanced Aquatic Sports (2:1:2)
Lecture, demonstration and practice in synchronized or competitive swimming, scuba or springboard diving. Swimming proficiency test required. May be repeated for credit as topic varies.

225 — Small Craft (2:1:2)
The course is designed to create an interest in sailing and canoeing and to develop sufficient knowledge and skill to safely enjoy the sport as a recreational activity. Swimming proficiency test required.

226 — Lifesaving and Water Safety Instruction (2:1:2)
Development of proficiency in lifesaving and water safety skills, the theory and study for teaching water safety technique and procedures. Completion of course includes American Red Cross certification. Prerequisite: Intermediate Swimming Skills.

GENERAL ACTIVITY PROGRAM (WPE-Dan)

Director — Jane Haskins

The activity courses from which four semesters are to be selected for graduation are listed below. The activity requirement is met during both semesters of the freshman and sophomore years. The classes are designed to enlarge the educational experience of the student by development skills and understandings associated with aquatics, dance and sports. The activities available provide for individual student interests and personal exercise needs at various experience levels. It is recommended that the student take one aquatic class, one dance class, one sport class and one elective class. Many students take more than four semesters of activity.

Aquatics: (WPE)	The aquatics sections offer beginning swimming through advanced synchronized and competitive swimming, life saving and water safety instruction; and diving from beginning through scuba and advanced springboard.
Dance: (DAN)	The dance sections offer ballet, jazz and modern dance at the beginning, intermediate, advanced and performance levels; folk dance and tap dance at the beginning and intermediate levels.
Fitness: (WPE)	The fitness sections offer general and individualized conditioning, jogging and field sports designed to provide conditioning and sports skill development.

Sports: (WPE) The sports sections offer instruction from beginning to competitive in badminton, basketball, fencing, golf, gymnastics, racketball, tennis, track and field and volleyball.

Students enrolled in women's physical education activity classes are required to wear regulation costumes suggested by the instructor. These may be purchased at the University Bookstore. Equipment for class may be provided by the student. A $10 suit/towel rental and laundry fee, payable the first week of class, is charged for all swimming classes.

ACTIVITY (WPE)

Several types of activities are listed under WPE 111, 112, 221 or 222. Students should review the activities schedule posted in the Women's Gymnasium prior to each semester for appropriate selection of activities.

111, 112 — Activity (1:1:2)
Physical activities directed toward basic movement skills inherent in conditioning and sports. May be repeated for credit.

221, 222 — Activity (2:1:2)
Physical activities directed toward development of lifetime skills in sports. May be repeated for credit.

Two semester hour dance classes may be taken as a part of the activity requirement.

DANCE (Dan)

See dance division this catalog.

Department of Home Economics

Department Head — Dorothy W. McAlister. *Associate Professors* — Jane S. Davidson, Ferial A. El-Maguid, LeBland McAdams. *Assistant Professors* — Virginia Anderson, Doris Davis, Jane Hinchey. *Instructor* — Connie Jo Eliff. *Adjunct Instructor* — Nelwyn Hardy. *Secretary* — Lonnie Szalkowski.

Bachelor of Science in Home Economics

The Department of Home Economics offers undergraduate instruction leading to the Bachelor of Science degree in Home Economics. The program is designed to prepare students for a professional career, for personal development and for the responsibilities of a contributing family member and citizen.

The home economics program offers opportunities for specialized professional preparation in the areas of home economics education, food service and dietetics, family and community service, fashion retailing and merchandising and interior design. Each of these areas of study is described on the following pages.

Students may minor in home economics by earning 18 semester hours of credit approved by the department head. Students majoring in elementary education may use home economics as an area of specialization by completing 24 semester hours of approved courses. Some home economics courses may be taken as electives by students with other majors.

Recommended Programs of Study

General Home Economics

The General Home Economics Program provides a broad background of preparation for those who do not wish to specialize in a particular area of home economics.

First Year

Eng—Composition	6
Science, Math or Foreign Lang	6-8
HEc 131—Food Sel and Prep	3
HEc 132—Cloth Sel and Prep	3
HEc 133—Art in HEc	3
HEc 134—Found in HEc	3
HEc 137—Family Rel	3
PE—Activity (2 sems)	2
Electives	3
	32-34

Second Year

Eng—Literature	6
Gov 231	3
Gov 232	3
HEc 231—Textiles	3
HEc 232—Dress Design	3
HEc 235—Meal Mgt	3
Science, Math or Foreign Language	6-8
Elective	3
PE—Activity (2 sems)	2
	32-34

Third Year

HEc 233—Early Chld Dev	3
HEc 239—Nutrition	3
HEc 330—Consumer Eco	3
HEc 331—Adv Cloth Constr	3
HEc 339—Sem in Fam Rel	3
His—Soph American	6
Electives 300-400 level	12
	33

Fourth Year

HEc 334—Early Child Lab Sch	3
HEc 335—Housing & Home Furn	3
HEc 433—Houshold Equip	3
HEc 437—Indiv Prob	3
HEc 439—Home Mgt	3
Electives	12
	27

Home Economics Education

The Home Economics Education program provides professional training for careers requiring technical knowledge of home economics and the art of teaching. Graduates of this curriculum meet the state requirement for Vocational Home Economics Certification. This program also provides the basis for endorsement in special education and early childhood education.

First Year

Eng—Composition	6
Chm or Biology	8
HEc 131—Food Sel and Prep	3
HEc 132—Cloth Sel and Prep	3
HEc 133—Art in HEc	3
HEc 134—Found in HEc	3
HEc 137—Family Rel	3
Math	3
PE—Activity (2 sems)	2
	34

Second Year

Eng—Literature	6
Gov 231	3
Gov 232	3
HEc 231—Textiles	3
HEc 232—Dress Design	3
HEc 233—Early Child Dev	3
HEc 235—Meal Mgt	3
HEc 239—Nutrition	3
Mth	3
Found Elective	3
PE—Activity (2 sems)	2
	35

Third Year

Edu 331—Found in Edu Cur	3
Edu 332—Edu Psy	3
HEc 330—Consumer Eco	3
HEc 334—Early Chld Lab Sch	3
HEc 335—Housing & Home Furn	3
HEc 338—Phil Prin Voc	3
HEc 339—Semin in Fam Rel	3
His—Soph Amer	6
Found Elective	3
Free Elective	3
	33

Fourth Year

HEc 433—Household Equip	3
HEc 438—Tchng Mthds & Mtls	3
HEc 439—Home Mgt	3
HEc 462—Std Tchng in HEc	6
Found Electives	12
Free Electives	3
	30

Food Service and Dietetics

The Dietetic and Food Service curriculum provides professional preparation which meets the American Dietetic Association requirements for an approved internship.

First Year

Eng—Composition	6
Bio 133-134—Human Physiol or Bio 142	6-8
Mth 134—College Alg	3
Eco 233—Prin and Policies	3
HEc 131—Food Sel and Prep	3
HEc 132—Cloth Sel and Prep or HEc 432—Fam Cloth	3
HEc 134—Found in HEc	3
HEc 235—Meal Mgt	3
PE—Activity (2 sems)	2
	32-34

Second Year

Eng—Literature	3
Eng 4335—Tech Rep W	3
Gov 231	3
Gov 232	3
Psy 131—Intro	3
Chm 141 & 142	8
Bio 344—Adv Physiol	4
HEc 137—Family Rel	3
HEc 239—Nutrition	3
PE—Activity (2 sems)	2
	35

Third Year

Soc 332—Soc Psy	3
His—Soph American	6
Acc 231-232—Prin of Acc	6
HEc 330—Consumer Eco	3
HEc 332—Adv Nutrition	3
HEc 333—Food Chemistry	3
HEc 336—Inst Food Serv	3
Elective	5
	32

Fourth Year

BA 335—Prin of Mgmt	3
BA 336—Personnel Mgmt	3
Edu 332—Edu Psy	3
CS 133 or Mth 234	3
HEc 337—Hum Beh Con Life	3
HEc 338—Phil Prin Voc	3
HEc 430—Therapy Nutrition	3
HEc 433—Household Equip	3
HEc 300 or 400 level	6
	30

Family and Community Service

The Family and Community Service curriculum provides professional training for a rewarding career as well as personal satisfaction in work with familes and children through government and private agencies.

First Year

Eng—Composition	6
Math, Sci, For Lang	6-8
HEc 131—Food Sel & Prep or HEc 132—Cloth Sel	3
HEc 133—Art in HEc	3
HEc 134—Found in HEc	3
HEc 137—Family Rel	3
Soc 131—Intro	3
PE—Activity (2 sems)	2
	31

Second Year

Eng—Literature or Com 231	6
Math, Sci, For Lang	6-8
His—Soph Amer	6
HEc 231—Textiles	3
HEc 233—Early Child Dev	3
HEc 235—Meal Mgt	3
Swk 231	3
Psy 131—Intro	3
PE—Activity (2 sems)	2
	37

Third Year

Gov 231	3
Gov 232	3
HEc 239—Nutrition	3
HEc 330—Consumer	3
HEc 334—Early Chld Lab Sch	3
HEc 339—Sem in Fam Rel	3
Swf 300 or 400 level	6
Swf 333	3
Soc or Psy—300 or 400 level	3
Electives	3
	33

Fourth Year

HEc 432—Family Clothing	3
HEc 435—Consumer Housing	3
HEc 439—Home Mgt	3
Swk 334	3
Swk 461	6
Soc or Psy—300 or 400 level	3
Electives	12
	33

Fashion Retailing and Merchandising

The Fashion Retailing and Merchandising specialization provides professional training for positions in merchandising, promotion, personnel and fashion coordination. The program includes on job training through a work study program.

First Year

Eng—Composition	6
Lab Sci—For Lang or Math	6-8
HEc 130—Psy of Cloth	3
HEc 132—Cloth Sel and Prep	3
HEc 133—Art in HEc	3
HEc 134—Found in HEc	3
HEc 137—Fam Rel	3
Spc 131—Speech	3
Art 131—Drawing I	3
PE—Activity (2 sems)	2
	34

Second Year

Eng—Literature	3
Lab Sci—For Lang or Math	3-4
Math 1315—Self-paced Math	3
Art 3353—Fash Illus	3
HEc 231—Textiles	3
HEc 232—Dress Design	3
HEc 234—Intro to Home & Fash Ret	3
Eco 231—Prin of Eco	3
Acc 231—Prin of Acc	3
Gov 231	3
Gov 232	3
PE—Activity (2 sems)	2
	35

Third Year

His—Soph Amer	6
HEc 235—Meal Mgt or HEc 239 Nut	3
HEc 330—Con Eco	3
HEc 331—Advanced Cloth	3
HEc 335—Hous & Home Furn	3
HEc 337—Human Beh & Cont Life	3
HEc 433—Household Equip	3
Bus 334—Marketing	3
Bus 339—Marketing Pro	3
Art 237—Graphic Des I	3
	33

Fourth Year

HEc 431A—Special Top in Clo & Tex	3
HEc 432—Family Cloth	3
HEc 434—Fashion Production	3
HEc 436—Home & Fash Mer	3
HEc 437—Indiv Prob in HEc	3
Art Elective 134, 231	3
Com 3383—Intro to Adver	3
Bus 335—Prin of Mgt	3
Bus 338—Prob in Ret & Wholesal	3
Electives	6
	30

INTERIOR DESIGN

The Interior Design specialization provides professional training for a wide range of design problems extending from personal to public environments.

First Year

Eng Comp	6
Sci or For Lang	8
HEc 130 Psy of Cloth or HEc 132 Cloth Sel Prep	3
HEc 133 Art in HEc	3
HEc 134 Found in HEc	3
HEc 137 Marriage & Fam Rel	3
Art 133 Design I	3
TA 133 Drafting	3
PE Activity (2 sems)	2
	34

Second Year

Eng Lit	3
Gov 231	3
Gov 232	3
HEc 131 Food Sel & Prep or HEc 239 Nutri	3
HEc 231 Textile	3
HEc 237 Fund of Int Des	3
HEc 2307 His of Arch & Int Furn	3
Art 132 Drawing II	3
Math 1315	3
Art 131 Drawing I	3
PE Activity (2 sems)	2
	32

Third Year

Art 134 Design II	3
Eco 233 Prin & Policies	3
Acc 231 Prin of ACC	3
Mth, Sci or For Lang	3
HEc 235 Meal Mgt. or HEc 337 Pers Mgt.	3
HEc 3305 Components of Int Des	3
HEc 335 Housing & Home Furnishings	3
His 233 Soph Amer	3
His 234 Soph Amer	3
Art 139 Appreciation	3
Art Elective	3
	33

Fourth Year

HEc 433 Household Equip	3
HEc 435 Consumer Hous or HEc 330 Consumer Eco	3
HEc 439 Home Mgt.	3
HEc 4305 Adv. Int Des	3
HEc 436 Home & Fash Merch	3
HEc 4307 Internship in HEc	3
BA 339 Marketing Pro.	3
Art 3313 Illus I	3
Art 300/400 Level	3
Electives	6
	33

HOME ECONOMICS (HEc)

130 — Psychology of Clothing (3:3:0)*
An interdisciplinary approach to clothing emphasizing the cultural, psychological, sociological and economical aspects of wearing apparal.

131 — Food Selection and Preparation (3:2:4)
Basic knowledge of nutrition related to scientific principles of food selection and preparation with application made in the laboratory.

132 — Clothing Selection and Construction (3:2:4)
A study of clothing construction principles with consideration given to new fabrics. Includes problems and procedures of consumer buying.

133 — Art in Home Economics (3:2:3)
Study and application of the concepts and elements of art as related to the field of home economics.

134 — Foundations in Home Economics (3:3:0)
An overview of the total home economics profession including field experience.

137 — Marriage and Family Relationships (3:3:0)
A study of the individual and the family as the fundamental unit in society. Special emphasis on preparation for adjustments in marriage, including courtship, sexuality, tasks of beginning marriage, parenting skills with an overview of the family life cycle.

138 — Principles of Nutrition (3:3:0)
Basic principles of nutrition in health and disease. Food selection and quality of nutrients in normal and therapeutic diets related to physiological and psychological needs of individuals considering socio-economic background.

2307 — History of Architecture and Interior Furnishings (3:3:0)
A study of period design in architecture and interiors from antiquity to the present; integration of the past with the present in understanding contemporary design.

231 — Textiles (3:3:0)
A study of the physical and chemical properties of textiles. Emphasis on consumer selection and care of fabrics.

232 — Dress Design (3:2:3)
Study principles of fashion design and flat pattern making. Commercial pattern provides experiences in fitting and altering. Master pattern is developed to design, draft and construct garments.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

233 — Early Childhood Development (3:3:0)
A study of the young child as a basis for understanding the dynamics of child growth and development.

234 — Introduction to Home and Fashion Retailing (3:3:0)
A broad view of retailing and its diverse operations with emphasis on home and fashion retailing. Includes a study of the contemporary aspects of retailing, preparing students for higher level positions.

235 — Meal Management (3:1:4)
Meal planning based on concepts of nutritional adequacy. Management of money, time and energy in relation to meals and table appointments.

237 — Fundamentals of Interior Design (3:3:0)
A study of the elements and principles of interior design and decoration.

239 — Nutrition (3:3:0)
A survey study of food components and their interaction, the relation of nutrients to body requirements throughout the life cycle.

330 — Consumer Economics (3:3:0)
Consumer information and an analysis of problems in household economics and finance.

3305 — Components of Interior Design (3:2:3)
Study of building construction and materials, applied surfaces, lighting, furnishings and accessories. Prerequisites: HEc 231, HEc 237.

331 — Advanced Clothing Construction (3:3:2)
A study of specialized techniques in the construction of a tailored garment. Emphasis is given to new technological advancement in fabric and garment construction and to clothing for the aged and handicapped.

332 — Advanced Nutrition (3:3:0)
A study of development in nutrient metabolism and their application. Concepts of biological values, bioenergetic and nutrition in health and disease. Prerequisite: HEc 239.

333 — Food Chemistry (3:3:0)
An introduction to the properties and metabolism of amino acids, enzymes, hormones, proteins, nucleic acids, carbohydrates, lipids, vitamins and minerals with an emphasis on their metabolic interrelationships in health and disease. Prerequisite: Chm 141, 142.

334 — Early Childhood Laboratory School (3:1:4)
Nursery school organization and procedure with observation and experience through participation with children ages two through four years. Prerequisite: HEc 233.

335 — Housing and Home Furnishings (3:2:3)
A study based on an understanding of historical design in architecture and furniture; application of design principles in choice of home and furnishings to meet individual needs. Prerequisite: HEc 133.

336 — Institutional Food Service (3:3:2)
A study of institutional equipment, maintenance and organization. Special emphasis on institutional food purchasing, quantity preparation, storage, inventory and cost control. Prerequisite: HEc 131, 235.

337 — Personal Management (3:3:0)
Basic management concepts as applied to individual development; emphasis on professional development and contribution.

338 — Philosophy and Principles of Vocational Home Economics (3:3:0)
Interpretation of home economics as a discipline concerned with developing student competencies.

339 — Seminar in Family Relations (3:3:0)
In depth study of selected family topics: The family as a unit of interacting persons which support and is supported by the larger society; kinds of family units; various cultural patterns and lifestyles; community organizations as related to the family and family life education. Study will be focused on professional preparation for work with families.

411, 421, 431 — Special Topics (1-3:1-3:0)
Special topics, including workshops and institutes, in home economics. A description of the particular area of study will appear on the printed semester schedule. May be repeated for a maximum of six semester hours when the area of study is different.
(A) Clothing/Textiles
(B) Family Relations/Child Development
(C) Food/Nutrition
(D) Home Economics Education
(E) Housing/Home Furnishings
(F) Home Management/Equipment/Consumer Economics

430 — Therapeutic Nutrition (3:2:3)
Biochemical changes in diseases, particularly those of nutritional origin; prevention, and the dietary modifications for their correction. Special emphasis on patient care, rehabilitation and nutritional education. Prerequisite: HEc 332, 333, 336.

4305 — Advanced Interior Design (3:3:2)
Study of professional procedures and practices in presenting residential and commercial interiors, emphasis on client and designer relations. Prerequisite: Consent of instructor.

4307 — Internship in Home Economics (3:A*:0)
Supervised work experience of at least 20 hours a week for 8 weeks or its equivalent in Home Economics related professions, services, business or industry. Weekly conferences and/or seminar will be required. Prerequisite: Senior standing and consent of instructor. May be repeated with varied experiences for a maximum of 6 hours credit.

432 — Family Clothing (3:3:0)
A study of cultural, functional and technological aspects of textiles and clothing with emphasis on clothing consumption needs during various stages of the family life cycle. Prerequisite: junior or senior standing.

433 — Household Equipment (3:3:0)
Selection, arrangement, use and care of basic equipment. Prerequisite: HEc 335.

434 — Fashion Production and Distribution (3:3:0)
A study of the economic background of the textile and apparel industry with emphasis on the production, distribution and marketing of products. Includes product displays and their coordination with sales promotion activities.

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

436 — Home and Fashion Merchandising (3:3:0)
A study of home furnishings, household equipment and apparel retailing techniques. Includes off-campus experiences through field trips to the home furnishings and fashion markets, manufacturing companies, textile mills, etc. Prerequisite: senior standing.

437 — Individual Problems in Home Economics (3:A*:0)
Designed to afford research opportunities and work experience for senior students. Under supervision, the students pursue individual interests in the profession of home economics.

438 — Methods and Materials for Teaching Home Economics (3:3:0)
Objectives, methods and techniques of teaching vocational home economics in the public school. Prerequisite: Edu 331 and 332; and HEc 338.

*Arranged

439 — Home Management (3:2:3)
A conceptual study of philosophies and principles of management resources. Practical application through individual and group problems. Prerequisite: HEc 235, HEc 330, HEc 433.

462 — Student Teaching in Home Economics (6:A*:0)
Supervised observation and teaching in the secondary school. Prerequisite: HEc 438. Class: 3 hours in an approved vocational program 5 days per week for 16 weeks.

*Arranged

College of Engineering

Departments: Chemical, Civil, Electrical, Industrial, Mechanical, Mathematics

Fred M. Young, Ph.D., Dean
Karen Urban, Secretary

The College of Engineering offers five undergraduate curricula in engineering, two undergradaute curricula in mathematics and an undergraduate curriculum in computer science. Graduate curricula at the master level are offered in both engineering and mathematics together with curricula leading to the Doctor of Engineering degree.

The five undergraduate curricula in engineering are accredited by the Engineers' Council for Professional Development. All six departments in the College of Engineering have associated with them chapters of their national honor societies which include Tau Beta Pi, Omega Chi Epsilon, Pi Mu Epsilon, Chi Epsilon, Pi Tau Sigma, Eta Kappa Nu, Alpha Pi Mu..

These curricula are designed to prepare graduating students for responsible positions as they become professional engineers, administrators, investigators, computer scientists, applied mathematicians or teachers.

The Engineers' Council for Professional Development defines engineering as "the profession in which a knowledge of the mathematical and natural sciences gained by study, experience and practice is applied with judgment to develop ways to utilize, economically, the materials and forces of nature for the benefit of mankind." Clearly, from this definition, engineers are to form the interface between science and society as they interpret, in realistic terms, the findings of science to society.

The first year of study is common for all engineering curricula. Each student in the College of Engineering is assigned to a member of the faculty who serves as his/her counselor. Through his/her counselor, the student will be able to determine his/her ultimate professional interests as well as obtain help and guidance in academic life. Because of the variety of mathematics programs, all mathematics majors are admitted directly to the mathematics department upon matriculation.

An entering freshman will be assigned a counselor from his/her major department.

The entrance requirements from high school for engineering degree programs in the College of Engineering are

1. English	4 units
2. Mathematics	
Algebra	2 units
Trigonometry	½ unit
3. Natural Sciences	
Chemistry	1 unit
Physics	1 unit
4. Social Sciences	2 units
5. Electives	4-½ units
Total	15 units

Students who meet the general entrance requirements of the University, but lack in specific requirements for the engineering curricula may, upon consultation with the dean, be permitted to enroll in the College of Engineering; however, all deficiencies must be removed before the end of the second academic year. Students having entrance deficiencies or weaknesses are urged to use the summer terms preceding the freshman year in college to remove them.

Attention is directed to the section in this catalog on admission requirements and, in particular, to the requirement that each person desiring to enter the College of Engineering must take the Level I Mathematics Test. Students attaining a sufficiently high grade in the CEEB Mathematics Level I exam may be eligible for advanced placement in the Calculus and Analytic Geometry sequence.

The Department of Mathematics has developed a placement test for entrance into the freshman mathematics courses: Mth 134, 1334, 1335, 148 or 236. All entering students (except those with grades of A or B in high school Algebra I, Algebra II and Trigonometry plus a score of at least 26 on the ACT or at least 590 on the CEEB Mathematics Level I test) are required to take this placement test before entering these courses. These tests are administered during the orientation periods held before registration, and during the regular registration periods. Entrance into all other mathematics courses is determined by the counselor in the student's major department. The Department of Chemistry requires a placement test of all students entering Chm 141. These tests are administered during the orientation periods held before registration, during the summer prior to fall semester registration and during the summer registration periods.

In addition to instruction in the various branches of engineering, the functions of the College of Engineering include research, both on fundamental and applied problems; development of a technological library; extension activities; provision of a center of technical meetings and activities and the management of a cooperative education program.

A Cooperative (Coop) Education Program, in which the student spends alternate terms at work and at study, is offered to qualified students in the College of Engineering. The Cooperative Education Programs in Chemical, Civil, Electrical, Industrial and Mechanical Engineering meet the requirements for basic-level accreditation of the Engineers' Council for Professional Development (ECPD). The same standards

for Cooperative Education Programs are upheld for industrial technology, mathematics and computer science, although the ECPD does not accredit curricula in these areas. To meet the minimum qualifications for the Coop program, a student must have:

1. Completed all the work in the Engineering Core Program for the first year.
2. An over-all grade point average of 2.5, using all grades earned.

To remain in the program, the student must maintain a grade point average equal to or above the minimum qualification level and perform in a manner satisfactory to both the employer and to Lamar.

The period during which a student may participate in the Coop program extends through the regular sophomore and junior years. Coop privileges are not extended to freshman or senior students. By participating in the Coop program throughout the sophomore and junior years of eligibility, a student extends the time required to obtain a degree to five years; but in doing so, gains the equivalent of almost two years experience in industry.

A student may apply for admission to the Coop program through the Office of the Dean of Engineering.

Academic Regulations

Academic regulations for all students at Lamar University are outlined in the University Bulletin and other official documents. For students in the College of Engineering, additional requirements and regulations are described below.

Repetition of a Course

A course may be repeated for additional credit toward a degree only as specified by the official course description in the University Bulletin. Excluding courses which may be taken for additional credit toward a degree, a student may not register for any course more than four times.

Any student who wishes to repeat a course must do so before completing a more advanced course in the same subject matter field.

A course in which a student has a grade of "B" or better may not be repeated for credit.

Academic Progress

Students are expected to take courses in the sequence shown in the University Bulletin for each degree program.

Students are expected to make acceptable progress toward their degree objectives. Students who fail to make such progress and accumulate grade point deficiencies may be placed on academic probation or suspension from a degree program in the College of Engineering.

All students with any grade point deficiency at the end of any semester shall be placed on academic probation in the degree program in the College of Engineering and will continue on probation as long as a deficiency exists.

All students with a grade point deficiency of 25 or more grade points, either in their major field, or overall, at the end of any semester shall be suspended from all degree programs in the College of Engineering for the following semester. This regulation does not apply to a student at the end of the first semester of residence at Lamar University. For purposes of this regulation, the total of Summer Session I plus Summer Session II, or any thereof, is considered to be one semester.

A student returning from academic suspension may return to a major field in the College of Engineering but will be on probation at least the first semester after his/her return.

Students returning from the academic suspension described above are expected to reduce their overall deficiency and any grade point deficiency in their major field every semester of enrollment until the deficiency is eliminated. Should the student fail to reduce either (major or overall) deficiency in any one semester, including summer session, the student will again be suspended from the academic program in the College of Engineering. The first academic suspension shall be for one semester, the second for two successive semesters. Readmission to a program in the College of Engineering after the second suspension is permitted only with written permission of the student's department head and the dean of the College of Engineering.

Students on the academic probation described above may not:

(a) register for more than 13 semester credit hours; (b) submit the degree program for graduation for any program in the College of Engineering; (c) apply for graduation from any program in the College of Engineering; (d) represent the College of Engineering in any extra-curricular activity; (e) hold collegiate office; (f) participate in trips or tours except when required as class projects; (g) participate in the Cooperative Education Program.

It is to be understood that while on probation, the student should primarily take courses in which he/she formerly received "D" or "F", or courses which are background-prepration courses for those in which unsatisfactory grades were previously made.

Electives

It is recommended that every student seek advice from his/her counselor regarding electives. All electives, designated (i.e., technical electives, mathematics electives, etc.) or not, must be approved by the student's department head.

Core Program — Engineering

First Year

First Semester		Second Semester	
Chm 141—Gen Chm	4	Chm 142—Gen Chem	4
Eng Comp	3	Eng Comp	3
Mth 148—Calc & Anal Geom I	4	Mth 149—Calc & Anal Geom II	4
Egr 111—Intro Egr	1	Egr 115—Egr Graphics II	1
Egr 114—Egr Graphics I	1	Phy 140—Intro Mech	4
American History	3	PE/AFROTC	1
PE/MLb 124/AFROTC	1		17
	17		

ENGINEERING (Egr)

111 — Introduction to Engineering (1:1:0)*

History of engineering, philosophy of engineering practice, the electronic calculator and analysis of the problems of being an engineering student.

114 — Engineering Graphics I (1:0:3)

Principles of orthographic projection combined with descriptive geometry to solve space problems graphically. Lettering and drafting techniques emphasized.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

115 — Engineering Graphics II (1:0:3)
Continuation of Egr 114. Descriptive geometry and special problems approved by the instructor. Prerequisite: Egr 114. Egr 115 may be taken concurrently with Egr 114 if student has one year of high school drawing and permission of student's department head.

230 — Statics (3:3:0)
Statics of particles and rigid bodies. Use is made of basic physics, calculus and vector algebra. Prerequisite: Physics 140.

2331 — Engineering Computation I (3:3:0)
Decision making, flow charting, digital computers, Fortran, Fortran programming.

233 — Circuits and Fields (3:3:0)
Electrical and magnetic units; heating effects; basic circuit analysis; electric and magnetic fields; ferromagnetic circuits; inductance and capacitance; principles of energy conversion and measurements. Prerequisite: Phy—Electricity; Mth 149 or concurrent.

234 — Thermodynamics (3:3:0)
The fundamental laws of thermodynamics; properties of systems — solids, gases and liquids — and thermodynamic tables. Prerequisite: Phy—Heat; Mth 241 or concurrent.

236—Career Development I (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Approval of academic dean.

237 — Career Development II (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Egr 236.

330 — Energy and Society (3:3:0)
Principles and practices of energy engineering are surveyed and used as background for understanding how energy and the environment are related to the industrial, business, economic, political and public sectors of society. Designed for students not enrolled in engineering, the course may not be used for credit toward any engineering degree. Prerequisite: Junior standing.

336 — Career Development III (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Egr 237.

337 — Career Development IV (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Egr 336.

4101, 4201, 4301, 4401 — Special Topics (1-4:A*:0)
An investigation into specialized areas of engineering under the guidance of a faculty member. This course may be repeated for credit when topics of investigation differ.

421 — Data Processing (3:1:3)
A study of AM, FM and pulse width modulation for telemetry of data and use of analog and digital computers for storing and analyzing the data.

436 — Career Development V (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Egr 337.

*Arranged

Bachelor of Science in Engineering Technology

An increasing need is found in industry for those who have a knowledge of basic engineering, and a desire to relate themselves to machines and equipment as operators, maintenance men, testers or as engineering aides. In general, these engineering technologists must have a sufficient knowledge of mathematics to understand some of the procedures being followed by a professional engineer, but the engineering technician need not have the depth of mathematics knowledge required to engage in creative engineering or high-level design.

The five engineering departments, Chemical, Civil, Electrical, Industrial and Mechanical, are authorized to specify a set of courses leading to the Bachelor of Science in Engineering Technology, with an option in the engineering field of the student's choice. Requirements for the Bachelor Degree — General, as specified in this bulletin must be satisfied, but the engineering technology student has considerable freedom in the selection of courses subject to the approval of the department head in the engineering field selected.

Computer Science Program

Program Director — William C. Nylin, Jr.; *Associate Professor* — Bobby Waldron. *Assistant Professor* — Serban D. Constantin. *Adjunct Instructors* — Melaine Mades, Marilyn Read; *Instructors* — James R. Comer*, Myers Lee Foreman

*On leave.

Bachelor of Science in Computer Science

The four-year undergraduate program in computer science provides for a strong foundation in computing, statistics, mathematics, science and engineering.

It has been said that the computer industry is the fastest growing industry in society today. With this growth comes an ever increasing need for computer analysts, programmers, researchers, technicians and designers. The computer science program at Lamar is a broad degree program encompassing all of these fields. Emphasis is in the areas of data structures, programming languages, information storage and retrieval, operating systems and compiler theory. An 18-hour specialization is provided for a minor in areas such as mathematics, industrial engineering, electrical engineering or business.

Recommended Program of Study Bachelor of Science in Computer Science

First Year

First Semester		Second Semester	
CS 131	3	CS 132	3
Eng Comp	3	Eng Comp	3
Mth 148	4	Mth 149	4
His—American	3	His—American	3
Elective	3	Elective	3
PE/MLb/AFROTC	1	PE/AFROTC	1
	17		17

Second Year

First Semester		Second Semester	
CS 3302/IE 3302	3	CS Elective	3
Mth 234/Mth 437	3	Mth 233	3
Gov 231	3	Acc 231/IE 335/Eco 233	3
Lab Science	4	Gov 232	2
Eng Lit	3	Lab Science	4
PE/MLb/AFROTC	1	PE/AFROTC	1
	17		17

Third Year

First Semester		Second Semester	
CS 4305	3	CS 4302/IE 4302	3
CS Elective	3	CS Elective	3
Mth Elective	3	Specialization	3
Specialization	6	Elective	3
	15	Mth 4316/IE 4302	3
			15

Fourth Year

First Semester		Second Semester	
CS Elective	6	CS Elective	6
Specialization	3	Specialization	3
Electives	6	Electives	6
	15		15

Summary Requirements for B.S. in Computer Science

Core Courses	Credit Hours
Eng Comp, Eng lit	9
Lab Science[1]	8
Gov 231, 232	6
His 231/236	6
Math 148, Mtb 149	8
Mth 233	3
Mth 234/Mtb 437	3
Mth Elective[2]	3
Acc 231/IE 335/Eco 233	3
Mth 4316/IE 4303	3
PE	4
Total	56

Required CS Courses	Credit Hours	
CS 131, CS 132	6	6
CS 3302/IE 3302	3	3
CS 4302/IE 4302	3	3
CS 4305	3	3
CS Electives[3]	21	21
Total	36	36
Area of Specialization[4]		18
Electives[5]		18
Sub-Total		36
Total Hours for B.S.		128

Footnotes:

1. For the EE, IE or Mth areas of specialization, the laboratory science shall be Phy 140 and Phy 241. Other areas of specialization may choose one of the following combinations:
   a. Chm 141, Chm 142
   b. Phy 140, Phy 241
   c. Bio 141, Bio 142
   d. Geo 141, Geo 142
2. Students with an engineering or mathematics area of specialization must take Mth 241 for their mathematics elective.
3. Fifteen semester hours must be in courses numbered 300/3000 or above. No more than six semester hours may be in special topics courses.
4. Areas of specialization 18 semester hours from one of the following areas, selected with the assistance of the advisor. Other areas of specialization may be selected with the approval of the advisor. These courses are listed as "specialization" in the "Recommended Program of Study."

A. **Industrial Engineering**
IE 330—Industrial Engineering
IE 333—Engineering Economy
IE 334—Human Relations in Industry
IE 430—Quality Assurance and Control
IE 435—Production and Inventory Control
IE 4315—Organization and Management

B. **Mathematical Sciences**
Mth 238—Introduction to Applied Mathematics
Mth 2340—Statistical Methods for Data Analysis
Mth 331—Ordinary Differential Equations
Mth 3319—Cominatorics
Mth 3321—Finite Mathematics
Mth 3322—Computability
Mth 3361—Practicum in Applied Mathematics
Mth 4301—Differential Equations and Linear Algebra
Mth 4302—Partial Differential Equations
Mth 4315—Numerical Analysis
Mth 4316—Mathematical Programming
Mth 438—Statistical Methods
Mth 433—Linear Algebra

C. **Electrical Engineering**
Egr 233—Circuits and Fields
EE 333—Electronics
EE 331—Circuits I
EE 332—Circuits II
EE 337—Electromagnetic Fields I
EE 4101—Individual Study
EE 4201—Digital Logic Laboratory
EE 4305—Digital Systems
EE 4306—Minicomputers
EE 4307—Microcomputer
EE 4308—Automata Theory
EE 431—Electronic II
EE 432—Electronics III
EE 418—Projects Laboratory

D. **Business Data Processing**
Acc 231, 232—Principles of Accounting
Eco 233—Principles and Policies
BA 332—Principles of Finance
BA 335—Principles of Management
BA 3302—Principles of Statistics
BA 3303—Principles of Management
BA 4303—Quantitative Techniques in Marketing
BA 4316—Business Simulation, Modeling & Decision Theory
BA 4317—Computers in Business Management
Student choosing this area of specialization should take CS 230, CS 3304, CS 4306 and CS 4309 as part of their computer science electives.

5. Mathematics courses below Mth 148 do not count towards the degree.

COMPUTER SCIENCE (CS)

131 — Introduction to Computer and Information Science (3:3:0)*
Structure and operational characteristics of computing systems, survey of computer languages and their usages, software, computer applications, information systems.

132 — Programming of Digital Computers (3:3:0)
Utilization of digital computers to solve both numeric and nonnumeric problems by means of procedural and/or conversational languages. Prerequisite: CS 131 or consent of the instructor.

133 — Introduction to Computers (3:3:0)
Introduces the student to historical evolution of computers; internal design;

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

associated hardware including input/output internal and secondary storage; and their social implications. A familiarity with the Fortran language is gained through the execution of several business-oriented problems.

230 — RPG Programming (3:3:0)
An introduction to RPG programming RPG techniques, specifications and routines. Prerequisites: CS 131 or CS 133.

235 — Engineering Computation II (3:3:0)
Problem theory, flow charting, advanced Fortran programming. Solution of advanced problems from various engineering disciplines.

3302 — Functional Characteristics of Digital Computers (3:3:0)
Machine, assembler level and macro languages, data representation, instruction formats, addressing, computer structure. CS 3302 and IE 3302 may not both be counted for credit. Prerequisite: CS 132 or Egr 235.

3304 — Cobol Programming (3:3:0)
A thorough coverage of the Cobol language and some of its variations is presented in this course. The emphasis is placed on the language, its flexibility and power as well as on applications. Prerequisite: CS 131, 132.

3305 — Logic and Algorithms (3:3:0)
Boolean algebra and propositional logic algorithmic processes, logical structure of computer components such as adders, registers, counters, switching networks. Prerequisite: CS/IE 3302.

4104, 4201, 4301, 4401 — Special Topics (1-4:A*-0)
An investigation into specialized areas of computer science under the guidance of a faculty member. This course may be repeated for credit when topics of investigation differ.

4302 — System Analysis and Design (3:3:0)
Multiprocessing and real time systems, time sharing, core management systems, interfacing, analysis and design of systems to meet specific requirements, management systems, systems programming. CS 4302 and IE 4302 may not both be counted for credit. Prerequisite: CS 3302.

4305 — Introduction to Information Structures (3:3:0)
Data bases and their structures; concepts of functions, arrays, files, records, lists, trees, storage systems and structure; symbol tables and search techniques, multilinked files. Prerequisite: CS/IE 3302.

4306 — Techniques of Information Processing and Retrieval (3:3:0)
Continuation of CS 4305. Keyword and descriptive indexing, decision tables, real time information processing and total information systems. Prerequisite: CS 4305.

4307 — Survey of Programming Languages (3:3:0)
Study of various programming languages and their use in problem solving. Included are scientific oriented, string processing and general purpose languages.

4308 — Introduction to Compiler Theory (3:3:0)
Formal definition of programming languages, including specifications of syntax, semantics, statements and notations used in the construction of compilers, structure of translators and compilers. Prerequisites: CS/IE 3302 and CS 4305.

4309 — Introduction to Simulation Techniques (3:3:0)
External properties of multivariate functions with and without constraints, convex functions, linear programming. Computer simulation utilizing logical, numerical and Monte Carlo modeling. The generation, termination and flow of entities through storage and processing facilities. Prerequisite: CS 132 and Egr 235 or ChE 437 or ME 4317; and Mth 234 or 438.

4310 — Computer Architecture (3:3:0)
Representation of information, calculators, storage, addressing, input, output, memory and control. Credit will not be given for both CS 4310 and EE 4310. Prerequisite: EE 4303 or CS 3305. Assembly language desirable.

4321 — Computer Uses in Education (3:3:0)
Theoretical and practical studies of how a computer can be used as an effective teaching tool in secondary schools. An introduction to computer aided instruction, games and simulation. Prerequisite: CS 131.

439 — Scientific Computer Applications (3:3:0)
An automatic language approach to solving interdisciplinary problems. This is a course primarily for life and earth-science majors.

Department of Chemical Engineering

Accredited by Engineers' Council for Professional Development

Department Head — Jack R. Hopper. *Professors* — Frederic C. Jelen, Robert A. McAllister, Richard E. Walker. *Associate Professor* — Carl L. Yaws. *Assistant Professors* — Ku-Yen Li, Richard L. Long. *Laboratory Technician* — John Read. *Secretary* — Katy Rankin.

The work of the chemical engineer is the changing of raw materials into finished products with efficiency and economy. Chemical engineers are concerned primariy with the design, construction and operation of equipment and plants in which chemical or physical changes of materials are involved. The chemical engineer enters into almost every modern industry. From petroleum to synthetic rubber, from steel to medicines, the chemical engineer engages in design, research, development, production, sales and management. Among the fields in which the chemical engineer is of prime importance are petroleum, petrochemicals, metals, plastics, paints, foods, paper, glass, dyes, synthetic fibers and a host of others.

The Department of Chemical Engineering will permit transfer of up to 78 semester hours from a junior college or a community college, if appropriate courses were taken at the junior (community) college level. The appropriate list of courses for a particular college can be made available upon request.

Recommended Program of Study Bachelor of Science in Chemical Engineering

First Year
(See Core Program)

Second Year

First Semester		Second Semester	
Phy 241—Heat Elec Mag	4	Phy 22—Lt Snd Quant	2
Mth 241—Anal III	4	Chm 241—Quant Anal	4
Egr 230—Statics	3	Egr 234—Thermo	3
Eng—Lit	3	*ChE 334—Proc Anal	3
Egr 2331—Egr Comp	3	His—American	3
PE/MLB/AFROTC	1	PE/AFROTC	1
	18		16

Third Year

First Semester		Second Semester	
*ChE 333—Thermo II	3	**ChE 332—Heat Transfer	3
ChE/ME 3311—Momen Transfer	3	**ChE 441—Kinetics	4
*ChE 437—Computer	3	Gov 232—2nd Sem	3
Gov 231—American	3	Chm 342—Organic	4
Chm 341—Organic	4	Mth 4301—Diff Eqns & Lin. Alg.	3
	16		17

Fourth Year

First Semester		Second Semester	
ChE 442—Mass Transfer	4	ChE 433—Proc Control	3
ChE 431—Lab	3	Chm 426—Inst Anal	2
ChE 436—Design I	3	ChE 434—Design II	3
ChE 414—Seminar	1	ChE 435—Adv Anal	3
Technical Elective	3	Chm 432—Physical	3
Eng 4335—Tech Rep Writ	3	Elective	3
	17		17

*These courses are taught during both the Fall and Spring Semester.
**These courses are also taught during the Summer Session.

CHEMICAL ENGINEERING (ChE)

3311 — Momentum Transfer (3:3:0)*
Fluid-flow concepts are presented through the derivation of the basic equations of continuity, energy and momentum. Engineering aspects of flow measurement, pressure-drop calculations and pumping requirements are considered. Same as ME 3311. Che 3311 and ME 3311 may not both be counted for credit. Prerequisite: Egr 234.

332 — Heat Transfer (3:3:0)
Principles of conduction, convection and radiation, and their application to the design of heat-transfer equipment and systems.

333 — Thermodynamics (3:3:0)
Application of the First and Second Laws to chemical processes. Thermodynamic properties of pure fluids and mixtures. Physical equilibrium. Prerequisite: Egr 234.

334 — Process Analysis (3:3:0)
Application of mathematics, physics and chemistry to the solution of problems in industrial chemistry. Material and energy balance calculations on processes undergoing physical and chemical changes. Prerequisite: Egr 234 or concurrent.

4111 — Seminar (1:1:0)
Oral presentation of advanced topics or research work in chemical engineering.

414 — Seminar (1:1:0)
Oral and written presentation of selected topics in chemical engineering from recent technical publications.

422 — Laboratory II (2:0:6)
A continuation of ChE 431. Intensive experimental work in one or more areas studied in ChE 431. May be taken on an individual instruction basis. Prerequistie: ChE 431.

431 — Laboratory I (3:1:6)
Experiments in heat transfer, mass transfer, fluid flow, reaction kinetics and thermodynamics. Prerequisite: ChE 442 or concurrent.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

4316 — Stagewise Processes (3:3:0)
Advanced study of absorption, extraction, distillation and diffusion, with emphasis on multicomponent mixtures.

4318 — Advanced Distillation (3:3:0)
Principles of multicomponent distillation, including prediction of equilibrium compositions of multicomponent mixture.

4321 — Process Economics (3:3:0)
Calculations involving economic evaluation of processes and equipment. Optimization of plants for least cost or maximum profit.

4322 — Unit Operations (3:3:0)
A study of chemical engineering operations not considered in other courses. An advanced study of one or more selected chemical engineering operations.

4323 — Engineering Materials (3:3:0)
Engineering properties of solid, liquid and gaseous materials. Selection and deterioration of materials for various industrial applications.

4325 — Introduction to Nuclear Engineering (3:3:0)
Interaction of neutrons with matter, nuclear properties of materials, shielding and control of reactors, production of neutrons by nuclear fission, discussion of the various types of reactors and introduction to reactor theory and design.

433 — Process Control (3:3:0)
Selection of equipment to measure and control process variables. Analysis of process response to variations in process parameters.

434 — Plant Design II (3:1:6)
A continuation of ChE 436, with emphasis on a major design project. Prerequisite: ChE 436.

435 — Advanced Analysis (3:3:0)
Development of mathematical equations for chemical engineering applications. Solution of ordinary and partial differential equations. Prerequisite: Mth 4301.

436 — Plant Design I (3:3:0)
Application of chemical engineering principles to the design of chemical processes and plants. Equipment design and specifications. Economic evaluation of processes and equipment. Prerequisite: ChE 441; ChE 442 or concurrent.

437 — Computer Applications (3:3:0)
Use of the digital and analog computers in performing process calculations. Advanced techniques of Fortran programming. Prerequisite: Egr 2331, ChE 334, ChE 333 or concurrent.

438 — Introductory Petroleum Engineering (3:3:0)
The modern techniques of producing oil will be reviewed. Drilling operations, primarily and secondary recovery operations, methods of evaluation, production rate potential and reserve, as well as other aspects of reservoir engineering will be studied. Prerequisites: Senior/graduate standing.

441 — Reaction Kinetics (4:3:3)
Chemical equilibrium. Analysis of experimental data to determine reaction rate parameters in homogeneous, heterogeneous, catayltic and noncatalytic reactions. Development of equations for batch, stirred-tank and flow reactors. Application of different equations to process and reactor design. Prerequisites: ChE 332 or concurrent, ChE 333 or concurrent.

442 — Mass Transfer (4:3:3)
Principles of diffusion. Simultaneous mass, energy and momentum transfer. Analysis of absorption, extraction and distillation processes. Prerequisite: ChE 333.

Department of Civil Engineering

Accredited by Engineers' Council for Professional Development

Department Head — Luther A. Beale. *Professors* — Andre P. Delflache, Bruce G. Rogers. *Associate Professors* — William E. Morgan, Marlin L. Sheridan. *Assistant Professors* — Desmond N. Penny, Ramchandra S. Singh. *Laboratory Technician* — Ronnie L. Smith. *Secretary* — Bonnie Miller.

Civil Engineering is vital to the world's economic, political and social well-being. Modern technological developments are ever widening the vistas of this profession and deepening its scientific roots. These trends are accentuating and creating needs that can be met only by truly professional people whose education has the breadth of a liberal education and the depth of a firm foundation in mathematics and science. This curriculum is designed to meet these requirements. It is strong in the engineering sciences including the natural and earth sciences. It embraces a sound core of mathematics, physics and chemistry. Completion of this curriculum will enable a student to enter the professional field of practice or to pursue an advanced program of study leading to a graduate degree in civil engineering. Areas of activity include soil, structural, hydraulic, sanitary, transportation, surveying and mapping, and power engineering. This curriculum is modern and designed to meet the requirements of the space and atomic age. Options are provided to fit the individual interest of the civil engineering student.

Recommended Program of Study
Bachelor of Science in Civil Engineering

Additional Degree Requirements:

Candidates for degrees in this program must submit a certificate showing they have passed the National Council of Engineering Examiners Examination on "Fundamentals of Engineering" as administered by the State Board of Registration for Professional Engineers.

BASIC PROGRAM

First Year
(See Core Program)

Second Year

First Semester		Second Semester	
Phy 241—Ht, Elec, Mag	4	Phy 222—Lt, Sd	2
Mth 241—Calc & Anal Geom III	4	ME 231—Dynamics	3
Egr 230—Statics	3	CE 232—Mech of Solids	3
Egr 2331—Egr Comp I	3	CE 212—Route Surv	1
CE 210—CE Mgmt	1	CE 213—Exp Str Anal	1
CE 211—Engr Meas	1	Mth 234—Prob & Stat	3
PE/MLb/AFROTC	1	Elective—Speech	3
	17	PE/AFROTC	1
			17

Third Year

First Semester		Second Semester	
CE 310—Cost Est & Eco	1	CE 311—Geodesy & Map	1
CE 331—Env Sci	3	CE 312—Research	1
CE 334—Struc Mech	3	CE 313—Mtls Engr	1
CE 335—Hydraulics	3	CE 336—Hydrology	3
Geo 220—Engr Geol	2	CE 337—Wtr Util Sys	3
IE 333—Engr Eco	3	CE 339—Soil Science	3
Egr 233—Cir & Flds	3	CE 430—Indet Struc	3
	—	CE 439—Struct Stl Des	3
	18		—
			18

Fourth Year

First Semester		Second Semester	
CE 434—Soil Egr	3	CE 411—Seminar	1
CE 436—Re Con Des	3	CE 412—Cont & Spec	1
BA 331—Bus Law	3	CE 413—Photogrammetry	1
Amer Hist	3	Elective—Tech	3
Gov 231—Amer Gov	3	Egr 234—Thermo	3
CE 431—Hydraulics II	3	Elective—Literature	3
	—	Gov 232	3
	18	Elective—Math	3
			—
			18

CIVIL ENGINEERING (CE)

210 — Civil Engineering Management (1:3:0)
Role of the civil engineer as a manager and executive director of civil engineering design, project administration and construction. Organizations, policies, objectives, motivation, staffing, budgeting, information systems, computers, equipment, proposals, standard practices, planning and review are topics of discussion.

211 — Engineering Measurements (1:0:3)
Introduction to basic principles of surveying. Use of equipment for measurement of horizontal and vertical distances and angles. Computer utilized in calculations.

212 — Route Surveying (1:0:3)
Field practice and calculations associated with design and layout of highway curves including vertical and horizontal alignments. Transition spirals. Surveying for transmission systems Computer utilized. Prerequisite: CE 211.

213 — Experimental Stress Analysis (1:0:3)
Physical testing of materials. Experimental determination of deformations and stresses using electronic strain gages. Study of tension members, beams, columns and torsion members. Elastic and inelastic instability considered. Prerequisite: CE 232 or Concurrent.

232 — Mechanics of Solids (3:3:0)
Effect of loads on deformable bodies. Uniaxial and biaxial stress-strain relationships. Indeterminate systems. Study of stresses due to axial, torsional and bending effects. Buckling of columns. Prerequisite: Egr 230.

310 — Cost Estimating and Economy (1:1:0)
Methods of estimating cost of engineered construction. Optimization of design. Economic considerations utilized in engineering.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

311 — **Geodesy and Mapping (1:0:3)**
Advanced surveying principles applied to horizontal and vertical control for mapping. Prerequisite: CE 212.

312 — **Research (1:1:0)**
Methods of research including literature searches. Proposal writing for engineering projects. Principles of technical writing and communication.

313 — **Materials Engineering (1:0:3)**
Study of material properties and suitability for engineering design. Material types and designations covered by standard specifications including ASTM. Reports required based on laboratory and library research. Prerequisite: CE 213.

331 — **Environmental Science (3:2:3)**
Introduction to the hydrologic cycle and the chemistry and microbiology of the natural aquatic environment, with emphasis on the physical, chemical and biological aspects of water and waste water systems in relation to man's environment. Laboratory work in the physical, chemical and biological analysis of water and waste water. Prerequisite: Chm 142.

334 — **Structural Mechanics (3:3:0)**
Analysis of loadings for bridges and buildings. Dynamic effects of moving loads. Influence lines. Shear and moment diagrams. Analysis of indeterminate structures. Model analysis. Introduction to structural design investigation of frames, girders and bents. Prerequisite: CE 232.

335 — **Hydraulics (3:2:3)**
Basic principles of fluid flow. Friction and drag studies. Calibration of flow measuring devices. Flow characteristics of open channels and closed conduits Boundary Layer Theory. Prerequisite: ME 231.

336 — **Hydrology (3:3:0)**
Precipitation, surface water, infiltration, sub-surface water. Analysis of rainfall and runoff data. Collection studies. Hydraulics of wells. Net storm rain; peak discharge and floor runoff: Prerequisite: Geo 220. CE 335

337 — **Water Utility Systems (3:3:0)**
General survey of environmental engineering covering water supply and sanitary sewerage systems. Prerequisite: CE 331 CE 335.

339 — **Soil Science (3:2:3)**
Basic principles of soil behavior under load. Soil properties and classification. Study of Hydraulics as applied to Soil Mechanics. Prerequisite: Geo 220.

411 — **Seminar (1:1:0)**
Discussion of professional topics. Study of technical journals and transactions. Presentation of oral and written reports. Completed thesis required. Prerequisite: CE 410.

412 — **Contracts and Specifications (1:1:0)**
Law and practice controlling the writing of engineering contracts and specifications. Prerequisite: BA 331.

413 — **Photogrammetry (1:0:3)**
Principles of aerial photography applied to map making, route locations and ground control. Introduction to use of photogrammetry equipment, including stereoscopes and plotters. Prerequisite: CE 215.

430 — **Indeterminate Structures (3:3:0)**
Basic principles of structural analysis and design, based upon requirements of equilibrium and continuity. Classical methods of strain energy, slope deflection and moment distribution used for analysis of frames, trusses and beams. Digital computer methods stressed. Prerequisite: CE 334.

431 — **Hydraulics II (3:3:0)**
Continuation of CE 335-Hydraulics emphasizing practical applications of basic fluid mechanics principles in fluid measurement, machinery, closed conduit flow, open channel flow and hydraulic transients. Prerequisite: CE 335.

433 — **Environmental Health Engineering (3:3:0)**
Problems of public health in rural, urban and industrial centers with water, housing, heating, cooling, ventilation, milk, food, insects and rodents. Biostatistics and public health laws, ordinances and regulations. Prerequisite: Bio 243 or CE 331.

434 — **Soil Engineering (3:3:0)**
Compressibility and strength characteristics. Stress distribution. Shallow and deep foundations, earth pressure theories, retaining walls, stability slopes. Prerequisite: CE 339.

435 — **Water and Waste Water Treatment. (3:3:0)**
Principles of physical, chemical and biological processes employed in water and waste water treatment. Design of selected units within water and waste water treatment systems. Prerequisite: CE 337.

437 — **Transportation Engineering (3:3:0)**
Study of highway pavements. History and development of transportation facilities. Drainage requirements. Fundamentals of highway location, design, construction and maintenance.

438 — **Reinforced Concrete Design (3:3:0)**
The design of structural concrete members based upon elastic and plastic theory. Study of standard specifications. Introduction to prestressed concrete. Prerequisite: CE 334.

439 — **Structural Steel Design (3:3:0)**
The elastic design of buildings and bridge components according to standard specifications. Plastic design of steel structures. Prerequisite: CE 334.

4310 — **Soil-Structure Interaction (3:3:0)**
Analysis of the mechanical behavior of soil-structure systems under the effect of static and dynamic loading, impact and stress wave propagation. Applications to structures supported by shallow and deep substructure and underground structures. Computer techniques are employed. Prerequisite: CE 434.

4312 — **Advanced Structural Design (3:3:0)**
Design principles associated with plastic design of steel, pre-stressed concrete, composite structures, hybrid girders and thin shell concrete. Computer methods of analysis utilized. Prerequisite: CE 430.

Department of Electrical Engineering

Accredited by Engineers' Council for Professional Development

Department Head — William R. Wakeland. *Professors* — Wendell C. Bean, James L. Cooke, Floyd M. Crum. *Associate Professors* — D. Robert Carlin, Ramon S. Satterwhite, Joseph T. Watt, Jr. *Assistant Professor* — Lyle E. Bohrer. *Laboratory Technician* — Robert Collier. *Secretary* — Marsha Gassen.

Electrical engineering is a rapidly changing profession which promises to bring significant changes to our society within the next decade. Electrical engineers are involved in research, development, design, manufacturing and applications in areas as varied as microelectronic devices, information science, power systems, computers, digital systems and communications systems.

In each of the electrical engineering courses, emphasis is placed upon creative thinking and an analytical approach. The specified curriculum lays a broad foundation in the relevant electrical sciences, and electives allow pursuit of the student's

special interests. In-depth specialization is possible in graduate school, industry or research.

The Department of Electrical Engineering will permit transfer of up to 72 semester hours from a junior college or a community college if appropriate courses were taken at the junior (community) college level. The appropriate list of courses for a particular college can be made available upon request.

Recommended Program of Study Bachelor of Science in Electrical Engineering

First Year

(See Core Program)

Second Year

First Semester		Second Semester	
Egr 230—Mechanics I	3	Egr 233—Circuits & Fields	3
Egr 2331—Egr Computation I	3	Egr 234—Thermodynamics	3
His—American	3	Eng—Literature	3
Mth 241—Calc. & Anal. Geom. III	4	Mth 4301—Diff. Eq. Lin. Alg.	3
Phy 241—Ht., Elec., & Mag	4	ME 231—Mechanics II	3
PE/MLb 124/AFROTC	1	Phy 222—Sound, Light, Quan.	2
	18	PE/AFROTC	1
			18

Third Year

First Semester		Second Semester	
EE 317—Jr. EE Lab	1	EE 318—Jr. EE Lab.	1
EE 331—Circuits I	3	EE 332—Circuits II	3
EE 333—Electronics	3	EE 336—Energy Convs. II	3
EE 3301—Electrical Anal	3	EE 337 Electromag Field I	3
EE Elective	3	Gov 232—Intro. to Amer. Gov.	3
Gov. 231	3	Phy 335—Modern	3
	16		16

Fourth Year

First Semester		Second Semester	
EE 411—Seminar	1	EE 412—Seminar	1
EE 415—Proj Lab	1	EE 416—Proj Lab	1
EE 417—Proj Lab	1	EE 418—Proj Lab	1
EE 431—Electronics II	3	EE—Elective	3
EE 433—Net Anal.	3	EE—Elective	3
EE 436—Control Egr	3	Elective	3
EE—Elective	3	Human/Soc Sci Elective	3
Spc or Tech Writing	3		15
	18		

ELECTRICAL ENGINEERING (EE)

317 — **Junior EE Laboratory (1:0:3)***
To be taken in parallel with EE 331.

318—**Junior EE Laboratory (1:0:3)**
To be taken in parallel with EE 332 and EE 336.

331 — **Circuits I (3:3:0)**
A study of instantaneous current and voltage, the impedance function, complex algebra in circuit analysis, average power and effective current, equivalent networks, resonance, graphical methods, loop and node network equations, matrix solutions and network theorems. Prerequisites: Egr 233 and Mth 241.

332 — **Circuits II (3:3:0)**
Coupled circuits, balanced and unbalanced polyphase circuits, symmetrical components, nonlinear elements. Fourier series and integral, transient response, complex frequency plane; Laplace transformation. Prerequisite: EE 331.

333 — **Electronics (3:3:0)**
A study of charged particles; metals and semiconductors; vacuum tube and transistor characteristics; gaseous conduction; rectifiers and power supplies. Prerequisite: Egr 233 or Phy 241.

335 — **Energy Conversion I (Direct) (3:3:0)**
An introductory study of direct heat to electrical energy conversion methods such as those employed by thermoelectric devices, thermionic converters, magnetohydrodynamic engines, solar and fuel cells. Prerequisites: Egr 234; parallel: EE 333.

336 — **Energy Conversion II (Electromechanical) (3:3:0)**
A study of electromechanical energy conversion principles. Lagrange's equations; incremental motion transducers; rotating machines. Prerequisite: EE 331.

337 — **Electromagnetic Fields I (3:3:0)**
Vector analysis, coordinate systems, static electric fields, electric potential, dielectrics, conductors, capacitance, current, static magnetic fields, magnetic materials, magnetic potentials, inductance, electromagnetic forces. Maxwell's equations, time-varying fields, plane waves. Prerequisite: Egr 233, Mth 241.

338 — **Electric Circuit Fundamentals (3:3:0)**
Laws, parameters and network theory. Laplace transforms, transient and a-c steady state circuit responses (intended for Computer Science majors). Prerequisites: Mth 241 and Phy 241.

339 — **Electronic Fundamentals (3:3:0)**
Fundamentals of semiconductors; diodes, transistors and vacuum tubes. Equivalent circuits, biasing methods and amplifier performance (intended for Computer Science majors). Prerequisite: EE 338.

3301 — **Electrical Analysis (3:3:0)**
Analog computer techniques, matrices and state variable methods applied to the solution of differential equations which approximate electrical phenomena. Prerequisites: Mth 241, Egr 233.

411 — **Electrical Engineering Seminar I (1:1:0)**
A study of the literature of electrical and related engineering fields; preparation and presentation of papers on electrical subjects. Parallel: EE 431.

412 — **Electrical Engineering Seminar II (1:1:0)**
Preparation, presentation and discussion of material on the engineering

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

profession, the interface between technology and society, and new areas of engineering involvement.

415-417 — Projects Laboratory (1:0:3)
Laboratory studies selected from machines, vacuum-tube and semiconductor electronics, digital logic and communication theory.

416-418 — Projects Laboratory (1:0:3)
Laboratory studies selected from automatic control systems, computers, vacuum-tube and semiconductor electronics, microwave devices.

431 — Electronics II (3:3:0)
Vacuum tubes and semiconductors as circuit elements; untuned voltage and power amplifiers, and electronic computing circuits. Prerequisite: EE 333 and EE 331.

432 — Electronics III (3:3:0)
A study of bipolar field effect transistor and tunnel diode devices as circuit elements in integrated circuits. Applications to digital systems, high frequency analog systems and measuring instruments are analyzed. Discrete elements in electronic circuits as signal processing devices are also studied. Prerequisite: EE 431.

433 — Network Analysis (3:3:0)
Properties of linear systems, excitation and response in the time domain, excitation and response in the frequency domain, generalized function, differential equations applied to network analysis, network analysis functions, network analysis domain. Prerequisite: EE 332.

434 — Network Synthesis (3:3:0)
Mathematical foundation needed for synthesis. Driving point synthesis with LC elements. Driving point synthesis with RC and RL elements. Two port synthesis. Filter design. Prerequisite: EE 433.

436 — Control Engineering (3:3:0)
Transfer functions; state variables; time response; frequency response; stability; observability and controllability; special topics. Prerequisite: EE 332.

437 — Electromagnetic Fields II (3:3:0)
Transmission lines, waveguides, cavities and antennas. Prerequisite: EE 337.

438 — Instrumentation (3:2:3)
A study of analog and digital electronic instruments in making measurements. Instruments studied are oscilloscopes, strip recorders, oscillators, frequency counters, PDR's, PGR's, digital (voltmeters, ohmmeters) and transducers.

4101 — Individual Study (1:1:0)
Independent study under the direction of a faculty member. May be repeated for credit.

4201 — Digital Logic Laboratory (2:1:3)
Laboratory study of digital devices and systems. Prerequisite: EE4303 or CS3305.

4302 — Communication Theory (3:3:0)
Principles of modulation; random signal theory and network analysis; basic information theory; analysis of noise. Prerequisite: EE 332.

4303 — Logical Design of Switching Systems (3:3:0)
Switching algebra necessary for formulating and manipulating switching functions. Circuit realization using relay logic, diode logic, transistor gates and core gates. Derivation and simplification of state tables for sequential circuits. State assignments for the design of computing systems. A synchronous circuits. Prerequisite: EE 333.

4304 — Advanced Topics (3:3:0)
Topics are selected on the basis of the needs of an adequate number of students. Topic areas include nuclear power; digital machines, languages, and algorithms; optimization techniques; power systems analysis; advanced

fields problems. May be repeated for credit when topics vary. Prerequisite: EE 331 or concurrent.

4305 — Digital Systems (3:3:0)
Coding, iterative circuits, special purpose circuits vs. computers, and algorithms. Prerequisite: EE 4303 or CS 3305.

4306 — Minicomputers (3:3:0)
Introduction to assembly language programming and small computer organization.

4307 — Microcomputers (3:3:0)
Microcomputer organization, peripheral devices, systems software for small computers. Prerequisite: EE 4306 or CS 3302.

4308 — Automata Theory (3:3:0)
Sets, relations, structure of sequential machines, incompletely specified machines, partition methods, state identification and fault detection. Prerequisite: EE 4303 or CS 3305.

4310/CS 4310 — Computer Architecture (3:3:0)
Representation of information, calculators, storage, addressing, input/output, memory and control. Prerequisite: EE 4303 or CS 3305. Assembly language desirable.

Department Of Industrial Engineering

Accredited by Engineers' Council for Professional Development

Department Head — Irvin L. Reis. *Professors* — Ali M. Alli, James J. Brennan, David G. Gates. *Adjunct Associate Professor* — Paul L. Schillings. *Assistant Professor* — Carl Carruth. *Laboratory Technician* — Herbert W. Deaton. *Secretary* — Christine Masters.

The Department of Industrial Engineering offers the Bachelor of Science degree in Industrial Engineering and in Industrial Technology.

INDUSTRIAL ENGINEERING

Industrial engineering serves vital functions in today's world and provides a wide range of career opportunities.

Industrial engineering deals not only with things but also with people. It especially deals with managerial problems requiring a knowledge of fundamental science and engineering practice for their solution.

Industrial engineers combine advanced study in management systems, economics and decision-making to answer such questions as:

"What products or services should we offer . . . what materials and methods should we use . . . how can we best motivate and reward people . . . how can we improve quality, productivity and service?"

Typical responsibilities of the industrial engineer involve design, operation and management. While manufacturing industry demands many graduates, increasing numbers are finding satisfying employment in other kinds of businesses. Airlines, banks, restaurant chains, department stores and hospitals, e.g., all use industrial engineers. Governmental agencies of all sorts are attracting graduates.

At Lamar University, students may elect either the principal professional curriculum or the systems engineering option. The principal professional option emphasizes production methods, management skills and human relations. The systems engineering option places increased emphasis on mathematics and computers for those having special interest in real-world application of those tools.

Lamar's Department of Industrial Engineering also offers a Bachelor of Science degree in Industrial Technology. This curriculum is especially designed to prepare two-year technology graduates to work effectively in the engineer-technologist team and to assume management responsibilities.

Recommended Programs of Study

Bachelor of Science in Industrial Engineering

First Year

(See Core Program)

Second Year

First Semester		Second Semester	
Egr 230—Mechanics I	3	IE 235—Egr Computation II	3
Egr 2331—Egr Computation I	3	IE 334—Human Relations	3
IE 330-IE—An Introduction	3	English Literature	3
Mth 241—Calc & Anal Geom I	4	Soph Amer History	3
Gov 231—Constitutions	3	Phy 241—Ht, Elec, Mag	4
PE/MLb 124/AFROTC	1	PE/AFROTC	1
	17		17

Third Year

First Semester		Second Semester	
IE 311—IE Seminar I	1	IE 212—Prod & Fab Processes	1
IE 333—Engineering Economy	3	IE 335—Accounting for Egrs	3
IE 339—Mat Sci & Mfg Proc	3	IE 338—Work Study	3
Egr 234—Thermodynamics	3	Egr 233—Circuits & Fields	3
Mth 234—Prob & Statistics	3	Approved Tech Elective	3
Gov 232	3	ME 231—Dynamics	3
	16		16

Fourth Year

First Semester		Second Semester	
IE 411—IE Seminar II	1	IE 430—Quality Assurance	3
IE 432—Stat Decis Making	3	IE 436—Design of Prod Fac	3
IE 435—Prod & Inv Control	3	IE 437-Operations Research	3
IE 4303—Linear Programming	1	Free Elective	3
ME 3311—Momentum Trans	3	IE 4315—Organization & Mgt	3
Approved Hum-Soc Elective	3		15
	16		

Bachelor of Science in Industrial Engineering (Systems Engineering Option)

First Year
(See Core Program)

Second Year

First Semester		Second Semester	
IE 330-IE—An Introduction	3	IE 235—Engr Computation II	3
Egr 230—Mechanics I	3	Gov 232	3
Egr 2331—Egr Computation I	3	Phy 241—Ht, Elec, Mag.	4
Gov 231—Constitutions	3	Egr 233—Circuits & Fields	3
Mth 241—Calc & Anal Geom I	4	English Literature	3
PE/MLb 124/AFROTC	1	PE/AFROTC	1
	17		17

Third Year

First Semester		Second Semester	
IE 311-IE Seminar I	1	IE 338—Work Study	3
IE 333—Engineering Economy	3	ME 3311—Momentum Trans	3
IE 3302—Funct Char Dig Comp.	3	Soph Amer History	3
Egr 234—Thermodynamics	3	Mth 4315—Numerical analysis	3
Mth 234—Prob & Statistics	3	Approved Tech Elective	3
Soph Amer History	3	ME 231—Dynamics	3
	16		18

Fourth Year

First Semester		Second Semester	
IE 411—IE Seminar II	1	CS 4305—Intro Info Struct	3
IE 4303—Linear Programming	3	IE 430—Quality Assurance	3
IE 432—Stat Decis Making	3	IE 437—Operations Research	3
IE 435—Prod & Inv Control	3	IE 4302—System Anal & Des.	3
Approved Hum-Soc Elective	3	IE 4315—Organization & Mgt	3
Free Elective	3		15
	16		

INDUSTRIAL ENGINEERING (IE)

212 — Production and Fabrication Processes (1:0:3)*
Machinery, welding, casting, forming and joining operations on materials of engineering importance. Demonstrations, lectures and laboratory exercises.

235 — Engineering Computation II (3:3:0)
Problem theory, flow charting; advanced Fortran programming. Solution of advanced problems from various engineering disciplines.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

311 — **IE Seminar I (1:1:0)**
Identifying and analyzing Industrial Engineering problems.

330 — **Industrial Engineering (3:3:1)**
Introduction to Industrial Engineering, its tools and techniques.

3302 — **Functional Characteristics of Digital Computers (3:3:0)**
Machine, assembler level and macro languages, data representation, instruction formats, addressing, computer structure. CS 3302 and IE 3302 may not both be counted for credit. Prerequisite: Egr 2331 or IE 235.

333 — **Engineering Economy (3:3:0)**
Economics applied to the evaluation of engineering proposals. The effects of depreciation, taxation and interest rates. Prerequisite: Mth 149 or Mth 1341.

334 — **Human Relations in Industry (3:3:0)**
The role of individuals and groups in industrial organizations. Satisfying and using their needs and goals.

335 — **Accounting for Engineers (3:3:0)**
Introduction to principles of bookkeeping and cost accounting. Use of cost records to help the engineer/executive make decisions.

338 — **Work Study (3:2:3)**
Determination of contents, techniques and times required for various tasks. Design of jobs and workplaces for maximum productivity. Prerequisite: Mth 1341 or Mth 234.

339 — **Materials Science and Manufacturing Processes (3:3:0)**
Basic principles underlying the behavior of engineering materials and methods of processing these materials. Prerequisite: Chm 143 or equivalent.

411 — **IE Seminar II (1:1:0)**
Preparing and presenting engineering reports. Real-life problems are studied and students report findings and recommendations.

430 — **Quality Assurance and Control (3:3:0)**
Assurance that products perform as intended. Reducing or eliminating defective output. Prerequisite: Mth 234.

432 — **Statistical Decision Making for Engineers (3:3:0)**
Analysis of data to help the engineer/executive make decisions. Evaluation of performance claims. Prerequisite: Mth 234.

434 — **Design of Tools and Processes (3:2:3)**
Choosing the process and machinery to make various products. Modifying the design and materials of a product so as to perform satisfactorily at the lowest cost. Prerequisites: IE 333, 338.

435 — **Production and Inventory Control (3:3:0)**
Techniques for planning and controlling production and inventories. Modern materials requirements planning. Prerequisites: Mth 234, IE 330.

436 — **Design of Production Facilities (3:1:6)**
Use of the principles from other IE courses to determine the location, layout, needed equipment and facilities and other factors in facilities design. Prerequisites: IE 212, 330, 333, 338, 339.

437 — **Operations Research (3:3:0)**
An introduction to the construction of mathematical models of organizational systems to aid executives in making decisions. Prerequisites: Mth 234, IE 333.

4302 — **System Analysis and Design (3:3:0)**
Multiprocessing and real time systems, timesharing, core management systems, interfacing, analysis and design of systems to meet specific requirements, management systems, systems programming. IE 4302 and CS 4302 may not both be counted for credit. Prerequisite: IE 3302.

4303 — **Linear Programming (3:3:0)**
Linear programming problems and solutions. Special procedures and techniques of application. Prerequisite: Egr 2331.

4313 — Human Engineering (3:2:3)
The engineering design of tools and equipment to meet the physiological needs of human beings.

4315 — Organization and Management (3:3:0)
The theory of organization and management. How the executive functions to achieve the organization's goals.

Department of Mechanical Engineering

Accredited by Engineers' Council for Professional Development

Department Head — Otto G. Brown. *Professors* — Eugene P. Martinez, Harry T. Mei. *Associate Professor* — John A. Bruyere. *Assistant Professors* — Charles E. Corgey, L. Wayne Sanders. *Adjunct Instructor* — James K. Boughton. *Laboratory Technician* — George E. Hundley, Jr. *Secretary* — Jennifer G. Cline.

Mechanical Engineering consists of the analysis, design, synthesis and selection of materials for mechanical and thermal processes and engineering systems. Such a broad field requires a firm foundation in the fundamental sciences and mathematics as well as in the engineering sciences.

Application of the sciences to the many phases of mechanical engineering is initiated in the junior year. Opportunity is provided the student at the senior level to examine certain aspects of mechanical engineering in more detail or to prepare for graduate study.

Mechanical engineers are found in virtually every phase of industry. They are engaged in professional engineering, research, management and public services. The end products resulting from the application of their knowledge and professional skills are many and a list would include, for example, all forms of transportation, central power plants, nuclear reactors, energy conversion, space vehicles, computers and complex engineering systems.

The Department of Mechanical Engineering will assist prospective transfer students from junior or community colleges in planning courses to fit the mechanical engineering curriculum at Lamar University. The appropriate list of courses for a particular junior college can be obtained from the Department of Mechanical Engineering.

Recommended Program of Study Bachelor of Science in Mechanical Engineering

First Year
(See Core Program)

Second Year

First Semester		Second Semester	
Egr 230—Statics	3	CE 232—Mech of Solids	3
Egr 2331—Egr Comp I	3	Egr 234—Thermo I	3
Mth 241—Calc & Anal Geom III	4	ME 231—Dynamics	3
Phy 241—Ht, Elec, Mag	4	Phy 222—Lt Snd Qua	2
Literature	3	Mth 4301—Diff Eq Lin Alg	3
PE/MLb/AFROTC	1	IE 212—Prod Fab Proc	1
	—	PE/AFROTC	1
	18		—
			16

Third Year

First Semester		Second Semester	
Egr 233—Cir Fields	3	EE 333—Electronics or	
ME 3311—Mom Trans	3	Phy 335—Mod Phy	3
ME 330—Kinematics	3	ME 331—Trans Theo I	3
ME 388—Thermo II	3	ME 332—Mech Des I	3
American History	3	ME 334—Egr Anal I	3
Tech Writ or Spc	3	Gov 231—Am Gov I	3
	18		17

Fourth Year

First Semester		Second Semester	
ME 411—Seminar	1	ME 4316 — Egr Project	3
ME 4313—Trans Theo II	3	Hum—Soc Elective	3
ME 4317—Egr Anal II	3	Free Elective	3
ME 4319—Mat Sci	3	Approve Electives	6
ME 4323—Mech Des II	3		15
Gov 232—Am Gov II	3		
	16	Total — 134 Semester Hours	

MECHANICAL ENGINEERING (ME)

231 — Dynamics (3:3:0)*
Kinematics of rigid bodies, kinetics of rigid bodies, work and energy, impulse and momentum. Prerequisite: Egr 230 or equivalent, Mth 241 or concurrent.

321 — Instrumentation and Testing Laboratory (2:1:3)
Various instruments with mechanical engineering applications are studied and tests are made. Emphasis is on pressure, temperature, speed, power, torque, frequency and various types of flow measurements. Prerequisites: ME 3311 and ME 338 or parallel with both.

330 — Kinematics (3:3:0)
Analysis of mechanisms. Centros, velocities and accelerations in plane mechanisms; rolling and sliding in belts, chains and cams; gears in plain and epicyclic trains. Prerequisites: ME 231 and CE 232.

331 — Transport Theory I (3:3:0)
Theory of conduction and potential flow, radiation and convection with engineering techniques and applications. Prerequisites: Mth 4301 and ME 3311.

3311 — Momentum Transfer (3:3:0)
Fluid-flow concepts are presented through the derivation of the basic equations of continuity, energy and momentum. Engineering aspects of flow measurement, pressure-drop calculations and pumping requirements are considered. Prerequisites: Egr 234, ME 231, CE 232 and Mth 4301.

332 — Elements of Mechanical Design I (3:2:3)
The design of machine components including shafting, columns, springs and frames with regard to static and dynamic forces employing analytical and graphical analysis. Prerequisites: CE 232 and ME 330.

334 — Engineering Analysis I (3:3:0)
Methods of analysis of engineering situations requiring application of fundamentals of engineering science and mathematics are studied. Mathematical methods of engineering analysis are presented and applied. Prerequisite: ME 3311.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

338 — **Thermodynamics II (3:3:0)**
A continuation of Egr 234 including vapor and gas cycles, mixtures of gases, thermodynamics of chemical systems and psychrometrics. Prerequisites: Mth 4301 and Egr 234.

411 — **Seminar (1:1:0)**
Oral and written presentation and discussion of selected topics including those from current literature of fields related to mechanical engineering. Professional activities are encouraged.

431 — **Engineering Systems Design (3:3:0)**
The design techniques of integrated component systems are treated. The student is required to utilize these techniques by designing such a system. Prerequisite: ME 334 and senior standing.

432 — **Mechanical Vibrations (3:3:0)**
The theory of vibrating systems, including kinematics or 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. Prerequisite: ME 334 and senior standing.

433 — **Aerodynamics (3:3:0)**
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. Prerequisites: ME 3311 and ME 331 or parallel.

434 — **Internal Combustion Engines (3:2:3)**
The principles of design and analysis of various types of internal combustion engines. Prerequisites: ME 331 and ME 338.

435 — **Turbomachinery (3:3:0)**
Flow problems encountered in the design of water, gas and steam turbines, centrifugal and axial-flow pumps and compressors. Prerequisites: ME 3311 and ME 338.

436 — **Dynamics of Machinery (3:2:3)**
Kinematics of mechanisms, gears and epicyclic gear trains. Synthesis of linkages. Calculation of inertia forces and shaking forces on machines. Multi-cyclinder engine balancing. Graphical and analytical methods are employed. Prerequisites: ME 332 and ME 334.

437 — **Advanced Machine Design (3:2:3)**
The application of machine design principles to an integrated design of a complete machine, including fabrication and economic consideration. Prerequisite: ME 4323.

438 — **Environmental Systems Engineering (3:2:3)**
Design of refrigeration and air-conditioning systems including selection of mechanical equipment, controls, piping and duct layout. Prerequisites: ME 331 and ME 338.

439 — **Advanced Strength of Materials (3:3:0)**
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 foundations, plates, shells and cylinders. Study of torsion of bars and cylinders. Prerequisites: CE 232 and ME 334.

4311 — **Controls Engineering (3:3:0)**
The theory of integrated automatic controls systems with application to combustion, temperature, pressure, flow and humidity control. Industrial control systems are considered. Prerequisites: ME 331 and ME 334.

4312 — **Gas Dynamics (3:3:0)**
Fundamentals of one-dimensional compressible flow. An introduction to multidimensional wave phenomena with various applications. Prerequisite: ME 4313 or parallel.

4313 — Transport Theory II (3:3:0)
Transport processes in incompressible boundary layers. Transport with change of phase. Heat exchanger design with emphasis on optimization of energy exchange, economics and design feasibility. Other topics as time permits. Prerequisites: ME 331, ME 334, ME 338.

4314 — Fundamentals of Physical Metallurgy (3:3:0)
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. Prerequisite: ME 4319 or parallel.

4315 — Thermodynamics III (3:3:0)
Topics in applied thermodynamics selected from any of the following: psychrometrics, combustion, equilibrium reactions, compressible flow, thermodynamic machinery and optimization of power plant and utility systems using availability analysis and/or linear programming. May be repreated for credit with consent of instructor. Prerequisites: ME 334, ME 338, ME 4313 in parallel.

4316 — Engineering Project (3:1:6)
Student research projects are planned, scheduled, designed and evaluated. Experience is gained in the execution of an engineering project and a formal technical report is required. Prerequisite: Senior standing.

4317 — Engineering analysis II (3:3:0)
A continuation of ME 334 with some emphasis being placed on analog methods and computer techniques in solving engineering problems. Prerequisite: ME 334.

4319 — Materials Science (3:2:3)
Properties of materials. Aspects of elastic behavior as well as stress and strain measurement, yield phenomena, tensions, torsion, hardness and assorted effects and considered. Criteria for selected proper engineering materials are discussed. Prerequisite: CE 232.

4320 — Propulsion Systems (3:3:0)
Space mission parameters. Basic elements of propulsion systems and propulsion systems parameters. Selected problems of thermochemical systems and electro-magneto-thermal systems. Prerequisites: ME 331 and ME 338.

4321 — Space Dynamics (3:3:0)
An analytical treatment of the mechanics of orbital motion, with applications to the trajectories of the astronomical objects and space vehicles. Prerequisite: ME 3311.

4323 — Elements of Mechanical Design II (3:2:3)
The design of power transmission machinery. Completed design of some assigned machine. Prerequisite: ME 332.

Department of Mathematics

Department Head — Richard A. Aló. *Director of Mathematics Instruction* — Sam M. Wood, Jr. *Professors* — Richard A. Aló, Russell W. Cowan, Sterling C. Crim, Philip W. Latimer, Sterling W. McGuire, Jeremiah M. Stark, Howard C. Vanzant. *Associate Professors* — Joseph A. Baj II, Mary Katherine Bell, George Berzsenyi, Ralph J. Brookner, Joan E. Brenizer, Robert L. Dingle, Richard L. Price, David R. Read, Sam M. Wood, Jr. *Assistant Professors* — Annie Sue Green, John F. Harvill, Michael A. Laidacker, Charles H. Lauffer, Reta G. Parrish, Billy D. Read, Dorothy F. Thames. *Instructor* — John W. Mades. *Adjunct Instructor* — Catherine L. Pace. *Secretary* — Alma Baize.

The Department of Mathematics offers courses and programs in applied and pure mathematics, computer science, mathematics education (for elementary and secondary school certification) and statistics. These programs are designed to permit students to select courses suited to a variety of interests and career goals. Advising plays an integral role in achieving these objectives. Consequently each student is assigned an individual advisor to assist with the student's schedule and career planning. An active mathematics club and computer science club provide students with the opportunity to work with fellow mathematics and computer science majors in a number of activities.

The department offers the following degrees:

Bachelor of Arts in Mathematics
Bachelor of Science in Mathematics
Bachelor of Science in Mathematical Sciences
Bachelor of Science in Mathematical Sciences, Statistical Concentration
Master of Science

In addition, provision is available for the Doctorate of Engineering in Mathematical Engineering.

Programs in the mathematical sciences prepare students for careers in a variety of fields. In addition to teaching in elementary, middle and senior high schools, students can prepare for opportunities in industry, business and government by electing options in applied mathematics, in computer science or by pursuing the regular mathematics major with electives chosen in statistics, computer science or business.

The importance of the mathematical sciences to the ambitious scientist and engineer of the present day cannot be overemphasized. Many phenomena of nature can only be understood adequately when translated into the language of mathematics. In a day when inventions are sought almost on schedule, a student majoring in science or engineering at a university may expect to find an emphasis on the basic tool of mathematics.

Undergraduate education in mathematics has, and will continue, to undergo substantial changes during this decade. The computer is primarily responsible for this. High speed computing machines have for many years been an important research tool. However, what is particulary striking about the 1970's is the extent to which computers also are being used for other tasks in industry and government. This has created new demands for *professional applied mathematicians*. Such people optimally have a solid background in basic mathematics, an understanding of advanced programming languages as well as advanced software techniques, and, finally, a mastery of important techniques in applied mathematics such as operations research and statistics.

People with these qualifications are needed in virtually all industrial and governmental settings. Those with an orientation toward engineering are needed to maintain and develop the mathematical software associated with computer-aided design. Moreover, many engineering problems are now simulated and solved on computers and there is a need for mathematicians to develop and maintain computer algorithms for these problems. Those whose interests lie primarily in industrial management are especially valuable in such diverse activities as industrial control, market forecasting and computer-based accounting systems. Finally, those with an interest in statistics are quite valuable to firms (for example, banking and insurance) who deal with a large amount of data and, thus, need professional mathematicians to develop and maintain the associated computer software.

Computer Facilities

Lamar University has a new Honeywell 66/20 large scale, time sharing computing system. The system has 4 million bits of on-line disc storage, three 9-track tape drives and one 7-track tape drive. Printing is done by two 1200/line/min printers. The system will support 32 remote terminals and is expandable to handle 500 remote terminals. In addition, it handles all of the present programming languages including Cobol, Fortran, GMAP, Basic, ALGOL and APL.

Placement Test

The Mathematics Department has developed a Placement Test for entrance into freshman mathematics courses. This test will assist the department in placing a student in the course for which the student's chances for successful completion are best. The test will be given during the summer orientation and regular registration periods. For information concerning the test, contact the Mathematics Department, Box 10047, Lamar University, Beaumont, Texas, 77710. All entering students (except those with grades of A or B in high school Algebra I, Algebra II and Trigonometry plus a score greater than 26 on the ACT or at least 590 on the Level 1 CEEB Mathematics test) are required to take the placement test before entering Mth 134, 1334, 1335, 148 or 236. Entrance into all other mathematics courses is determined by the counselor in the student's major department.

Teacher Certification — Mathematics

Those wishing to secure the Bachelor of Arts or the Bachelor of Science in Mathematics or the Bachelor of Science in Mathematical Sciences and at the same time certify for a provisional certificate (secondary school certificate with a teaching field in mathematics) must include in their degree program the following:

(1) 18 hours of professional education including Edu 331, 332, 338, 438 and 462.
(2) Minor to be expanded to include an approved 24 hour teaching field other than mathematics (Consult this catalog — College of Education).
(3) CS 131 and Mth 234.
(4) 12 hours of advanced mathematics to include Mth 330 or 338, 3311, 333 or 334, 335 or 336 or 337.
(5) Approved electives sufficient to make a total of 132 semester hours.

Recommended Programs of Study

Bachelor of Arts — Mathematics Major (Minimum) 126 hours

1. General requirements: (Minimum) 48 hours
   (a) Eng — Composition — six semester hours
   (b) Eng — Literature — six semester hours
   (c) Laboratory science — eight semester hours (same science)*
   (d) Gov. 231, 232
   (e) His — Soph Am His — six semester hours
   (f) Foreign Language through 232 (same language)
   (g) PE (Activity) — four semester hours (minimum)
2. Major requirements: 36 hours
   (a) Mth 148, 149, 241 — Calculus and Analytic Geometry I, II, III
   (b) Mth 233 — Computational Linear Algebra
   (c) Mth Electives — 21 semester hours (15 of which must be at an advanced** level) approved by the department
3. Minor requirements (to be approved by the department) 18 hours
4. Electives (to be approved by the department) 24 hours

*To be chosen from Phy 140/241, or 141/142 Chem, Bio or Geo.
**Advanced level courses are those that are 300/3000 or above.

Bachelor of Arts Standard Curriculum

First Year

First Semester		Second Semester	
Mth 148—Cal & Anal Geom I	4	Mth 149—Cal & Anal Geom II	4
Eng Composition	3	Eng Composition	3
Science	4	Science	4
Elective	3	Elective	3
PE/MLb 124/AFROTC	1	PE/AFROTC	1
	15		15

Second Year

First Semester		Second Semester	
Mth 241—Cal & Anal Geom III	4	Eng Literature	3
Eng Literature	3	His—Soph Am His	3
His—Soph Am His	3	For Lang 132	3
For Lang 131	3	Mth Elect	6
Mth 233—Com Lin Alg	3	PE Activity	1
PE Activity	1		16
	17		

Third Year

First Semester		Second Semester	
For Lang 231	3	For Lang 232	3
Gov 231	3	Gov 232	3
Mth Adv Elec	6	Mth Adv Elec	6
Minor	3	Minor	3
Elective	3	Elective	3
	18		15

Fourth Year

First Semester		Second Semester	
Mth Adv Elec	3	Mth Adv Elec	3
Minor	6	Minor	6
Elective	6	Elective	6
	15		15

Bachelor of Science — Mathematics Major (Minimum) 126 hours

1. General requirements: (Minimum) 33 hours
   Same as general requirements for Bachelor of Arts except English Literature is reduced to three semester hours and there is no foreign language requirement.
2. Major requirements: 48 hours
   (a) Mth 148, 149, 241
   (b) Mth 233, Mth 238
   (c) Mth Electives — 24 semester hours — 21 semester hours must be at an advanced level.
   (d) CS 131 and CS 132
3. Professional Electives: 27 hours
   Courses (to be approved by the department) in the Colleges of Engineering, Science or Business.
4. Electives: 18 hours
   (to be approved by the department) Courses outside of the colleges listed in (3) above with at least six hours from the Humanities and Social Sciences.

Bachelor of Science — Standard Curriculum

First Year

First Semester		Second Semester	
Eng Composition	3	Eng Composition	3
Mth 148 — Cal & Anal Geom I	4	Mth 149 — Cal & Anal Geom II	4
Science	4	Science	4
Elective	3	CS 131	3
PE/MLb 124/AFROTC	1	PE/AFROTC	1
	15		15

Second Year

First Semester		Second Semester	
Mth 241 — Cal & Anal Geom III	4	Mth 238 — Intro to Appl Mth	3
Mth 233 — Comp Lin Alg	3	Prof Elec	6
Eng Literature	3	Mth Elec	3
His—Soph Am His	3	His—Soph Am His	3
CS 132	3	PE Activity	1
PE Activity	1		16
	17		

Third Year

First Semester		Second Semester	
Gov 231	3	Gov 232	3
Prof Elec	3	Prof Elec	6
Elective	3	Elective	3
Mth Adv Elec	6	Mth Adv Elec	6
	15		18

Fourth Year

First Semester		Second Semester	
Prof Elec	6	Prof Elec	6
Elective	3	Elective	6
Mth Elec	6	Mth Elec	3
	15		15

Bachelor of Science in Mathematical Sciences

This is a professional program that is terminal in the sense that the student will be prepared to start an industrial or government career immediately after graduation. However, the student's training will be sufficiently comprehensive to allow entry into most graduate programs in the engineering, mathematical, physical, life or management sciences. The term mathematical sciences indicates the scope and breadth of this program since it includes subdisciplines such as **applied mathematics, computer science** and **statistics.**

Structure of Degree

To insure that the student is thoroughly trained in the important areas of mathematical sciences that will arise in his/her later studies, the first two years of the program are tightly structured. The requirements here are referred to as the **core program.**

Core Program

	Credits
Calculus	10 or 12
Physics (Phy 140 or Egr 132 and Phy 241)	7 or 8
Chemistry, Biology or Geology (141)	4
Computational Linear Algebra (Mth 233)	3
Differential Equations (Mth 331)	3
Computer Science (CS 131 and 132)	6
Probability and Statistics (Mth 234 & 437)	6
Numerical Analysis (Mth 4315)	3
Introduction to Applied Math (Mth 238)	3
Finite Mathematics (Mth 3321)	3
Practicum (Mth 3324)	3
	51 or 54*

University Requirements

English Composition and Literature	9
Sophomore History	6
PE/MLb/AFROTC	(minimum) 4
Sophomore Government 231, 232	6
	25

In the last two years the student is given the opportunity to select one of a number of different options or TRACKS. As opposed to a minor in a particular subject, a track, by definition, permits the interdisciplinary aspect of this degree. It consists of at least 20 credit hours.

Some examples of these tracks are given below. Other tracks may be designed in consultation with a student's counselor to meet the special needs of an individual student. More details also are given in departmental brochures.

Select a Track in:

Computer Science
- Software
- Hardware/Engineering

Data and Systems Analysis

Scientific Computation

Control Systems

Administration and Management Sciences

Engineering
- Civil
  - Structures Option
  - Environmental Science Option
  - Soil Engineering Option
- Mechanical
  - Mechanics Option
  - Energy Option
  - Engineering Science Option
  - Actuarial Science Option

*In Statistics Concentration, the core is increased by four hours of chemistry, biology or geology (142).

Data and Systems Analysis Track

This track is designed for students without specialized interests. The core of this track is operations research, in which one is introduced to important mathematical techniques for solving problems which arise in industry. The track includes advanced courses in statistics in which computing plays an important role. This sequence is highly recommended for students interested in graduate work in Management Science.

IE 437—Operations Research (Mth 234, IE 333)*
IE 430—Quality Assurance and Control (Mth 234)
IE 432—Statistical Decision Making for Engineers (Mth 234)
IE 335—Accounting for Engineers
CS 4306—Introduction to Information Structures (CS 4305)
Mth 439—Statistical Methods for Data Analysis

Administration and Management Sciences Track

Required Courses:

IE 4315—Organization and Management
BA 4308—Organizational Behavior
Acc 231—Principles of Accounting
Eco 233—Principles and Policies of Economics
BA 334—Marketing (Eco 232 or 233)

Electives: In addition to the five required courses above, the student will choose two more from the following set of courses:
Eco 334—Macro-Economics
BA 331—Business Law
Eco 4315—Social Control of Business (Six hours Eco)
Acc 334—Cost Accounting (Acc 232) or IE 335—Accounting for Engineers
A course in the Department of Sociology such as Soc 332 (Social Psychology) or substitute approved for the individual's program by the head of the student's department.

ACTUARIAL SCIENCE TRACK: See the Department Head for courses in this newly developed and exciting program geared to the insurance industry.

Computer Science Track

Required Courses:

CS/IE 3302—Functional Characteristics of Digital Computers (CS 132)
CS 4305—Introduction to Information Structures (IE 3302)
CS 4307—Survey of Programming Languages
CS 4308—Introduction to Compiler Theory (IE 3302 and CS 4305)
IE 437—Operations Research
Mth 3322—Computability
Mth 4316—Mathematical Programming

Additional courses to complete a track will be chosen with the assistance of a student's counselor.

*( ) indicates prerequisites

Bachelor of Science in Mathematical Sciences — General Degree Requirements

University requirements	25 credits
Core Program	51 or 54
Mathematical Sciences Electives	12
Electives	12
Humanities and Social Science Electives	6
Professional Technical Electives	18
	124 or 127

Mathematical Sciences — Statistics Concentration Degree Requirements

University requirements	25
Core Program*	55 or 58
Mathematical Sciences	15
Electives	9
Humanities and Social Science Electives	3
Professional Technical Electives	18
	125 or 128

*In the Statistics concentration the core course Mth 331 is replaced by Mth 4317 (Modern Developments in Statistical Methods)

Bachelor of Science in Mathematical Sciences (Standard Curriculum)

First Year

First Semester		Second Semester	
†Eng Comp	3	†Eng Comp	3
†Am His 231/236	3	CS 132 (Prog of Dig Comp)	3
Mth 148/236 (Calculus)	4 or 3	Mth 149/237 (Cal II)	3 or 4
CS 131 (Intro to Computers)	3	Mth 234 (Elem Stat)	3
Humanities & Social Science Elec	3	Phy 140 (Mechanics)	4
PE/MLb/AFROTC	1	**PE/AFROTC	1
	16 or 17		17 or 18

Second Year

First Semester		Second Semester	
Phy 241 (Heat, Elec & Mag)	4	Eng Literature	3
Mth 241 (Cal III)	4	Mth 233 (Comp Lin Alg)	3
Chem/Bio/Geo 141	4	Mth 3321 (Finite Mth)	3
Mth 238 (Intro to Appl Mth)	3	*Prof Elec	3
PE/MLb/AFROTC	1	***Elective	3
	16	**PE/AFROTC	1
			16

Third Year

First Semester		Second Semester	
Gov 231	3	Gov 232	3
Mth 437 (Prob & Stat)	3	†Am His 231/236	3
Mth 331 (Diff Eq)	3	Mth 4315 (Num Anal)	3
Prof Elec	3	Mth Sci Elec	3
Mth Sci Elec	3	Prof Elec	3
	15		15

Fourth Year

First Semester		Second Semester	
Mth Sci Elec	3	Mth 2322 (Practicum)	3
Prof Elec	6	Mth Sci Elec	3
***Elec	6	Humanities and Social Science Elec	3
	15	Prof Elec	3
		***Elec	3
			15

†Student must choose two distinct courses from the indicated list.

*Professional electives are courses selected in consultation with the student's advisor to complete the track selected by the student. If the student's track requires it, this Provisional Elective should be chosen from Chem/Bio/Geo 142 or Phy 242.

**Spring units may be allotted to the fall semester of all four years.

***To be selected with the approval of the student's counselor.

Bachelor of Science in Mathematical Sciences — Statistics Concentration (Standard Curriculum)

First Year

First Semester		Second Semester	
Eng Comp	3	Eng Comp	3
†Am Hist 231/236	3	CS 132 (Prog of Dig Comp)	3
Mth 148/236 (Calculus)	4 or 3	Mth 149/237 (Calculus II)	4 or 3
CS 131 (Intro to Computers)	3	Mth 234 (Elem Stat)	3
Humanities and Social Sciences Elec	3	Phy 140 (Mechanics)	4
PE/MLb/AFROTC	1	**PE/AFROTC	1
	16 or 17		17 or 18

Second Year

First Semester		Second Semester	
Phy 241 (Heat, Elec & Mag)	4	Eng Literature	3
Mth 241 (Calculus III)	4	Mth 233 (Comp Lin Alg)	3
Chem/Bio/Geo 141	4	Mth 3321 (Finite Mth)	3
Mth 238 (Intro to Appl Mth)	3	Minor	3
PE/MLb/AFROTC	1	Chem/Bio/Geo 142	4
	16	**PE/AFROTC	1
			17

Third Year

First Semester		Second Semester	
Gov 231	3	Gov 232	3
Mth 437 (Prob & Stat)	3	†Am His 231/236	3
Mth 4315 (Num Anal)	3	Mth 4316 (Mth Programming)	3
Minor	3	Mth 438 (Theory of Stat)	3
***Elec	3	Minor	3
	15		15

Fourth Year

First Semester		Second Semester	
Mth 4317 (Stat Method)	3	Mth 3322 (Practicum)	3
Mth 4321 (Least Sq — Reg Anal)	3	Mth 4322 (Anal of Var)	3
CS Elec	3	Minor	6
Minor	3	***Elec	3
***Elec	3		15
	15		

†Student must choose two distinct courses from the indicated list.
**Spring units may be allotted to the fall semester of all four years.
***To be selected with the approval of the student's counselor.

MATHEMATICS (Mth)

111 — Calculator Computation (1:1:0)*
Course utilization of calculators, efficient use of memory capability, simple algorithms, obtaining sophisticated features from only the +, −, ×, ± operations and estimation of error.

1212 — Individualized Tutorial Trigonometry (2:2:0)
Trigonometric functions, identities, inverse functions, graphs and applications. Only recommended for students who have no trigonometry.

1311 — Survey of Mathematics (3:3:0)
Mathematics history, problem solving, logic and other selected topics of current interest. Recommended for degrees with undesignated mathematics requirements.

1312 — Trigonometry-Lecture (3:3:0)
Study of trigonometric functions and identities, inverse functions, graphs and applications of trigonometry. Only recommended for students who have had no trigonometry in high school.

1313 — Individualized Tutorial Computational Skills (3:3:0)
Study of basic concepts and operations involved in computations. Problems from business, science, metrication, construction and geometry. Not recommended for students who have received credit in a course for which this or its equivalent is a prerequisite. When used as a prerequisite, a grade of B or better is recommended.

1314 — Individualized Tutorial Basic Algebra (3:3:0)
Review of skills and concepts of basic algebra. Signed numbers, linear equations and systems, quadratics, radicals and logarithms. Recommended

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

for those who need a review before taking Mth 134. Not recommended for students who have received credit in a course for which this or its equivalent is a prerequisite. When used as a prerequisite, a grade of B or better is recommended.

1315 — **Individualized Tutorial Consumer Mathematics (3:3:0)**
Interest, installment buying, discount and taxes. Not recommended for students who have received credit in a course for which this or its equivalent is a prerequisite.

1316 — **Fundamentals of Mathematics (3:3:0)**
Sets, logic, problem solving, probability and related topics.

1334 — **Intermediate Algebra (3:3:0)**
Designed to bridge the gap between Mth 1314 and Mth 1335. Second degree equations, conic sections, systems of equations, inequalities, partial fractions, complex numbers, finite sequences and series. Prerequisite: grade of B or better in Mth 1314 or its equivalent.

1335 — **Precalculus Mathematics (3:3:0)**
Fundamentals of algebra, trigonometry and analytic geometry. Prepares students for Mth 148 and Mth 236. Prerequisite: Mth 1334 or its equivalent.

134 — **College Algebra (3:3:0)**
Linear equations, systems, inequalities, programming. Vectors, matrices and logarithms. Prerequisite: High School Algebra I and II or a grade of B or better in Mth 1314.

1341 — **Elements of Analysis (3:3:0)**
Probability, differential and integral calculus. Prerequistie: Mth 134.

1342 — **Introduction to Mathematics of Finance (3:3:0)**
Simple and compound interest as applied to promissory notes, perpetuities, annuities, depreciation and bonds. Calculators will be used. Prerequisites: Mth 1334 or Mth 134 or the equivalent.

135 — **Contemporary Mathematics I (3:3:0)**
Logic, introduction to mathematical reasoning, sets and relations, the system of whole numbers, numeration systems, system of integers and elementary number theory.

136 — **Contemporary Mathematics II (3:3:0)**
Fractions and rational numbers, decimals and real numbers, concepts of probability, introduction to statistics, some concepts from algebra. Prerequisite: Mth 135.

139 — **Analysis II (3:3:0)**
Methods of integration, differential equations, polar coordinates and selected topics from analytic geometry. Prerequisite: Mth 148 or its equivalent.

148 — **Calculus and Analytic Geometry I (4:5:0)**
Functions, limits, derivatives of algebraic, trigonometric, exponential and logarithmic functions, curve sketching, related rates, maximum and minimum problems, definite and indefinite integrals with applications. Prerequisite: Mth 1335 or its equivalent. Class: 3 hours lecture, 2 hours recitation.

149 — **Calculus and Analytic Geometry II (4:5:0)**
Methods of integration, differential equations, polar coordinates and vector analysis. Prerequisite: Mth 148 or its equivalent. Class: 3 hours lecture, 2 hours recitation.

231 — **Analysis III (3:3:0)**
Plane analytic geometry, polar coordinates vectors and parametric equations and partial differentiation. Prerequisite: Mth 139.

232 — **Analysis IV (3:3:0)**
Multiple integrals, infinite series, complex numbers, partial differentiation. Prerequisite: Mth 231.

233 — **Computational Linear Algebra (3:3:0)**
Algorithmic approach to basic problems of linear algebra solution of linear equations, linear programming and the simplex method. Prerequisite: Mth 149 or Mth 237 may be taken concurrently.

234 — **Elementary Statistics (3:3:0)**
Introduction to computational statistics — data, measures of central tendency and variation. The normal distribution, correlation and sampling.

236 — **Calculus I (3:3:0)**
Sets, functions, limits, derivatives and applications. Introduction to integral calculus. Designed for students majoring in business, social, computer and life sciences. Prerequisite: high school Algebra I, II and Trigonometry or Mth 1335.

237 — **Calculus II (3:3:0)**
Integral calculus and applications. Functions of several variables. Convergence and divergence of series and sequences. Designed for students majoring in business, social, computer and life sciences. Prerequisite: Mth 236.

238 — **Introduction to Applied Mathematics (3:3:0)**
Mathematical modeling with applications to the biological, social and management sciences. Selected topics to suit the needs of individual students. Prerequisite: Mth 134, 1334 or 1335 or their equivalents.

241 — **Calculus and Analytic Geometry III (4:5:0)**
Vectors, parametric equations, functions of several variables, partial derivatives, multiple integrals, functions of complex variable. Prerequisite: Mth 149 or equivalent. Class: 3 hours lecture, 2 hours recitation.

330 — **Principles of Mathematics (3:3:0)**
Introduction to some modern mathematical topics. Symbolic logic, development of the number system, groups, fields, sets and function theory. Prerequisite: Mth 149 or Mth 231.

331 — **Ordinary Differential Equations (3:3:0)**
Solution and modeling techniques, existence and uniqueness, numerical procedures, linear equations and systems, special functions, autonomous nonlinear systems, qualitative techniques. Prerequsites: Mth 233 and Mth 232 or Mth 241.

3311 — **Set Theory (3:3:0)**
Infinite sets, cardinal and ordinal arithmetic. Axiom of choice. Transfinite induction. Applications in the topology of the real line, complex plane and simple closed curves. Prerequisite: Mth 149.

3313 — **Modern Elementary Geometry (3:3:0)**
A study of the structure of geometry with primary emphasis on the needs of the elementary teacher. Prerequisite: Mth 136.

3314 — **Elementary Algebra for Education Majors (3:3:0)**
An advanced course in algebra for elementary education majors whose specialization is mathematics. Prerequisite: Mth 136.

3315 — **Number Theory for Education Majors (3:3:0)**
A development of the elementary theory of numbers with emphasis on the needs of teachers. Prerequisite: Mth 136.

3317 — **Problem Solving (3:3:0)**
Role of inductive and deductive methods in solving and posing problems, motivational techniques to help children become better problem solvers. Methodology is introduced via illustrative examples. Prerequisite: Mth 135 and 136.

3319 — **Combinatorics (3:3:0)**
Emphasis on decision-making applications. Topics covered: sets and order sets, order relation, logic, induction, generating functions, general methods of counting, permutations, Polya's theorem, partitions, trees, networks, scheduling problems, integral and conditional linear programming, decision problems. Prerequisite: Mth 149 or Mth 237.

3321 — **Finite Mathematics (3:3:0)**
Liner programming, matrix game theory, social science models, transportation models, graph theory models. Prerequisite: at least one of Mth 148, 233, 236, 238.

3322 — Computability (3:3:0)
Existence of non-computable functions, notion of computability; recursive functions, Turing machines, Markov algorithms; equivalence of these notions. Church's thesis, recursive enumerability; unsolvability. Prerequisite: Junior standing.

3324 — Practicum in Applied Mathematics (3:3:0)
Introduction to methods and practices of applied mathematics. The student (with faculty supervision) will be required to identify, analyze and construct a mathematical model of an appropriate problem in his or her chosen field. A partial list of areas particularly suited to these techniques includes: biology, economics, psychology and oceanography. Prerequisite: Consent of department head of Mathematics.

333 — Higher Geometry (3:3:0)
Axiomatic treatment of projective, metric, Euclidean or topological spaces. Emphasis on method rather than on content. Prerequisite: Mth 149 or 231.

334 — Higher Geometry (3:3:0)
Advanced topics in Euclidean geometry. Brief study of satellites. Constructible elements, Appolonius' problem, geometrical transformations. Euler line, Feuerbach Theorem, geometry of the triangle. Dandelin spheres, conic sections. Prerequisite: Mth 149 or Mth 231.

335, 336 — Modern Algebra (3:3:0)
Group theory, integral domains, fields, polynomials, unique factorization domains, rings and ideals, spectral theorem in finite dimensional spaces. Jordan canonical form and other selected topics. Prerequisite: Mth 233.

3361 — Applied Abstract Algebra (3:3:0)
Binary relations and graphs, Boolean algebra, semigroups, groups, rings, polynomial rings, ideals, finite fields with applications to computer design, circuits, switching networks, linear finite state machines, finite state automata and coding theory. Prerequisite: Mth 233.

337 — Theory of Equations (3:3:0)
Complex numbers, general theorems on algebraic equations. Determinants, matrices, Cramer's Rule, symmetric functions, resultants, discriminants and elimination, Graeffe method. Prerequisite: Mth 149 or Mth 231.

338 — Advanced Calculus (3:3:0)
The concept of a function, limits sequences, continuity, differentiability, the Reimann integral, infinite series, Taylor series. Prerequisite: Mth 241.

4131, 4231, 4331 — Special Problems (1-3:1-3:0)
Special advanced problems in mathematics to suit the needs of individual students. Course may be repeated when the topic varies.

4141, 4241, 4341 — Special Topics in Algebra (1-3:1-3:0)
Special advanced problems in algebra to suit the needs of individual students. This course may be repeated for credit when topics differ.

4142, 4242, 4342 — Special Topics in Analysis (1-3:1-3:0)
Special advanced problems in analysis to suit the needs of individual students. This course may be repeated for credit when topics differ.

4143, 4243, 4343 — Special Topics in Geometrs (1-3:1-3:0)
Special advanced problems in geometry to suit the needs of individual students. This course may be repeated for credit when topics differ.

4301 — Differential Equations and Linear Algebra (3:3:0)
Ordinary differential equations, Laplace transforms, linear algebraic equations, matrices, eigenvalues, systems of differential equations. Prerequisite: Mth 241.

4302 — Partial Differential Equations (3:3:0)
Fourier series, separation of variables applied to problems for heat, wave and Laplace equations. Transform methods and numerical procedures. Prerequisite: Mth 241.

431 — Complex Variables (3:3:0)
Complex numbers, analytic functions, complex line integrals, Cauchy inte-

gral formula and applications. Prerequistie: Mth 241, 3311.

4315 — Numerical Analysis (3:3:0)
Approximations, interpolations, finite differences, numerical integration, curve fitting. Prerequisite: Mth 139 or 149 or Mth 237 and CS 132 or Egr 133 or its equivalent.

4316 — Mathematical Programming (3:3:0)
Theory, development and computational aspects of the simplex method; convexity; degeneracy problems; revised simplex method; transportation problems, network flow problems; industrial applications. Prerequisite: Mth 241 or 237.

4317 — Modern Developments in Statistical Methodology (3:3:0)
Special subjects in higher mathematics to meet the needs of individual students. Prerequistie: Approval of instructor.

4321 — Least Squares and Regression Analysis (3:3:0)
Simple, multiple and curvilinear regression analysis; orthogonal polynomials; nonlinear least squares. Prerequisite: Approval of instructor.

4322 — Analysis of Variance (3:3:0)
Analysis of variance in experimental statistics, single and multiple classifications; factorials; analysis of designed experiments including randomized blocks and Latin squares; multiple comparisons and orthogonal contrasts. Prerequisite: Approval of instructor.

4325 — Finite Element Analysis (3:3:0)
Fundamentals of the finite element method. Domain discretization, interpolation functions, computer implementation. Applications to heat transfer, torsion on noncircular sections, and irrotational flow. Prerequisite: Mth 232 or Mth 241 and either Mth 331 or any 400 level mathematics courses.

433 — Linear Algebra (3:3:0)
Linear spaces, linear transformations, matrices, determinants, eigenvalues, eigenvectors, inner product spaces, adjoint spaces, self adjoint transformations, quadratic forms, principal axis transformations, spectral decomposition. Prerequisite: Mth 233 and 149 or Mth 237.

435 — Introductory Topology (3:3:0)
Topological, metric, product, connected and compact spaces. Continuity, homeomorphism, sub-spaces, components and open coverings. Some applications to analysis. Prerequisite: Mth 3311.

4351 — Cultural Approach to Mathematics (3:3:0)
Designed for liberal arts students, teachers of elementary and secondary mathematics and non-mathematical subjects. A survey demonstrating how mathematics is intricately related to physical sciences, philosophy, logic, religion, literature, music, painting and other arts. Resources are Italy with its vast heritages as found in its museums and national monuments. Prerequisite: none. Lamar University-Rome program only.

437 — Probability and Statistics (3:3:0)
Introduction to the theory of probability and statistical inference, random variables of discrete and continuous types. Estimation theory, testing hypotheses, regression and least square theory. Prerequisite: Mth 241.

438 — Theory of Statistics (3:3:0)
General theory of estimation and sufficiency including maximum likelihood, minimum-variance estimation; general distribution theory and the theory of testing hypotheses. Prerequisite: Mth 241.

College of Fine and Applied Arts

Departments: Art, Communication, Music

W. Brock Brentlinger, Ph.D., Dean
Kathy Newton, Secretary

AIMS AND PURPOSES

In Relation to the University: Within the context of a philosophy that suggests that art and science may improve upon nature, the College of Fine and Applied Arts provides work on a professional level in several creative and practical disciplines. The College also assumes the role of contributing to the education of the "whole" man or woman; therefore, with the possible exception of some of the upper level courses, all of the work available in the College is open to and within the capabilities of most students enrolled in the University. It is the purpose of those courses in the fine arts to confront the unknown from a non-science oriented approach to knowledge to encourage the development of aesthetic sensitivity and to provide for an enriching artistic

experience. In this respect the aims and purposes of the College of Fine and Applied Arts agree with and complement those of Lamar University. The College also offers several programs in the applied arts designed to equip the student, as practically as possible, for vocations in the fields of advertising, communication and speech and hearing therapy.

In Relation to the Departments: The College of Fine and Applied Arts offers the following basic degree programs:

1. Bachelor of Fine Arts — Art Major
   a. Graphic Design
   b. Studio Art
2. Bachelor of Science — Art Major
   a. Plan I — Graphic Design
   b. Plan II — Studio Art
   c. Plan III — All Level Teacher Certification
3. Bachelor of Music — Majors in:
   a. All Applied Fields
   b. Theory and Composition
   c. Music Education
4. Bachelor of Science — Music Major, Teacher Certification (all levels)
   a. Instrumental Major
   b. Piano Major
   c. Vocal Major
   d. Theory and Composition
5. Bachelor of Science — Speech Major
   a. Plan I — Teacher Certification in Speech, Theater or Journalism
   b. Plan II — Teacher Certification in Speech and Hearing Therapy
   c. Plan III — Teacher Certification in Deaf Education
   d. Plan IV — Speech and Hearing Therapy, Public Address, Theater or Communication
6. Bachelor of Arts — Speech major, available in all four plans listed
7. Bachelor of Science — Communication Majors
8. Bachelor of General Studies — Fine Arts

Descriptions of graduate programs leading to the Master of Music or Master of Music Education degree are included in the Graduate Bulletin.

HUMANITIES (Hum)

The departments of art, communication and music of the College of Fine and Applied Arts cooperate in the offering of three interdisciplinary courses in fine arts appreciation.

130 — Appreciation of Art and Music (3:3:0)*

Survey course of art and music appreciation. Introduces student to major monuments of painting, sculpture and architecture. The course is concerned with basic principles of line, color, space and form common to visual art. The music section seeks to develop the student's perception of "sound" and "time" in music. A wide spectrum of music is presented including jazz, rock, opera, nonwestern and traditional classical.

131 — Appreciation of Music and Theater (3:3:0)

A survey course of music and theater appreciation. Introduces student to the concepts of "sound" and "time" in music. A wide spectrum of music will be presented including jazz, rock, opera, nonwestern and traditional classi-

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

cal. The theater section presents theater as a fine art including comment on the related fields of motion pictures and television.

132 — Appreciation of Theater and Art (3:3:0)
A survey course of theater and art appreciation. Introduces the student to theater as a fine art including comment of the related fields of motion pictures and television. The art section of the course presents the major monuments of painting, sculpture and architecture. Explains the basic principles of line, color, space and form common to all visual arts.

135 — Introduction to Museum Studies (3:3:0)
Traces the history of museums providing an overview of the functions, staff, facilities, and funding required. Emphasis is on the individual's role in preserving our heritage with practical experience in specific projects.

231 — Studies in Italian Culture (3:2:4)
Exposure to and study of the history of the development of the cultural arts in central Italy by means of lectures and exploratory visits to churches, museums and important historical sites in Rome, Naples, Florence and nearby cities. Summers only. (LU-Rome only.)

331 — Experiential Learning in the Arts (3:0:9)
Design and implementation of experiential learning study project under guidance of faculty advisor. Provides opportunity to apply classroom learning to actual experiences in community art programs. May be repeated for credit.

335 — Topics in Museum Studies (3:3:0)
Research seminars and individual directed study conference courses on selected topics, techniques and developments in museology. May be repeated for a maximum of six semester hours when the area of study is different.

439 — Seminar in the Fine Arts (3:3:0)
A study of aesthetics, i.e., the theory of fine arts and people's response to them particularly in reference to the visual arts, music and theater.

4101, 4201, 4301, 4601 — Institute or Workshop in Museum Studies (1:A*:0)
Workshops in museum techniques and development designed for volunteers and professionals in the field who desire to advance their competence. May be repeated for a maximum of four semester hours when subjects differ sufficiently.

Bachelor of General Studies — Fine Arts

The Bachelor of General Studies — Fine Arts degree offers a program of interest to those who desire a wide knowledge of the arts without the intent of becoming practicing professional artists and teachers of the arts. Thus, the program offered through this degree resists any tendency toward specialization within the arts. It does provide opportunity, however, for an individual to construct his/her own curricular plan, i.e., to follow a special interest within the arts, *or* to complement his/her appreciation and understanding of the arts through the selection of a rather broadbased program of elective courses from the University offerings as a whole.

Recommended Program of Study
Bachelor of General Studies — Fine Arts

First Year

First Semester		Second Semester	
The 233—Intro to Thea	3	Art 139—Art Appreciation	3
MLt 111—Music Principles	1	His 234—Amer His: Arts	3
MEd 131—Elements of Music	3	MLt 112—Music Principles	1
Eng 1314—Composition	3	Eng 1315—Composition	3
Mth/Sci/For Lang	3-4	Mth/Sci/For Lang	3-4
PE—Activity	1	PE—Activity	1
	14-15		14-15

Second Year

First Semester		Second Semester	
MLt 113—Pop Music Survey	1	Art 236—Art History II	3
Art 235—Art History I	3	Eng 2312—English Literature	3
Eng 2311—English Literature	3	Gov 2324—American Politics	3
Gov 2321—Intro to Government	3	Mth/Sci/For Lang	3-4
Mth/Sci/For Lang	3-4	His 231—American History	3
PE—Activity	1	PE—Activity	1
	14-15		16-17

Third Year

First Semester		Second Semester	
MLt 333—Music History I	3	MLt 334—Music History II	3
Eng 337/4317—Drama	3	The 334—Stagecraft	3
Hum 331—Experiential Learning	3	Hum 331—Experiential Learning	3
Elective	4	Elective	3
Elective	4	Elective	4
	16		16

Fourth Year

First Semester		Second Semester	
The 436—History of Theater	3	Hum 439—Seminar—Fine Arts	3
Hum 331—Experiential Learning	3	Elective	3
Elective	3	Elective	3
Elective	3	Elective	3
Elective	3	Elective	3
	15		15

Department of Art

Department Head — Robert C. Rogan. *Associate Professors* — J. Robert Madden, Jerry A. Newman, Robert G. O'Neill. *Instructors* — Philip M. Fitzpatrick, Meredith M. Jack, Lynne Lokensgard, John F. Sommerfeld. *Adjunct Instructor* — Mary Frances Van Pelt. *Secretary* — LaVerne J. Gilligan.

The Department of Art offers undergraduate instruction leading to the Bachelor of Fine Arts degree or the Bachelor of Science degree. Art courses are designed for the general student as well as those who intend to enter the visual arts professionally.

Art majors are required to follow the prescribed sequence of courses. The letter grade "C" will be the minimum prerequisite grade for continuing studio courses in sequence.

Nonmajors may be admitted to art courses by consultation.

Students may minor in art by earning 18 hours of credit approved by the department head.

During the senior year, a candidate for a degree in art will be required to prepare a one-person exhibit or to participate in a group exhibit. The Department of Art reserves the right to retain a selected work from each graduate for its department collection.

Recommended Programs of Study

Bachelor of Fine Arts
Specialization in Graphic Design

First Year

First Semester		Second Semester	
Art 131—Drawing I	3	Art 132—Drawing II	
Art 133—Design I	3	Art 134—Design II	3
Art 139—Art Appreciation	3	Hum 131	3
Eng—Composition	3	Eng—Composition	3
PE—Activity	1	PE—Activity	1
Mth/Lab Sci/For Lang	3-4	Mth/Lab Sci/For Lang	3-4
	16-17		16-17

Second Year

First Semester		Second Semester	
Art 231—Drawing III	3	Art 232—Drawing IV	3
Art 233—Design III	3	Art 236—Art History II	3
At 235—Art History I	3	Art 237—Graphic Design I	3
PE—Activity	2	PE—Activity	2
Dft 133	3	Eng Lit	3
Mth/Lab Sci/For Lang	3-4	Mth/Lab Sci/For Lang	3-4
	17-18		17-18

Third Year*

First Semester		Second Semester	
Art 239—Photography I	3	Art 3393—Photography II	3
Art 3313—Illustration I	3	Art 3343—Graphic Design III	3
Art 3333—Graphic Design II	3	Art His Elective	3
Soph Am His	3	Soph Am His	3
Gov 231	3	Gov 232	3
	15	Eco 233	3
			18

Fourth Year

First Semester		Second Semester	
Art—Gr Des Elective	3	Art 4343—Prob Gr Des	3
Art 3355—Printmaking I	3	Art Elective	3
Art 3316—Watercolor I	3	Art—Studio Elective	3
Art His Elective	3	Art His Elective	3
Free Elective	3	Free Electives	6
	15		18

*Art 235-236 prerequisite to all Art 300-400 level courses for art majors.

Specialization in Studio Art

First Year

First Semester		Second Semester	
Art 131—Drawing I	3	Art 132—Drawing II	3
Art 133—Design I	3	Art 134—Design II	3
Art 139—Art Appreciation	3	Hum 131	3
Eng—Composition	3	Eng—Composition	3
PE—Activity	1	PE—Activity	1
Mth/Lab Sci/For Lang	3-4	Mth/Lab Sci/For Lang	3-4
	16-17		16-17

Second Year

First Semester		Second Semester	
Art 231—Drawing III	3	Art 232—Drawing IV	3
Art 233—Design III	3	Art 234—Sculpture I	3
Art 235—Art History I	3	Art 236—Art History II	3
PE—Activity	2	Art 238—Painting I	3
Eng—Literature	3	PE—Activity	2
Mth/Lab Sci/For Lang	3-4	Mth/Lab Sci/For Lang	3-4
	17-18		17-18

Third Year*

First Semester		Second Semester	
Art 3315—Drawing V	3	Art 3325—Drawing VI	3
Art 3316—Watercolor I	3	Art 3317—Painting II	3
Art 3355—Printmaking I	3	Art His Elective	3
Soph Am His	3	Soph Am His	3
Gov 231	3	Gov 232	3
	15		15

Fourth Year

First Semester		Second Semester	
Art—Studio Elective	3	Art—Studio Elective	3
Art—Studio Elective	3	Art—Studio Elective	3
Art—Studio Elective	3	Art—Studio Elective	3
Art His Elective	3	Art His Elective	3
Electives	6	Electives	6
	18		18

*Art 235-236 prerequisite to all Art 300-400 level courses for art majors.

Bachelor of Science — Art

Plan I

This program is designed for those students seeking professional careers in graphic design.

First Year

First Semester		Second Semester	
Art 131—Drawing I	3	Art 132—Drawing II	3
Art 133—Design I	3	Art 134—Design II	3
Eng—Composition	3	Eng—Composition	3
PE—Activity	1	PE—Activity	1
Hum 131	3	Mth	3
Mth	3	Dft 133	3
	16		16

Second Year

First Semester		Second Semester	
Art 231—Drawing III	3	Art 236—Art History II	3
Art 233—Design III	3	Art 237—Graphic Design I	3
Art 235—Art History I	3	Art 239—Photography I	3
Eng—Literature	3	PE—Activity	2
PE—Activity	2	Electives	6
Elective	3		17
	17		

Third Year*

First Semester		Second Semester	
Art 3313—Illustration I	3	Graphic Design Elective	3
Art 3333—Graphic Design II	3	Art 3343—Graphic Design III	3
Soph Am History	3	Soph Am History	3
Mth/Lab Sci/For Lang	3-4	Mth/Lab Sci/For Lang	3-4
Elective	3	Eco 233	3
	15-16		15-16

Fourth Year

First Semester		Second Semester	
Art Elective	3	Art 4343—Prob Gr Des	3
Art 3355—Printmaking I	3	Art Elective	3
Gov 231	3	Gov 232	3
Electives	9	Electives	9
	18		18

*Art 235-236 prerequisite to all Art 300-400 level courses for art majors.

Plan II

This program is designed for those students seeking careers in Studio Art.

First Year

First Semester		Second Semester	
Art 131—Drawing I	3	Art 132—Drawing II	3
Art 133—Design I	3	Art 134—Design II	3
Eng—Composition	3	Art 139—Art Appreciation	3
PE—Activity	1	Eng—Composition	3
Hum 131	3	PE—Activity	1
Mth	3	Mth	3
	16		16

Second Year

First Semester		Second Semester	
Art 231—Drawing III	3	Art 231—Drawing IV	3
Art 233—Design III	3	Art 234—Sculpture I	3
Art 235—Art History I	3	Art 236—Art History II	3
PE—Activity	2	Art 238—Painting I	3
Eng—Literature	3	PE—Activity	2
Mth/Lab Sci/For Lang	3-4	Mth/Lab Sci/For Lang	3-4
	17-18		17-18

Third Year*

First Semester		Second Semester	
Art 3316—Watercolor I	3	Art 3327—Painting III	3
Art 3317—Painting II	3	Soph Am History	3
Art 3355—Printmaking I	3	Electives	9
Soph Am History	3		15
Electives	3		
	15		

Fourth Year

First Semester		Second Semester	
Art—History	3	Art—History	3
Gov 231	3	Gov 232	3
Electives	12	Electives	12
	18		18

*Art 235-236 prerequisite to all Art 300-400 level courses for art majors.

Plan III

All-Level Certification

Fulfilling the requirements for Plan III qualifies a student for teacher certification in art, all levels.

First Year

Second Year

First Semester		Second Semester	
Art 131—Drawing I	3	Art 132—Drawing II	3
Art 133—Design I	3	Art 134—Design II	3
Eng—Composition	3	Eng—Composition	3
PE—Activity	1	PE—Activity	1
Hum 131	3	Mth	3
Mth	3	Elective	3
	16		16

Second Year

First Semester		Second Semester	
Art 231—Drawing III	3	Art 236—Art History II	3
Art 233—Design III	3	Eng—Literature	3
Art 235—Art History I	3	PE—Activity	2
Eng—Literature	3	Science (lab)	4
PE—Activity	2	Electives	6
Science (lab)	4		18
	18		

Third Year*

First Semester		Second Semester	
Art 3371—Elementary Art	3	Art 3381—Secondary Art	3
Edu 331—Foundations	3	Edu 334—Child Development	3
Edu 332—Psychology	3	Gov 232	3
Gov 231	3	Soph Am History	3
Soph Am History	3	Elective	4
Elective	3		16
	18		

Fourth Year

First Semester		Second Semester	
Art 4331—Crafts Elem Edu	3	Art 4341—Crafts Sec Edu	3
Art 4371—Curr & Inst in Art Ed	3	Edu 463—Stu Teaching	6
Edu 438—Classroom Mngt	3	Electives	6
Electives	6		15
	15		

*Art 235-236 prerequisite to all Art 300-400 level courses for art majors.

Art

131 — Drawing I (3:6:0)*

A beginning course investigating a variety of drawing media, techniques and subjects, exploring perceptual and descriptive possibilities.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

132 — Drawing II (3:6:0)
Continuation of Drawing I stressing the expressive and conceptual aspects of drawing. Prerequisite: Drawing I.

133 — Design I (3:6:0)
An introduction to the elements of art structure with emphasis on two-dimensional design.

134 — Design II (3:6:0)
Continuation of Design I with emphasis upon three-dimensional concept. Prerequisite: Design I.

135 — Introduction to Visual Studies (3:3:0)
Development of aesthetic awareness through examination of our environment and its relationship to visual arts.

139 — Art Appreciation (3:3:0)
An introductory course emphasizing the understanding and appreciation of visual arts (painting, sculpture, architecture) open to all students.

1393 — Introduction to Photographic Arts (3:3:0)
Fundamentals of photography, including cameras, films and lighting. Recommended for non-majors who wish a course requiring no laboratory.

231 — Drawing III (3:6:0)
A life drawing course emphasizing structure and action of the human figure. Prerequisite: Drawing II.

232 — Drawing IV (3:6:0)
A continuation of Drawing III with emphasis on individual expression. Prerequsite: Drawing III.

233 — Design III (3:6:0)
An advanced investigation into the problems of two-dimensional form with emphasis on individual expression. Prerequisite: Design II.

234 — Sculpture I (3:6:0)
An exploration of the various sculptural approaches in a variety of media including additive and subtractive techniques. Prerequisite: Drawing II & Design II.

235 — Art History Survey I (3:3:0)
A survey of painting, sculpture, architecture and the minor arts from prehistoric times to the 14th Century.

236 — Art History Survey II (3:3:0)
A survey of painting, sculpture, architecture and the minor arts from the 14th Century to the present.

237 — Graphic Design I (3:6:0)
An introduction to the basic processes and techniques of advertising art. Prerequisite: Design III.

238 — Painting I (3:6:0)
Exploring the potentials of painting media with emphasis on color and composition. Prerequisite: Drawing II & Design II.

239 — Photography I (3:6:0)
An introduction to basic photographic processes and techniques used as an art medium.

3313 — Illustration I (3:6:0)
A media course. The preparation and execution of graphic material for reproduction.

3315 — Drawing V (3:6:0)
Continuation of drawing. Experimentation with varios media and their adaptability to drawing principles. Prerequisite: Art 234.

3316 — Watercolor I (3:6:0)
Study and practice in the planning and execution of paintings in transparent and opaque watercolor. Prerequisite: Art 234.

3317 — Painting II (3:6:0)
Continuation of Painting I with emphasis on individual expression. Prerequisite: Art 238.

3323 — Illustration II (3:6:0)
Experimentation with various techniques and/or media. Continuation of Art 3313.

3325 — Drawing VI (3:6:0)
Continuation of Art 3315. Prerequisite: Art 3315.

3326 — Watercolor II (3:6:0)
Continuation of 3316. Prerequisite: Art 234.

3327 — Painting III (3:6:0)
Continuation of 3317. Prerequisite: Art 3317.

3333 — Graphic Design II (3:6:0)
The study of basic layout, advertising design and commercial reproduction techniques. Prerequisite: Art 237.

3335 — Crafts (3:6:0)
Basic processes of textile design, weaving, leather and jewelry. May be repeated for credit. Prerequisite: Art 234.

3343 — Graphic Design III (3:6:0)
Continuation of Art 3333. Prerequisite: Art 3333.

3353 — Fashion Layout and Illustration (3:6:0)
A study of basic layout and illustration for fashion advertising.

3355 — Printmaking I (3:6:0)
An introduction to printmaking with an emphasis on intaglio and relief processes. Prerequisite: Art 234.

3365 — Printmaking II (3:6:0)
A continuation of Art 3355 with emphasis on planographic and serigraphic techniques. Prerequisite: Art 3355.

3371 — Elementary Art Education (3:6:0)
Contemporary concepts of art in the elementary school program. Experience with a variety of techniques and media appropriate for the elementary classroom teacher.

3375 — Sculpture II (3:6:0)
Application of the principles of sculpture through experiment in clay, plaster and various materials. May be repeated for credit.

3376 — Ceramics I (3:6:0)
Investigation and practice in ceramic processes: forming and firing techniques. May be repeated for credit. Prerequisite: Art 234 or permission of instructor.

3381 — Secondary Art Education (3:6:0)
Problems involved in building a significant art program for the contemporary secondary school; studio experience with techniques and media appropriate for the secondary school.

3386 — Ceramics II (3:6:0)
Opportunities for specialization in ceramic processes. May be repeated for credit. Prerequisite: Art 3376.

3393 — Photography II (3:2:4)
Advanced study of photography as an art medium. Prerequisite: Art 239.

4315 — Drawing VII (3:6:0)
Specialized problems in studio area. May be repeated for credit. Prerequisite: Art 232.

4316 — Painting IV (3:6:0)
Specialized problems in studio area. May be repeated for credit.

4325 — Drawing VIII (3:6:0)
A continuation of Drawing VII. Prerequisite: Art 3325.

4326 — Painting V (3:6:0)
A continuation of Painting IV. May be repeated for credit. Prerequisite: Art 4316.

4331 — Crafts Elementary Education (3:6:0)
An introduction to various craft materials and techniques used in the elementary school. Prerequisite: Art 3371. Course may be repeated for credit.

4333 — **Problems in Graphic Design (3:6:0)**
Further study of commercial art techniques and typography. Prerequisite: Art 3343.

4336 — **Mural Painting (3:3:0)**
An introduction to the history of mural painting, techniques, themes, design, mechanics and color. Application of art on walls as a finished mural.

4338 — **Renaissance Art (3:3:0)**
Study of 15th and 16th century art in the Western world.

4341 — **Crafts Secondary Education (3:6:0)**
An introduction to the various craft materials and techniques used in the secondary school. Prerequisite: Art 3381. Course may be repeated for credit.

4343 — **Problems in Graphic Design. (3:6:0)**
Study in commercial art techniques and production. Prerequisite: Art 3343.

4348 — **Nineteenth & Twentieth Century Abstract Art (3:3:0)**
Foundation of Abstraction in European Art from Neo-Classicism through Surrealism.

4353 — **Special Problems in Graphic Design I (3:6:0)**
Investigation of problems, methods and other considerations relevant to designing an advertising campaign. Prerequisite: Art 3343.

4355 — **Printmaking III (3:6:0)**
Specialized problems in studio area. May be repeated for credit. Prerequisite: Art 3365.

4358 — **American Art (3:3:0)**
The development of painting, sculpture and architecture in the United States from Colonial times to the present.

4363 — **Special Problems in Graphic Design II (3:6:0)**
Continuation of 4353. Prerequisite: Art 3343.

4368 — **Contemporary Art (3:3:0)**
A historical and critical analysis of painting, sculpture and architecture in Europe and the Americas from 1900 to the present.

4371 — **Curriculum and Instruction in Art Education (3:3:0)**
Problems in selecting, evaluating and guiding art activities. Study of children's development in art as background for teaching.

4373 — **Field Study in Graphic Design (3:6:0)** Familiarization with the overall commercial art field through actual experience. Time to be arranged. Permission of instructor.

4375 — **Sculpture III (3:6:0)**
Specialized problems in studio area. May be repeated for credit. Prerequisite: Art 3375.

4376 — **Ceramics III (3:6:0)**
Specialized problems in studio area. May be repeated for credit. Prerequisite: Art 3376.

4378 — **Primitive Art (3:3:0)**
A study of the development and nature of primitive art.

4381 — **Problems: Art Education (3:6:0)**
Individual projects to be completed under faculty supervision. Prerequisite: Art 4371.

4391 — **Directed Individual Study (3:A*:0)**
Study of specialized area within art education field. Permission of instructor. May be repeated for credit.

4393 — **Directed Individual Study (3:A*:0)**
Study of specialized area within commercial art field. Permission of instructor. May be repeated for credit.

4395 — **Directed Individual Study (3:A*:0)**
Study of specialized area within fine arts field. Permission of instructor. May be repeated for credit.

*Arranged

Department of Communication

Department Head — DeWitte T. Holland. *Professors* — Robert F. Archilles, W.Brock Brentlinger, S. Walker James. *Associate Professors* — Arnold C. Anderson, John P. Johnson, W. Patrick Harrigan III, Olen T. Pederson, Robert Moulton. *Assistant Professors* — Mary Alice Baker, Vera Hays Campbell, White A. Jacob, Lane Roth, Robert Wilkerson, Betty Winney. *Instructors* — Jeff Bass, Charles Butt. *Secretaries* — Sandra Bougere, Cathy Mistric, Diane Kersh.

The Department of Communication has four plans of study under either the B.S. or the B.A. degree. Secondary teacher certification is offered in speech, drama or journalism under Plan I. Plan II is a generic speech and hearing science degree that is a foundation for the master's degree and teacher certification in speech pathology or deaf education. Plan III is the mass communication degree and Plan IV is an individualized program in any of the areas of the department. It does not lead to teacher certification, but being highly flexible it lends itself to specialized professional interests or to preparation for graduate study. Non-communication department courses focusing on the oral communicative process may be considered for communication credit in a degree of the department.

The Mass Communication and General Speech under Plan IV programs serve as appropriate degrees for entry into law schools. Either of these plans also may serve as a three year pre-law foundation for special degree programs described earlier under Degree Requirements. See the head of the Communication Department for details.

The department does not recognize grades of D in the major area for degree or teacher certification purposes, although they may be considered for elective purposes.

Theater majors, whether for degree or teacher certification purposes, are required to take Theater 210-Theater Practicum during four different semesters or summer terms. Two of these practicums may be transferred from other colleges.

Speech majors planning to certify to teach speech are required to take Speech 222-Forensic Activity twice.

Recommended Programs of Study

Bachelor of Science — Speech Major

Plan I (For those who wish to qualify for a secondary teacher's certificate in speech, drama or journalism)

Six semester hours of a single modern language may be used for either the math or the science requirement under Plan I.

First Year

First Semester		Second Semester	
Eng—Composition	3	Eng—Composition	3
PE—Activity	1	PE—Activity	1
Lab Science	4	Lab Science	4
Mth	3	Mth	3
Major—Required	6	Major—Required	3
	—	Hum 130	3
	17		—
			17

Second Year

First Semester		Second Semester	
Eng—Literature	3	Eng—Literature	3
His—United States (soph)	3	His—United States (soph)	3
PE—Activity	1	PE—Activity	1
Major—Required	6	Major—Required	3
Electives	3	Electives	6
	16		16

Third Year

First Semester		Second Semester	
Edu 331—Foundations	3	Edu 338—Cur and Mat	3
Edu 332—Edu Psy	3	Gov 232	3
Gov 231	3	Major—Adv	6
Major—Adv	3	Teaching Field Two and/or Electives	6
Teaching Field Two and/or Electives	6		18
	18		

Fourth Year

First Semester		Second Semester	
Edu 438—Classroom Mgmt	3	Edu 462—Student Teaching	6
Major—Adv	3	Teaching Field Two and/or Electives	6
Teaching Field Two and/or Electives	12		12
	18		

Total 132

Teacher certification is available in speech, theater (drama) and journalism under Plan I.

Courses included in the Public Speaking/Speech area are as follows: 132, 222 (twice), 235, 238, 434, 438, 439 and three advanced hours. In addition, Speech 1311 is a degree requirement.

Courses in the theater/drama area are as follows: The 211 (four times), 231, 237, 335, 4311, 4312, 437 and 431. In addition, Speech 1311 is a degree requirement.

Courses included in the journalism area are as follows: Com 133, 231, 232, 333, 3381, 4383, 431 and 432. In addition, Com 131 is a degree requirement.

Plan II General Speech and Hearing Science. This program lays the foundation for professional teacher certification in speech therapy and deaf education which may be completed on the graduate level. Six hours of a single modern language may be used instead of math under Plan II.

First Year

First Semester		Second Semester	
Bio 141	4	Bio 142	4
Eng—Composition	3	Hum 130, 131, 132	3
PE—Activity	1	Eng—Composition	3
Mth	3	PE—Activity	1
Spc 1301—Intro to the field	3	Mth	3
Spc 1302—Phonology	3	Spc 1303—S & H Voi Sci	3
	17		17

Second Year

First Semester		Second Semester	
Eng—Literature	3	Eng—Literature	3
His—U.S. (soph)	3	His—U.S. (soph)	3
PE—Activity	1	PE—Activity	1
Spc 2302—Intro Deaf Ed	3	Spc 2303—Intro Audio	3
Elective	6	Spc 2301—Intro Spc Path	3
	16	Elective	3
			16

Third Year

First Semester		Second Semester	
Ed 331—Foundation	3	Spc 3302—Language	3
Edu 332—Edu Psy	3	SpEd 2301—Found of SpEd	3
Gov 231	3	Edu 334—Child Dev & Eval	3
Spc 3303—Man Com	3	Gov 232	3
Spc 3301—Research	3	Elective	6
Bio 332	3		
	18		18

Fourth Year

First Semester		Second Semester	
Edu 434—Classroom Mgmt	3	Spc 4303—Practicum	3
Spc 4302—Adv Aud	3	Electives	9
Spc 4301—Adv Spc Path	3		12
Electives	9		
	18		
		Total	132

Plan III

Bachelor of Science — Mass Communication

The purpose of this degree program is a broadly-based preparation for university students who are interested in professional careers in mass communication, e.g., radio, television, newspaper, magazine, public relations and advertising. In its attempt to prepare students for the communications industry as a whole, rather than for a specific position, the program focuses attention upon significant concepts of the mass communication process in contrast to efforts to refine and perfect specific skills. The program does, however, give attention to the development of basic speech, art and writing proficiency. Thus, a unique characteristic of this degree is its purpose to provide the student with an interdisciplinary experience in the study of communication involving several departments. For this reason, the major requirement is 43 hours instead of the usual 24 or 30 hours. Within this total program, 27 hours of specific coursework is required, and the student will complete the 43-hour total by selecting 16 hours from a second group of related courses referred to in the degree plan as 'major electives.' Credit for internship may be granted through the major and free elective areas.

The student may desire to emphasize non-quantative business administration courses or teacher certification thorugh careful use of electives in order to give a wider vocational opportunity.

First Year

First Semester		Second Semester	
Eng—Composition	3	Eng—Composition	3
*Laboratory Science	4	*Laboratory Science	4
Spc 131	3	Economics 233	3
Communication 131	3	Communication 133 or 231	3
Hum 130, 131 or 132	3	CS 131	3
PE—Activity	1	PE—Activity	1
	17		17

Second Year

First Semester		Second Semester	
Eng—Literature/Spc 235	3	Spc 235/Eng—Literature	3
*Math	3-4	*Math	3
His—U.S. (soph)	3	Gov 232	3
Gov 231	3	His—U.S. (soph)	3
Comm 2384—Eval of Mot	3	Major Elective	3
PE—Activity	1	PE—Activity	1
	16-17		16

Third Year

First Semester		Second Semester	
Communication 234	3	Communication 4383	3
Foundation elective	3	Foundation elective	3
Communication 431	3	Major electives	6
English 4326, Com 231 (R)	3	Foundation elective	3
Com 333 or Spc 434/332/439	3		15
	15		

Fourth Year

First Semester		Second Semester	
Foundation elective	6	Major electives	7
Major elective	3	General electives	8
General electives	3		15
Communication 3383	3		
	15		
		Total	124

*Four courses in Math, Lab, Sci or Mod Lang are required with at least two of the areas being represented.

Plan IV (For those not desiring teacher certification) This degree plan is designed for those wishing to emphasize mass communication, public address, theater or speech and hearing therapy, for purposes other than teaching certification. The plan provides a maximum of flexibility in the composition of the courses for the major. The first and second years of Plan IV are, of course, essentially the same as Plan I. Students interested in concentrating in any of these areas of study apart from teacher certification, should contact the departmental chairman for further assistance. This plan requires 124 semester hours. May serve as preprofessional training for the field of law. Requires 120 semester hours exclusive of the required physical education courses/marching band/AFROTC.

Bachelor of Arts — Speech Major

Same as any of the above programs except for the completion of the course numbered 232 in a foreign language.

COMMUNICATION (Com)

131 — Introduction to Mass Communication (3:3:0)*
A study of mass communication and the media involved in the dissemination of news information or cultural affairs.

*Code explanation:
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

133 — **News Writing (3:2:3)**
A study of the principles of news writing, with emphasis upon concise, accurate, objective writing. Proficiency in typewriting is required.

231 — **News Reporting (3:2:3)**
A basic course in gathering material and writing news stories for publication. Proficiency in typewriting is required. Course may be repeated for a maximum of six semester hours.

232 — **Editing and Copyreading (3:2:3)**
The development and use of printing, type recognition, type harmony, preparing editorial material, writing headlines and correcting copy. Prerequisite: Com 231.

234 — **Introduction to Broadcasting (3:2:3)**
A general introduction to the field of broadcasting, including a study of station and network organization and control by law and societal forces.

2341 — **Principles of Broadcast Production (3:2:3)**
Training in broadcast production with emphasis on operation of campus broadcast facilities. Different formats will be considered. Practical experience in announcing, planning, production of programs. Prerequisite: Com 234 or consent of instructor.

2384 — **Evolution of Motion Pictures (3:3:0)**
Development of American film as an art form, industry, mass medium and "language."

2385 — **Film Genre (3:3:0)**
Advanced analysis of discrete categories of film works. May be repeated when topic varies.

3234 — **Practicum in Communication (2:0:6)**
Laboratory experience in an actual setting. Assignment may be made for specific on the job experience in newspaper offices, radio stations, television stations, advertising agencies, etc. May be repeated for a total of eight semester hours.

333 — **Advanced Journalism Writing (3:2:3)**
Writing focusing on skills required for sports, human interest, feature, editorial and specific subject area columns. Prerequisite: Com 231 or equivalent.

335 — **Magazine Production (3:2:3)**
Analysis and participation in all phases of magazine production.

338 — **Television Production (3:2:3)**
Activities in writing, acting, directing, producing, announcing and engineering various types of television productions.

3381 — **Photo Journalism (3:2:3)**
Principles of photography applied to the specific area of photojournalism. No experience is required, but each student must have a 35 mm adjustable camera and a developing tank.

3382 — **Cinematography (3:2:3)**
An introduction to the basic techniques involved in the use of the motion picture as a means of communication. A thorough knowledge of basic photographic theory will be expected. All aspects of motion picture production will be covered.

3383 — **Broadcast Advertising (3:3:0)**
Broadcast advertising theory and techniques in the total marketing mix.

443 — **Mass Communication and Society (3:3:0)**
Analysis of impact of mass communication on society.

431 — **Laws and Ethics of the Mass Media (3:3:0)**
A study of the responsibilities of the media, including ethical responsibilities to news sources, persons in the news, readers and employers and legal rights and restrictions.

432 — **History and Principles of American Journalism (3:3:0)**
The growth of modern newspapers, with emphasis on important persons in

American journalism and the influence of their publications on the history of the United States.

438 — **Broadcast News (3:2:3)**
Study and practice in developing news for broadcasting. Various types of news material, including the documentary, its procurement and presentation. Prerequisite: Com 234 or consent of instructor.

4383 — **Print Advertising (3:2:3)**
A study of advertising, including copy writing, type selection, layout and design for print media.

4391 — **Advanced Television Production (3:2:3)**
Seeks to develop professional competence in television production of news, commercials, documentaries and special programs.

SPEECH (Spc)

1301 — **Introduction to Speech, Hearing and Language Disorders (3:3:0)**
Overview of the profession of speech pathology, audiology and deaf education.

1302 — **Phonology (3:3:0)**
Descriptive phonetics, phonetic alphabet systems.

1303 — **Speech, Hearing and Voice Science (3:3:0)**
Introduction to the scientific variables of speech, hearing, and voice.

131 — **Public speaking (3:3:0)**
Principles and practice of public speaking.

1311 — **Voice, Vocabulary and Pronunciation (3:3:0)**
Vocal development, vocabulary building and pronunciation skills through systematic analysis and drill.

211 — **Parliamentary Procedure (1:1:0)**
Theory and practice in conducting a business meeting through standard parliamentary procedures.

222 — **Forensic Activity (2:0:4)**
Participation in forensics and co-curricular speaking events including campus, community and intercollegiate occasions. May be repeated for a maximum of eight semester hours credit. Permission of instructor required.

2301 — **Introduction to Speech Pathology (3:3:0)**
Etiology and treatment of speech disorders with emphasis on functional disorders.

2302 — **Introduction to Deaf Education (3:3:0)**
Historical and current considerations in the deaf education profession.

2303 — **Introduction to Audiology (3:3:0)**
Anatomy of ear, physics of sound, test modes and procedures.

232 — **Interpersonal Communication (3:3:0)**
Principles and practices of interpersonal communication in various settings.

233 — **Advanced Public Speaking (3:3:0)**
Principle and practice in special occasion speaking.

235 — **Oral Interpretation of Literature (3:3:0)**
Instruction and practice in the principles of speech applied to performance in the interpretation of prose and poetry.

238 — **Oral Controversy (3:3:0)**
A study of evidence and reasoning and a critique of them as reflected in current public affairs.

3301 — **Research and literature in Speech and Hearing (3:3:0)**
Literature and research methods specific to speech and hearing.

3302 — **Language Development and Language Disorders (3:3:0)**
Normal language development, language assessment, language, intervention.

3303 — Introduction to Manual Communication Systems (3:3:0)
Introduction to fingerspelling and the language of signs.

331 — Business and Professional Speech (3:3:0)
Application of the fundamentals of speech production to the needs of the professional man or woman. Practice in gathering and organizing material for speeches for special occasions. Emphasis is given to extemporaneous speaking, conferences and discussion group speaking and report presentations.

332 — Group Methods and Discussion (3:3:0)
Communication theory of group processes. Practice in group problem solving.

333 — Interpretation of Children's Literature (3:3:0)
Study of materials for different ages of children; sources of program material, practice in adapting material into programs; practice in presenting programs in laboratory and in nearby schools, hospitals and homes.

334 — Interviewing (3:3:0)
Theory and practice in the several types of interviews current in the United States.

338 — General Semantics (3:3:0)
Analyze the general semantic mechanism conditioning knowledge, activities and adjustments in life. Application to communicator's language problems related to evaluation of messages, predictability, abstracting, facts and verifiability.

430 — Problems and Projects in Speech (3:A*:0)
These problems are discussed and analyzed through discussion and research. Each student elects a project or problem on which he/she does extensive research and presents a report to the department faculty. Course may be repeated once for credit.

4301 — Advanced Speech Pathology (3:3:0)
Advanced speech pathology: introduction to specific communication disorders, diagnostic procedures and therapy programs.

4302 — Advanced Audiology (3:3:0)
Hearing evaluation procedures, clinical evaluation techniques and instrumentation.

4303 — Clinical Practicum (3:0:9)
Introduction to clinical practice in speech pathology, audiology and deaf education. This course may be repeated for clinical clock hours accumulation.

4304 — Intermediate Manual Communication (3:3:0)
Intermediate skills course in the language of sign.

434 — Persuasion (3:3:0)
The psychological and emotional principles involved in influencing individuals and groups. An analysis and practice with the speech devices and techniques in effectively motivating audience reaction.

437 — Italian Rhetoric (3:3:0)
A study of classical, medieval and Renaissance principles and practices in Italian Rhetoric as contributing factors to contemporary American rhetoric. (LU-Rome only.)

4371 — Advanced Oral Interpretation (3:3:0)
Instruction and practice in oral interpretation of dramatic literature.

438 — Directing Secondary School Speech Activities (3:A*:0)
Principles in extracurricular activities such as debate, extemporaneous speaking, radio and television. Practical experience with workshop students constitutes a part of this course. (Offered in spring terms only.)

4381 — Black Rhetoric (3:3:0)
Significant oral contributions to the Black quest for full citizenship from Colonial times to the present.

*Arranged

439 — Rhetoric and Public Address (3:3:0)
A study and analysis of some of the world's great speeches with application of the principles of original speeches of special types.

THEATER (The)

135 — Children's Theater (3:2:3)
Instruction and practice in the beginning principles of theater as applied to plays for children's audiences.

210 — Theater Practicum (1:0:3)
Laboratory instruction in production techniques required in the areas of scenery, lighting, costumes and other technical areas. It may be repeated three times for credit of four hours.

2260 Music Comedy (2:0:6)
A laboratory course providing background study and practical work in the field of musical comedy, including participation in the presentation of a full production. Open by audition or by consent of the instructor to students from all departments who are interested in acting or technical work in the theater, especially as applied to musical comedy. May be repeated for credit up to six hours.

231 — Beginning Stagecraft (3:2:3)
Basic course in technical theater. Emphasis on methods of construction and handling of scenery, construction and care of stage properties, basic knowledge of lighting units and their use on the stage nomenclature of the crafts of theater. Laboratory: 3 hours and participation in department productions.

233 — Introduction to Theater (3:2:3)
A general survey of the major fields of theater arts. For students who have a limited theatrical experience or knowledge. Emphasis on the various types and styles of plays, knowledge of the functions of the actor, director, costumer, scene designer, light designer and other elements of theater production.

237 — Acting (3:2:3)
Detailed study of characterization and styles of acting through class assignments of individuals and group scenes. Course may be taken twice for credit. Laboratory: 3 hours and participation in department productions.

239 — Dialects (3:2:3)
Instruction and workshop for mastering dialects used on stage, or for impersonating cultures (as speakers, radio or TV personalities); prerequisite Speech 1302 or 1311.

335 — Directing (3:2:3)
To give the student a background knowledge in directing from the viewpoint of the interpreter, planner, organizer, businessperson, technician, actor, psychologist and artist with specific problems in directing scenes from plays.

336 — Creative Dramatics (3:3:0)
Instruction in the methods of introducing creative projects related to the development of creative play-making in the home, community and school.

3360 — Advanced Children's Theater (3:2:3)
Instruction and practice in advanced principles of theater as applied to plays for children's audiences.

3361 — Classic Theater. (3:3:0)
Viewing and analysis of representative classic dramas in the Western World since the Elizabethian period.

430 — Creative Communication (3:3:0)
This is a process oriented approach to creative learning through creative communications. It is of special value to the communication of information in or out of the classroom at any age level.

431 — Problems and Projects in Theater (3:A*:0)
Students will perform activities in one of the following areas: acting, directing, producing, designing and constructing costumes and stage settings for the school theater. May be repeated once for credit. Admission to course by prior permission only.

4311 — Theory and Practice of Scenery and Lighting Design (3:2:3)
Study and practice of the principles and techniques of stage scenery and lighting design with an emphasis on coordinating the two. Prerequisite: Theater 231.

4312 — Costume Design and Construction (3:2:3)
Study and practice of the principles and techniques involved in designing and constructing costumes for the principal periods encountered in theater production.

434 — Advanced Stagecraft (3:3:3)
Advanced techniques in theater crafts. Emphasis on special problems in building and handling scenery, technical plotting of scenery, special lighting problems and physical requirements of a theater.

436 — History of Theater (3:3:0)
A survey of theater from 5th Century B.C. to the present day, with emphasis on methods and styles of presentation.

437 — Directing Secondary School Theater Activities (3:A*:0)
Principles involved in extracurricular theater activities. Practical experience with workshop students constitutes a part of this course. (Offered in spring terms only.)

438 — History of Theater in Italy (3:2:3)
A survey of important contributions which Italy has made to world theater from the 3rd Century B.C. to the present, with emphasis on the influence these contributions have had on the theaters of other countries especially English-speaking countries. (LU-Rome only.)

Department of Music

Department Head: George L. Parks. *Professors:* Joseph Carlucci, Hubert Kaszynski, Charles A. Wiley. *Associate Professors:* J.N. Collier, Paul Holmes, Joseph Truncale. *Assistant Professors:* Mary French Barrett, John LeBlanc. *Instructors:* L. Randolph Babin, Robert M. Culbertson Jr., Wayne Dyess, Reinier Knetsch, Raul Ornelas, James Simmons, James Swain. *Secretary:* Delores Black. *Staff Accompanist:* Jerry Berthiaume.

The degrees of Bachelor of Music and Bachelor of Science — Music Major (voice, piano, theory and composition, or instrumental major) are granted under the following conditions:

1. Meet the basic requirements for all degree programs.
2. Complete one of the programs of study listed below.
3. Pass a department qualifying examination given by the music faculty before the end of the first semester of the senior year. Junior level music history and music theory must be taken before the oral examination.

*Arranged

4. All students must continue to take secondary piano for as many consecutive semesters as are required for the completion of the barrier. Application for the piano barrier exam may be made during any semester of the student's enrollment except when otherwise specified.
5. Participate in student recitals as recommended by the department.
6. For graduation, all music majors must present a recital during the senior year as recommended by the department head.
7. All students, including transfers, must show adequate proficiency in their areas of specialization, as determined by the music faculty.
8. Auditions are required for junior level standings in the Bachelor of Music degree program.
9. All music majors will be required to take Humanities 132.

Recommended Programs of Study

Bachelor of Music

Composition

First Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Band, Choir, Orchestra	1	MLb—Band, Choir, Orchestra	1
MTy 132	3	MTy 133	3
MLt 121	2	MLt 122	2
English (Composition)	3	English (Composition)	3
PE	1	PE	1
AM Elective (must be piano with the exception of piano and organ majors)	1	AM Elective (must be piano with the exception of piano and organ majors)	1
Elective (Math, Science or Foreign Language)	4	Elective (Math, Science or Foreign Language)	4
MLb 114—Repertoire & Pedagogy	1	Mlb 114—Repertoire & Pedagogy	1
	18		18

Second Year

First Semester		Second Semester	
AM 2283	2	AM 2284	2
MLb—Band, Choir, Orchestra	1	MLb—Band, Choir, Orchestra	1
MTy 232	3	MTy 233	3
English (Literature)	3	Elective (non-music)	3
Sophomore American History	3	Sophomore American History	3
Gov 231	3	Gov 232	3
PE	1	PE	1
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
	17		17

Third Year

First Semester		Second Semester	
AM 3483	4	AM 3484	4
MLb—Band, Choir, Orchestra	1	MLb—Band, Choir, Orchestra	1
MTy 321	2	MTy 322	2
MLt 333	3	MLt 334	3
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
Elective (Math, Science or Foreign Lanugage)	3	Elective (Math, Science or Foreign Language)	3
Humanities 132	3	Elective (non-music)	3
	17		17

Fourth Year

First Semester		Second Semester	
AM 4483	4	AM 4484	4
MLb—Band, Choir, Orchestra	1	MLb—Band, Choir, Orchestra	1
MTy 421	2	MTy 422	2
MLt 336 or MLt 337	3	MEd 337 or MEd 338	3
MTy 425	2	MLb 114—Repertoire & Pedagogy	1
Music Elective	2	Music Elective	2
MLb 114—Repertoire & Pedagogy	1		—
	—		13
	15		

Total 132

Instrumental (Strings)

First Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
AM 1143	1	AM 1143	1
MTy 132	3	MTy 133	3
MLb 122—Orchestra	2	MLb 122—Orchestra	2
MLt 121	2	MLt 122	2
English (Composition)	3	English (Composition)	3
PE	1	PE	1
Elective (Math, Science or Foreign Language)	4	Elective (Math, Science or Foreign Lanugage)	4
	—		—
	19		19

Second Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
Chamber Music Ensemble	1	Chamber Music Ensemble	1
MTy 232	3	MTy 233	3
MLb 122—Orchestra	2	MLb 122—Orchestra	2
Sophomore American History	3	Sophomore American History	3
Elective (non-music)	3	Humanities 132	3
PE	1	PE	1
English (Literature)	3	Elective (Non-music)	3
	—		—
	19		19

Third Year

First Semester		Second Semester	
AM—Major Instrument	4	AM—Major Instrument	4
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
MLb 122—Orchestra	2	MLb 122—Orchestra	2
MLt 333	3	MLt 334	3
Gov 231	3	Gov 232	3
Elective (Math, Science or Foreign Language)	3	Elective (Math, Science or Foreign Language)	3
MTy 321	2	MTy 322	2
	—		—
	18		18

Fourth Year

First Semester		Second Semester	
AM—Major Instrument	4	AM—Major Instrument	4
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
MLb 122—Orchestra	2	MLb 122—Orchestra	2
MLt 337	3	MEd 338	3
MTy 421	2	MTy 422	2
Chamber Music Elective	1	Chamber Music Elective	1
Elective (non-music)	2	Elective (non-music)	2
	15		15

Total 142

Instrumental (Wind and Percussion)

First Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
AM 1143	1	AM 1143	1
MTy 132	3	MTy 133	3
MLb 124—Marching Band or PE	2	MLb 125—Symphonic/Concert Band	2
MLt 121	2	MLt 122	2
Music Elective	1	Music Elective	1
English (Composition)	3	English (Composition)	3
Elective (Math, Science or Foreign Language)	4	Elective (Math, Science or Foreign Language)	4
	19		19

Second Year

First Semester		Second Semester	
AM-Major Instrument	2	AM—Major Instrument	2
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
MTy 232	3	MTy 233	3
Music Elective	1	Music Elective	1
MLb 124—Marching Band or PE	2	MLb 125—Symphonic/Concert Band	2
Sophomore American History	3	Sophomore American History	3
English (Literature)	3	Elective (non-music)	3
Elective (non-music)	2	Elective (non-muic)	2
	17		17

Third Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	4
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
MLt 333	3	MLt 334	3
Chamber Music Ensemble	1	Chamber Music Ensemble	1
MTy 321	2	MTy 322	2
MLb 124—Marching Band or PE	2	MLb 125—Symphonic/Concert Band	2
Gov 231	3	Gov 232	3
Elective (Math, Science or Foreign Language)	3	Elective (Math, Science or Foreign Language)	3
	19		19

Fourth Year

First Semester		Second Semester	
AM—Major Instrument	4	AM—Major Instrument	4
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
MLt 337	3	MEd 338	3
MTy 421	2	MTy 422 or 425	2
MLb 124—Marching Band or PE	2	MLb 125—Symphonic/Concert Band	2
Humanities 132	3	Elective (non-music)	3
	15		15

Total 140

Piano And/Or Organ

First Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
Major Performing Ensemble	1	Major Performing Ensemble	1
AM—Elective	1	AM—Elective	1
MLt 121	2	MLt 122	2
MTy 132	3	MTy 133	3
English (Composition)	3	English (Composition)	3
PE	1	PE	1
Elective (Math, Science or Foreign Language)	4	Elective (Math, Science or Foreign Language)	4
	18		18

Second Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
Major Performing Ensemble	1	Major Performing Ensemble	1
Chamber Music Ensemble	1	Chamber Music Ensemble	1
MTy 232	3	MTy 233	3
English (Literature)	3	Elective (non-music)	3
Sophomore American History	3	Sophomore American History	3
Elective (non-music)	3	Elective (non-music)	3
PE	1	PE	1
	18		18

Third Year

First Semester		Second Semester	
AM—Major Instrument	4	AM—Major Instrument	4
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
Major Performing Ensemble	1	Major Performing Ensemble	1
Chamber Music Ensemble	1	Chamber Music Ensemble	1
MTy 321	2	MTy 322	2
MLt 333	3	MLt 334	3
Gov 231	3	Gov 232	3
Elective (Math, Science or Foreign Language)	3	Elective (Math, Science or Foreign Language)	3
	18		18

Fourth Year

First Semester		Second Semester	
AM—Major Instrument	4	AM—Major Instrument	4
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
Major Performing Ensemble	1	Major Performing Ensemble	1
MTy 421	2	MTy 422	2
MLt 336 or MLt 337	3	MEd 337 or MEd 338	3
Humanities 132	3	Elective (non-music)	3
	14		14

Total 136

Vocal

First Year

First Semester		Second Semester	
AM 1281	2	AM 1282	2
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
AM 1143	1	AM 1143	1
MLb—Choir	1	MLb—Choir	1
MTy 132	3	MTy 133	3
MLt 121	2	MLt 122	2
English (Composition)	3	English (Composition)	3
Italian	3	German	3
PE	1	PE	1
	17		17

Second Year

First Semester		Second Semester	
AM 2281	2	AM 2282	2
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
MLb—Choir	1	MLb—Choir	1
MTy 232	3	MTy 233	3
Spc. 133	3	English (Literature)	3
French	3	Elective (Math, Science or Foreign Language)	3
Sophomore American History	3	Sophomore American History	3
PE	1	PE	1
	17		17

Third Year

First Semester		Second Semester	
AM 3481	4	AM 3482	4
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
MLb—Choir	1	MLb—Choir	1
MLb 210	1	MLb 210	1
MTy 321	2	MTy 322	2
MLt 336	3	MEd 337	3
MLt 333	3	MLt 334	3
	15		15

Fourth Year

First Semester		Second Semester	
AM 4481	4	AM 4482	4
MLb 114—Repertoire & Pedagogy	1	MLb 114—Repertoire & Pedagogy	1
MLb—Choir	1	MLb—Choir	1
MLb 210	1	MLb 210	1
MTy 421	2	MTy 422	2
Gov 231	3	Gov 232	3
Humanities 132	3	Elective (non-music)	3
	15		15

Bachelor of Music in Music Education (Winds, Brass, Percussion)

(Qualifies for teacher certification — music, all-levels)

First Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Marching Band or PE	2	Mlb—Symphonic Band	2
AM 1143	1	AM 1143	1
Sophomore American History	3	Sophomore American History	3
Eng (Composition)	3	Eng (Composition)	3
Mth, Sci, or Foreign Lang	3	Mth, Sci, or Foreign Lang	3
Mty 132	3	Mty 133	3
Mlt 121	2	Mlt 122	2
	19		19

Second Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Marching Band or PE	2	MLb—Symphonic Band	2
AM 1143	1	AM 1143	1
Gov 231	3	Gov 232	3
Mth, Sci or Foreign Lang	4	Mth, Sci or Foreign Lang	4
MTy 232	3	MTy 233	3
Eng (Literature)	3	Eng (Literature)	3
	18		18

Third Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Marching Band or PE	2	MLb—Symphonic Band	2
MEd 311, 313	2	MEd 312, 314, 411	3
MEd 336	3	MEd 338	3
MLt 333	3	MLt 334	3
Edu 331, 332	6	Edu 334	3
MTy 321	2	MTy 322	2
	20		18

Fourth Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Marching Band or PE	2	MLb—Symphonic Band	2
Edu 438	3	Edu 463	6
MTy 421	2	MTy 422 or 425	2
MEd 412	1	MEd 315, 317	2
Elective (Foundation)	3		14
Elective (Foundation)	3		
Hum 132	3		
	19		

Total Hours 145

The six hours of foundation electives must be chosen from two different foundation groups, and if marching band is taken for PE credit, an additional non-music elective must be taken.

Bachelor of Music in Music Education (Strings)

(Qualifies for teacher certification — music, all-levels)

First Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Orchestra	2	MLb—Orchestra	2
AM 1143	1	AM 1143	1
Sophomore American History	3	Sophomore American History	3
Eng (Composition)	3	Eng (Composition)	3
MTy 132	3	MTy 133	3
MLt 121	2	MLt 122	2
PE	1	PE	1
Mth, Sci or Foreign Lang	3	Mth, Sci or Foreign Lang	3
	20		20

Second Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Orchestra	2	MLb—Orchestra	2
Gov 231	3	Gov 232	3
Mth, Sci or Foreign Lang	4	Mth, Sci or Foreign Lang	4
MTy 232	3	MTy 233	3
PE	1	PE	1
Eng (Literature)	3	Eng (Literature)	3
	18		18

Third Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Orchestra	2	MLb—Orchestra	2
MEd 311 or 312	1	MEd 313 or 314	1
MEd 336	3	MEd 338	3
MLt 333	3	MLt 334	3
Edu 331, 332	6	Edu 334	3
MTy 321	2	MTy 322	2
		Hum 132	3
	19		19

Fourth Year

First Semester		Second Semester	
AM—Major Instrument	2	AM—Major Instrument	2
MLb—Orchestra	2	MLb—Orchestra	2
Edu 438	3	Edu 463	6
MTy 421	2	MTy 422	2
MEd 411 or 412	1	MEd 315	1
Elective (Foundation)	3		
Elective (Foundation)	3		13
	16		

Total Hours 143

The six hours of foundation electives must be chosen from two different foundation groups.

Bachelor of Music in Music Education (Piano/Organ, Voice)

(Qualifies for teacher certification — music, all-levels)

First Year

First Semester		Second Semester	
AM 1241 or 1281	2	AM 1242 or 1282	2
MLb—Choir	1	MLb—Choir	1
AM 1183 or 1143	1	AM 1184 or 1143	1
Sophomore American History	3	Sophomore American History	3
Eng (Composition)	3	Eng (Composition)	3
Mth, Sci or Foreign Lang	3	Mth, Sci or Foreign Lang	3
MTy 132	3	MTy 133	3
MLt 121	2	MLt 122	2
PE	1	PE	1
	19		19

Second Year

First Semester		Second Semester	
AM 2241 or 2281	2	AM 2242 or 2282	2
MLb—Choir	1	MLb—Choir	1
AM 1183 or 1143	1	AM 1184 or 1143	1
Gov 231	3	Gov 232	3
Mth, Sci or Foreign Lang	4	Mth, Sci or Foreign Lang	4
PE	1	PE	1
MTy 232	3	MTy 233	3
MLb 210	1	MLb 210	1
Eng (Literature)	3	Eng (Literature)	3
	19		19

Third Year

First Semester		Second Semester	
AM 3241 or 3281	2	AM 3242 or 3282	2
MLb—Choir	1	MLb—Choir	1
MEd 331	3	MEd 332	3
MEd 335	3	MEd 337	3
MLt 333	3	MLt 334	3
Edu 331, 332	6	Edu 334	3
MTy 321	2	MTy 322	2
		Hum 132	3
	20		20

Fourth Year

First Semester		Second Semester	
AM 4241 or 4281	2	AM 4242 or 4282	2
MLb-Choir	1	MLb—Choir	1
Edu 438	3	Edu 463	6
MTy 421	2	MTy 422	2
MLb 210	1	MLb 210	1
Elective (Foundation)	3		
Elective (Foundation)	3		
	15		12

Total Hours 143

The six hours of foundation electives must be chosen from two different foundation groups. Organ majors will substitute organ for all piano. Piano/Organ majors may take band or orchestra, but must have at least four semesters of choir.

Bachelor of Science — Music Major

(Qualifies for teacher certification — music, all-levels)

Instrumental Major

First Year

First Semester		Second Semester	
English (Composition)	3	English (Composition)	3
Mth 1311	3	Mth 1313	3
AM—Major Instrument	2	AM—Major Instrument	2
AM 1143	1	AM 1143	1
MLt 121	2	MLt 122	2
MTy 132	3	MTy 133	3
PE or MLb 124	2	MLb 125	2
Science (Laboratory)	4	Science (Laboratory)	4
	20		20

Second Year

First Semester		Second Semester	
English (Literature)	3	English (Literature)	3
Sophomore American History	3	Sophomore American History	3
Gov 231	3	Gov 232	3
AM—Major Instrument	2	AM—Major Instrument	2
MTy 232—Advanced Harmony	3	MTy 233—Advanced Harmony	3
Elective (Foundation)	3	Elective (Foundation)	3
PE or MLb 124	2	MLb 125	2
	19		19

Third Year

First Semester		Second Semester	
Edu 331	3	Edu 334	3
Edu 332	3	AM—Major Instrument	2
AM—Major Instrument	2	MEd 312	1
MEd 311	1	MLt 334	3
MLt 333	3	MEd 338	3
MEd 336	3	MEd 315	1
MEd 317	1	MTy 322	2
MTy 321	2	MEd 313-314	2
PE or MLb 124	2	MLb 125	2
	20		19

Fourth Year

First Semester		Second Semester	
Edu 438	3	Edu 463	6
MTy 421	2	MTy 425 or 422	2
AM—Major Instrument	2	AM—Major Instrument	2
Elective (non-music)	4	MLb 125	2
MEd 411	1	MEd 412	1
PE or MLb 124	2		13
	14		

Total. 144

The six elective hours must be chosen from two different academic foundation groups.

Piano and Organ Major

First Year

First Semester		Second Semester	
English (Composition)	3	English (Composition)	3
PE	1	PE	1
AM 1183	1	AM 1184	1
AM 1241	2	AM 1242	2
MLb—Choir or Orchestra	1	MLb—Choir or Orchestra	1
MLt 121	2	MLt 122	2
MTy 132	3	MTy 133	3
Science (Laboratory)	4	Science (Laboratory)	4
	17		17

Second Year

First Semester		Second Semester	
English (Literature)	3	English (Literature)	3
Sophomore American History	3	Sophomore American History	3
PE	1	PE	1
AM 2241	2	AM 2242	2
MLb—Choir or Orchestra	1	MLb—Choir or Orchestra	1
MLt 213	1	MLb 210	1
Mth 1311	3	Mth 1313	3
MTy 232	3	MTy 233	3
	17		17

Third Year

First Semester		Second Semester	
Edu 331	3	Edu 334	3
Edu 332	3	AM 3242	2
AM 3241	2	MEd 332	3
MEd 331	3	MEd 337	3
MEd 335	3	MLb—Choir or Orchestra	1
MLb—Choir or Orchestra	1	MLt 334	3
MLt 333	3	MTy 322	2
MTy 321	2	Elective (Foundation)	3
	20		20

Fourth Year

First Semester		Second Semester	
Edu 438	3	Edu 463	6
Gov 231	3	Gov 232	3
AM 4241	2	AM 4242	2
MLb—Choir or Orchestra	1	MLb—Choir or Orchestra	1
Elective (Foundation)	3	MTy 422	2
MTy 421	2		14
	14		

Total 138

The six elective hours must be chosen from two different academic foundation groups.

If the student is an organ major, substitute organ for all piano.

Piano or organ majors must take at least four semesters of their eight semesters of laboratory in choir.

String Major

First Year

First Semester		Second Semester	
English (Composition)	3	English (Composition)	3
Mth 1311	3	Mth 1313	3
Science (Laboratory)	4	Science (Laboratory)	4
MLt 121	2	MLt 122	2
MTy 132	3	MTy 133	3
AM—Major Instrument	2	AM—Major Instrument	2
MLb 122	2	MLb 122	2
PE	1	PE	1
	20		20

Second Year

First Semester		Second Semester	
English (Literature)	3	English (Literature)	3
Sophomore American History	3	Sophomore American History	3
Gov 231	3	Gov 232	3
MTy 232	3	MTy 233	3
MEd 313 or 314	1	AM—Violin or Cello	2
AM—Major Instrument	2	AM—Major Instrument	2
MLb 122	2	MLb 122	2
PE	1	PE	1
	18		19

Third Year

First Semester		Second Semester	
Edu 331	3	Edu 334	3
Edu 332	3	MEd 338	3
MEd 311	1	MLt 334	3
MEd 336	3	MTy 322	2
MLt 333	3	AM—Major Instrument	2
MTy 321	2	MLb 122	2
AM—Major Instrument	2	AM 1143	1
MLb 122	2	Elective (Music)	1
	19		17

Fourth Year

First Semester		Second Semester	
Edu 438	3	Edu 463	6
MEd 411	1	MTy 422	2
MEd 332	3	AM—Major Instrument	2
MTy 421	2	MLb 122	2
AM—Major Instrument	2	Elective (Foundation)	3
Elective (Foundation)	3		15
MLb 122	2		
AM 1143	1		
	17		

Total 145

The six elective hours must be chosen from two different academic foundation groups.

Theory and Composition Major

First Year

First Semester		Second Semester	
English (Composition)	3	English (Composition)	3
Mth 1311	3	Mth 1313	3
Science (Laboratory)	4	Science (Laboratory)	4
AM—Major Instrument	2	AM—Major Instrument	2
MTy 132	3	MTy 133—Elementary Harmony	3
MLt 121	2	MLt 122—Music Principles	2
MLb—Band, Chorus, Orchestra	1	MLb—Band, Chorus, Orchestra	1
PE	1	PE	1
	19		19

Second Year

First Semester		Second Semester	
English (Literature)	3	English (Literature)	3
Sophomore American History	3	Sophomore American History	3
Gov 231	3	Gov 232	3
AM 1241	2	AM 1242	2
MTy 232	3	MTy 233	3
MLb—Band, Chorus, Orchestra	1	MLb—Band, Chorus, Orchestra	1
PE	1	PE	1
	16	Elective (non-music)	3
			19

Third Year

First Semester		Second Semester	
Edu 331	3	Edu 334	3
Edu 332	3	AM 3284	2
AM 3283	2	MTy 322	2
MTy 321	2	MEd 337 or 338	3
MEd 335 or 336	3	MLt 334	3
MLt 333	3	MEd 332	2
MEd 331	3	MLb—Band, Chorus, Orchestra	1
MLb—Band, Chorus, Orchestra	1		17
	20		

Fourth Year

First Semester		Second Semester	
Edu 438	3	Edu 463	6
MTy 421	2	MTy 422	2
MTy 425	2	AM 4284	2
AM 4283	2	Elective (non-music)	3
Elective (Music)	2	MLb—Band, Chorus, Orchestra	1
MLb—Band, Chorus, Orchestra	1		14
	12		
		Total	136

The six elective hours must be chosen from two different academic foundation groups.

Theory and Composition majors certifying in instrumental music may elect six hours from Percussion 315, Brass 311, 312, Strings 313, 314 or Woodwinds 411, 412. Those certifying in vocal music will take Music Education 331 and 332.

Vocal Major

First Year

First Semester		Second Semester	
English (Composition)	3	English (Composition)	3
PE	1	PE	1
AM 1143	1	AM 1143	1
AM 1281	2	AM 1282	2
MLb—Choir	1	MLb—Choir	1
MLt 121	2	MLt 122	2
MTy 132	3	MTy 133	3
Science (Laboratory)	4	Science (Laboratory)	4
	17		17

Second Year

First Semester		Second Semester	
English (Literature)	3	English (Literature)	3
Sophomore American History	3	Sophomore American History	3
PE	1	PE	1
AM 2281	2	AM 2282	2
MLb—Choir	1	MLb—Choir	1
MLb 210	1	MLb 210	1
Mth 1311	3	Mth 1313	3
MTy 232	3	MTy 233	3
	17		17

Third Year

First Semester		Second Semester	
Edu 331	3	Edu 334	3
Edu 332	3	AM 3282	2
AM 3281	2	MEd 332	3
MEd 331	3	MEd 337	3
MEd 335	5	MLb—Choir	1
MLb—Choir	1	MLt 334	3
MLt 333	3	MTy 322	2
MTy 321	2	Elective (Foundation)	3
	20		20

Fourth Year

First Semester		Second Semester	
Edu 438	3	Edu 463	6
Gov 231	3	Gov 232	3
AM 4281	2	AM 4282	2
MLb—Choir	1	MLb—Choir	1
MTy 421	2	MTy 422	2
Elective (Foundation)	3		14
	14		

Total 136

Voice majors will take two semesters of private piano lessons. These may not be waived by a barrier exam.

The six elective hours must be chosen from two different academic foundation groups.

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All statements in the music section of this catalog concerning "Math, Science or Foreign Language" will be regarded as requirements for certification if and when the Education Council passes the requirements of Foreign Language.

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APPLIED MUSIC (AM)

1101 — Beginning Band or Orchestral Instruments (1:1½:0)
1143 — Secondary Piano (1:1:0)
1183, 1184 — Secondary Voice (1:1:0)
1203, 1204, 2203, 2204, 3203, 3204, 4203, 4204 — Bassoon (2:1½*:0)
3403, 3404, 4403, 4404 — Bassoon (4:2:0)**
1211, 1212, 2211, 2212, 3211, 3212, 4211, 4212 — Cello (2:1½*:0)
3411, 3412, 4411, 4412 — Cello (4:2:0)**
1215, 1216, 2215, 2216, 3215, 3216, 4215, 4216 — Clarinet (2:1½*:0)
3415, 3416, 4415, 4416 — Clarinet (4:2:0)**
1217, 1218, 2217, 2218, 3217, 3218, 4217, 4218 — Cornet-Trumpet (2:1½*:0)
3417, 3418, 4417, 4418 — Cornet-Trumpet (4:2:0)**
1221, 1222, 2221, 2222, 3221, 3222, 4221, 4222 — Flute (2:1½*:0)
3421, 3422, 4421, 4422 — Flute (4:2:0)**
1223, 1224, 2223, 2224, 3223, 3224, 4223, 4224 — French Horn (2:1½*:0)
3423, 3424, 4423, 4424 — French Horn (4:2:0)**
1231, 1232, 2231, 2232, 3231, 3232, 4231, 4232 — Oboe (2:1½*:0)
3431, 3432, 4431, 4432 — Oboe (4:2:0)**
1233, 1232, 2233, 2234, 3233, 3234, 4233, 4234 — Organ (2:1½*:0)
3433, 3434, 4433, 4434 — Organ (4:2:0)**
1241, 1242, 2241, 2242, 3241, 3242, 4241, 4242 — Piano (2:1½*:0)
3441, 3442, 4441, 4442 — Piano (4:2:0)**
1251, 1252, 2251, 2252, 3251, 3252, 4251, 4252 — Saxophone (2:1½*:0)
3451, 3452, 4451, 4452 — Saxophone (4:2:0)**
1253, 1254, 2253, 2254, 3253, 3254, 4253, 4254 — Percussion (2:1½*:0)
3453, 3454, 4453, 4454 — Percussion (4:2:0)**
1257, 1258, 2257, 2258, 3257, 3258, 4257, 4258 — String Bass (2:1½*:0)
3457, 3458, 4457, 4458 — String Bass (4:2:0)**
1261, 1262, 2261, 2262, 3261, 3262, 4261, 4262 — Trombone or Baritone (2:1½*:0)
3461, 3462, 4461, 4462 — Trombone or Baritone (4:2:0)**
1263, 1264, 2263, 2264, 3263, 3264, 4263, 4264 — Tuba (2:1½*:0)
3463, 3464, 4463, 4464 — Tuba (4:2:0)**
1271, 1272, 2271, 2272, 3271, 3272, 4271, 4272 — Viola (2:1½*:0)
3471, 3472, 4471, 4472 — Viola (4:2:0)**
1273, 1274, 2273, 2274, 3273, 3274, 4273, 4274 — Violin (2:1½*:0)
3473, 3474, 4473, 4474 — Violin (4:2:0)**
1281, 1282, 2281, 2282, 3281, 3282, 4281, 4282 — Voice (2:1½*:0)
3481, 3482, 4481, 4482 — Voice (4:2:0)**
2283, 2284 — Composition (2:1½*:0)
3283, 3284, 4283, 4284 — Composition (2:1½*:0)
3483, 3484, 4483, 4484 — Composition (4:2:0)**

*One 30-minute private lesson and one one-hour class per week.
**One hour private lesson and one one-hour class per week.

MUSIC EDUCATION (MEd)

131 — **Elements of Music (3:3:0)***
Designed to familiarize non-music majors with the meaning of musical notation and the harmonic, melodic and rhythmic structure of music.

233 — **Musical Experiences for the Lower and Middle School (3:3:0)**
Exploration of general music activities for the elementary and junior high school with emphasis on a study of music literature.

234 — **Musical Experiences for the Lower and Middle School (3:3:0)**
A continuation of general music activities for the elementary and junior high school with emphasis on recorded material and other listening activities.

311 — **Brass (1:1:0)**
Techniques and materials in the teaching of instrumental music in the elementary school. Trumpet and Horn.

312 — **Brass (1:1:0)**
Techniques and materials in the teaching of instrumental music in the elementary school. Trombone, Baritone and Tuba.

313 — **Strings (1:1:0)**
Techniques and materials in the teaching of instrumental music in the elementary school. Violin and Viola.

314 — **Strings (1:1:0)**
Techniques and materials in the teaching of instrumental music in the elementary school. Cello and Bass.

315 — **Percussion (1:1:1)**
Materials for the percussion instruments. Performance on all percussion instruments.

317 — **Marching Methods (1:2:0)**
Basic marching maneuvers. Charting various types of half-time shows for football games, such as the pageant type and the precision drills, and arranging the music for these shows. Term project: a completely charted half-time show with music.

331 — **Elementary Methods and Materials (3:3:0)**
Techniques and materials in teaching of music in the lower elementary grades. The child's voice, rote singing; rhythmics, introduction of notation, creative music activities. Prerequisite: MTy 131 or equivalent.

332 — **Techniques and Materials in Teaching of Music in the Upper Elementary Grades (3:3:0)**
Creative music, rhythmic activity, rote singing, reading of notation and effective use of materials. Prerequisite: MTy 131 or equivalent.

333 — **The Organization and Development of the High School Stage Band (3:3:0)**
The relationship of the jazz band to the over-all music program; instrumentation; sources of music; types of presentation; rehearsal and techniques; study of the effective application of dynamics, phrasing, intonation and balance for improved performance.

335 — **Choral Music (3:3:0)**
A detailed study, primarily at the secondary level, of the organization and administration of choirs, glee clubs, small ensembles and vocal problems encountered in the choral music class.

336 — **Instrumental Music (3:3:0)**
Materials and problems encountered in the instrumental music field of the high school. A detailed study of the organization and administration of bands, orchestras, etc.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

337 — **Choral Conducting (3:3:0)**
Basic patterns and rudiments of choral techniques as applied to secondary school choral groups. Limited to music majors. Prerequisite: Some vocal study, piano keyboard, one year of vocal laboratory and music theory.

338 — **Instrumental Conducting (3:3:0)**
The rudiments of conducting as applied to high school instrumental groups, phrasing interpretation, etc. of the instrumental field, both band and orchestra.

339 — **Choral Conducting (3:3:0)**
Basic patterns and rudiments of choral conducting; choral techniques as applied to elementary school classroom instruction and choral performances. Prerequisite: MTy 131 or equivalent.

410 — **Seminar (1:1:0)**
A general study of the problems encountered in music.

411 — **Woodwinds (1:1:0)**
Techniques and materials in the teaching of instrumental music in the elementary school. Flute, Clarinet and Saxophone.

412 — **Woodwinds (1:1:0)**
Techniques and materials in the teaching of instrumental music in the elementary school. Oboe and Bassoon.

MUSIC LABORATORY (MLb)*

111 — **Jazz Piano (1:1:0)**
A study of contemporary jazz piano styles.

112 — **Fender (Electric) Bass (1:1:0)**
Basic fundamentals of jazz and pop Fender bass performance.

113 — **Jazz Improvisation (1:1:0)**
Designed to provide background in the art of inprovisation.

114 — **Repertoire and Pedagogy (1:1:0)**
A presentation and study of the literature, its performance, styles and means of presentation for a particular instrument or instruments. Eight semesters in the same instrument required (AM-Applied) of each major.

117 — **Dance Band (1:0:3)**
Organized to furnish training in all styles of dance band performance. Open to any student who can qualify.

122 — **Orchestra (2:0:6)**
A performing ensemble open to all university students who can qualify. Required of any student majoring in a string instrument.

124 — **Marching Band (2:0:6)**
The study and performance of march music and military drill. Open to any student who can qualify. Four semesters completes PE requirement.

125 — **Symphonic Band (2:0:6)**
Performs symphonic wind ensemble and band repertoire. Tryout required for admittance.

1101 — **Concert Choir (1:0:6)**
A course in choral singing, organized to furnish training in the more important works of choral literature. Presentation of selections in public throughout the year. Audition required. Open to qualified students from other departments.

*Courses in Music Laboratory may be repeated for credit. Total credit not to exceed eight semester hours for any one course.

1102 — Cardinal Singers (1:0:6)
Performing choral ensemble with instrumental combo accompaniment specializing in popular and folk repertoire. Audition required. Open to qualified students from other departments.

1103 — Shades of Cardinal (1:0:6)
A performing choral ensemble with piano accompaniment and choreography specializing in popular and folk repertoire. Audition required. Open to qualified students from other departments.

1104 — Grand Chorus (1:0:3)
A course in choral singing designed to acquaint the student with the larger works in choral literature. A public concert is given each semester. Audition required. Open to qualified students from other departments.

1105 — Cardinal Moods (1:0:6)
Performing choral ensemble with instrumental combo accompaniment specializing in popular and folk repertoire. Audition required. Open to qualified students from other departments. (LU at Orange only)

1106 — Cardinal Reflections (1:0:6)
Performing choral ensemble with instrumental combo accompaniment specializing in popular and folk repertoire. Audition required. Open to qualified students from other departments. (LU at Port Arthur only)

210 — Opera (1:0:3)
A laboratory class for advanced voice students providing study of complete operatic roles, scenes and excerpts for presentation in the opera-theater. Annual full scale opera production. Auditions open to all qualified students.

2260 — Musical Comedy (2:0:6)
A laboratory course providing both background study and practical work in the specialized field of musical comedy, including participation in the presentation of a full production. Open to both vocalists and instrumentalists from all departments by audition or by consent of instructor.

423 — Chamber Music Ensemble (2:0:5)
String ensemble, woodwind, brass ensemble and percussion ensemble. A course designed to give the student an opportunity to study and perform music written for the smaller instrument ensembles. These groups will participate in various recital programs throughout the year. Open to any student upon recommendation of the instructor.

MUSIC LITERATURE (MLt)

111, 112 — Music Principles (1:0:2)
An appraisal of the important events in music history with emphasis upon those aspects of music associated with style, form and performance. Familiarization of the student with music terminology and a thorough briefing on score reading through the use of recordings from the significant periods of music history.

113 — Pop Music Survey (1:1:0)
A study of present day pop music.

121-122 — Music Literature (2:2:0)
An appraisal of the important events in music history with emphasis upon those aspects of music associated with style, form and performance. Familiarization of the student with music terminology and a thorough briefing on score reading through the use of recordings from the significant periods of music history. Prerequisite: MLt 121 must be taken before MLt 122.

213 — **Piano Pedagogy (1:2:0)**
A brief, chronological survey and analysis of the styles and forms of compositions in relation to keyboard instruments. Minimum knowledge of all keyboard instruments will be required. Special emphasis will be placed on the contribution of the performers, composers and compositions in the field of piano literature.

332 — **Music Appreciation (3:3:0)**
A course designed to acquaint the non-music major with some phases and aspects of music listening, theory, rhythm and other forms of musical enjoyment.

333 — **Music History (3:3:2)**
A survey of the literature and advances made in music from the early Christian era through the middle Baroque (c. 1700). Two hours of listening required per week in addition to class lecture. Prerequisite: MLt 121-122 and MTy 232-233.

334 — **Music History (3:3:2)**
A survey of the literature and advances made in music from the late Baroque (J. S. Bach and others) through the present time. Two hours of listening required per week in addition to class lecture. Prerequisite: May be taken before Music History 333, so long as prerequisites for Music History 333 have been satisfied.

335 — **Music of the Afro-American (3:3:0)**
A general study of the present day American Negro music and a study of the Afro-American music historical background.

336 — **Choral Literature (3:3:0)**
A study of music written for combinations of vocal music groups from the 12th century to the present day. Prerequisite: junior status.

337 — **Instrumental Literature (3:3:0)**
An in depth study of the literature and pedagogy of symphonic literature for strings and winds. Prerequisite: junior status.

338 — **Chamber Opera (3:3:0)**
A class in chamber opera of short operatic works for students providing study of complete roles and ensemble operatic excerpts for presentation in concert. Open to all students from all departments by audition. LU-Rome only.

339 — **Grand Opera (3:3:0)**
A class providing study of complete operatic roles, scenes and excerpts from standard and contemporary works for presentation in opera-theater. Auditions open to all qualified students from all departments. LU-Rome only.

MUSIC THEORY (MTy)

131 — **Elements of Music (3:3:0)**
Designed to prepare students for advanced study in music theory. A study of scales, chords, musical terminology, key signatures, sight singing, rhythm, musical notation and the harmonic, melodic and rhythmic structure of music.

132, 133 — **Elementary Harmony (3:5:0)**
Elementary keyboard and written harmony, sight singing; ear training. Prerequisite: MTy 131 or by advanced standing exam.

232, 233 — Advanced Harmony (3:5:0)
Advanced keyboard and written harmony; sight singing; ear training. Prerequisite: MTy 133.

321, 322 — Counterpoint (2:2:0)
16th and 18th century contrapuntal techniques through analysis and creative writing. Prerequisite: MTy 233.

323 — Jazz Arranging (2:2:0)
A study and analysis of jazz harmony, melody and rhythm as applied to jazz band instrumentation; a workshop wherein arrangements are written and played.

421 — Form and Analysis (2:2:0)
Analytical study of musical forms and styles. Prerequisite: MTy 233.

422 — Orchestration (2:2:0)
Techniques of writing and arranging for orchestral instuments in small combinations and for full orchestra. Prerequisite: MTy 233.

425 — Band Arranging (2:2:0)
Techniques of writing, transcribing from orchestra score and arranging for the instrumentation of the high school marching and concert bands.

College of Health Sciences

Departments: Allied Health, Nursing.

Edna L. Neumann, R. N., Ph.D., Dean
Mrs. Ruby C. Allen, Secretary

The College of Health Sciences was organized in 1974 and provides programs of instruction in dental hygiene, medical technology, radiologic technology, respiratory technology, baccalaureate nursing, associate degree nursing and vocational nursing. The Bachelor of General Studies — Health Sciences, health science elective courses and preparation for emergency medical technician state examinations are also provided.

Organization of the College of Health Sciences marks the beginning of coordinated programs for the education of health specialists for Southeast Texas, the potential for expansion of existing programs and the addition of new health programs.

Degrees Offered

Bachelor of Science: Nursing
Bachelor of General Studies — Health Science
Associate of Science: Nursing
Associate of Applied Science: Dental Hygiene,* Radiologic Technology.*
Certificate of Completion: Respiratory Technology,* Vocational Nursing.*

*These programs are offered with the approval of the Texas Education Agency.

Goals of the College

The over-all goal of the College of Health Sciences is to produce high caliber health specialists in specific areas of need, and in sufficient numbers to contribute significantly to the improvement of health care of Southeast Texas citizens.

Since education of the health professional draws on concepts from the reservoir of knowledge in general and scientific education, health science students are exposed to those concepts through university courses during the preprofessional semesters.

The College and its faculty are dedicated to responding to the health manpower needs of urban and rural health delivery systems. The tangible offerings include certificates, associate degrees and baccalaureate degrees, listed above.

Graduates of the College of Health Sciences programs are eligible to take the certification examinations to meet the licensing or registration requirements of each discipline. The programs are accredited by the appropriate accrediting bodies.

Department of Allied Health

Department Head — Dennis M. Buchanan. *Assistant Professors* — Frieda I. Atherton, Dennis M. Buchanan, Judith K. Caldwell, Sheila M. Ketrick. *Instructors* — Joanna G. Ambs, P. Gail Rivers, Ira L . Young. *Clinical Instructors* —Paul A. Bronson, Allen R. Cowart, Martha Huval, William David Short, Elizabeth Spencer, Patrick Wallace. *Adjunct Professors* — Gene Barry, D.D.S., Sam Giglio, D.D.S.,

Harry Jepson, D.D.S., Arnold O. Manske, M.D., Paul B. Shaw, M.D., R. Leldon Sweet, M.D. *Part-time Clinical Instructors* — Marie Elliott, JoAnn Foxx, Karen Hayes, Diane Hughes, Jack Bryan Moore, Anna Marie O'fiel, Julia Puckett, Gary L. West, Betty C. Wyble. *Secretaries* — Janet Biddle, Tammy Domec, Martha Summerlin.

The health occupations within the department provide specific services to people in a variety of health care settings under the supervision of physicians or dentists. The goal of delivering services through a team of health specialists working cooperatively characterizes allied health disciplines. The faculty aims to achieve this goal by providing an academic environment in which students can learn the theory underlying practice, positive attitudes toward their contribution to health care and clinical competence through supervised application of knowledge.

Admission to Department of Allied Health Programs

Students enrolled at Lamar University must submit an Application for Admission to department programs.

Students not enrolled at Lamar must submit two separate applications: one for admission to Lamar (obtained from the Office of Admissions and Records) and one for admission to the specific program (obtained from the program director, Ward Health Sciences Building).

Completed Application for Admission to Allied Health programs, with required transcripts, test scores and related documents, must be received on specific dates (see program statement) of each year, to be considered for admission to Summer Session I. Applicants are urged to follow application instructions carefully to ensure processing by program admission committees.

Applications for Admission are evaluated on the following basis:

1. Admission to the University (Admission section of this bulletin).
2. Transcripts and grades in high school and any previous college work.
3. Evidence of physical and emotional capability of completing the program of instruction and clinical practice. Health examinations are required. Forms are available with application forms.
4. Motivation for allied health practice demonstrated through letters of recommendation, employment and volunteer records and references, a statement of career goals and, in most cases, a personal interview.
5. Admission may be limited by available space.

Additional costs above tuition and fees are required in all Allied Health Department programs. Uniforms, equipment and instruments, liability insurance, health examinations and transportation to clinical facilities are the responsibility of the student. A wrist watch with a second hand is needed. Financial aids are available to eligible students: see Financial Aid and Award section of this bulletin.

Liability insurance and health examinations must be renewed each year of a health science program.

Students may be assigned to clinical experiences during day, evening, night or week-end hours.

Clinical agencies may require additional health examinations, dress codes or conformity with other policies. Students will be informed in advance of each requirement.

Dental Hygiene

Program Director — Judith K. Caldwell

The purpose of the Dental Hygiene Progam is to prepare highly competent dental hygienists to meet the oral health care needs of the public.

The program is designed to produce practitioners who will meet part of the preventive, maintenance and therapeutic needs of the community and state concerning oral health and its effect on total health. Through basic education in the Dental Hygiene Program, students acquire knowledge and proficiency to become functioning members of the health care delivery team.

Dental Hygiene Application for Admission forms, test criteria and admission procedures are available from the Dental Hygiene Program office, Ward Health Sciences Building. Applications are due by January 15 of each year.

To progress in the Dental Hygiene Program, a minimum grade of "C" (2.0) is required in all phases (lecture and laboratory/clinical practice) of dental hygiene courses and in science courses.

A minimum grade point average of 2.0 must be maintained in all courses submitted on the degree plan to obtain the Associate of Applied Science degree. Graduates who successfully pass the Dental Hygiene National Board Examination are eligible to take state licensing exams in states where they plan to practice.

Recommended Program of Study Associate of Applied Science — Dental Hygiene

First Year

Summer Session I

Bio 143—Anatomy & Physiology	4
DH 131—Orientation to Dental Hygiene	3
HS 121—Health Care Concepts	2
	9

Summer Session II

Bio 144—Anatomy & Physiology	4
DH 127—Morphology & Occlusion	2
	6

Fall Semester

DH 132—Dental Radiology	3
DH 144—Head and Neck Anatomy and Physiology	4
DH 145—Pre Clinic	4
Chem 143—Introductry Chemistry	4
	15

Spring Semester

DH 137—Dental Materials	3
DH 138—General & Oral Pathology	3
DH 146—Clinic I	4
Chem 144—Introductory Chemistry	4
	14

Second Year

Summer Session I

Bio 245—Microbiology	4
HEc 131—Principles of Nutrition	3
	7

Summer Session II

Eng. 131—English Composition	3
DH 221—Diet Analysis	2
DH 223—Periodontology	2
	7

Fall Semester

Psych 131—Introduction to Psych	3
DH 224—Pharmacology	2
DH 233—Community Dentistry I	3
DH 255—Clinic II	5
	13

Spring Semester

DH 225—Community Dentistry II	2
DH 256—Clinic III	5
Eng 131—English Composition	3
Soc 131—Introduction to Sociology	3
	13

NOTE: Credit by examination may be earned in some Dental Hygiene courses. See the program director.

Emergency Medical Technician (EMT)

A one-semester program of classroom and clinical practice is available to prepare individuals to take the state written examination to become certified as Emergency Medical Technicians. See EMT advisor, Ward Health Sciences Building, for details for admission.

Bachelor of General Studies — Health Science

The Bachelor of General Studies — Health Science degree is designed for those students who have already established careers in the health professions and who wish to earn credit toward a degree. The program offered through this degree resists any tendency toward specialization within the health sciences except through self-direction. It provides opportunity for the student, in conjunction with an academic advisor, to construct an individualized curriculum plan, to follow a special interest within the health sciences or to complement an understanding of health care systems through the selection of a program of elective courses from the University offerings as a whole. The Bachelor of General Studies — Health Science will be granted upon the completion of the general degree requirements of the University, plus a major in health sciences of 36 semester hours, including 18 advanced. At least 30 semester hours of the work applied toward this degree must be completed after August 1, 1978.

Admission into the program requires an applicaiton to the College of Health Sciences in addition to an application to Lamar University. All course work for this degree must be approved by a health science program advisor. For application, information and counseling, contact the advisor, Ward Health Sciences Building.

Radiologic Technology

Program Director — William David Short

The purpose of this program is to prepare students for a career in Radiologic Technology. Each student will be assisted in the pursuit of technical competence through lectures, demonstrations, supervised study and practical experience. A graduate of this two-year instructional program is awarded the Associate of Applied Science degree and becomes eligible to take the American Registry Examination for Radiologic Technology.

Students are accepted into the Radiologic Technology Program in the summer of each year. Admission to the program is based upon evidence of personal, physical, intellectual and emotional characteristics which are assumed to be consonant with a successful career in radiologic technology.

Radiologic Technology application for admission forms, criteria and admission procedures are available from the Radiologic Technology Program director, Ward Health Sciences Building. Applications are due by April 15 of each year.

A minimum grade of "C" (2.0) must be earned in all radiologic technology and science courses for progression in the program. In addition, a grade point average of 2.0 must be maintained in all courses submitted on the degree plan to obtain the Associate of Applied Science degree.

Recommended Program of Study Associate of Applied Science — Radiologic Technology

First Year

Summer Session I

Bio 143 Anatomy and Physiology	4
HS 121 Orientation	2
	6

Summer Session II

Bio 144 Anatomy & Physiology	4
Ra 131 Orient to Rad Tech	3
	7

Fall Semester

Ra 132 Radiographic Principles	3
Ra 143 Radiographic Positioning	4
Math	3
Ra 152 Practicum	5
	15

Spring Semester

Ra 133 Med Surg Disease	3
Ra 144 Physics	4
English Comp	3
Ra 154 Practicum	5
	15

Second Year

Summer Session I

Ra 234 Radiographic Practicum	3

Summer Session II

Ra 235 Radiographic Practicum	3

Fall Semester

Ra 231 Special Procedures	3
Ra 242 Adv Procedures	4
English Comp	3
Ra 262 Practicum	6
	16

Spring Semester

Ra 236 Seminar	3
Ra 233 Radiation Biology	3
Psy or Soc	3
Ra 264 Practicum	6
	15

Respiratory Technology

Program Director — Paul A. Bronson

The purpose of this program is to prepare students for careers in respiratory therapy through lectures, laboratories and clinical experiences aimed at qualifying the student for certification in respiratory therapy. Upon successful completion of the course, the graduate must complete an additional one year of experience in respiratory therapy under medical supervision to be eligible to take the examination given by the National Board for Respiratory Therapy. A passing score on the examination will qualify the individual as a Certified Respiratory Therapy Technician (C.R.T.T.)

Completed application forms must be submitted to the director of the respiratory technology program by March 1 of each year. These forms and the admission procedures are available from the program director, Room 252, Ward Health Sciences Building.

A minimum grade of "C" (2.0) must be earned in all respiratory technology and science courses for progression in the program. In addition, a grade point average of at least 2.0 must be maintained in all courses to obtain the Certificate of Completion in Respiratory Technology.

Recommended Program of Study Certificate of Completion — Respiratory Technology

Summer Session I		Summer Session II	
Bio 143—Anatomy & Physiology	4	Bio 144—Anatomy & Physiology	4
HS 121—Health Care Concepts	2	RT 131—Orientation to RT Practice	3
	6		7

First Year

Fall Semester		Spring Semester	
RT 121—Clinical Medicine I	2	RT 122—Clinical Medicine II	2
RT 141—RT Procedures I	4	RT 137—RT Procedures II	3
RT 143—RT Sciences	4	RT 138—Cardiopulm Tech	3
RT 160—RT Clinic I	6	RT 161—RT Clinic II	6
	16		14

DENTAL HYGIENE (DH)

127 — Dental Morphology and Occlusion (2:1:3)*
A detailed anatomical study of human teeth, their eruption, exfoliation and occlusion. Prerequisite: Admission to the program.

131 — Orientation to Dental Hygiene Practice (3:2:3)
Orientation and introduction to the practice of dental hygiene, including his/her role in all phases of dental specialty practice. Prerequisite: Admission to the program.

132 — Dental Radiology (3:2:3)
A detailed study of theories, clinical techniques and principles of dental radiographic practice. Radiation safety, protection, exposure, production, development and interpretation are emphasized. Prerequisite: Admission to the program.

137 — Dental Materials (3:2:3)
A study of the sources, properties, uses and techniques of manipulation of the various materials used in dentistry. Prerequisite: Admission to the program.

138 — General and Oral Pathology (3:3:0)
A histopathological study of oral lesions, pathogenic conditions of particular significance to dentistry and principles of general and oral pathology. Prerequisite: Admission to the program.

144 — Head and Neck Anatomy and Physiology (4:4:0)
A detailed study of the embryology, histology, anatomy and physiology of the head and neck region, including common dysfunctions of the temporal-mandibular joint. Prerequisite: Admission to the program or permission of program director.

145 — Pre-Clinic (4:2:6)
Theoretical and clinical instruction in oral prophylaxis and preventive procedures. Transfer to patient simulation completed on manikins and class partners. Prerequisite: Admission to the program.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory or clinical laboratory hours required per week

146 — Clinic I (4:2:8)
Continuation and mastery of basic oral prophylaxis procedures. Advancement of complete patient care conducted in the dental hygiene clinic. Prerequisite: Admission to program.

221 — Dietary Analysis (2:2:0)
Study and application of diet analysis consultation skills on affecting patient behavior change relative to diet and dental disease. Prerequisite: Admission to program.

223 — Periodontology (2:2:0)
Comparative study of normal and diseased periodontium and the effects of structural, functional and environmental agents. Prerequisite: Admission to the program.

224 — Pharmacology (2:2:0)
Study of the uses and actions of drugs, including drug side-effects, contraindications and oral manifestations. Prerequisite: Admission to the program.

225 — Community Dentistry II (2:1:3)
Application of program planning skills enhanced through actual community implementation. Analytical skills concerning critical evaluation of scientific data emphasized through a review of scientific literature. Prerequisite: Admission to program.

233 — Community Dentistry I (3:3:0)
Theory and principles of public health including epidemiology, statistics, preventive medicine, health behavior and program planning related to governmental, sociological, environmental and cultural concerns. Prerequisite: Admission to the program.

255 — Clinic II (5:2:12)
Advancement of clinical prophylaxis skills applied to periodontally involved patients. Clinic and theoretical framework expanded through the addition of amalgam polishing procedures and diet consultation procedures. Prerequisites: Admission to the dental hygiene program; DH 145 and 146.

256 — Clinic III (5:2:12)
Continuation and advancement of dental hygiene skills including advanced scaling and root smoothing procedures. Time utilization emphasized. Prerequisites: Admission to the program; DH 255.

HEALTH SCIENCES (HS)

121 — Health Care Concepts (2:2:0)
Lecture course designed to provide the basic concepts appropriate to health. The various health care worker roles, professional ethics, communication, growth and development and related topics will be presented. The rationale for skills which are common to all health personnel will be introduced. The course is required for all health science majors and will be prerequisite for the beginning skill courses in the various programs.

2101, 2201, 2301, 2401 — Special Topics (1-4:1-4:0)
Significant topics in health sciences, education or delivery of health care. The description of the particular area of study will appear in the printed semester schedule of courses. A student may repeat the course when content varies. Prerequisite: Departmental consent.

2105, 2205, 2305, 2405 — Directed Study (1-4:A*:0)
Investigation into special areas in the health sciences under the direction of a faculty member. This course may be repeated for credit when topics of investigation differ. Prerequisite: Departmental consent.

3101, 3201, 3301, 3401 — Special Topics (1-4:1-4:0)
Advanced topics in health sciences, education, research or delivery of health care. Includes field, library and/or clinical work and conferences. The description of the particular area of study will appear in the printed semester schedule of courses. May be repeated for credit when content varies. Prerequisite: Departmental consent.

3103 — Directed Reading in Health Sciences (1:A*:0)
Selected study of current literature in health sciences, education, clinical practice and/or research under direction of a faculty member. The course may be repeated for credit when focus of study varies. Prerequisite: Departmental consent.

3105, 3205, 3305, 3405 — Directed Study (1-4:A*:0)
Investigation into advanced and specialized areas in the health sciences under the direction of a faculty member. May be repeated for credit when topics of investigation differ. Prerequisite: Departmental consent.

330 — Human Sexuality (3:3:0)
A lecture/discussion class exploring the biological, psychological, social and cultural aspects of human sexuality for health professionals.

4101, 4201, 4301, 4401 — Special Topics (1-4:1-4:0)
Advanced topics in health sciences, education, research and/or delivery of health care. Includes a research investigation, plus field, library and/or clinical application. May be repeated for credit when content varies. Prerequisite: Departmental consent.

4105, 4205, 4305, 4405 — Directed Study (1-4:A*:0)
Research investigation of advanced and specialized areas in the health sciences under direction of a faculty member. Prerequisite: Departmental consent.

430 — Concepts of Loss (3:3:0)
Study of a variety of losses experienced through the life span. Includes loss of relationships, jobs, body function, youth and independence, spouses, mobility, dying and death. Sensitivity exercises. Strategies for helping people cope with and adapt to losses.

431 — Teaching in the Health Sciences (3:3:0)
Study of the concepts, principles and methods of teaching health science subjects. Emphasis on the development and application of teaching skills in health care settings.

432 — Research Process in the Health Professions (3:3:0)
Introduction to the philosophy and values of research, the major methods of conducting investigations and the application of research findings to health care.

433 — Concepts of Health Care Administration (3:3:0)
Study and application of management, supervision and administrative theory and techniques in health care settings. Emphasis on planning, implementing and evaluating delivery of health care.

434 — Advanced Concepts in Community Health (3:3:0)
Advanced concepts in community and public health; including application of epidemiology, research and legislative processes to assess, plan for, implement and evaluate community health needs and programs. Prerequisite: Introductory course in Community Health, or consent of instructor.

*Arranged

RADIOLOGIC TECHNOLOGY (RA)

131 — **Orientation to Radiologic Technology (3:2:3)**
Introduction to Radiology; including history, organization, production of x-rays, radiation protection, darkroom technique, terminology. Examinations performed in radiology department.

132 — **Radiographic Principles (3:3:0)**
Study of basic principles of x-ray production; emphasis on the relationship between milliamperage, kilovoltage, time and distance as related to density and contrast on a radiograph. Film critique and dark room technique.

133 — **Medical-Surgical Disease (3:3:0)**
Subjects in this course will include medical and surgical diseases and their relation to radiography. Student technologists will also be introduced to basic departmental administration and equipment maintenance.

143 — **Radiographic Positioning (4:3:4)**
Procedures in radiology. Basic, advanced contraindications are explored. Topographic anatomy included.

144 — **Radiographic Physics (4:3:2)**
Intensive study of electromagnetism, electric transformers, electrical rectification, production of x-rays and the preventive maintenance of x-ray machines.

152 — **Radiographic Practicum I (5:0:20)**
Introduction to the clinical environment in affiliate hospitals. Rotation through different work centers to observe and assist in the operation of the radiology department.

154 — **Radiographic Practicum II (6:0:25)**
Students make standard radiographs under close supervision by a qualified radiologic technologist.

231 — **Special Procedures (3:3:0)**
Procedures uncommon to the radiology department. Specialized equipment involved. Anatomy, contrast media and radiographic projections used. Analysis of film quality.

233 — **Radiation Biology (3:3:0)**
Effects of radiation on the human population, methods of protection and dosimetry. Basic principles of radiation therapy and nuclear medicine.

234 — **Radiographic Practicum III (3:0:40)**
Clinical study to broaden the students' application of radiographic procedures. Proficiencies in diagnostic radiology will be emphasized.

235 — **Radiographic Practicum IV (3:0:40)**
A continuation of Ra 234 with increasing emphasis in diagnostic radiology. Prerequisite: Ra 234.

236 — **Radiologic Technology Seminar (3:3:0)**
An indepth study of testing methodology. Also covered will be new advances in the field of radiology.

242 — **Advanced Procedures (4:3:2)**
Specialized technical procedures in radiology. Basic image detector principles, reducing patient exposure, accessory devices for patient safety, comparison of radiographic tubes, enlargement techniques, comparison of timing devices, mobile or bedside radiography, body section radiography and electronic image systems. Pediatric radiology included.

262 — **Radiographic Practicum V (6:0:32)**
Rotation through specialized procedure areas during clinical practice under limited supervision.

264 — **Radiographic Practicum IV (6:0:32)**
Rotation through specialized areas in a radiology department. Emphasis on job responsibilities and confidence in skill performance.

RESPIRATORY TECHNOLOGY (RT)

121 — Clinical Medicine I (2:2:0)
Basic pathological process applicable to disease conditions important to the respiratory technician. Emphasis on chronic respiratory diseases.

122 — Clinical Medicine II (2:2:0)
Prepares the student for the management of acute respiratory failure in newborn, pediatric, medical, surgical, obstetric and gynecology patients. Respiratory therapy involvement is emphasized.

131 — Orientation to RT Practice (3:3:6)
Oxygen administration and physical examination of the chest. Laboratory consists of simulated practice sessions. Prerequisite: HS 121. Taught only in the summer.

137 — Respiratory Therapy Procedures II (3:2:3)
Prepares the student to skillfully operate various volume ventilators and to effectively administer assistance required by medical staff. The student must be concurrently enrolled in RT 138, 122 and 161.

138 — Cardiopulmonary Technology (3:2:3)
Emphasizes the importance of the heart and lungs to respiratory therapy. Relates the cardiopulmonary systems to airway management, cardiopulmonary resuscitation, blood gas analysis, pulmonary function studies and chest physiotherapy.

141 — Respiratory Therapy Procedures I (4:3:4)
Instruction and application of techniques and skills necessary to administer common methods of gas, aerosol and humidity therapy. Pharmacology for respiratory therapy discussed in detail and correlated with intermittent positive pressure breathing procedures and equipment.

143 — Respiratory Therapy Sciences (4:3:2)
Basics of mathematics, chemistry, physics and microbiology as they relate to respiratory therapy principles and procedures.

160 — Respiratory Therapy Clinic I (6:0:24)
Introduces the student to the respiratory therapy department in clinical facilities. Observation of techniques of therapists and technicians as they perform services. The student will participate in basic respiratory therapy procedures including intermittent positive pressure breathing, aerosol, humidity and gas therapy. Must be taken concurrently with RT 141, 143 and 121.

161 — Respiratory Therapy Clinic II (6:0:24)
Clinical application of treatment conditions discussed concurrently in RT 122, 137 and 138. Special emphasis on practice in critical care areas utilizing volume ventilators. Experience in the management of artificial airways, tracheobronchial aspiration, blood gas analysis and pulmonary function testing are included.

*Clinical Practice

Department of Nursing

Department Head — Marcia Poole. *Professor* — Edna L. Neumann. *Associate Professor* — Ruth Taylor. *Assistant Professors* — Dorothy Daniels, Helen Moss, Marcia Poole, Doris J. Price, Donna Wilsker. *Instructors* —Jann Torrance Balmer, Judy Baugh, Ruth E. Brewer, Lynn Ford, Mahalia Lewis, Adelia Shelton, E. Jean Woodard. *Instructor IV* — F. Dolores Jones. *Instructor III* — Norma Aycock. *Instructor II* — Edna M. Kjelson, Virginia Rudloff, Faye Stone. *Clinical Instructors* —

DeLilah Gregory, M. Louise Grose, Janet Hamilton, Ruby Kilpatrick, E. Ruth Mason, Eda Richardson, Katherine Roberts, Olinda J. Rosetta, F. Jane Smith. *Adjunct Assistant Professor and Research Analyst* — Carolyn Crawford. *Adjunct Instructor and Medical Librarian* — Patricia Weaver-Meyers. *Learning Resources Center Technician* — Coy James. *Secretaries* — Gloria Jones, Kenna Dee Oakes.

Nursing education began at Lamar University in 1951, when the Vocational Nursing Program was approved in the College of Technical Arts. Eventually, the way was paved for the development of Registered Nurse preparation. The Associate of Science in Nursing program accepted students in January 1974, and the Bachelor of Science in Nursing Program admitted the first class in January 1976.

Nursing programs differ in their focus on education and clinical practice. It is pertinent then, to state the department's view of nursing education and nursing service.

Basic to the philosophy of the department is the belief that all people have the right to optimal health care. Nursing shares with other health sciences the goal of promoting health for individuals, families and communities, as well as the responsibility for the care, comfort and coordination of services to clients experiencing acute, chronic and terminal illness. To accomplish this goal, nurses function in collaboration with other members of the health team, in a supportive role to the medical regime, and as independent practitioners of nursing. Nurses also function as patient/client advocates. Based on scientific knowledge, caring attitudes and technical skills, nurses focus on promotion of health, prevention of illness and disease, and in support of the client and his family. Nursing is concerned with expansion and application of new knowledge and methods of care, and with improvement of health care delivery systems.

To implement this philosophy, the curricula focus on the behavior of man in various levels of wellness. The programs provide understanding of the systems which influence living and care giving, and man's psychology and physiology under normal and pathological conditions. Attaining clinical competence is stressed.

Students of nursing meet course requirements through didactic courses, laboratory assignments and clinical experiences in health care facilities under supervision of University faculty. Students are expected to adhere to rules and regulations of Lamar University and the various facilities to which they are assigned. Specific policies may be obtained from program directors.

Admission to Department of Nursing Programs

Students enrolled at Lamar University must submit an application for Admission to Nursing programs.

Students not enrolled at Lamar must submit two separate applications: one for admission to Lamar (obtained from the Office of Admissions and Records), and one for admission to the specific program (obtained from Program Director, Ward Health Sciences Building).

Completed Application for Admission to Nursing programs, with required transcripts, test scores and related documents must be received on specified dates (see program statements) to be considered for admission. Applicants are urged to follow application instructions carefully to ensure processing by admission committees.

Applications for Admission are evaluated on the following bases:

1. Admission to the University (Admissions section of this bulletin).
2. Transcripts and grades in high school and previous college work. Specified test scores may be required.
3. Evidence of physical and emotional capability of completing the program of instruction and clinical practice. Health examinations are required. Forms are available with application forms.

4. Motivation for nursing practice demonstrated through letters of recommendation, employment and volunteer records and references, statement of career goals and, in most cases, a personal interview.
5. Admission may be limited by available space.

Additional costs above tuition and fees are involved in nursing programs. Uniforms, equipment and instruments, liability insurance, health examinations, special testing fees, additional laboratory fees and transportation to clinical facilities are the student's responsibility. A wrist watch with a second hand is required. Financial aids are available for eligible students (see Financial Aid and Awards section of this bulletin).

Liability insurance and health examinations must be renewed each year of Nursing programs.

Students may be assigned to clinical experiences during day, evening, night or week-end hours.

Clinical agencies may require additional health examinations, dress codes or conformity with other policies. Students will be informed in advance of such requirements.

Transfer credits from other institutions will be evaluated on an individual basis.

Courses taught during the summer sessions may require different registration procedures.

Bachelor of Science Degree — Nursing

Program Director — Ruth Brewer

The purpose of the baccalaureate nursing program is to prepare professional nurse practitioners to meet community and state needs for nurses who can assume leadership in the delivery of health care.

The program is designed to prepare the graduate for beginning roles in assessing, planning, implementing and evaluating nursing and health care needs of individuals, families and groups in a variety of settings. This program also lays the foundation necessary for graduate study in clinical specialities, supervision, administration, education and/or research.

Completion of the program leads to a Bachelor of Science in Nursing degree. Recipients of the degree are eligible to make application to write the examination given by the Board of Nurse Examiners to become a Registered Nurse (RN).

The baccalaureate program also provides an opportunity for Registered Nurses who wish to pursue a Bachelor of Science Degree in Nursing.

Application for admission to the program is made to the Department of Nursing one semester prior to beginning the clinical phase of the nursing major. Students are encouraged to develop and maintain early counseling contact with the department.

Admission to the nursing major follows criteria of the College of Health Sciences. Admission is determined by the Admissions Committee and is based on evaluation of the student's application and available space. To be considered for admission the student must:

1) Have a minimum overall grade point average (GPA) of 2.50 in all college work.
2) Have completed all required health sciences and psycho/social/biological science courses with a grade of "C +" (2.5) or better.
3) Submit a complete application and attendant materials to the Admissions Committee by October 15 (for admission to the January class).

Credit may be earned by examination in selected nursing courses. Criteria for eligibility to take competency/equivalency examinations, fees, policies, procedures and other details may be obtained from the program director, Ward Health Sciences Building.

Students will be required to validate their knowledge of social, psychological or biological science courses which were taken more than 10 years prior to the date of application to the nursing program.

Nursing courses may be repeated once by special permission.

Recommended Programs of Study

Bachelor of Science — Nursing Major

Semester I, Fall

Bio 143—Anat & Physiology	4
HEc 138—Nutrition	3
Chm 143—Introduction	4
Psy 131—Introduction	3
Eng—Composition	3
PE—Activity	1-2
	18-19

Semester II, Spring

Bio 144—Anat & Physiology	4
Chm—Biochemistry 144	4
Psy 231—Child Psychology	3
History—American	3
Eng—Composition	3
PE—Activity	1-2
	18-19

Semester III*, Fall

Bio 245—Microbiology	4
Soc 131—Introduction	3
Math or Foreign Language	3
HS 121—Health Care Concepts	2
Nur 132—Orient to Health Care	3
PE Activity or Elective	1-2
	16-17

*Apply for Admission by Oct. 1

Semester IV, Spring

Nur 331—Core Concepts in Nsg	3
Nur 333—Pathophysiology	3
Nur 361—Conceptual Approach to Nsg Practice	6
Nur 438—Ecology of Nsg	3
PE Activity or Elective	1-2
	16-17

Semester V, Fall

Nur 334—Psychopathology	3
Nur 362—Adult Health	6
Eng—Literature	3
HS 432 Research Process	3
Elective—non major	3
	18

Semester VI, Spring

Nur 421—Community as Client	2
Nur 463—Care Childbearing Fam	6
History	3
Elective Nursing	4-6
	15-17

***Semester VII, Summer**

Nur 464—Care Childbearing Fam	6
Gov 231—Introduction Am Gov. I	3
Elective	3
	12

Semester VIII, Fall

Nur 482—System Approach to Nursing Practice	8
Gov 232—American Gov II	3
Nur 433—Senior Seminar	3
	14

*Semester VII will be taught Summer I and II.

Associate of Science Degree — Nursing

Program Director — Doris J. Price

The purpose of the Associate of Science degree nursing program is to prepare a practitioner for beginning roles in assessing, planning, implementing and evaluating, with assistance, the nursing and health care needs of clients in the hospital setting.

The associate degree nursing program may be completed in two calendar years. This program includes health sciences (2 hours), general education courses (41-42 hours) and nursing education courses (40 hours). Students receive classroom instruction and coordinated clinical experience in the nursing care of patients at local hospitals and community agencies. Each recipient of the degree is eligible to make application to write the state licensing examination given by the State Board of Nurse Examiners to become a registered nurse (RN).

A minimum grade of "C" (GPA 2.0) must be maintained in all nursing and science courses for admission and progression in the program, as well as to obain the Associate of Science degree. A student who fails to perform satisfactorily in clinical practice will receive a failing grade in the nursing course regardless of the theory grade. Nursing courses may be repeated once by special permission.

To be considered for admission, the student must submit an application to the director of the associate degree nursing program by April 15 of each year (this form and information concerning admission procedures may be procured from the Program Director, Ward Health Science Building.) The student is also required to complete the required courses (with a grade of "C" or better) offered in Summer Session I and Summer Session II. Students are encouraged to develop and maintain early counseling contact with the department.

Recommended Program of Study Associate of Science Degree — Nursing

First Year

Summer Session I

Hs 121—Health Care Concepts	2
Bio 143—Anat & Physiology	4
PE—Activity	1 or 2
	7-8

Summer Session II

Nur 132—Orientation to Health Care	3
Bio 144—Anat & Physiology	4
	6-7

Fall Semester

Eng—Composition	3
Psy 131—Introduction	3
Nur 161—Mental & Physical Health I	6
Gov 231—Intro Am Gov I	3
	15

Spring Semester

Bio 245—Mcirobiology	4
Eng—Composition	3
Nur 172—Mental & Physical Health II	7
His 231—American History	3
	17

Summer Session I and II

Nur 281—Nursing Problems I 8

Second Year

Fall Semester

Nur 282—Nursing Problems II	8
Gov 232—Intro Am Gov II	3
PE—Activity	1 or 2
Soc 131—Introduction	3
	15 or 16

Spring Semester

Nur 283—Nursing Problems III	8
His 232—American History	3
Eng—Literature	3
	14

Vocational Nursing

Program Director — F. Dolores Jones

Vocational Nurses provide basic nursing care under the direct supervision of a Registered Nurse. Upon successful completion of the program, graduates receive a certificate of completion and are eligible to make application to write the examination given by the State Board of Vocational Nurse Examiners to become a Licensed Vocational Nurse (LVN).

Vocational nursing classes begin in the Fall, Spring and Summer Semesters. Applications for admission are accepted April 1, July 1, and November 1 of each year. Applicants are selected by the Vocational Nursing Admissions Committee. An SAT score of at least 550 is required for admission. Application forms, policies and procedures regarding retention and progression in the program are available from the program director, Ward Health Science Building.

Recommended Program of Study Vocational Nursing

First Semester

VN 121—Ethics	2
VN 122—Nutrition & Diet Therapy	2
VN 133—Pharmacology	3
VN 144—Anatomy and Physiology	4
VN 175—Nursing Skills	7
	18

Second Semester

VN 136—Medical Surgical Nursing I	3
VN 137—Medical Surgical Nursing II	3
VN 166—Clinical Practice I	6
VN 166—Clinical Practice II	6
	18

Third Semester

VN 138—Obstetrical Nursing	3
VN 139—Pediatric Nursing	3
VN 168—Clinical Practice III	6
VN169—Clinical Practice IV	6
	18

NURSING (Nur)

132 — Orientation to Health Care (3:2:3)*
Theory and practice of skills in a geriatric health care setting which assists individuals to meet basic needs. Course is prerequisite for all students planning to enter the baccalaureate or associate degree nursing program.

161 — Mental and Physical Health I (6:2:16)
Introduction to the concepts which serve as the framework for the associate degree program. The student applies these concepts in assessing nursing care needs for all age groups. The student begins to develop the technical, observational and communication skills necessary to implement effective nursing care, emphasizing wellness in the physical, psychological and social domains. Prerequisite: Admission to ADN program.

172 — Mental and Physical Health II (7:3:16)
Continues the basic concepts with emphasis on the maintenance of homeostasis in situations of stress upon the individual and family. Increased importance is placed on promoting wellness for the patient and family through teaching and more complete application of the nursing process. Prerequisite: Nur 161.

281 — Nursing Problems I (8:3:15)
Continuation of the concepts presented in previous courses. The focus is on the use of the nursing process with persons who are experiencing imbalance and behavioral patterns involved in maintaining homeostasis. Prerequisite: Nur 172.

282 — Nursing Problems II (8:3:15)
Nursing concepts extended throughout this course with emphasis on imbalances which inflict more severe stress upon the bio-psycho-social integrity of

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory or clinical laboratory hours required per week

the individual and the family unit. Increasingly complex manifestations of need imbalances and resultant behavioral changes are considered in expanding the scope and depth of the nursing process. Prerequisite: Nur 281.

283 — Nursing Problems III (8:2:24)
A continuation of previous Nursing Education Problems I and II courses. Major focus on the effect of crisis situations in imbalance, identification of specific stressors and basic rehabilitative processes. Emphasis on the bio-psycho-social man within family and community continues. Identification of responsibilities of the graduate, role as a citizen and career opportunities included both in theory and laboratory practice. Prerequisite: Nur 282.

3101, 3201, 3301, 3401/4101, 4201, 4301, 4401 — Selected Topics in Nursing (1-4:1-4:0)
Nursing elective introducing topics related to health care. Designed to expand the student's professional role in various health care settings and areas of specialization. Prerequisite: Departmental consent.

3105, 3205, 3305, 3405/4105, 4205, 4305, 4405 — Directed Study in Nursing (1-4:1-4:0)
This elective provides the nursing student with an opportunity for individualized study of selected concepts and/or problems in professional nursing. Course may be repeated as content varies. Prerequisite: Departmental consent.

331 — Core Concepts in Nursing (3:3:0)
Introduction to selected concepts in nursing which serves as a framework for nursing practice. Prerequisite: Departmental consent.

332 — Pharmacology (3:3:0)
An introduction to pharmacology, principles of therapeutics and clinical applications. Prerequisite: Departmental consent.

333 — Pathophysiology (3:3:0)
Introduction to selected concepts in the physiological sphere of human behavior. Prerequisite: Admission to Nursing Major or Departmental consent.

334 — Psychopathology (3:3:0)
Introduction to selected concepts in the psychosocial spheres of human behavior. Prerequisite: Nur 333 or Departmental consent.

361 — Conceptual Approach to Nursing Practice (6:2:16)
Provides the beginning level nursing student with opportunity to expand knowledge of core concepts in classroom and clinical settings. Prerequisite: Admission to Nursing Major.

362 — Adult Health (6:2:16)
Intermediate levels of theory and practice in the nursing process for adults with variable levels of physiological and psychosocial wellness. Prerequisite: Nur 361.

411 — Directed Reading in Nursing (1:A*:0)
Provides the senior nursing student an opportunity to engage in reading and library study of selected concepts in nursing, under faculty supervision. May not be repeated. Prerequisite: Departmental consent.

421 — Community as Client (2:2:0)
Expands previously presented concepts to include the delivery of health care to large and small groups. Emphasis given to the concepts of the community as a client within the context of primary, secondary and tertiary health care. Prerequisites: Nur 362, HS 432.

431 — Clinical Elective in Nursing (3:1:8)
Opportunity to expand knowledge of theory and practice in selected areas of nursing. Course may be repeated as content varies. Prerequsites: Nur 362 and departmental consent.

433 — Senior Seminar (3:3:0)
Provides the senior nursing student the opportunity to study and discuss complex nursing and health care issues. Prerequisite: Nur 421.

438 — Ecology of Nursing (3:3:0)
Consideration of nursing from historical and contemporary perspective. The nature of nursing with emphasis on roles of the nurse included. Legal, ethical and introductory research process integrated. Focus on interrelatedness of nursing practice and education within social system. Prerequisite: Departmental consent.

463 — Care of Childbearing Families (6:2:16)
This combination didactic and clinical course is designed to present nursing concepts within the context of the childbearing continum. Prerequisites: Nur 362, HS 432.

464 — Care of Childbearing Families (6:2:16)
This combination didactic and clinical course is designed to present nursing concepts within the context of human development from infancy through adolescence. Prerequisites: Nur 463.

482 — Systems Approach to Nursing (8:4:24)
This combination clinical and didactic course is designed to provide the student with an opportunity to study and apply concepts of leadership. Classroom and clinical experiences include the management of client services, as well as management of complex health problems. Prerequisites: Nur 464.

VOCATIONAL NURSING (VN)

121 — Ethics (2:2:0)
Personal and vocational adjustment including aspects of community health, disease prevention and mental health.

122 — Nutrition and Diet Therapy (2:2:0)
This course is designed to acquaint the student with the fundamental principles of basic nutrition, the relationship of food to normal health and the application of basic principles of nutrition to diet therapy in the treatment of disease.

133 — Pharmacology (3:3:0)
This course is designed to introduce the student to pharmacology and the administration of medicines.

136 — Medical Surgical Nursing I (3:3:0)
Specific theory in the disease and conditions of integumentary, special sensory, respiratory, endocrine, muscular and cardiovascular systems.

137 — Medical Surgical Nursing II (3:3:0)
Specific theory in the disease and conditions of gastrointestinal, genitourinary, male and female reproductive, nervous and skeletal systems.

138 — Obstetrical Nursing (3:3:0)
Specific theory on the care of mothers and newborn infants.

139 — Pediatric Nursing (3:3:0)
Specific theory on the care of sick children.

144 — Anatomy and Physiology (4:4:0)
The primary objective is to introduce principles of the biological and physical sciences that contribute to the student's understanding of the human body process in normal and certain abnormal conditions.

166 — Clinical Practice I (6:0:16)
General care of medical patients. Hospital practice. Corequisite: VN 136.

167 — Clinical Practice II (6:0:16)
General care of surgical patients. Hospital practice. Corequisite: VN 137.

168 — Clinical Practice III (6:0:16)
General care of mothers and newborn infants. Hospital practice. Corequisite: VN 138.

169 — Clinical Practice IV (6:0:16)
General care of sick children. Hospital practice. Corequisite: VN 139.

175 — Nursing Skills (7:2:10)
The skills designed to prepare the student in the techniques of basic nursing procedures including ability to meet emergencies. The operation of hospital equipment will be taught in this course.

College of Liberal Arts

Departments: English, Government, History, Modern Languages, Public Affairs, Sociology

Preston B. Williams, Ph.D., Dean
Laquita L. Stidham, Secretary

DEGREE OFFERINGS

Bachelor of Arts with majors in the following fields:

English	History
French	Sociology
Government	Spanish

Bachelor of General Studies — Liberal Arts

Bachelor of Science with majors in the following fields:

Criminal Justice	Sociology
Government	

Bachelor of Social Work

Associate of Science with a major in the following field:
Law Enforcement

Information concerning graduate programs in English, government, history and public administration may be obtained in the Graduate Bulletin.

THE LIBERAL ARTS

Lamar University accepts the philosophy that higher education involves the whole mind of a person and thus should not be limited to job preparation. Thus, every student in the University takes a substantial portion of his/her first two years of work in courses offered by the College of Liberal Arts.

The liberal arts are those fields which "liberate" the mind and give the student an opportunity to learn about and to criticize the various facts and assumptions about people, society and the relationship between the individual and that society. Broadly speaking, the area may be divided into the Humanities (English, history, journalism, modern languages and philosophy) and the Social Sciences (government, sociology, anthropology, economics and psychology).

Specialization in one or more of these disciplines provides an excellent liberal education and the best possible pre-professional preparation.

To increase and strengthen its programs of education for public service, the College of Liberal Arts has established a Department of Public Affairs. In this department, a student may earn a Bachelor of Science in Criminal Justice, a Bachelor of Social Work or an Associate of Science in Law Enforcement degree.

The Liberal Arts departments offer approved programs which enable students to secure the Bachelor of Arts degree in one of the Liberal Arts and at the same time certify for a provisional certificate — secondary with teaching field in that Liberal Arts discipline.

Bachelor of General Studies — Liberal Arts

The Bachelor of General Studies — Liberal Arts degree is designed for those stu-

dents who have already established careers and who wish to earn credit toward a degree while learning for the pleasure of learning.

The Bachelor of General Studies — Liberal Arts will be granted upon the completion of the General Degree Requirements of the University plus a major in liberal arts of 36 semester hours, including 18 advanced, over and above the liberal arts courses specified in the General Degree Requirements. For purposes of establishing what courses may be applied toward the liberal arts major, liberal arts courses shall be defined as those offered by the Departments of Economics, English (philosophy), Government, History, Modern Languages, Psychology and Sociology (anthropology). At least 30 semester hours of the work applied toward this degree must be completed after June 1, 1976.

Honors Program — Liberal Arts

The Liberal Arts Honors Program is an enriched program offering a variety of courses designed specifically for qualified and highly motivated students. Although the program is supervised by the College of Liberal Arts, students working toward any approved major can participate. Normally, some scholarships are available to qualified students who enroll in the program.

The Honors Program includes special honors courses in sophomore literature (Eng 2318 and Eng 2319), special honors section in sophomore government (Gov 231H and Gov 232H), special honors section of American history (His 231H and His 232H) and two advanced interdisciplinary courses especially designed for the program (Hon. 331 and Hon. 431).

HONORS (Hon)

331 — Liberal Arts Honors Seminar I (3:3:0)
An interdisciplinary course designed for the Liberal Arts Honors Program. The content depends upon the combination of disciplines involved.

431 — Liberal Arts Honors Seminar II (3:3:0)
An interdisciplinary course designed for the Liberal Arts Honors Program. The content depends upon the combination of disciplines involved.

Department of English

Department Head — Arney L. Strickland. *Director of Freshman English* — Annette E. Platt. *Professors* — Robert J. Barnes, George W. de Schweinitz, Winfred S. Emmons, Harry L. Frissell, Marilyn D. Georgas, Elizabeth L. Meeks, Robert C. Olson, Henry B. Rule, R. Blaine Thomas, George B. Wall, A. W. Yeats. *Associate Professors* — Olga D. Harvill, Kirkland C. Jones, Jack N. Renfrow. *Assistant Professors* — Peter L. De Rose, Henry Hutchings III, Nora B. Leitch, Annette E. Platt, Timothy Summerlin, Joan B. Wilkerson. *Adjunct Instructors* — Christopher P. Baker, Merri Gay Biser, Colley J. Durley, Beth Greenfeld, Sam Gwynn, Sue Hachbold, Robert R. Hill, Dale G. Priest, R. Clay Reynolds, Edward H. Ross, Thomas P. Schmidt, Lou Ann Thompson. *Secretaries* — Priscilla Burrows, Audrey Wynn.

The degree of Bachelor of Arts in English will be awarded upon the completion of the following requirements:

A. General Requirements:
   Foreign Language through the course numbered 232.
   Freshman composition — six semester hours.
   Mathematics and laboratory science — four courses, at least one in mathematics and one in a laboratory science. No courses less advanced than college algebra will fulfill the mathematics requirement (except as indicated under Teacher Certification below).
   History 131 and 132 (not required for persons who earn a teacher's certificate).
   Sophomore American history — six semester hours.
   Sophomore American government — Government 231 and 232.
   Physical activity courses, marching band or AFROTC — four courses.

B. Major:
   Sophomore literature — six semester hours
   Advanced American literature — six semester hours
   Advanced British literature — nine semester hours
   English 430 (except as indicated under Teacher Certification below).

C. Minor:
   An approved minor of 18 semester hours, including at least six semester hours in advanced course.

D. Sufficient approved electives to complete a total of 126 semester hours (except as indicated under Teacher Certification below).

Teacher Certification — English

Students wishing to secure the Bachelor of Arts degree in English and at the same time to certify for a provisional certificate-secondary with a teaching field in English, must include in their degree program the following:

1. Six hours of mathematics and eight hours of science. The mathematics requirement must include at least college algebra or a more advanced course.
2. An approved additional teaching field in the place of the minor (consult this catalog, College of Education).
3. English 334, 3312 or 430.
4. English 3321.
5. Eighteen hours of education: 331, 332, 338, 438, 462.
6. Approved electives sufficient to bring the total number of hours to 132.

Recommended Program of Study

First Year

Eng—Composition	6
His 131-132—World Civilization	6
Foreign Language—131-132	8
Mth	6
Electives	6
PE—Activity	2
	34

Second Year

Eng—Sophomore Lit	6
Sophomore Am History	6
Gov 231 and 232	6
Foreign Languages—231-232	6
Electives	6
PE—Activity	2
	32

Third Year

Eng	9
Laboratory Science	8
Minor	9
Electives	6
	32

Fourth Year

Eng 430—History of the English Language	3
Eng	6
Minor	9
Electives	9-12
	27-30

ENGLISH (Eng)

131 — Composition (3:3:0)*
Intensive study and practice in basic forms of expository writing. Frequent themes. Collateral reading in articles and essays of a factual and informative type. Prerequisite to English 132, 133, 134 and 135.

132 — Composition (3:3:0)
Further study and practice in the basic forms of expository writing and analytical writing. Topics for composition suggested from wide reading in poetry and drama. Prerequisite: English 131.

133 — Composition (3:3:0)
Further study and practice in the forms of expository and analytical writing. Topics for composition suggested from wide reading in prose fiction. Prerequisite: English 131.

134 — Composition (3:3:0)
Further study and practice in the forms of expository and analytical writing. Topics for composition suggested from a wide survey of various communications media — films, tapes, radio, television, periodicals, books, etc. Requires attendance at specific instructor-specified events in addition to class attendance. Prerequisite: English 131.

135 — Composition (3:3:0)
Intensive study and practice in the forms of persuasive writing. Topics for composition suggested by the study of rhetoric and collateral readings. Prerequisite: English 131.

136 — Composition and Rhetoric (3:3:0)
An accelerated program for those exceptionally well prepared at time of enrollment. Extensive writing; introduction to literary genres. Offered long semesters and on main campus only. Must be taken the first semester the student is enrolled. Upon completion of this course with the grade of C or better, the student receives credit for both English 131 and 136. This course meets the general degree requirement for freshman English. Prerequisite: approval of head of the English Department.

(Note: The student can satisfy the general degree requirements for freshman English by completing successfully English 131 and any other course from English 132, 133, 134 and 135. However, a student is not permitted to receive credit for more than one freshman English course a semester.)

137 — Developmental Reading and Writing (3:3:2)
Development of writing skills, broadening reading background and improvement of reading comprehension. Emphasis on individualized instruction in composition. This course does not satisfy general degree requirements for Freshman English.

(Note: Satisfactory completion of six hours of freshman composition is prerequisite to sophomore literature courses. Unless specified by a particular department, any combination of the six sophomore courses below will satisfy a sophomore literature requirement.)

2311 — Masterworks of World Literature (3:3:0)
Critical study of six to ten major monuments of world literature, from classical antiquity to the present century.

2312 — Masterworks of American Literature (3:3:0)
Critical study of six to ten major works of American literature, including both the nineteenth and twentieth centuries.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

2313 — **Masterworks of British Litertaure (3:3:0)**
Critical study of six to ten major works of British literature, including writers from most of the important periods.

2315 — **The Literature of Africa (3:3:0)**
Major writers of Africa, including various genres and works translated from languages other than English.

2316 — **Black Writers of America (3:3:0)**
Significant contributions to American literature from Colonial times to the present.

2318 — **Sophomore Literature Honors Course (3:3:0)**
Critical studies of several major works of British and World Literature from classical antiquity to the present century, designed especially for honors students.

2319 — **Sophomore Literature Honors Course (3:3:0)**
Critical studies of several major works of British, American and World Literature from classical antiquity to the present century, designed especially for honors students.

333 — **Shakespeare (3:3:0)**
Rapid reading of the histories, comedies and tragedies. The development of Shakespeare as a dramatist; his relationship to the Elizabethan theater; his social, political and literary background in the Tudor-Stuart era.

334 — **Advanced Grammar (3:3:0)**
Intensive analysis of sentences, the concept of structural meaning.

335 — **Creative Writing (3:3:0)**
A workshop approach to the writing of poetry, fiction and drama. Prerequisite: recommendation by the department head. May be repeated with permission of department head.

336 — **The Short Story (3:3:0)**
The technique of the short story; its historical development; study and analysis of great short stories.

337 — **The Drama (3:3:0)**
The historical development of the drama from Aeschylus to the present. Intensive study of selected plays.

338 — **Studies in the British Novel (3:3:0)**
Wide reading and critical study in some particular aspect or period of the British novel. May be taken for credit more than once if the topic varies.

339 — **American Novel (3:3:0)**
A study of the history, growth and technique of the American novel, with emphasis on the novels of the twentieth century.

3312 — **Introduction to Linguistics (3:3:0)**
A survey of descriptive and historical linguistics intended to provide some understanding of the nature of language and linguistic change, of the current methods used in describing and comparing languages, and of the interaction of language and culture.

3313 — **Mythology (3:3:0)**
Classical, Scandinavian, German and Oriental mythology emphasizing the myths, deities and great legendary characters of Greek, Roman, Scandinavian, Teutonic and Oriental civilizations most frequently referred to in the literature of the Western world.

3316 — **Poetic Analysis (3:3:0)**
A study of the forms and techniques and the critical evaluation of poetry.

3321 — **Methods of Teaching English (3:3:0)**
Methods of teaching reading and composition at the secondary level, with special attention to the assigning and evaluating of written work.

3322 — **The American Literary Renaissance: 1820-1860 (3:3:0)**
An intensive study of the major authors of the period from Poe to Melville.

3324 — **The Development of American Realism: 1860 to 1900 (3:3:0)**
An intensive study of the major authors of the period from Whitman to Norris.

3331 — Advanced Survey of British Literature (3:3:0)
Intensive survey of British literature from the beginnings to 1800, with wide collateral reading in literary history.

3332 — Advanced Survey of British Literature (3:3:0)
Intensive survey of British literature from 1800 to present, with wide collateral reading in literary history.

430 — History of the English Language (3:3:0)
Theory and nature of language. Studies in the growth of English and American forms.

432 — Studies in Sixteenth Century Literature (3:3:0)
Critical studies in the poetry, prose and drama of the age. May be taken for credit more than once if the topic varies.

434 — Shakespeare (3:3:0)
Intensive study of selected major plays. Prerequisite: English 333 or permission of the instructor.

435 — Studies in Seventeenth Century Literature (3:3:0)
Critical studies in the poetry, prose and drama of the period 1600-1660. May be taken for credit more than once if the topic varies.

438 — Studies in Eighteenth Century Literature (3:3:0)
Critical studies in the poetry, prose and drama of the period 1660-1800. May be taken for credit more than once if the topic varies.

439 — Studies in Romantic Literature (3:3:0)
Critical studies in the poetry, prose and drama of the Romantic period. May be taken for credit more than once if the topic varies.

4311 — Studies in Victorian Literature (3:3:0)
Critical studies in the poetry and prose of the Victorian period. May be taken for credit more than once if the topic varies.

4312 — Studies in Language and Linguistics (3:3:0)
Special problems in linguistics, such as the history of American English, regional dialects, new grammars. May be taken for credit more than once if the topic varies.

4317 — Contemporary Drama (3:3:0)
A study of dramatic trends and representative plays from Ibsen to he present.

4318 — Contemporary Poetry (3:3:0)
A study of poetry developments in England and America with emphasis on representative poets from Hardy to the present.

4319 — Contemporary Fiction (3:3:0)
A study of prose fiction representative of modern ideas and trends, with emphasis on English and Continental authors.

4322 — Russian Literature (3:3:0)
Selected works from nineteenth and twentieth century Russian literature in translation. Pushkin to Sholokov.

4325 — Language: Sound and Meaning (3:3:0)
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. May not be counted for English major credit.

4326 — Expository Writing (3:3:0)
The practical application of the techniques of mature exposition; classification, explanation, evaluation. With permission of the instructor, this course may be repeated one time for credit.

4327 — Bibliography and Methods of Research (3:3:0)
An introduction to research methods and sources. Recommended for those planning or beginning graduate study.

4328 — Early American Literature (3:3:0)
A survey of all significant writers from the beginning of Colonial America to 1828.

4329 — Modern American Literature (3:3:0)
A critical survey of major American writers of the twentieth century.

4333 — Studies in a Particular Author (3:3:0)
Intensive critical study of a major writer such as Chaucer, Milton, Hawthorne, Faulkner. May be taken for credit more than once when the topic varies.

4334 — Critical Studies in Literature (3:3:0)
Intensive critical study of a particular genre or theme in comparative literature or criticism. May be taken more than once for credit when the topic varies.

4335 — Technical Report Writing (3:3:0)
Supervised preparation of technical and scientific reports according to standard usage recommended by scientific and engineering societies. English majors who take this course must count it as an elective.

PHILOSOPHY (Phl)

131 — Introduction to Philsophy (3:3:0)
General characteristics of philosophy as a field of knowledge and as a method of inquiry.

232 — Logic (3:3:0)
Nature and methods of correct reasoning; deductive and inductive proof; logical fallacies.

332 — Ethics (3:3:0)
A critical analysis of the concepts, methodology and theories of ethics.

333 — History of Philosphy I, Ancient and Medieval Philosophy (3:3:0)
The development of Western philosophic thought from the inception in Greece to the end of the Medieval period.

334 — History of Philosophy II, Modern Philosophy (3:3:0)
The development of philosophic thought from the Renaissance through the nineteenth century; emphasis upon philosophers of the seventeenth and eighteenth centuries.

430 — Topics in Philosophy (3:3:0)
Selected topics in philosophy. Course may be repeated for credit when topic changes.

Department of Government

Department Head — Manfred Stevens. *Professor* — William R. Tucker. *Associate Professors* — William M. Pearson, Bruce R. Drury, Boyd L. Lanier, Glenn H. Utter. *Assistant Professors* — Elbert T. Dubose Jr., Lyttleton Thomas Sanders, Ronald Stidham. *Adjunct Instructors* — Dan L. Knight, William D. Pederson, Ted G. Jelen. *Secretary* — Gloria Sellers.

Bachelor of Arts — Government Major

A. General Requirements:
Freshman English — six semester hours
Literature — six semester hours
*Mathematics — 134 and three additional hours

*Science — laboratory — eight semester hours
Completion of the 232 course in a foreign language
Sophomore American History — six semester hours
Physical activity courses, Band or AFROTC — four semesters

B. Major:
Government 231-232 — American Government
Government 233 — Contemporary Political Analysis
Government 3319 — Statistics for Social Scientists
Advanced Government (at least one course from each of five fields) — 15 semester hours. The fields are American government (Gov 334, 335, 339, 436, 437, 3301, 3312, 3313, 3315); political philosophy (Gov 3302, 3303, 433); international relations (Gov 332, 336, 337, 435); comparative government (Gov 331, 3317, 4381, 4382, 4383); public administration (Gov 3316, 430, 434, 439).

C. Minor
An approved minor of 18 semester hours, including at least six advanced hours. (Freshman English composition courses may not be counted toward a minor in English)

D. Electives
Sufficient approved electives to complete a total of 126 semester hours.

Bachelor of Arts — Teacher Certification — Government

Students wishing to secure the Bachelor of Arts degree in Government and at the same time certify for a provisional certificate — secondary with a teaching field in Government, must include in their degree program the following:

1. Six hours of mathematics and eight hours of science.
2. An approved 24 hour additional teaching field in place of the minor (consult this catalog, College of Education).
3. Education 331, 332, 338, 438 and 462.
4. Sufficient electives to complete a total of 132 semester hours.

*For science and mathematics the general degree requirements may be followed.

Recommended Program of Study

First Year

Eng—Composition	6
Foreign Language	6
Mth (incl 134)	6
PE Activity	2
Electives*	9
	29

Second Year

Eng—Literature	6
Foreign Language	6
PE Activity	4
AM His	6
Gov 233	3
Gov 231-232	6
Gov 3319	3
	34

Third Year

Gov (Adv)	9
Electives or Edu 331, 332, 338	9
Laboratory Science	8
Minor (or other teaching field) and Electives	5-8
	31-34

Fourth Year

Gov (Adv)	6
Electives or Edu 438 and 462	9
Minor (or other teaching field) and Electives	15-18
	30-33

*Gov 131 and His 131-132 are recommended.

Bachelor of Science — Government Major

The Bachelor of Science degree in government emphasizes career education. It will be awarded upon completion of the requirements for the Bachelor of Arts degree in government with the following substitution for the foreign language requirement: Computer Science 131; Gov 4319 and nine additional hours to be selected from two of the following areas: Accounting 231-232; Computer Science — Adv; Economics 131-133 or Adv; Mathematics — Adv; Psychology — Adv.

Recommended Program of Study

First Year

Eng—Composition	6
Math (incl 134)	6
PE	2
Computer Science	3
Electives*	15
	32

Second Year

Eng—Literature	6
Am History	6
Gov 233	3
Gov 231-232	6
Gov 3319	3
PE Activity	4
Approved Electives	6
	34

Third Year

Gov (Adv)	9
Laboratory Science	8
Gov 4319	3
Minor & Electives	12
	30-34

Fourth Year

Gov (Adv)	6
Minor and Electives	21
	27-30

*Gov 131 and His 131-132 are recommended.

Government — Pre-law

Students may pursue either the Bachelor of Arts degree or the Bachelor of Science degree as candidates for admission to a school of law. The degree requirements are the same as those specified above. Guidance and counseling for the needs of the pre-law student are available.

Career Development Program (Pre-Law)

Exceptional students may qualify for a cooperative education program presently available in the legal profession. While this is primarily directed at the pre-law student, other programs are being planned to allow students cooperative education experience in local government, public administration and with the Lamar Social Data Center. Students earn up to 12 semester hours of elective credit in their junior and senior years while working half-days in local law firms. Law office experience is combined with academic assignments to develop practical skills useful to the potential lawyer. Admission to the program is by permission of the head of the Department of Government.

GOVERNMENT (Gov)

231 — Introduction to American Government I (3:3:0)*

A study of the national and Texas constitutions; federalism; political social-

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

ization and participation; public opinion and interest groups; parties, voting and elections. Prerequisite: Sophomore standing.

231H — Introduction to American Government I Honors (3:3:0)
A study of the national and Texas constitutions; federalism; political socialization and participation; public opinion and interest groups; parties, voting and elections. Designed especially for honors students. Prerequisite: sophomore standing and departmental approval.

232 — Introduction to American Government II (3:3:0)
A study of the legislative, executive and judicial branches and the bureaucracy; policy formulation and implementation including civil rights and civil liberties, domestic and foreign policies. Prerequisite: Government 231.

232H — Introduction to American Government II Honors (3:3:0)
A study of the legislative, executive and judicial branches and the bureauracy; policy formulation and implementation including civil rights and civil liberties; domestic and foreign policies. Prerequisite: sophomore standing and departmental approval.

Note: Gov. 231-232 will, starting with the Fall semester 1979, fulfill the six hour requirement in American Government. Students who completed one of the following courses — Gov. 2322, 2323, Gov. 2324, Gov. 2325 must enroll in Gov. 231 to complete the six hour requirement in American Government.

131 — Elements of Political Science (3:3:0)
History of political institutions and ideas; power and cultural setting of modern governments.

2322 — Texas Government (3:3:0)
A study of the constitution, government and politics of Texas.

233 — Contemporary Political Analysis (3:3:0)
A general introduction to political behavior as a generic concept; designed to equip the student with the theoretical models and methods of analysis appropriate to the various fields of political science.

321 — Career Development I (2:2:0)
Comprehensive treatment of career-related special assignments and projects, under the guidance of a faculty member. Prerequisite: Approval of department head.

322 — Career Development II (2:2:0)
Comprehensive treatment of career related special assignments and projects, under the guidance of a faculty member. Prerequisite: Gov 321.

323 — Career Development III (2:2:0)
Comprehensive treatment of career related special assignments and projects, under the guidance of a faculty member. Prerequisite: Gov 322.

331 — The Politics of Developed Nations (3:3:0)
An analysis of the political culture, political structure and decision-making process of developed nation-states with major emphasis on Western European systems.

332 — Studies in International Politics (3:3:0)
A study of the concepts underlying the Western State system; nationalism and imperalism; the techniques and instruments of power politics and the foreign policies of selected states.

334 — American Political Parties and Pressure Groups (3:3:0)
A study of political parties in terms of their theory, their history and their place in contemporary American politics; analysis of the role of economic and other groups in American politics; group organization and techniques of political influence.

335 — **The American Presidency (3:3:0)**
The role of the office in political and diplomatic, social and economic terms, as well as in the policy-making aspects.

336 — **International Institutions (3:3:0)**
An analysis of the political and legal foundations of international organizations with emphasis on the procedure and machinery for the peaceful settlement of international disputes. The League of Nations, the United Nations, specialized agencies, disarmament and regional arrangements will be considered.

337 — **The Politics of American Foreign Policy (3:3:0)**
An analytical and historical view of United States foreign policy; its domestic sources; the instruments of American diplomacy; United States involvement in world politics and the limitations and potentials of American foreign policy.

339 — **Urban Politics (3:3:0)**
Analysis of the organization and development of urban governments in the United States. Interrelationships among urban problems, political behavior and policy will be examined.

3301 — **The Legislative Process (3:3:0)**
The structure, functioning and political control of legislative bodies.

3302 — **Classical Political Thought (3:3:0)**
The chief concepts of outstanding political thinkers from the Greeks to the Renaissance.

3303 — **Modern Political Thought (3:3:0)**
A continuation of Government 3302 from the Renaissance to Karl Marx, including the Reformation leaders, Hobbes, Locke, Rousseau and Hegel.

3313 — **The Judicial Process (3:3:0)**
The theory and structure of the American court system; its personnel and decision-making processes; the judicial process in the setting of the American criminal justice system.

3315 — **Conflict Management in American Politics (3:3:0)**
An examination of various approaches — political, social, psychological, philosophical and legal — to the study of conflict, and its management and resolution; specific cases of conflict to be studied will be drawn from American politics.

3316 — **Introduction to Public Administration (3:3:0)**
A survey of American public administration, with emphasis upon modern problems and trends.

3317 — **Politics of Developing Nations (3:3:0)**
An analysis of the political systems of Latin America, Africa, the Middle East and Asia, focusing on ideologies, interest groups, political parties, elites and problems in political development.

3319 — **Statistics for Social Scientists (3:3:0)**
Basic concepts and techniques of statistics employed in social science research including descriptive statistics; measures of central tendency and dispersion; correlation and regression analysis; inductive statistics; fundamentals of probability and tests of significance.

421 — **Career Development IV (2:2:0)**
Comprehensive treatment of career related special assignments and projects, under the guidance of a faculty member. Prerequisite: Gov 323.

422 — **Career Development V (2:2:0)**
Comprehensive treatment of career related special assignments and projects, under the guidance of a faculty member. Prerequisite: Gov 421.

423 — **Career Development VI (2:2:0)**
Comprehensive treatment of career related special assignments and projects, under the guidance of a faculty member. Prerequisite: Gov 422.

430 — Organization Theory and Behavior (3:3:0)
A study of the structural and management aspects of public administration, theory and practice; policy formation processes and techniques.

433 — Contemporary Political Thought (3:3:0)
The significant trends in political thought from Karl Marx to the present, including Lenin, Sorel, Green, Freud and elitist and fascist writers.

434 — Formulation of Public Policy (3:3:0)
The demands for public action on policy issues; organization and nature of political support; processes and problems of decision making in the formulation of public policy at the national, state and local levels. The issues studied will vary from semester to semester.

435 — The International System (3:3:0)
The study of the legal bases of the modern international system and the political and legal characteristics of developing world order.

436 — American Constitutional Law and Development (3:3:0)
Development of the American Constitution through judicial interpretations, with particular emphasis on cases dealing with federalism, commerce, Congress and the executive.

437 — American Constitutional Law and Development (3:3:0)
A continuation of Gov 436 with particular emphasis upon cases dealing with due process and civil rights.

439 — Special Topics in Public Administration (3:3:0)
This course is designed to cover fiscal administration, public personnel administration, comparative development administration, administrative regulation and related areas. Course may be repeated for credit when the topic varies.

4310 — Directed Study (3:3:0)
Students may study individually with an instructor in an area of mutual interest to the student and the instructor. Prerequisite: Approval of head of Department of Government.

4312 — American State Government (3:3:0)
A survey of American state political systems from a comparative basis.

4319 — Advanced Research Methods (3:3:0)
Analysis or study of special problems, topics, cases, models and theories in political science research.

4381 — Government and Politics of the Soviet Union (3:3:0)
A study of the origin, development, structures, functions and behavior of the Soviet decision-making organs.

4382 — Government and Politics of East Asia (3:3:0)
An introduction to the political ideas, institutions and process of China and Japan considered against their social and economic development with special emphasis on contemporary political problems.

4383 — Government and Politics of Latin Ameica (3:3:0)
An intensive comparative analysis of the political systems of Latin America with special emphasis on political culture, constitutional development, authoritative decision-making agencies, interest identification, leadership selection, political socialization and conflict resolution.

Department of History

Department Head — Adrian N. Anderson. *Professors* — Paul E. Isaac, Howard Mackey, William A. MacDonald, Wesley Norton, R. Beeler Satterfield, Walter A. Sutton, Preston B. Williams, Ralph A. Wooster. *Associate Professors* — Howell H. Gwin Jr., Marion Holt, Joseph C. Lambert, John W. Storey, Naaman J. Woodland, Jr. *Assistant Professor* — John M. Carroll. *Instructor* — Jo Ann Stiles. *Adjunct Instructor* — Claudine L. Ferrell. *Departmental Secretary* — Frances Shelton.

Bachelor of Arts — History Major

The degree of Bachelor of Arts in History will be awarded upon the completion of the following requirements:

A. General Requirements:
   Freshman English — six semester hours
   Literature — six semester hours (including English 2311)
   Mathematics and laboratory science — four semester courses, at least one in mathematics and one in laboratory science. Mathematics and science courses must be selected from a list of approved courses.
   Completion of the 232 course in a foreign language
   Sophomore government — six semester hours
   Physical Education or Band — four semesters

B. Major:
   History 131-132 — World History
   Sophomore American History — six semester hours
   History 339 — Historical Research
   Advanced United States History — six semester hours
   Advanced World (Non-United States) History — six semester hours

C. Minor:
   An approved minor of 18 semester hours, including at least six advanced semester hours.

D. Electives:
   Sufficient approved electives to complete a total of 126 semester hours.

Teacher Certification — History

Students wishing to secure the Bachelor of Arts degree in history and at the same time certify for a provisional certificate — secondary with a teaching field in history, must include in their degree program the following:

1. Six hours of mathematics and eight hours of science. Must be selected from list of approved courses.
2. An approved 24 hour additional teaching field (See College of Education section of this catalog for a list of approved teaching fields).
3. Education 331, 332, 338, 438 and 462.
4. Sufficient approved electives to complete a total of 132 semester hours.

Recommended Program of Study

First Year

His 131-132—World History	6
Freshman English	6
Foreign Language	8
Mth	6
Electives	6
PE—Activity	2
	34

Second Year

Sophomore American History	6
Literature (including Eng 2311)	6
Foreign Language	6
Science	8
Sophomore Government	6
PE—Activity	4
	36

Third Year

His 339	3
His (Adv)	6
Electives	9
Minor (or other Teaching Field) and Electives	12-14
	30-32

Fourth Year

His (Adv)	6
Edu 438 and 462 or Minor (or other Teaching Field) and Electives	15-17
	30-32

HISTORY (His)

131 — History of World Civilization (3:3:0)*
Survey of world history to 1660.

132 — History of World Civilization (3:3:0)
Survey of world history from 1660 to 1965.

134 — History of Texas (3:3:0)
Survey of Texas history from the beginning to the present time.

231 — American History: History of the United States, 1763 to 1877 (3:3:0)
Survey of United States history from the revolutionary period through reconstruction.

231H — American History: History of the United States, 1763 to 1877 (3:3:0)
Survey of United States from the revolutionary period through reconstruction, designed especially for honors students. Prerequisite: departmental approval.

232 — American History: History of the United States, 1877 to the present (3:3:0)
Survey of United States history from the post-reconstruction period to the present.

232H — American History: History of the United States, 1877 to the present (3:3:0)
Survey of United States history from the post-reconstruction period to the present, designed especially for honors students. Prerequisite: departmental approval.

233 — American History: The Development of Society in America (3:3:0)
A historical survey of social change in the United States.

234 — American History: The Arts in America (3:3:0)
A historical survey of cultural life in the United States.

235 — American History: The Americas to 1810 (3:3:0)
The United States and the Western Hemisphere from the beginning to 1810.

236 — American History: The Americas since 1810 (3:3:0)
The United States and the Western Hemisphere since 1810 (3:3:0)

NOTE: Various colleges and departments may counsel their majors into certain of the courses listed above; otherwise the student may satisfy his/her American history requirement by taking any two courses selected from History 231, 232, 233, 234, 235 or 236.

330 — History of Ideas (3:3:0)
The Judeo-Christian and Greco-Roman elements in the Western intellectual tradition.

331 — Social and Intellectual History of the United States to 1865 (3:3:0)
Life and thought in the United States prior to 1865.

332 — Social and Intellectual History of the United States Since 1865 (3:3:0)
Life and thought in the United States since 1865.

333 — History of American Economic Life (3:3:0)
A study of economic change in the context of institutional development in the United States.

334 — Military History of the United States (3:3:0)
History of American warfare and the development of American military institutions and practices.

337 — Diplomatic History of the United States (3:3:0)
Historical development of American diplomacy.

338 — Urban History of the United States (3:3:0)
The origin and development of cities in the United States.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

339 — **Historical Research (3:3:0)**
Principles and methods of historical research.
430 — **Era of the Renaissance and Reformation (3:3:0)**
Western Europe from 1453 to 1610.
431 — **The Old Regime (3:3:0)**
Western Europe from 1610 to 1783.
432 — **The French Revolution and Napoleon (3:3:0)**
Western Europe from 1783 to 1815.
433 — **Russia and Eastern Europe to 1860 (3:3:0)**
Russia, Poland, and the Balkans from the period of the Byzantine Empire to 1860.
434 — **Nineteenth Century Europe (3:3:0)**
Europe from 1815 to 1914.
435 — **Twentieth Century Europe (3:3:0)**
Europe since 1914.
436 — **The American West (3:3:0)**
The American West from colonial times to the present.
437 — **The Old South (3:3:0)**
The American South from colonial times to the Civil War.
438 — **The New South (3:3:0)**
The American South from the Civil War to the present.
439 — **Honors Program (3:A*:0)**
A tutorial program for honors seniors. Admission by invitation only.
4311 — **Colonial America (3:3:0)**
4312 — **The American Revolution (3:3:0)**
4313 — **The Age of Jackson (3:3:0)**
4314 — **The American Civil War (3:3:0)**
4315 — **Reconstruction and Industrialization: The United States from 1865 to 1898 (3:3:0)**
4316 — **World Power and Reform: The United States from 1898 to 1920 (3:3:0)**
4317 — **New Deal and World Leadership: The United States from 1920 to 1940 (3:3:0)**
4318 — **Classical Civilization (3:3:0)**
Greece and Rome from earliest times to the fall of the Roman Empire in the West.
4319 — **Medieval Civilization (3:3:0)**
Western Europe and the Mediterranean area from the late Roman period to 1453.
4321 — **The Far East to 1800 (3:3:0)**
Japan, China, Indo-China and India to 1800.
4322 — **The Far East Since 1800 (3:3:0)**
Japan, China, Indo-China and India since 1800.
4323 — **Latin America to 1810 (3:3:0)**
4324 — **Latin America Since 1810 (3:3:0)**
4325 — **Tudor and Stuart England (3:3:0)**
England from 1485 to 1688.
4326 — **Eighteenth Century England (3:3:0)**
England (Great Britain) from 1688 to 1815.
4327 — **Victorian England (3:3:0)**
Great Britain from 1815 to 1914.
4328 — **Contemporary America: The United States Since 1940 (3:3:0)**
4329 — **Modern European Intellectual History (3:3:0)**
An examination of the major European intellectual movements and thinkers from the Renaissance to the present.
4331 — **Russia Since 1860 (3:3:0)**
The development of modern Russia, from 1860 to the present.

*Arranged

4332 — Afro-American History to 1865 (3:3:0)
The black experience in Africa and in the Western Hemisphere prior to emancipation.

4333 — Afro-American History since 1865 (3:3:0)
The black experience toward achieving freedom in the United States.

4334 — Early National Period (3:3:0)
The United States from 1789 to 1820.

4335 — Topics in History (3:3:0)
Selected special topics in major areas of history. Course may be repeated for a maximum of six semester hours credit when the topic varies.

4336 — Ancient Near East (3:3:0)
The civilizations of the Near East from the earliest times to the pre-classical period.

Department of Modern Languages

Department Head — M. LeRoy Ellis. *Professor* — Victoria E. Urbano. *Associate Professors* — William F. Adams Jr.*, Nathan Travis Francis. *Assistant Professors* — Antonio J. Pineda, R. Victoria Price, Genevieve Z. Smith. *Adjunct Instructor* — Ann M. Crain. *Laboratory Supervisor* — Rafael A. Pardo. *Departmental Secretary* — Leta Currie.

*On Leave.

The language requirement for a Bachelor of Arts degree is the completion of the 232 course.

Students who plan to do graduate work are advised to study two foreign languages while earning the Bachelor of Arts degree.

Placement and Advanced Status. Students with a background in a foreign language are placed according to CEEB scores submitted. A student not submitting a CEEB test score may take the CEEB Achievement Test (not the Supplementary Achievement Test) in the language either during the summer orientation program or at a designated time just prior to registration. All students are urged to take the CEEB language achievement test in high school as an additional fee will be required if the test is taken after entering Lamar University.

A. Students with one year of language in high school:
   1. CEEB test scores submitted
      a. Advanced placement if score is high enough
      b. Placed in language 131 for credit if score is too low
   2. No CEEB test score submitted
      Placed in language 131 for credit

B. Students with two years or more of language in high school:
   1. CEEB test scores submitted
      a. Advanced placement if score is high enough
      b. Placed in language 133 if score is too low
      c. May choose to take language 131 for credit
   2. No CEEB test score submitted
      a. Placed in language 133 for credit
      b. May choose to take language 131 for credit

C. Foreign students:
   1. Any student placing in an intermediate or advanced course will receive credit for the 131 and 132 courses and intermediate courses circumvented, up to a maximum of twelve semester hours, provided that he/she take the next higher course and earn a grade of "C" or better.
   2. Those who want to study a language other than native language will be placed as any other student studying a foreign language.

Any student placing in an intermediate or advanced course will receive credit for the 132 course and intermediate courses circumvented, up to a maximum of nine semester hours, provided that he take the next higher course and earn a grade of "C" or better.

As no advanced German courses are offered, students placing in an *advanced* German course (i.e., beyond Ger 232) should then consult the head of the Department of Modern Languages to get credit for courses skipped by means of the Advanced Standing Examination procedure.

Students who have had previous study of a language, but do not feel they are ready to take a course beyond the elementary level, may resume the study of that language starting with Language 131. Credit will be given for all courses satisfactorily completed provided that they do not duplicate other courses taken on the college level.

Americans or foreign citizens who speak a foreign language but have had no formal training in the language will be treated as any other student with no formal training in the language.

Advanced Placement Examination

(See *Admissions*, this catalog)

Bachelor of Arts — French Major or Spanish Major

The degree of Bachelor of Arts in French and Bachelor of Arts in Spanish will be awarded upon the completion of the following requirements:

A. General Requirements:
   Freshman English — six semester hours
   Literature — six semester hours
   *Mathematics — six semester hours
   *Science — laboratory — eight semester hours
   Sophomore American History — six semester hours
   Sophomore American Government — six semester hours
   Physical Education or Band — four semesters

B. Major:
   French
   French 131-132 — Elementary French
   French 231-232 — Reading, Composition, Conversation
   French 330 — French Conversation
   French 337 — Advanced Grammar and Composition
   French 338 — French Phonetics
   Advanced French — three semester hours
   Spanish
   Spanish 131-132 — Elementary Spanish
   Spanish 231-232 — Reading, Composition, Conversation
   Spanish 330 — Spanish Conversation
   Spanish 335 — Advanced Composition
   Advanced Spanish — six semester hours

C. Minor in French or Spanish:
An approved minor of 18 semester hours, including at least six advanced semester hours

D. Electives:
Sufficient approved electives to complete a total of 126 semester hours.

*Students may follow general degree requirements in regard to science and mathematics.

Recommended Program of Study

First Year

*Maj Lang 131-132—Elementary	6
Eng—Composition	6
**Mth	6
HPE—Activity	2
Elec	12
	32

Second Year

Maj Lang 231, 232—Intermediate	6
Eng—Literature	6
Sophomore American His	6
**Sci	8
HPE	4
Elec	2
	32

Third Year

Maj Lang: Fre 330, 337, 338	9
or	
Maj Lang: Spa 330, 335	6
Spa (Adv)	3
Elec (incl minor)	15
	30

Fourth Year

Maj Lang (Adv)	3
Elec (incl minor)	30
	33

*Must be included if student has not already had the equivalent.
**Students may follow general degree requirement in regard to Science and Mathematics.

Teacher Certification — French, Spanish

Student wishing to obtain the Bachelor of Arts degree in French or Spanish and at the same time certify for a provisional certificate-secondary with a teaching field in French or Spanish, must include in their degree program the following:

1. An approved 24 hour additional teaching field (See College of Education section of this catalog for a list of approved teaching fields).
2. Education 331, 332, 338, 438 and 462.
3. Sufficient approved electives to complete a total of 132 semester hours.

SEMI-INTENSIVE PROGRAM IN ENGLISH AS A SECOND LANGUAGE (ESL)

(NOTE: The Semi-Intensive Program in ESL provides a total of fifteen hours of work per week. Placement is determined by means of English proficiency testing. Students enrolled in the full program usually take one or two other courses simultaneously. Academic advisers should recommend that students in the semi-intensive program take courses which are not heavily dependent on verbal skills and in which students have some background. Students whose test scores indicate a need for work in certain specific language skills may be placed in those courses without taking the full program of courses. ESL 130-134 are graded on a Satisfactory-Unsatisfactory basis.

130 — Study Skills and Cultural Orientation (3:3:0)
Preparation for library research, dictionary use and American testing procedures. Focus on aspects of American culture that affect the foreign student studying in the United States.

131 — Pronunciation and Conversation (3:3:0)
The course focuses on phonology and grammatical patterns of American English. Oral presentations and practice in idiomatic expression. Frequent use of laboratory tapes.

132 — Listening Comprehension (3:3:0)
The course aims toward achieving the goal of understanding native speech at normal speed in unstructured situations.

133 — Reading and Vocabulary Development (3:3:0)
The course emphasizes vocabulary building and increasing reading comprehension skills. Use of magazines, newspapers and other types of reading material.

134 — Grammar and Writing Skills (3:3:0)
Progressive work in mastering English grammar for purposes of writing. Frequent guided and free writing exercises.

(NOTE: The student for whom English is a second language can satisfy the general degree requirements for freshman English by completing successfully ESL 135 and ESL 136. The courses, however, may not be taken simultaneously.)

135 — Composition: English as a Second Language (3:3:0)
Intensive grammar review followed by study and practice in basic forms of expository writing needed for writing essay examinations, themes and term papers.

136 — Composition: English as a Second Language (3:3:0)
Further study in basic forms of expository writing. The primary aim of the course is to assist the student to prepare for writing required research papers. Practice in library research. Prerequisite: ESL 135.

137 — Developmental Skills in ESL (3:3:0)
The course deals with techniques for teaching basic English skills and literature to non-native speakers. Students for whom English is a second language are placed in this course when English proficiency scores fall below the prescribed level for exemption. This course does not satisfy general degree requirements for Freshman English. Grading on a Satisfactory-Unsatisfactory basis.

231 — Masterpieces in British and American Literature (3:3:0)
Critical study of six to ten major works in British and American literature, including representative works from most of the major periods. Applies toward the sophomore literature requirement for students for whom English is a second language.

232 — World Masterpieces in English Translation (3:3:0)
Critical study of six to ten major works of world literature in various genres, from classical antiquity to the present century. Applies toward the sophomore literature requirement for students for whom English is a second language.

431 — The Teaching of English as a Second Language (3:3:0)
The course deals with techniques for teaching basic English skills and literature to non-native speakers. Socio-cultural aspects of second language learning.

*Code explanation:
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

FRENCH (Fre)

131 — **Elementary French (3:3:0)**
Pronunciation, conversation, reading, dictation, grammar. Use of tapes.

132 — **Elementary French (3:3:0)**
Pronunciation, conversation, reading, dictation, grammar. Use of tapes. Prerequisite: Fre 131 or equivalent determined by examination.

133 — **First Year French (3:3:0)**
Pronunciation, conversation, reading, dictation, grammar. Use of tapes. This course is designed for students who have had two or more years of the language in high school but who are not ready to go into the intermediate courses. Students who take this course will finish the entire first year of the language in one semester and will then be eligible to enter the intermediate courses.

231, 232 — **Reading, Composition, Conversation (3:3:0)**
Prerequisite for Fre 231; Fre 132 or equivalent. Prerequisite for Fre 232: Fre 231 or equivalent.

330 — **French Conversation (3:3:0)**
Required of majors and of students desiring teacher certification in French. (This course may not be substituted for Fre 232 to meet the language requirement for the Bachelor of Arts degree.) Prerequisite: Fre 231 or equivalent.

331 — **Contemporary French Drama (3:3:0)**
A study of representative plays of the twentieth century with emphasis on the theater of post World War II. Dramatists studied include Giraudoux, Sartre, Camus, Ionesco, Beckett, Arrabal. Prerequisite: Fre 232.

332 — **Contemporary French Novel (3:3:0)**
A study of representative novels of the twentieth century, including such writers as Gide, Mauriac, Sartre, Camus and the masters of the New Novel. Prerequisite: Fre 232.

337 — **Advanced Grammar and Composition (3:3:A*)**
A thorough study of French grammar with extensive written composition. Secondary stress on pronunciation. Prerequisite: Fre 232.

338 — **French Phonetics (3:3:A*)**
A study of the French sound system. Laboratory exercises to improve pronunciation. Prerequisite: Fre 232.

339 — **French Culture and Civilization. (3:3:0)**
A survey of the intellectual, philosophic, political and social development of France. Readings of significant works in these areas. Lectures, readings, oral and written reports. Prerequisite: French 232 or equivalent.

430 — **Problems in Teaching Foreign Languages (3:3:0)**
An examination of materials and methods used to teach a foreign language. A careful analysis of those areas of French and Spanish which are of particular importance and which are particularly difficult for beginning students to learn. Preparation of pattern drills. Examination of textbooks for secondary and elementary levels. Demonstration teaching. Open only as elective credit to students desiring teacher certification in French and Spanish. Prerequisite: 6 advanced hours in the language.

431 — **The Nineteenth Century French Novel (3:3:0)**
Prerequisite: 6 hours of advanced courses in French.

433 — **17th Century French Literature (3:3:0)**
A study of representative plays of Corneille, Racine and Moliere, with secondary stress on the prose and poetry of the period. Prerequisite: 6 hours advanced courses in French.

*Arranged

435 — **Survey of French Literature through the 18th Century (3:3:0)**
Readings from significant works. Lectures, readings, oral and written reports. Prerequisite: 6 hours advanced courses in French.

436 — **Survey of French Literature Since the 18th Century (3:3:0)**
Readings from significant works. Lectures, readings, oral and written reports. Prerequisite: 6 hours advanced courses in French.

437 — **French Poetry (3:3:0)**
A study of the evolution of French poetry, with primary stress on the poetry of the 19th and 20th centuries. Prerequisite: 6 hours advanced courses in French.

438 — **Directed Study (3:3:0)**
Students may study individually with an instructor in an area of mutual interest to the student and the instructor. May be taken for credit more than once if the topic varies.

GERMAN (Ger)

131 — **Elementary German (3:3:0)**
Pronunciation, conversation, reading, dictation, grammar. Use of tapes.

132 — **Elementary German (3:3:0)**
Pronunciation, conversation, reading, dictation, grammar. Use of tapes. Prerequisite: Ger 131 or equivalent determined by examination.

230 — **Technical Translation (3:3:0)**
Translation of technical textbook and selected articles in technical and scientific journals. (Ger 230 with a prerequisite of Ger 132 does not meet the requirement for a BA degree. Science majors working toward a BA degree may substitute Ger 230 for Ger 231.) Prerequisite: Ger 132.

231 — **Reading, Composition, Conversation (3:3:0)**
Grammar review; conversation; selected readings, including readings from areas of special interests of individual students. Science students may enroll in this course to complete language requirements for the BS degree. Prerequisite: Ger 132 or equivalent, or placement by proficiency test.

232 — **Reading, Composition, Conversation (3:3:0)**
Grammar review as needed. Composition, conversation and emphasis upon reading and vocabulary building. Prerequisite: Ger 231 or equivalent, or placement by proficiency test.

ITALIAN (Ita)

131 — **Elementary Italian (3:3:0)**
Conversation, reading, dictation, grammar. Use of tapes. Emphasis will be placed on vocabulary and pronunciation.

132 — **Elementary Italian (3:3:0)**
Conversation, reading, dictation, grammar. Use of tapes. Emphasis will be placed on vocabulary and pronunciation. Prerequisite: Italian 131.

SPANISH (Spa)

131 — Elementary Spanish (3:3:0)
Pronunciation, conversation, reading, dictation, grammar. Use of tapes.

132 — Elementary Spanish (3:3:0)
Pronunciation, conversation, reading, dictation, grammar. Use of tapes. Prerequisite: Spa 131 equivalent determined by examination.

133 — First Year Spanish (3:3:0)
Pronunciation, conversation, reading, dictation, grammar. Use of tapes. This course is designed for students who have had two or more years of language in high school but who are not ready to go into the intermediate courses. Students who take this course will finish the entire first year of the language in one semester and will then be eligible to enter the intermediate courses.

231, 232 — Reading, Composition, Conversation (3:3:0)
Prerequisite for Spa 231: Spa 132 or equivalent. Prerequisite for Spa 232: Spa 231 or equivalent.

330 — Spanish Conversation (3:3:0)
Required of majors and of students desiring teacher certification in Spanish. (This course may not be substituted for Spa 232 to meet the language requirement for the Bachelor of Arts degree.) Prerequisite: Spa 231 or equivalent.

331 — Culture and Civilization of Spain and Spanish America (3:3:0)
A study of the geography, history, government, art, economic resources and psychology of Spain, Cuba, Santo Domingo, Mexico and Central America. Lectures, readings, oral and written reports. Prerequisite: Spa 232.

332 — Culture and Civilization of Spanish-American Countries (3:3:0)
A study of the geography, history, government, art, economic resources and psychology of South America. Lectures, readings, oral and written reports. Prerequisite: Spa 232.

333 — Survey of Spanish-American Literature (3:3:0)
A study of outstanding writers and their works up to the nineteenth century *modernista* movement. Lectures, readings, oral and written reports. Prerequisite: Spa 232.

334 — Survey of Spanish-American Literature (3:3:0)
A study of outstanding writers and their works from the *modernista* movement to the present day. Lectures, readings, oral and written reports. Prerequisite: Spa 232.

335 — Advanced Composition (3:3:0)
Vocabulary building, intensive review of grammar as needed for sentence structure. The development of the paragraph in written composition. Frequent written reports. Prerequisite: Spa 232.

336 — Advanced Composition (3:3:0)
Continuation of vocabulary building and stylistics of written Spanish. Development of the term paper on topics of interest to the student as well as literary topics. Frequent written reports. Prerequisite: Spa 232, but it is recommended that the student take Spa 335 first.

337 — Contemporary Spanish-American Short Story (3:3:0)
The authors chosen are among the best interpreters of the spiritual and intellectual climate of Spanish America. Lectures, readings, oral and written reports. Prerequisite: Spa 232.

338 — Contemporary Theater of Spain (3:3:0)
Emphasis will be given to the theater of Lorca, Casona, Buero Vallejo, Calvo Sotelo, Alfonso Sastre and other major authors of today. Prequisite: Spa 232.

431 — Contemporary Spanish Literature (3:3:0)
Prerequisite: 6 hours of advanced Spanish.

432 — Development of Spanish Novel (3:3:0)
Prerequisite: 6 hours of advanced Spanish.

433 — Survey of Spanish Literature Through the 17th Century (3:3:0)
A study of the most significant works of Spanish literature through the seventeenth century. Readings from *El Cid, El Conde Lucanor, La Celestina,* poetry of the Renaissance, Cervantes' prose and the Golden Age drama. Lectures, readings, oral and written reports. Prerequisite: 6 hours of advanced Spanish.

434 — Survey of Spanish Literature Since the 17th Century (3:3:0)
A study of the most significant works of Spanish literature from the eighteenth century through the twentieth century. Readings with emphasis on the drama and the novel. Lectures, readings, oral and written reports. Prerequisite: 6 hours of advanced Spanish.

436 — Spanish American Novel (3:3:0)
Prerequisite: 6 hours of advanced Spanish.

438 — Directed Study (3:3:0)
Students may study individually with an instructor in an area of mutual interest to the student and the instructor. May be taken for credit more than once if the topic varies.

LAMAR OVERSEAS STUDY PROGRAM

The Lamar Overseas Study Program was initiated in the summer of 1971. A group of 15 students, accompanied by a director from the Department of Modern Languages, spent six weeks at the University of Strasbourg, France, where the participants studied French and German language and literature on all levels. The program will be offered every other year, that is, 1979, 1981, 1983, as long as there is interest in it. The group is limited to 15 students. College students as well as high school students who receive their high school diplomas before the beginning of the program are eligible to participate. Students interested in registering for the program may obtain details from the office of the Department of Modern Languages.

Courses listed below may be taken by students who have finished elementary and intermediate language courses through language 232. The French courses listed are accepted toward a major or teaching field in French but may not be substituted for a required advanced course. The German courses may be taken as electives. Students who have not completed elementary or intermediate language courses, that is, language 131, 132, 231 and 232, may take those courses abroad.

4371 — French Studies Abroad (3:3:A*)
A study of the French language, literature and culture on a campus abroad. Students will be placed in language groups according to their proficiency in the language. Cultural activities will include visits to famous museums, historic sites and churches and cathedrals. Credit for this course may be applied toward a major in French.

4372 — French Studies Abroad (3:3:A*)
Students may register for this course concurrently with French 4371. A study of the French language, literature and culture on a campus abroad. Students will be placed in language groups according to their proficiency in the language. Cultural activities will include visits to famous museums, historic sites and churches and cathedrals. Credit for this course may be applied toward a major in French.

*Arranged

4373 — **French Studies Abroad** (3:3:A*)
This course is designed for students who have completed French 4371 or 4372. It consists of a more advanced study of French language, literature and culture on a campus abroad. Students will be placed in language groups according to their proficiency in the language. An in-depth study will be made by the student of one facet of the foreign culture. Credit for this course may be applied toward a major in French. Prerequisite: French 4371 or 4372.

4374 — **French Studies Abroad** (3:3:A*)
Students may register for this course concurrently with French 4373. The course is designed for students who have completed French 4371 or 4372. It consists of a more advanced study of French language, literature and culture on a campus abroad. Students will be placed in language groups according to their proficiency in the language. An in-depth study will be made by the student of one facet of the foreign culture. Credit for this course may be applied toward a major in French. Prerequisite: French 4371 or 4372.

4371 — **German Studies Abroad** (3:3:A*)
A study of the German language, literature and culture on a campus abroad. Students will be placed in language groups according to their proficiency in the language. Cultural activities will include visits to famous museums, historic sites and churches and cathedrals.

4372 — **German Studies Abroad** (3:3:A*)
Students may register for this course concurrently with German 4371. A study of the German language, literature and culture on a campus abroad. Students will be placed in language groups according to their proficiency in the language. Cultural activities will include visits to famous museums, historic sites and churches and cathedrals.

4373 — **German Studies Abroad** (3:3:A*)
The course is designed for students who have completed German 4371 or 4372. It consists of a more advanced study of German language, literature and culture on a campus abroad. Students will be placed in language groups according to their proficiency in the language. An in-depth study will be made by the student of one facet of the foreign culture. Prerequisite: German 4371 or 4372.

4374 — **German Studies Abroad** (3:3:A)
Students may register for this course concurrently with German 4373. The course is designed for students who have completed German 4371 or 4372. It consists of a more advanced study of the German language, literature and culture on a campus abroad. Students will be placed in language groups according to their proficiency in the language. An in-depth study will be made by the student of one facet of the foreign culture. Prerequisite: German 4371 or 4372.

Department of Public Affairs

Department Head — Robert L. Frazier. *Associate Professor* —John R. Altemose. *Assistant Professors* —Raymond C. Coxe, James J. Love, Vernice M. Monroe, Neda E. Wilson, Kevin N. Wright. *Instructor* — Victor H. Sims. *Secretaries* —Juni Ellis, Ellen Landry.

The Department of Public Affairs offers undergraduate instruction leading to the Associate of Science degree in Law Enforcement, the Bachelor of Science degree in Criminal Justice and the Bachelor of Social Work degree.

The AS degree in Law Enforcement, the BS degree in Criminal Justice and the training offered by the Regional Police Academy are fully accredited by the Texas Commission on Law Enforcement Officer Standards and Education. Enrollment and continuation in any degree program requires the permission of head of the department.

Associate of Science in Law Enforcement

The degree of Associate of Science in Law Enforcement will be awarded upon the completion of the following requirements:

A. General Requirements:
   Freshman English Composition — six semester hours
   Literature — three semester hours
   Science — laboratory — eight semester hours
   Government — Sophomore American — six semester hours
   History — Sophomore American — six semester hours
   Physical Education, Band or AFROTC — two semesters

B. Criminal Justice:
   CJ 131 — Police Organization and Administration
   CJ 132 — Introduction to Law Enforcement and the Criminal Justice System
   CJ 133 — Police-Community Relations
   CJ 134 — Police Role in Crime and Delinquency
   CJ 232 — Criminal Investigation
   CJ 234 — Legal Aspects of Criminal Justice
   CJ 237 — Criminal Procedure and Evidence

C. Electives:
   Sufficient approved electives to complete a total of 64 semester hours.

Bachelor of Science in Criminal Justice

The degree of Bachelor of Science in Criminal Justice is offered with three concentrations: law enforcement; corrections; and criminal justice theory and research. The degree will be awarded upon the completion of the requirements listed under any one of the three concentrations. Requirements common to all three concentrations are as follows:

A. General Requirements:
   Freshman English Composition — six semester hours
   Literature — three semester hours
   Science — laboratory — eight semester hours
   Mathematics — Mth 134 and three additional semester hours
   Government — Sophomore American — six semester hours
   Government 3316 or 437
   History — Sophomore American — six semester hours
   Psychology 131
   Social Work 241 and 331
   Sociology 131
   Physical Education, Band or AFROTC — four semesters

B. Major — courses in Criminal Justice or Social Work as specified under the concentration chosen.

C. Minor — an approved minor of 18 semester hours, including at least six ad-

vanced semester hours. Approved minor fields are listed under the concentration chosen.

D. Electives — Sufficient additional approved electives to complete a total of 126 semester hours.

Concentration in Law Enforcement. (Designed to prepare the student for line operations or supervisory and administrative positions in law enforcement agencies.)

A. General Requirements — as listed above
B. Major:
   CJ 131 — Police Organization and Administration
   CJ 132 — Introduction to Law Enforcement and the Criminal Justice System
   CJ 133 — Police—Community Relations
   CJ 134 — Police Role in Crime and Delinquency
   CJ 232 — Criminal Investigation
   CJ 234 — Legal Aspects of Criminal Justice
   CJ 237 — Criminal Procedure and Evidence
   CJ Electives — 12 semester hours of additional CJ courses at the 300 or 400 level

Concentration in Corrections. (Designed to prepare the student for treatment and supervisory positions in prisons, jails, probation, parole and other treatment programs.)

A. General Requirements — as listed above
B. Major:
   CJ 132 — Introduction to Law Enforcement and the Criminal Justice System
   CJ 134 — Police Role in Crime and Delinquency
   CJ 334 — Corrections
   CJ 436 — Seminar in Community-Based Corrections
   CJ 437 — Seminar in Institutional-Based Corrections
   CJ 438 — Correctional Law
   SWk 231 — Survey of the Social Welfare Institution
   SWk 332 — Behavioral Foundations
   SWk 333 — Social Work Practice I
   SWk 335 — Social Work Practice II
   SWk Field Experience — six semester hours of field experience courses
C. Minor — one of the following fields: government, psychology or sociology.
D. Electives — Sufficient additional approved electives to complete a total of 126 semester hours.

Concentration in Criminal Justice Theory and Research. (Designed to give the broadest possible background in criminal justice to prepare the student for graduate school, law school or positions in criminal justice planning and research.)

A. General Requirements — as listed above
B. Major:
   CJ 132 — Introduction to Law Enforcement and the Criminal Justice System
   CJ 134 — Police Role in Crime and Delinquency
   CJ 439 — Seminar in Criminal Justice Theory
   CJ 4311 — Criminal Justice Planning and Research
   CJ 4312 — Contemporary Issues in Criminal Justice
   CJ 4313 — Community Crime Prevention
   CJ Electives: 15 semester hours of additional CJ courses.
C. Minor — one of the following fields: computer science, government, mathematics, psychology, social work or sociology.
D. Electives — Sufficient additional approved electives to complete a total of 126 semester hours.

CRIMINAL JUSTICE (CJ)

131 — Police Organization and Administration (3:3:0)*
Principles of organization and management as applied to law enforcement agencies; introduction to concepts of organizational behavior.

132 — Introduction to Law Enforcement and the Criminal Justice System (3:3:0)
History, development and philosophy of law enforcement in a democratic society; introduction to agencies involved in the administration of criminal justice; career orientation.

133 — Police-Community Relations (3:3:0)
The role of the individual officer in achieving and maintaining a positive public response; inter-group relations and public information.

134 — Police Role in Crime and Delinquency (3:3:0)
Study of deviant behavior and current criminological theories, with emphasis on police applications; crime prevention and the phenomena of crime as it relates to juveniles.

1311 — Introduction to Law Enforcement (Academy) (3:3:0)
A study of history and philosophy of law enforcement: structure of government; criminal justice system; Texas Penal Code of Criminal Procedure; search and seizure; civil procedures and laws of arrest. Prerequisite: admission to Police Academy and consent of instructor.

1312 — Law Enforcement Related Fields (Academy) (3:3:0)
A study of juvenile procedures; written and oral reports; interviews and interrogations; practical problems; first aid; courtroom demeanor and testimony; Texas liquor laws; speech; defensive tactics and firearms training. Prerequisites: admission to Police Academy and consent of instructor.

232 — Criminal Investigation (3:3:0)
Introduction to the fundamentals of criminal investigation, including theory and history, conduct at crime scenes, collection and preservation of evidence.

234 — Legal Aspects of Criminal Justice (3:3:0)
History and philosophy of modern criminal law, including the structure, definition and application of statutes and leading case laws; the elements of crimes and penalities; general provisions of the Penal Code.

237 — Criminal Procedures and Evidence (3:3:0)
Introduction to the rules governing the admissibility of evidence and types of evidence; criminal procedure in various courts, review of the Texas Code of Criminal Procedure, including laws of arrest, search and seizure, and leading case law on each topic.

238 — Career Development I (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member.

239 — Career Development II (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: CJ 238.

331 — Introduction to Security (3:3:0)
Historical, philosophical and legal basis of security; survey of the administrative, personnel and physical aspects of the security field.

332 — Human Behavior (3:3:0)
Survey of the biological, cultural, sociological and psychological factors in human behavior. Analysis of abnormal behavior, violent behavior and interpersonal relations in authoritative settings.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

333 — Advanced Topics in Police-Community Relations (3:3:0)
Seminar dealing with problems in the relationship between the police and the community. Each student will research and report on a local police-community relations problem. Prerequisite: CJ 133.

334 — Corrections (3:3:0)
History and philosophy of corrections; survey of correctional process including sentencing, probation, correctional institutions and parole. Prerequisite: CJ 132.

335 — The Juvenile Justice System (3:3:0)
History, organization, programs and procedures of the agencies charged with control and prevention of juvenile delinquency, including police juvenile units, the juvenile court and juvenile correctional agencies. Prerequisite: CJ 134.

336 — Victimless Crime (3:3:0)
Narcotics, drunkenness, sex and gambling offenses and offenders; legal, philosophical and sociological aspects of the role of the criminal justice system in controlling these offenses; methods of diversion.

337 — Organized Crime (3:3:0)
Survey of organized crime in America; areas of influence; remedial practices and control.

338 — Career Development III (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: CJ 239.

339 — Career Development IV (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: CJ 338.

410, 420, 430 — Special Topics in Criminal Justice (1-3:A*:0)
Topics in various areas of criminal justice. Includes field and/or library work and conference with a staff member. A student may repeat course for credit. Prerequisite: Consent of both the instructor and the department head.

431 — Career Development V (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of faculty member. Prerequisite: CJ 339.

433 — Seminar in Police Problems (3:3:0)
Advanced treatment of the major contemporary police problems from the viewpoint of both the administrative and line operations officer; integration of established scientific knowledge with practical police experience. Prerequisite: 18 semester hours of Criminal Justice.

434 — Advanced Criminal Justice Administration (3:3:0)
Theories of organizational behavior as applied to criminal justice agencies; alternative forms of organization; communication, control and accountability problems. Prerequisite: CJ 131.

435 — Advanced Management Techniques in Criminal Justice (3:3:0)
Analysis of advanced management techniques from the viewpoint of the criminal justice administrator; management by objectives; operations analysis, computers and systems approach; systematic planning. Prerequisites: CJ 131 or CJ 331 or CJ 334.

436 — Seminar in Community-Based Corrections (3:3:0)
Techniques and procedures used in the supervision of offenders in the community; treatment methods used in probation, parole, half-way houses, drug treatment programs. Prerequisites: CJ 334 and SWk 333.

*Arranged

437 — Seminar in Institutional-Based Corrections (3:3:0)
Constructive use of the institutional setting; evaluation of specific programs and experiments in prison and jail treatment programs; conflict between rehabilitation and other institutional goals. Prerequisites: CJ 334 and SWk 333.

438 — Correctional Law (3:3:0)
Survey of criminal law, both substantive and procedural. Emphasis on the legal rights of the offender.

439 — Seminar in Criminal Justice Theory (3:3:0)
Selected topics such as sociological, psychological and biological theories of crime causation; philosophy and sociology of law; labeling theory. Prerequisite: CJ 134.

4310 — Conflict Management (3:3:0)
A study of interpersonal situations involving violence or the threat of violence. Techniques the police or correctional officer can use to control self and others; crisis intervention. Extensive use of the case studies, films, role plays and video tape. Prerequisite: CJ 133.

4311 — Criminal Justice Planning and Research (3:3:0)
Criminal Justice applications of the principles of planning; program evaluation; theory testing; funding sources; grantsmanship. Prerequisites: a course in statistics and a course in research methods.

4312 — Contemporary Issues in Criminal Justice (3:3:0)
Current topics in criminal justice. (May be repeated for credit when the topic is varied.)

4313 — Community Crime Prevention (3:3:0)
An intensive study of alternative forms of crime control that employ community action as their primary process.

4314 — Advanced Legal Issues (3:3:0)
An indepth analysis of contemporary legal issues with emphasis upon emerging trends of the U.S. Supreme Court in procedural due process topics such as capital punishment. Recent cases will be interpreted and developing criminal law doctrines examined through group discussion and research.

4315 — Criminal Evidence (3:3:0)
An indepth analysis of law relating to legal evidence of crime; history, philosophy and application of traditional and contemporary rules of evidence; survey and discussion of recent case law and its impact upon criminal litigation.

4316 — Criminal Procedure (3:3:0)
An indepth analysis of state and federal law related to 1st, 5th, 6th and 8th Amendments of U.S. Constitution. Examination of case law concerning police investigative techniques, legal trial rights and similar constitutional doctrines applicable to law enforcement. Prerequisite: consent of instructor.

4318 — Traffic Management (3:3:0)
Traffic planning and resource management with emphasis on traffic engineering, surveys, safety and enforcement. Prerequisite: consent of instructor.

4322 — Police Internship (3:1:4)
A work experience to increase student understanding of law enforcement administration and operation; the internship is initiated by the school in an agency, and both college and agency supervise and direct the student's program. Prerequisite: consent of the instructor.

4323 — Police Internship II (3:1:4)
A work experience to increase the student's understanding of law enforcement administration and operation; the internship is initiated by the school in an agency, and both college and agency supervise and direct the student's program. Prerequisite: Consent of the instructor.

462 — Police Internship (6:1:10)
Work experience to increase student understanding of law enforcement administration and operation; the internship is initiated by the school in an agency, and both the college and agency supervise and direct the student's program. Prerequisite: consent of the instructor.

Bachelor of Social Work

Social Work is a profession that helps people improve their social functioning. Problems of personal and social adjustment are brought to the social worker whose work is devoted to helping individuals, groups and communities face difficulties and find solutions to problems. Social work practice involves more than a desire to "do good"; it involves the synthesis of knowing, doing, feeling and understanding. Therefore, degree candidates in social work must successfully complete an evaluation of their personal, emotional and intellectual development.

A. General Requirements:
Freshman English Composition (six semester hours)
Literature (three semester hours)
Literature or Speech (three semester hours)
Laboratory Science — Bio 141, 142
Mathematics (Math 134 and three additional semester hours)
American History (six semester hours)
American Government (Six semester hours)
Sociology 336
Psychology 131
Psychology 234 or 235
Sociology 131, 132
Physical Education, Band or AFROTC (four semesters)

B. Major: SWk 131; SWk 231; SWk 241; SWk 331; SWk 332; SWk 333; SWk 334; SWk 335; SWk 4321; SWk 4324; SWk elective

C. Minor: An approved minor of 18 semester hours, six of which must be advanced. Students will normally minor in either psychology or sociology.

D. Electives: Sufficient approved electives to complete a total of 126 semester hours.

Concentration in Corrections

The Concentration in Corrections is designed to prepare the prospective social worker for practice in probation and parole departments, prisons and jails. The general requirements, major and electives are the same as those listed above. The following courses replace the minor: CJ 132, CJ 134, CJ 334, CJ 436, CJ 437 and CJ 438.

Concentration in Family and Children's Services

The Concentration in Family and Children's Services is designed to prepare the prospective social worker who wishes to specialize in practice involving families and children. The general requirements, major and electives are identical to those listed above. The following courses replace the minor: HEc 137, HEc 233, HEc 239, HEc 330 or 435, HEc 334 and HEc 339.

SOCIAL WORK (SWk)

131 — Introduction to Social Work (3:3:0)
An overview of the history, philosophy, field of practice and services of the social work profession. A field experience to introduce students to the social work profession is required.

231 — Survey of the Social Welfare Institution (3:3:0)
Study of the growth and development of the social welfare institution; with emphasis on selected pieces of social welfare legislation and the effect on social welfare services.

241 — Social Work Research I (4:3:2)
Research methods used by social service professionals. Philosophy of science; sets and variance; probability and inference; designs of research.

331 — Social Work Research II (3:3:0)
A continuation of SWk 241. Types of research; measurement; data collection; analysis and interpretation. Prerequisite: SWk 241.

332 — Huamn Behavior in the Social Environment (3:3:0)
Life cycle approach to the study of growth and development as impacted upon by the social environment.

333 — Social Work Practice I (3:3:0)
Theories, concepts, principles and modalities generic to social work practice. Emphasis on the use of interventive skills with client systems.

334 — Social Policy and Administration (3:3:0)
Analysis of social policies as related to selected social problems at all governmental levels. Emphasis placed on integrating policy into the administering of human service programs.

335 — Social Work Practice II (3:3:0)
Continuation of 333. Prerequisite SWk 333.

410, 420, 430 — Special Topics in Social Work (1-3:A*:0)
Topics in various areas in social services. Includes field and/or library work and conferences with a staff member. A student may repeat the course for credit when the area of study is different. Prerequisite: consent of the instructor.

432 — Seminar (3:3:0)
Current topics in social work. May be repeated for credit when the topic is varied.

4321 — Field Experience I (3:A*:0)
Integration of theory into practice through placement in community social service agencies. Consent of the instructor required for registration. Placement to be arranged. Prerequisite: SWk 333 and 335 plus three additional hours in SWk.

4324 — Field Experience II (3:A*:0)
Integration of theory into practice through placement in community social service agencies. Consent of the instructor required for registration. Placement to be arranged. Prerequisite: 4321.

Note: Field Experience courses may be taken during Summer Sessions I and II/or concurrently during Fall Semester.

*Arranged

Department of Sociology

Department Head — Delbert L. Gibson. *Professors* — Claude B. Boren, John M. Ellis. *Associate Professors* — Raymond L. Drenan, George A. Woodward. *Assistant Professors* — Clifford J. Clarke, Li-chen Ma, Wayne C. Seelbach, Robert J. Stahl. *Adjunct Instructors* — Pamela A. Meyer, Ronald L. Richardson. *Secretary* — Cheryl E. Simar

Bachelor of Arts — Sociology Major

The degree of Bachelor of Arts in Sociology will be awarded upon completion of the following requirements:

A. General Requirements:
Freshman English — six semester hours.
Literature — six semester hours.
Four semesters of Laboratory Science and Math including Math 134.
Completion of the 232 course in a foreign language.
Government — Sophomore American, six semester hours
History — Sophomore American, six semester hours.
Physical Education or Marching Band — four semesters, but no more than six semester hours.
Liberal Arts Approved Electives - six semester hours, including Ant 231.

B. Major — minimum of 30 semester hours.
Sociology 131 — Introduction to Sociology.
Sociology 3311 — Introduction to Social Research.
Sociology 438 — Research Methods.
Sociology 3312 — Sociological Concepts or Sociology 337 — History of Social Thought.
Sociology 439 — Social Theory.

C. Minor — minimum of 18 semester hours.
An approved minor of 18 semester hours, including at least six advanced semester hours.

D. Electives:
Sufficient approved electives to complete a total of 126 semester hours.

Recommended Program of Study

First Year

Eng—Composition	6
Liberal Arts Electives	6
Language	6
Mth	6
Soc	3-6
PE—Activity	2
	29-32

Second Year

Eng—Literature	6
His—Soph American	6
Language	6
Science	8
Ant	3
Soc	3
PE—Activity	4
	36

Third Year

Gov—Soph American	6
Soc 3311 and either 337 or 3312	6-9
Minor field	6-9
Electives	6-9
	24-33

Fourth Year

Soc 438—Research Methods	3
Soc 439—Social Theory	3
Minor field	6-12
Electives	3-9
Soc	6-9
	21-36

Total ..... 126 semester hours

Bachelor of Science — Sociology Major

The Bachelor of Science degree in sociology emphasizes career education and general education. It will be awarded upon completion of the requirements for the Bachelor of Arts degree in sociology with the following modification: Sufficient approved electives to complete a total of 126 semester hours, incuding 15 semester hours of career related electives requiring official approval by the assigned advisor as substitution for the foreign language requirements.

Recommended Program of Study

First Year

Eng—Composition	6
Liberal Arts Elective	6
Science	8
Mth	6
Soc	3-6
PE—Activity	2
	31-34

Second Year

Eng—Literature	6
His—Sophomore American	6
Gov—Sophomore American	6
Ant	3
Soc	3-6
Minor field	3
PE	2-4
	22-34

Third Year

Electives—Career Related	6
Soc 3311 and either 337 or 3312	6-9
Minor field	6-9
Electives	6-9
	24-33

Fourth Year

Soc 438—Research Methods	3
Soc 439—Social Theory	3
Minor field	6-12
Electives—Career Related	3-9
Soc	6-9
	21-36

Total ..... 126 semester hours

Teacher Certification — Sociology

Students wishing to secure the Bachelor of Arts or Bachelor of Science degree in sociology and at the same time to certify for a provision certificate, secondary, with a teaching field in sociology must include in their degree program the following:

1. Six hours in mathematics including Mth 134 and eight hours of laboratory science (in same science).
2. The approved 24 hour teaching field in sociology. (See list of approved teaching fields in the College of Education section of this catalog.)
3. An approved 24 hour additional teaching field in place of minor. (See list of approved teaching field in the College of Education section of this catalog.)
4. Eighteen hours of education: 331, 332, 338, 438, 462.
5. Sufficient approved electives to complete a total of 126 semester hours.

ANTHROPOLOGY (Ant)

231 — Introduction to Anthropology (3:3:0)

A general introduction to the major subdisciplines of anthropology and their basic concepts. Throughout the course the evolutionary perspective on man is applied. Coverage is given to the physical and cultural evolution of man as well as to the ecological adaptations of contemporary small-scale or so-called "primitive" societies.

232 — **Culture Areas (3:3:0)**
North American Indians/Central and South American Indians/Asia/Oceania — a series of area survey courses designed to introduce the student to the cultural diversity present in each area. Attention is given to cultural origins and pre-contact civilizations as well as to the impact of Western technology and colonization. The course may be repeated for credit when the designated topics are varied.

234 — **Primitive Religion (3:3:0)**
The comparative study of myths and belief systems of preliterate societies. Special attention will be given to the function of the myth in culture and society. The world views of the North and South American Indian and of the small scale societies of Africa, Asia and Oceania will receive most coverage in the course. Shamanism will also be discussed.

235 — **Introduction to Archaeology (3:3:0)**
An introduction to the method, theory and major prehistoric sequences of the old and New World.

331 — **Culture and Personality (3:3:0)**
Anthropological contributions to understanding the role of culture in personality development. Coverage is given to child rearing, language acquisition and normative approaches to culturally distinct personality. Prerequisite: Ant 231.

332 — **Ecological Anthropology (3:3:0)**
Treatment of the problems of cultural adaptations of human societies to their environments. Attention is given the systemic relationship of environments, technology, economic exchange and authority in non-industrial societies.

431 — **Topics in Anthropology (3:3:0)**
Topics will be selected on basis of need and interest. Course may be repeated for credit, when the designated topics are varied.

SOCIOLOGY (Soc)

131 — **Introduction to Sociology (3:3:0)**
Sociology as a field of knowledge. Basic terms, concepts, theories of sociology applied to an explanation of human behavior personality, groups and society.

132 — **Social Problems (3:3:0)**
Attributes of society and of persons which are subject to disapproval; the causes, extent and consequences of problems; programs and prospects of their resolution.

230 — **Urban Problems (3:3:0)**
The study of contemporary urban problems in America. Attention is given to problems of poverty, transportation, disorganization and city planning and reconstruction.

231 — **Deviant Behavior (3:3:0)**
The study of the major areas of social maladjustment from the standpoint of the processes underlying social and individual disorganizations, such as alcoholism, illegitimacy, suicide, drug addiction and other personal deviations.

233 — **Marriage and the Family (3:3:0)**
Characteristics of and problems within courtship, marriage and family in American society.

234 — **Social Gerontology (3:3:0)**
A general survey of the social phenomenon of aging in American society, attention given to the interrelationship among biological, individual, group and social variables.

235 — **Career Development I (3:A*:0)**
Special assignments related to work-experience in cooperation with employer under faculty supervision.

236 — **Career Development II (3:A*:0)**
Special assignments related to work-experience in cooperation with employer under faculty supervision.

330 — **American Society (3:3:0)**
Description and analysis of structural and functional characteristics of American society and culture.

331 — **Sexual Interaction (3:3:0)**
An overview of current scientific knowledge concerning human sexuality as a form of interaction between the sexes in the cultural milieu.

3311 — **Introduction to Social Research (3:3:0)**
A general introduction to the problems, concepts and techniques of scientific research in sociology.

3312 — **Sociological Concepts (3:3:0)**
Development and current usage of sociological concepts.

3313 — **Career Development III (3:A*:0)**
Special assignments related to work-experience in cooperation with employer under faculty supervision.

3314 — **Career Development IV (3:A*:0)**
Special assignments related to work-experience in cooperation with employer under faculty supervision.

332 — **Social Psychology (3:3:0)**
Social and cultural influences upon individual behavior and personality; interpersonal and intergroup relations and collective behavior.

333 — **Urban Sociology (3:3:0)**
Social and ecological processes in the urbanization movement; characteristics of urban society and culture.

334 — **Industrial Sociology (3:3:0)**
The social structure of industry and of the trade union interrelationships of industry, union and society; personal, social and cultural factors in industrial organization and operation.

335 — **The Family (3:3:0)**
Structural and functional characteristics of the family as a basic institution.

336 — **Race and Ethnic Relations (3:3:0)**
Racial and ethnic minority groups within the society; causes, distinctions and changes in the relationship between minority and dominant groups.

337 — **History of Social Thought (3:3:0)**
A survey of social thought from lore to sociological theory.

338 — **Criminology (3:3:0)**
Extent of and explanation for crime in American society; agencies dealing with crime and criminal; programs for control and prevention of crime and delinquency.

339 — **Juvenile Delinquency (3:3:0)**
The nature, incidence and explanations for juvenile delinquency in American society; agencies and programs for prevention and control of juvenile delinquency.

430 — **Seminar in Sociology (3:3:0)**
Basic concepts and general principles of sociology as applied to the study of selected topics. The course may be repeated for credit when the designated topics are varied.

431 — **Population Problems (3:3:0)**
The growth and composition of population with emphasis on social, economic and political problems.

*Arranged

4311 — Medical Sociology (3:3:0)
A study of social organization in the medical field with emphasis on the social interaction between persons involved.

4312 — Advanced Deviant Behavior (3:3:0)
Indepth study of behavior classified as deviation from the social norms.

432 — Sociology of Education (3:3:0)
A study of the multicultural influences on the school system and the democratic society. Included will be an analysis of educational problems in the multicultural society of Texas.

433 — Social Psychology of Adult Development and Aging (3:3:0)
An indepth analysis of the social and psychological processes associated with the passage of individuals through the age structure of American society. Prerequisite: Soc 234.

434 — Social Change (3:3:0)
Theories of social change. Science and technology as stimulations of change with social planning to give control and direction to change.

435 — Sociology of Religion (3:3:0)
Religion as a social institution in contemporary America; development of religious systems; cultural, social and individual function of religion.

436 — Social Movements (3:3:0)
Historical, structural and tactical consideration in the development of major systems of belief and practice within society; political movements in American society.

437 — Public Opinion (3:3:0)
Factors and processes in formation and change of public opinion, influence of the mass media on communication; analysis and evaluation of propaganda.

438 — Advanced Research Methods (3:3:0)
Advanced in depth analysis of social data concerning various specific topics in sociological research. Prerequisite: Soc 3311.

439 — Social Theory (3:3:0)
A survey of major sociological theorists and theories. Prerequisite: Soc 337 or 3312.

Courses in Bible and Religious Education

Instructors — Jim Chatham, Arthur Crane, Jim Gill, John Lawrence, Edward Mazzu, James Wray

These courses are provided by church related sources. If credit is desired, the fees are payable to the University. A maximum of 12 semester hours is allowed with the approval of the student's academic dean.

BIBLE (Bib)

131 — Survey of the Old Testament (3:3:0)
A critical study of the Old Testament and its relevance to Western culture.

132 — Survey of the New Testament (3:3:0)
A critical study of the New Testament, its historical context and the beginnings of the Christian Church.

133 — **New Testament: Gospels (3:3:0)**
A critical study of the Gospels, the person and work of Jesus of Nazareth.

134 — **New Testament: Paul (3:3:0)**
A study of the life and ministry of St. Paul and the major portion of the Pauline letters.

135 — **Introduction to Christian Thought (3:3:0)**
A course designed to acquaint the student with the major concepts of the Christian faith: to explore their Biblical basis and their relevance for the present day.

212 — **Current Issues in Religion (1:1:0)**
An interpretation of religious events through the reading of current religious and secular periodicals.

231 — **Church History (3:3:0)**
The history of the Christian Church, including the General Councils, the missionary movements, the Reformation and the transition to the modern scene.

232 — **Christian Ethics (3:3:0)**
The relation of the Christian Faith to daily living, with particular emphasis on vocation, courtship and marriage, the person and society.

233 — **Old Testament: Prophets (3:3:0)**
A study of the major and minor prophets and the role they played in the development of the religion of Israel.

314 — **Thematic Approach to Religion (1:1:0)**
A critical study of significant ideas or writings in religion.

324 — **Thematic Approach to Religion (2:2:0)**
A critical study of significant ideas or writings in religion.

331 — **Philosophy of Religion (3:3:0)**
Planned to describe the points of view in religious philosophy which are of vigorous contemporary influence and to analyze the basic issues between them, including a study of religion as such, its historical development and some emphasis on major contemporary religions.

332 — **Major Themes of the Bible (3:3:0)**
Planned to present Biblical concepts of God, man, history, covenant, prophecy, vocation and related ideas.

333 — **Comparative Religion (3:3:0)**
A comparative study of the world's major religions, e.g. Judaism, Christianity, Islam, Hinduism, Buddaism.

334 — **Thematic Approach to Religion (3:3:0)**
A critical study of significant ideas or writings in religion.

College of Sciences

Departments: Aerospace Studies, Biology, Chemistry, Geology, Physics, Psychology

Roger E. Yerick, Ph.D., Dean
Cheryl H. Patterson, Secretary

The College of Sciences, formerly the School of Sciences, was established by the University in 1966 and comprises the departments of Aerospace Studies, Biology, Chemistry, Geology, Physics and Psychology. Prior to this reorganization, degrees had been granted in these areas by the School of Arts and Sciences, formed in 1952.

The Bachelor of Science degree is granted in biology, chemistry, geology, physics, psychology, oceanographic technology, energy resources management and environmental science. The Bachelor of Arts degree is offered in biology, chemistry, geology and psychology.

Information concerning graduate programs in biology, chemistry and psychology may be found in the Graduate Bulletin.

General Statement

Success in scientific pursuits requires an inquiring mind, thorough grounding in fundamental theory and manipulative skill. The ultimate of success is attained when these qualities are developed against a broad background of liberal education.

Through a specialized curriculum, the student prepares a career in business or industry, government service, teaching, research, advanced study and other professional fields.

Pre-professional training prepares the student for careers in medical technology, medicine, dentistry, pharmacy, physical therapy and veterinary medicine.

The pre-medical and pre-dental curricula have been programmed to satisfy requirements for admission to medical and dental schools. Students who gain admission to a medical or dental school after the completion of three years of work at Lamar University may be eligible to receive a Bachelor of Science in Biology degree after the successful completion of one year at the medical or dental school. Specific details may be obtained from either the Office of the Dean or the Department of Biology.

Academic instruction in science demands success in laboratory work. Because of the technical nature of laboratories, students are expected to display competence in following both written and oral instructions in performing their laboratory work. Failure to display this competency may result in a student being dropped from a course.

DEGREE OFFERINGS

Bachelor of Arts with majors in the following fields:

Biology	Geology
Chemistry	Psychology

Bachelor of Science with majors in the following fields:

Biology	Oceanographic Technology
Chemistry	Energy Resources Management
Environmental Science	Physics
Geology	Psychology

PRE-PROFESSIONAL PROGRAMS

The College of Sciences administers pre-professional programs for students planning careers in medicine, dentistry, pharmacy, physical therapy, occupational therapy, physician's assistant and veterinary medicine.

The programs in physical therapy, occupational therapy and physician's assistant are administered by the Department of Biology and the specific programs of study are listed in that department.

The pre-medical, pre-dental, pre-veterinary medicine and pre-pharmacy programs are administered by the Office of the Dean of the College of Sciences and students should consult this office for academic advisement.

Students intending to pursue careers in medicine or dentistry are encouraged to major in any academic area of their choice; all fields of academic endeavor in the University are open.

The Dean of the College of Sciences is the chairman of the Pre-professional Advisory Committee for the Health Professions. Students in these areas should plan their academic and professional programs through that office.

Recommended Program of Study
Pre-medical and Pre-dental

The first two years of study, as listed below, are designed to equip students with the minimum background in the biological and physical sciences needed for the Medical College Admissions Test (MCAT) or the Dental Admissions Test (DAT).

The third and fourth years of the pre-medical and pre-dental program are planned around the student's desired major. Additional courses in biology and chemistry are recommended in all cases. Applicants to these professional schools are generally considered more competitive by the respective admissions committees if they completed requirements for a baccalaureate degree prior to beginning the medical or dental curriculum.

First Year	
Eng—Composition	6
Bio 141, 142—General	8
Chm 141, 142—General	8
*Mth	6
Phy 141-142	8
PE/MLb 124**/AFROTC	2-4
	38-40

Second Year	
Eng—Literature	6
Bio 240—Comp Anatomy	4
Bio 243, 244—Microbiology	8
Chm 341, 342—Organic	6
His 231-232	6
Elective	3
PE/MLb 124**/AFROTC	2-4
	37-39

*Dental schools have no specific mathematics requirement. Medical schools require credit for Calculus I (Mth 236 or equivalent).
**Offered Fall semester only.

Veterinary Medicine

The following fulfills the minimum requirement for admission to study veterinary medicine in Texas.

First Year	
Eng—Composition	6
Bio 141, 142—General	8
Chm 141, 142—General	8
Soph Am His	6
Mth 1335—Precal Mth	3
Mth 236—Calculus I	3
	34

Second Year	
Eng—Literature	3
Bio 347—Genetics	4
Chm 341, 342—Organic	8
Gov 231-232	6
Phy 141-142—General	8
	29

Additionally, six semester hours of Animal Science (including animal nutrition) and submission of scores on the Veterinary Aptitude Test (VAT) are required for entrance into the professional curriculum in veterinary medicine.

Pharmacy

Professional training in pharmacy is offered at three institutions in Texas. All require a minimum of two years pre-pharmacy training followed by three years in a College of Pharmacy.

Minimum entrance requirements differ for the several institutions, and students are cautioned to work closely and carefully with the pharmacy advisor in planning their careers. Exceptions to the minimum entrance requirements are seldom granted by the respective Colleges of Pharmacy.

All Colleges of Pharmacy in Texas require submission of test scores on the Pharmacy College Admission Test (PCAT).

Pre-pharmacy training for entrance into the College of Pharmacy, University of Houston:

First Year		Second Year	
Bio 141, 142—General	8	Bio 245—Microbiology	4
Chm 141, 142—General	8	Chm 341, 342—Organic	8
Eng—Composition	6	Phy 141, 142—General	8
Mth 1335—Precalculus	3	Eco 233—Principles	3
PE—Activity	2-4	Eng — Literature	6
*Electives	3	*Electives	3
	30-32		32

*Chosen from Ant, Hum, Psy or Soc.

Summer

His 231, 232—American	6
Gov 231, 232—American	6
	12

Pre-pharmacy training for entrance into the College of Pharmacy, the University of Texas:

(Students applying to the University of Texas must be prepared to accept assignment to either the Austin or San Antonio campus for their last year of professional pharmacy training.)

First Year		Second Year	
Bio 141, 142—General	8	Bio 245—Microbiology	4
Chm 141, 142—General	8	Bio 344—Advanced Physiology	4
Eco 233—Principles	3	Chm 341, 342—Organic	8
Eng—Composition	6	Phy 141, 142—General	8
Mth 1335—Precalculus	3	Spc 331—Bus and Prof	3
Mth 236—Calculus	3	**Electives	6
	31		33

**Chosen from Hum, Psy, Soc or Ant

Summer

His 231, 232—American	6
Gov 231, 232—American	6
	12

Pre-pharmacy training for entrance into the College of Pharmacy, Texas Southern University, Houston:

First Year		Second Year	
Bio 141, 142—General	8	Bio 245—Microbiology	4
Chm 141, 142—General	8	Chm 341, 342—Organic	8
Eng—Composition	6	Phy 141, 142—General	8
Mth 1334—Algebra	3	Eng—Literature	6
Mth 1335—Precalculus	3	Eco 233—Principles	3
PE—Activity	3	Hum—Fine Arts Apprec	3
	31		32

Summer

His 231, 232—American	6
Gov 231, 232—American	6
	12

Cooperative Education Program

A Cooperative (COOP) Education Program in which the student spends alternate terms at work and at study, is offered to qualified students in the College of Sciences through the Departments of Biology, Chemistry, Geology and Physics. This program is coordinated by the Director of Cooperative Education, and students may contact that office or the individual departments for further information.

Department of Aerospace Studies

Department Head — Lt. Col. Theodore B. Johnson. *Assistant Professors* — Major Larry Moore, Capt. Vernon J. Disney. *Detachment Personnel Technician* — SSgt. John T. Tye. *Noncommissioned Office-in-Charge of Administration* — SSgt. Leon Wilder. *Department Secretary* — Cara Carpenter.

The Air Force Reserve Officers Training Corps (AFROTC), through the Department of Aerospace Studies, conducts a permanent program of instruction on the campus to provide eligible students an opportunity to qualify for a commission in the United States Air Force. Students who successfully complete the program will be commissioned as second lieutenants upon graduation.

There are two different programs in Air Force ROTC. The four-year program is recommended for entering freshmen. The two-year program is available for those students with a minimum of two years remaining of undergraduate or graduate study at the University. The four-year program is divided into two phases: a general military course (GMC) for freshmen and sophomores and a professional officers course (POC) for juniors and seniors. Two-year students take only the professional officers course, but are required to complete successfully a six-week field training program prior to acceptance into the POC.

AFROTC students receive free uniforms and textbooks, and all members of the professional officers course receive $100 per month while participating in the program. Scholarships also are available, and those students interested should consult the head of the Department of Aerospace Studies.

Four semesters of aerospace studies satisfy the requirements for physical education activity courses in all degree programs.

Additional courses in aerospace studies may be used as electives in degree programs.

AEROSPACE STUDIES (Aer)

121 — First Year GMC (2:1:1)
A study of the doctrine, mission and organization of the United States Air Force; U.S. strategic offensive and defensive forces: their mission, function and employment of nuclear weapons: civil defense.

122 — First Year GMC (2:1:1)
Aerospace defense; missile defense; U.S. general purpose and aerospace forces; the mission resources and operation of tactical air forces with special attention to limited war; review of Army, Navy and Marine general preparation forces.

221 — Second Year GMC (2:1:1)
The beginning of manned flight, the early growth and development of air power (from Kitty Hawk, 1903, to the beginning of WWII, 1941) and the development of concepts and doctrine governing the employment of air power.

222 — Second Year GMC (2:1:1)
The modern development of air power, from the beginning of WWII (1941) through the air war in Southeast Asia (1973), the peaceful employment of U.S. air power and the changing missions of the defense establishment.

331-332 — First Year POC (3:3:1)
An integrated management course emphasizing the individual as a manager in an Air Force milieu. The individual motivational and behavioral processes, leadership, communication and group dynamics are covered to provide a foundation for the development of the junior officer's professional skills as an Air Force officer. The basic managerial processes involving

decision-making, utilization of analytical aids in planning, organizing and controlling a changing environment are emphasized as necessary professional concepts.

431-432 — Second Year POC (3:3:1)

The Armed Forces as an integral element of society, with an emphasis on the broad range of American Civil-Military relations and the environmental context in which U.S. defense policy is formulated and implemented. Special themes include: societal attitudes toward the military; the role of the professional military leader-manager in a democratic society; the functional values and socialization processes associated with the Armed Services; requisites for maintaining adequate national defense structure and the variables involved in the formulation and implementation of national security policy.

Department of Biology

Department Head — Michael E. Warren. *Professors* — Richard C. Harrel, Russell J. Long, J. Leon McGraw Jr., Jed J. Ramsey, W. Russell Smith, Henry T. Waddell. *Associate Professors* — William T. Fitzgerald, Philip B. Robertson, Charles P. Turco. *Assistant Professors* — George A. Bryan Jr., Gilbert W. Gatlin, Phillip G. Malnassy, William C. Runnels. *Instructor* — Madelyn D. Hunt. *Secretary* — Bobbie Strickland.

Recommended Program of Study

Bachelor of Science — Biology Major

First Year

Eng 131	3
Eng—Composition	3
Bio 141, 142—General	8
Chm 141, 142—General	8
Mth 1335—Precalculus or (236)	3
Mth 236—Calculus or (237)	3
Electives	4
PE/MLb 124***/AFROTC (2 sem)	2 or 4
	34-36

Second Year

Eng—Literature	6
Chm 341, 342—Organic	8
Phy 141, 142—General	8
Bio (selected from core**)	12
PE/MLb 124***/AFROTC (2 sem)	2 or 4
	34-36

Third Year

Gov 231-232	6
Electives	8
Mth 234—Statistics	3
Bio (selected from core**)	8
Bio Elective	8
Chm 441* or Bio 4302	3 or 4
	36-37

Fourth Year

Bio 416, 417—Bio Lit	2
Bio Electives	8
Electives	18
Soph Am His	6
	—
	34

*Chm 241 required

**The following courses must be included in the Biology Core: Bio 245 or 243, Microbiology; Bio 346, Invertebrate Zoology; Bio 345, Botany; Bio 240 or 444, Comparative Anatomy or Vertebrate Natural History; Bio 347, Genetics.

***Offered Fall Semester only. If MLb 124 option is desired it should be added to third and fourth year as four semesters are required.

Bachelor of Arts — Biology

The recommended program of study for the BA in Biology is the same as the BS in Biology (see above) except that electives must include credit for the course numbered 232 in a foreign language. The program, as outlined, results in a minor in chemistry.

*Bachelor of Science in Psychology
*Bachelor of Science in Biology

First Year

Bio 141, 142—General	8
Chm 141, 142—General	8
Eng—Composition	6
Mth 1355—Precalculus	3
Psy 131—Intro to Psy	3
Psy 241—Intro to Stat Meth	4
PE Activity	2-4
	34-36

Second Year

Chm 341, 342—Organic	8
Bio 240—Comparative Anatomy	4
Bio 342—Embryology	4
Psy 242—Methods	4
Eng—Soph Literature	6
Mth 236—Calculus I	3
Mth 237—Calculus II	3
Psy—Electives	3
	35

Summer

Soph Am Gov	6
PE Activity	2-4
Electives	6
	14-16

Third Year

Soph Am His	6
Phy 141, 142—General	8
Bio 347—Genetics	4
Psy 344—Adv Physiology	4
Psy 343—Experimental Psy	4
Psy Electives (Adv-6 hrs)	9
	35

Fourth Year

Bio 444—Vert Natural History	4
Bio 416—Bio Literature	1
Bio 446—Ecology	4
Bio 447—Cellular	4
Bio Electives	8
Psy Elective (Adv)	3
Electives	13
	37

*Both degrees must be awarded simultaneously.

Bachelor of Science in Biology†
Bachelor of Science in Chemistry†

First Year

Bio 141-142—General	8
Chm 141-142—General	8
Eng—Composition	6
Mth 1335—Precalculus	3
Mth 236—Calculus	3
PE/MLb 124**/AFROTC	2-4
Electives	6
	36-38

Second Year

Chm 341-342—Organic	8
Mth 237—Calculus	3
Eng—Literature	6
Phy 141-142—General	8
Chm 241—Quantitative	4
Gov 231-232	6
PE/MLb 124**/AFROTC	2-4
	37-39

Summer

Phy 335—Modern	3
Bio 243	4
Bio Elective	4
Electives	3
	14

Third Year

Bio (selected from core***)	16
Soph Am His	4
Chm 413—Physical Lab	1
Chm 333—Inorganic	3
Chm 431—Physical	3
Electives	6
	35

Fourth Year

Bio 416 or 417—Bio Lit	1
Bio Electives	8
Chm 441—Biochem	4
Chm Electives* (min)	8
Electives	11
	32

Biology electives to be chosen from Bio 244, 341, 342, 344, 447.

*Chemistry electives to be selected from Chm 414, 426, 432, 435, 436, 442, 444, 446.

**Offered Fall Semester only. If MLb 124 option is desired it should be added to third and fourth year as four semesters are required.

***The following courses must be included in the Biology Core: Bio 245 or 243, Microbiology; Bio 346, Invertebrate Zoology; Bio 345; Botany; Bio 240 or 444, Comparative Anatomy or Vertebrate Natural History; Bio 347, Genetics.

†Both degrees must be awarded simultaneously.

Bachelor of Science — Medical Technology

First Year

Eng 131	3
Eng—Composition	3
Bio 141, 142—General	8
Chm 141, 142—General	8
Mth 1334—Algebra	3
Mth 1335—Precalculus	3
Electives	4
PE/MLb 124***/AFROTC (2 sem)	2 or 4
	34-36

Second Year

Eng—Literature	6
Bio 243-244—Microbiology	8
Chm 341-342—Organic	8
Phy 141-142—General	8
PE/MLb 124*/AFROTC	2 or 4
	32-34

Third Year

Bio 344—Adv Physiology	4
Bio 340—Diagnostic Microbiology	4
Chm 241—Quantitative	4
Soph Am His	6
Bio 441—Parasitology	4
Electives (Approved)	8
Gov 231-232	6
	36

*Offered Fall Semester only. If MLb 124 option is desired it should be added to third and fourth year as four semesters are required.

Fourth Year — Clinical Training

All the above requirements for the degree must be met before a student may be admitted to clinical training (12 consecutive months at a hospital laboratory approved for teaching by the Council on Medical Education and Hospitals of the AMA). After satisfactorily completing this training, the student is awarded the degree of Bachelor of Science — Medical Technology.

The Program shown will fulfill Registry requirements.

Note: This program is in a period of transition from the College of Sciences, Department of Biology, to the College of Health Sciences. For detailed program requirements, contact faculty advisors in Hayes 205.

Physical Therapy

First Year

Eng 131	3
Eng—Composition	3
Bio 141-142—General	8
Chm 141-142—General	8
Mth 1335—Precalc	3
Psy 131—Introduction	3
Electives*	6
	34

Second Year

Physics 141-142	8
Sociology 131	3
Speech	3
Bio 344—Adv Physiology	4
Psy 241—Statistics	4
His 231-232	6
Gov 231-232	6
	34

Third Year

Bio 240—Comparative	4
Eng—Literature	3
Psy 234—Child	3
Psy 337—Adjustment	3
Psy 432—Abnormal	3
Electives (minimum)*	10
	26

*Electives should be chosen from Sociology, Psychology, Economics, etc.

The first two years of the program above will satisfy the minimum requirements for the University of Texas Medical Branch at Galveston. Their program calls for an additional two years of clinical work for the BS degree. The three years of preparatory work will meet the requirement of the University of Texas Health Science Center at Dallas. Their program requires one year of clinical work for the BS degree. PE, etc., does not count toward the semester hour requirement. Acceptance to the clinical program is on a competitive basis.

Occupational Therapy

First Year

Eng 131	3
Eng—Composition	3
Bio 141-142—General	8
Chm 141-142—General	8
Psy 131	3
Mth 1334	3
Psychology*	3
	31

Second Year

Eng Lit	6
His 231-232—United States	6
Gov 231-232	6
Soc	6
Electives	6
	30

Plus two years clinical affiliation

*Child Psychology not recommended.

Physician's Assistant

First year same as first year Physical Therapy.
Second year same as second year Occupational Therapy.

Plus two years clinical affiliation.

Lamar University provides only the pre-clinical years for the above three programs, changes program requirements are under the control of the schools offering the clinical programs. For detailed course requirements contact the faculty advisor in Hayes 101.

COOPERATIVE EDUCATION (COOP) PROGRAM

A Cooperative (Coop) Education Program in which the student spends alternate terms at work and at study, is offered to qualified students in the Department of Biology. To meet the minimum qualifications for the Coop program, a student must have:

1. Completed all the work in the Biology Program for the first year.
2. An over-all grade-point average of 2.5 using all grades earned.

To remain in the program, the student must maintain a grade point average equal to or above the minimum qualification level and perform in a manner satisfactory to both her/his employer and to Lamar.

The period during which a student may participate in the Coop program exends through the regular sophomore and junior years. Coop privileges are not extended to freshman or senior students. By participating in the Coop program throughout eligibility, a student extends the time required to obtain a degree to five years; but in doing so, gains the equivalent of almost two years experience in industry.

A student may apply for admission to the Coop program through the Department Head, Department of Biology.

BIOLOGY (Bio)

130 — Fundamentals of Modern Biology (3:3:0)*
Human, environmental, genetic and population biology.

141 — General Biology (4:3:2)
A survey of organisms, molecules, cells, tissues, photosynthesis, genetics and evolution.

142 — General Biology (4:3:2)
Structure and function, development, reproduction and ecology.

143 — Human Anatomy and Physiology (4:3:2)
Structure and function of cells, tissues, muscle, skeletal and nervous system.

144 — Human Anatomy and Physiology (4:3:2)
Structure and function of the circulatory, digestive, excretory and reproductive systems. Prerequisite: Bio 133.

236 — Career Development (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Approval of department head.

237 — Career Development II (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Bio 236.

240 — Comparative Anatomy of the Vertebrates (4:3:4)
Comparative anatomy presented from systemic viewpoint. Prerequisite: Bio 141-142. Two-2-hour labs per week.

243 — Microbiology (4:3:3)
Classification, morphology, reproduction and physiology of microorganisms. Prerequisites: Bio 141-142.

244 — Disease and Immunity (4:3:3)
Antigen-antibody responses and life cycles of disease-causing microorganisms. Prerequisite: Bio 243.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

245 — Introductory Microbiology (4:3:2)
Micro-organisms with emphasis on those of medical significance and problems of personal and community health.

330 — Applied Anatomy and Kinesiology (3:3:0)
Organization and mechanics of the human body and analysis of human motion, skeletal system, attachments and actions of muscles. (Does not count toward biology major.) Prerequisite: Bio 141-142.

332 — Anatomy and Physiology of Speech and Hearing (3:3:0)
Human structure, function, respiration and hearing, for majors in speech and hearing pathology. (Does not count toward biology major.) Prerequisite: Bio 141-142.

336 — Career Development III (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Bio 237.

337 — Career Development IV (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Bio 336.

340 — Diagnostic Microbiology (4:2:6)
Public health diagnostic procedures, epidemiology, control and treatment of human bacterial diseases. Prerequisite: Bio 243-244; Chm 342 (or concurrent enrollment).

341 — Histology (4:3:3)
Study of normal tissues of vertebrates including human tissue. Prerequisite: Bio 141-142 and 240 or 243-244.

342 — Embryology (4:3:3)
Comparative study of meiosis, fertilization, cleavage and early embryology as it relates to human development of vertebrates. Prerequisite: Bio 141-142, 240.

343 — Introduction to Medical Technology (4:3:3)
Procedures used in clinical laboratories; practice in hematology, serology and urinalysis. Prerequisite: Bio 141-142, 243-244.

344 — Advanced Physiology (4:3:3)
General physiology, muscle-nerve relations, digestive, circulatory, respiratory, excretory, nervous and endocrine systems. Prerequisite: Bio 141-142. Recommended: Chm 341-342.

345 — General Botany (4:3:3)
Introduction to plant structure and functions with emphasis on the seed plants. Prerequisite: Bio 141-142.

346 — Invertebrate Zoology (4:3:3)
Classification, natural history, phylogenetic relationships and economic importance of the invertebrate phyla. Prerequisite: Bio 141-142.

347 — Genetics (4:3:3)
General principles of heredity, including human inheritance. Prerequisite: Bio 141-142.

4101, 4201, 4301, 4401 — Special Topics in Biology (1-4:A*:0)
Physiological, anatomical, taxonomic and ecological biology. Laboratory and/or library work and conferences with a faculty member. May be repeated for credit when the area of study differs.

416 — Classical Biological Literature (1:1:0)
A survey of major written works in biology. Prerequisite: Senior standing in biology.

417 — Current Biological Literature (1:1:0)
A survey of modern biological works published in recent journals. Prerequisite: Senior standing in biology.

*Arranged

430 — Undergraduate Problems (3:0:6)
Individual investigation of a problem in biology. Formal report of research to be approved by two faculty members. Prerequisite: Permission of instructor.

4302 — Cellular Physiology (3:3:0)
Basic processes in physiology, metabolism, transport, energetics, molecular and cellular mechanisms. Prerequisite: Junior standing, credit for organic chemistry.

4303 — Principles of Electron Microscopy (3:3:0)
Principles of operation, adjustment and elementary maintenance of the electron microscopy. Preparation of specimens, sectioning and grid preparation.

4304 — Electron Microscope Techniques (3:1:6)
Practical experience in application of electron microscopy procedures from living tissue to finished photographic plate. Prerequisite: Bio 4303 and consent of instructor. Supplementary lab fee.

436 — Career Development V (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Bio 337.

440 — Ornithology (4:3:3)
Natural history, taxonomy and ecology of birds.

4402 — Taxonomy of Vascular Plants (4:3:3)
The classification of vascular plants; family characteristics, specific identification of the local flora and dominant plants of floristically different areas of Texas.

441 — Parasitology (4:3:3)
A study of the morphology, life history and host-parasite relationships of helminthic parasites of man and other vertebrates. Prerequisite: Bio 141-142.

442 — Entomology (4:3:3)
Physiology, morphology, life history, collection, classification and control of insects. Prerequisite: Bio 141-142.

443 — Limnology (4:3:3)
Fauna, flora, ecology and productivity of fresh water. Prerequisite: Bio 141-142.

444 — Vertebrate Natural History (4:3:3)
Collection, identification and natural history of area fish, amphibians, reptiles, birds and mammals. Prerequisite: Bio 141-142.

445 — Marine Biology (4:3:3)
Habitats and community relationships of marine plants and animals. Prerequisite: Bio 141-142.

446 — Ecology (4:3:3)
Quantitative approach to both field and experimental studies. Interrelationships of organisms and their environment. Prerequisite: Bio 141-142.

447 — Cellular Biology (4:3:3)
Structure and function of the cell and its organelles. Prerequisites: Bio 341, Chm 341-342.

449 — Protistology (4:3:3)
Morphology, taxonomy and ecology of protozoa, algae and fungi. Prerequisites: Bio 141-142.

460 — Field Botany (6:A*:0)
Environmental relationships and natural history of plants, invertebrates and vertebrates. Extensive field trips for study and collection of organisms in their natural habitat. Prerequisite: Bio 345, 20 hours credit in biology and consent of instructor. Summers only.

*Arranged

Department of Chemistry

Department Head — Keith C. Hansen. *Director of Environmental Science* — Ewin A. Eads. *Professors* — Harold T. Baker, Margaret D. Cameron, Roger E. Yerick. *Associate Professors* — Kenneth L. Dorris, Keith C. Hansen, Anne Harmon, Joe M. Mejia, J. Dale Ortego, John A. Whittle. *Assistant Professor* — Hugh A. Akers. *Stockroom Manager* Horace L. Grayson. *Secretary* — June G. Braquet.

The Department of Chemistry has been approved by the Committee on Professional Training of the American Chemical Society to offer ACS approved degrees.

Recommended Programs of Study

Bachelor of Science — Chemistry Major*

First Year

Chm 141, 142—General	8
Bio/Geo 141, 142—General	8
Mth 148, 149—Calc-An Geo I, II	8
Eng—Composition	6
HPE/MLb**/AFROTC	2-4
	32-34

Second Year

Chm 241—Quantitative	4
Chm 333—Inorganic	3
Phy 140—Mechanics	4
Phy 241—Heat, Elec, Mag	4
Eng—Literature	6
Ger 131, 132—Elementary	6
Mth 241—Calc-An Geo III	4
HPE/MLb**/AFROTC	2-4
	33-35

Third Year

Chm 341, 342—Organic	8
Chm 431, 432—Physical	6
Chm 413, 414—Physical Lab	2
Phy 222—Vibr, Sound, Light	2
Phy 212—Lab, Vibr and Waves	1
CS 131, 132—Intro	6
His 231, 232—Amer. His	6
	31

Fourth Year

Chm 444—Organic Qual	4
Chm 446—Instrumental	4
Chm 411—Chemical Lit	1
Chm 412—Senior Seminar	1
Chm 436—Inorganic	3
Chm—Electives***	6
CS 439—Problem Solving	
or	
Eng 4335—Report Writing	3
Gov 231, 232—Amer. Gov	6
Electives	6
	34

Minimum 126 semester hours + HPE/MLb/AFROTC

*American Chemical Society approved degree plan.

**Offered Fall Semester only. If MLb 124 option is desired it should be added to third and fourth years, as four semesters are required.

***To be selected from Chm 430, 433, 435, 437, 438, 441, 442.

Bachelor of Science — Chemistry (Biochemistry Option)*

First Year

Chm 141, 142—General	8
Bio 141, 142—General	8
Mth 236, 237—Calculus I, II	6
Eng—Composition	6
HPE/MLb**/AFROTC	2-4
	30-32

Second Year

Chm 241—Quantitative	4
Chm 333—Inorganic	3
Bio 243, 244—Microbio	8
Gov 231, 232—Amer. Gov	6
Phy 141, 142	
or	
Phy 140, 241	8
Eng — Literature	3
HPE/MLb**/AFROTC	2-4
	34-36

Third Year

Chm 341, 342 — Organic	8
Chm 431, 432—Physical	6
Chm 413, 414—Physical Lab.	2
Bio 341—Histology	4
Phy 335	
or	
Phy 222, 212	3
His 231, 232—Amer. His	6
Chm/Bio Electives	3-4
	32-33

Fourth Year

Chm 441, 442—Biochem	8
Chm 446—Instrumental	4
Chm 436—Inorganic	3
Chm 412—Sr. Seminar	1
Eng—Literature	
or	
Eng 4335—Report Writing	3
Bio/Chm Electives***	7
Electives	6
	32

Minimum 124 hours + HPE/MLb AFROTC

*American Chemical Society approved degree plan.
**Offered Fall Semester only. If MLb option is desired it should be added to third and fourth years, as four semesters are required.
***To be selected from Chm 430, Chm 433, Chm 435, Chm 437, Chm 438, Chm 444, Bio 342, Bio 344, Bio 347, Bio 441 and Bio 447.

Bachelor of Arts — Chemistry Major

First Year

Chm 141, 142—General	8
Bio/Geo 141, 142—General	8
Mth 236, 237—Calculus I, II	6
Eng—Composition	6
HPE/MLb*/AFROTC	2-4
	30-32

Second Year

Chm 241—Quantitative	4
Chm 333—Inorganic	3
Phy 140—Mech	4
Phy 241—Heat, Elec, Mag	4
Fre 131, 132—Elementary	6
Soph Am His	6
Eng—Literature	6
HPE/MLb*/AFROTC	2-4
	35-37

Third Year

Chm 341, 342—Organic	8
Phy 222, 212	3
Fre 231, 232—Reading	6
Gov 231, 232—Amer Gov	6
CS 133—Fortran	3
Minor/Electives	6
	32

Fourth Year

Chm 431, 432—Physical	6
Chm 413, 414—Physical Lab.	2
Chm 411—Literature	1
Chm 412—Seminar	1
Minor/Electives	20
	30

Minimum 123 + PE/MLb/AFROTC

*Offered Fall Semester only. If MLb option is desired, it should be added to third and fourth year, as four semesters are required.

Bachelor of Science in Biology†
Bachelor of Science in Chemistry†

First Year

Bio 141-142—General	8
Chm 141-142—General	8
Eng—Composition	6
Mth 1335—Precalculus	3
Mth 236—Calculus	3
PE/MLb 124**/AFROTC	2-4
Electives	6
	36-38

Second Year

Chm 341-342—Organic	8
Mth 237—Calculus	3
Eng—Literature	6
Phy 141-142—General	8
Chm 241—Quantitative	4
Gov 231-232	6
PE/MLb 124**/AFROTC	2-4
	37-39

Summer

Phy 335—Modern	3
Bio 243	4
Bio 244	4
Electives	3
	14

Third Year

Bio 240—Comparative	4
Bio 344—Adv Physiology	4
Bio 341—Histology	4
Bio 343—Embryology	4
Soph Am His	6
Chm 413—Physical Lab	1
Chm 333—Inorganic	3
Chm 431—Physical	3
Electives	6
	35

Fourth Year

Bio 416 or 417—Bio Lit	1
Bio 447—Cellular	4
Bio 347—Genetics	4
Chm 441—Biochem	4
Chm Electives* (min)	8
Electives	11
	32

*Chm electives to be selected from Chm 414, 426, 432, 435, 442, 444, 446. The degree will be ASC accredited if Chm 432 and 414, Chm 446 or Chm 426, and Chm 444 or 435 are elected.

**Offered Fall Semester only. If MLb 124 option is desired it should be added to third and fourth year as four semesters are required.

†Both degrees must be awarded simultaneously.

Bachelor of Science — Environmental Science

Interdisciplinary program in Chemistry, Biology and Civil Engineering.

First Year

Bio 141, 142—General	8
Chm 141, 142—General	8
Eng—Composition	6
Mth 1335—Precalculus	3
Mth 236—Calculus I	3
Elective	3
HPE/MLb*/AFROTC	2-4
	33-35

Second Year

Bio 243, 244—Microbio	8
Chm 241—Quantitative	4
Chm 334—Air Anal	3
Eng—Literature	6
Mth 237—Calculus II	3
Phy 141, 142—General	8
HPE/MLb*/AFROTC	2-4
	34-36

Third Year

Bio 446—Ecology	4
Chm 341, 342—Organic	8
Chm 434—Air Pollu Surv	3
CE 331—Envir Sci	3
Eng 4335—Report Writing	3
HED 434—Hlth/Human Eco	3
HED 437—Hlth/Epid	3
Chm 333—Inorganic	3
Gov 231—Amer Gov I	3
	33

Fourth Year

Bio 443—Limnology	4
Chm 410—Sem Envi Sci	1
Chm 438—Radiochem	3
Chm Electives**	6-8
His 231, 232—Amer His	6
Gov 232—Amer Gov II	3
Bio Electives	8
	31-33

Minimum 127 semester hours + HPE/MLb/AFROTC.

*Offered Fall Semester only. If MLb option is desired it should be added to third and fourth year as four semesters are required.

**Selected with approval of department.

Cooperative Education (COOP) Program

A Cooperative Education Program, in which the student spends alternate terms at study and at work, is available to qualfied studies in the Department of Chemistry. Details may be obtained from the department head.

CHEMISTRY (Chm)

130 — Introductory Environmental Science (3:3:0)*
Fundamental concepts of environmental systems as related to urban affairs and man's environment. Air, water and soil pollution with control methods related to the modern technological society.

141 — General (4:3:3)
General practices, problems, fundamental laws and theories. Prerequisite: High school chemistry or permission of department head.

142 — General (4:3:3)
A continuation of Chm 141. Properties of the elements. Elementary qualitative analysis and theories of solutions and equilibrium. Prerequisite: Chm 141.

143 — Introductory (4:3:2)
For nonscience majors. A survey course in elementary inorganic chemistry.

144 — Introductory (4:3:2)
For nonscience majors. Continuation of Chm 143. Nuclear science, elementary organic and physiological chemistry. Prerequisite: Chm 143 or 141.

236 — Career Development I (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Approval of department head.

237 — Career Development II (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Approval of department head.

241 — Quantitative Analysis (4:3:5)
Theory and practice of analytical chemistry utilizing gravimetric and titrimetric techniques. Prerequisite: Chm 142 with a grade of C or better.

333 — Inorganic (3:3:0)
Generalization involving atomic and nuclear theory; properties of the elements (with emphasis on periodicity); non-aqueous solvents, acids, bases, oxidation-reduction, etc. Prerequisite: Chm 142.

334 — Air Analysis (3:3:3)
Theory and practice of chemistry as required in determination of ambient air quality. Prerequisties: Chm 241, Mth 236.

336 — Career Development III (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Approval of department head.

337 — Career Development IV (3:3:0)
Comprehensive treatment of career-related special assignments and projects, specialization areas under guidance of a faculty member. Prerequisite: Approval of department head.

341 — Organic (4:3:4)
Current theories and chemical principles as they relate to the field of structure and reaction of the various types of organic compounds. Prerequisite: Chm 142 with grade of C or better.

342 — Organic (4:3:4)
A continuation of Chm 341. Prerequisite: Chm 341.

410 — Seminar in Environmental Science (1:1:0)
Reports and assigned reading. Prerequisite: senior standing in Environmental Science

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

411 — Chemical Literature (1:1:0)
Lecture and assigned reading in the chemical literature. Chemical literature search on an advanced level. Prerequisite: 20 semester hours of chemistry.

412 — Senior Seminar (1:1:0)
Reports and assigned reading. Prerequisite: senior standing in chemistry.

413 — Physical Laboratory (1:0:4)
Laboratory applications of modern theory in physical chemistry. Prerequisite: Chm 241, 431 (or parallel).

414 — Physical Laboratory (1:0:4)
Continuation of Chm 413. Prerequisite: Chm 241 and Chm 432 (or parallel).

426 — Instrumental Analysis (2:1:4)
Modern instrumental techniques in chemistry for non-chemistry majors. Theory and practice in optical, electrometric, chromatographic and spectrometric methods. Prerequisite: Chm 241, 431 (or equivalent), Mth 149 or 237, Phy 142 or 241. (Credit not given for both Chm 426 and Chm 446).

430 — Organic Polymers (3:3:0)
Chemistry of industrial polymerization of organic compounds, petrochemistry of organic monomer preparation and chemical characteristics of organic polymers. Prerequsites: Chm 241, 333 and 342. Class: 3 hours with industrial field trip(s).

431 — Physical (3:3:0)
Modern chemical theory as applied to gases, liquids, solids and solutions. Prerequisite: Chm 142, Phy 142 or 241, Mth 241 or 237 (or parallel).

432 — Physical (3:3:0)
A continuation of Chm 431. Prerequisite: Chm 431 (or equivalent).

433 — Modern Physical (3:3:0)
Selected topics in modern physical chemistry. Prerequisite: Chm 432 (or parallel).

434 — Air Pollution Surveys (3:3:3)
Chemical, physical, meterological, biological, bacteriological and epidemiological factors as applied to determine the extent of environmental damage from air pollution. Prerequisites: Chm 334 and senior standing.

435 — Chemical Preparations (3:1:6)
Theory and practice of chemical synthesis techniques. Prerequisite: Chm 241, 333 and 342.

436 — Inorganic (3:3:0)
Study of the quantized atom, valency and the chemical bond, and coordination chemistry with applications to biological systems. Prerequisite: Chm 432.

438 — Radiochemistry (3:2:3)
Basic concepts of nuclear science. Principles and use of radiation measuring devices. Prerequisite: Chm 241, Chm 333, Chm 431.

441 — Biochemistry I (4:3:4)
Structures chemistry and functions of biological compounds. A survey of the detailed structures, chemistry and functions of the various classes of biologically important compounds. Prerequisite: Chm 241 and Chm 342.

442 — Biochemistry II (4:3:4)
A detailed survey of metabolic pathways and processes. Prerequisite: Chm 441.

444 — Qualitative Organic Analysis (4:2:8)
A study of systematic methods for the identification of organic compounds and mixtures of organic compounds. Prerequisite: Chm 241 and 342.

446 — Instrumental Chemical Analysis (4:3:4)
Instrumental techniques of chemistry.Theory and practice in optical, electrometric and chomatographic methods. Prerequisite: Chm 241, 342 (or parallel), 431, Mth 149 or 237, Phy 142 or 241. (Credit is not given for both

Chm 426 and Chm 446.)

427, 437, 447 — Introduction to Research (2-4:A*:0)
Problems are on the undergraduate level and emphasize research techniques. With approval of the department head, these courses may be repeated for credit. Prerequisite: B average in at least 12 semester hours of previous chemistry courses.

4101, 4201, 4301, 4401 — Special Topics in Chemistry (1-4:A*-0)
Topics in under-graduate analytical, inorganic, organic and physical chemistry or biochemistry. Library and/or laboratory work and conferences with a staff member. Approval of department head and instructor required. With permission of the department head, student may repeat the course for credit when the area of study is different.

Department of Geology

Department Head — H. E. Eveland. *Professors* — Saul Aronow, William H. Matthews III, William R. Pampe, Anthony C. Tennissen. *Associate Professor* — James B. Stevens. *Assistant Professors* — Roger W. Cooper, Darrell E. Davis, Roberto Fainstein, Raymond T. Kaczorowski. *Departmental Secretary* — Dianne McGlaun.

Recommended Programs of Study

Bachelor of Science — Geology Major

First Year

Geo 141-142—Phys, Hist	8
Chm—Freshman Chm	8
Mth 1335—Pre-Calculus	3
Mth 236—Calculus I	3
Eng—Composition	6
PE—Activity	2-4
	30-32

Second Year

Geo 241-242—Min, Petr	8
Bio 141-142—General	8
Mth 237—Calculus II	3
Egr 2331—Computation	3
Eng—Literature	3
Spc 238 or 331—Speech	3
Egr 114—Graphics	1
PE—Activity	2-4
	31-33

Third Year

Geo 341—Stat-Data Proc	4
Geo 342—Structural Geo	4
Geo 343—Paleontology	4
Geo 419—Seminar	1
Phy 141-142—General	8
Gov 231	3
Gov 232	3
Elective	3
	30

Fourth Year

*Geo—3 Sr Geo Courses	9
Geo 419—Seminar	1
His—Soph Am His	6
**Advanced Science	3-4
Electives	12
	31-32

Third or Fourth Summer

Geo 360—Field Camp 6

Minimum Total — 128

*Three Senior courses selected from the sequence Geo 431 thru Geo. 438.
**A junior or senior course selected from Bio, Chm, Phy, Mth or Egr.

Bachelor of Arts — Geology Major

First Year

Geo 141-142—Phys, Hist	8
Chm 143—Introductory	4
Bio 141—General	4
Mth 1335—Pre-Calculus	3
Phy 137—Astronomy	3
Eng—Composition	6
PE—Activity	2-4
	30-32

Second Year

Geo 241-242—Min, Petr	8
Egr 114—Graphics	1
Foreign Language 131-132	6
Gov 231	3
Gov 232	3
Eng—Literature	6
PE—Activity	2-4
	29-31

Third Year

Geo 341—Stat-Data Proc	4
Geo 342—Structural Geo	4
Geo 343—Paleontology	4
Geo 419—Seminar	1
Foreign Language 231-232	6
His—Soph Am His	6
Electives	6
	31

Fourth Year

*Geo—3 Sr. Geo Courses	9
Geo 419—Seminar	1
**Advanced Science	3-4
***Advanced Arts	6
Electives	12
	31-32

Minimum Total — 121

*Three Senior courses selected from the sequence Geo. 431 thru Geo. 438.
**A junior or senior course selected from Bio, Chm, Phy, Mth or Egr.
***Two junior or senior courses selected from Eng, Soc, Gov, His, Phl, Ant, Eco, Spc or Art.

Bachelor of Science — Oceanographic Technology — Marine Biology Option

First Year

Bio 141-142—General	8
Chm 141-142—General	8
Mth 1335—Pre-Calculus	3
Mth 236—Calculus I	3
Eng—Composition	6
PE—Activity	2-4
	30-32

Second Year

Geo 141—Physical	4
Phy 141-142—General	8
Mth 237—Calc II	3
His—Soph Am His	3
Statistics	3
Eng—Literature	6
PE 227-228—Swim, Life	4
	31

Third Year

Geo 344—General Ocean	4
Bio 346—Invert Zool	4
Bio 444—Vert Nat His	4
Bio 445—Marine Bio	4
Bio 449—Protistology	4
Chm 341-342—Organic	8
His—Soph Am His	3
Elective	3
	34

Fourth Year

Geo 4370—Meteorology	3
Geo 417—Ocean Seminar	1
Geo 430—Phys Ocean	3
Bio 417—Bio Lit	1
Bio 243—Microbio	4
Bio 446—Ecology	4
Bio 443—Limnology	4
Gov 231	3
Gov 232	3
EE 438—Instrumentation	3
Elective	3
	32

Third of Fourth Summer

Geo 361—Field Course	6

Minimum Total — 133

Bachelor of Science — Oceanographic Technology — Marine Geology Option

First Year

Geo 141-142—Phys, Hist	8
Chm—Freshman Chm	8
Mth 1335—Pre-Calculus	3
Mth 236—Calculus I	3
Eng—Composition	6
PE—Activity	2-4
	30-32

Second Year

Geo 241-242—Min, Petr	8
Bio 141-142—General	8
Mth 237—Calculus II	3
Egr 2331—Computation	3
Egr 114—Graphics	1
Eng—Literature	6
PE 227-228—Swim, Life	4
	33

Third Year

Geo 4370—Meterology	3
Geo 341—Stat, Data Proc	4
Geo 342—Structural Geo	4
Geo 344—General Ocean	4
Geo 419—Seminar	1
Phy 141-142—General	8
CE 339—Soils Sci	3
Gov 231	3
Gov 232	3
	33

Fourth Year

Geo 430—Phys Ocean	3
Geo 433—Geophysics	3
*Geo—Sr Geology Course	3
Geo 417—Ocean Seminar	1
Bio 445—Marine Bio	4
EE 438—Instrumentation	3
His—Soph Am His	6
Electives	6
	29

Third or Fourth Summer

Geo 361—Field Course 6

Minimum Total — 131

*A Senior course selected from the sequence Geo. 431 thru Geo. 438.

Bachelor of Science — Oceanographic Technology — Ocean Engineering Option

First Year

Geo 141—Physical	4
Chm—Freshman Chm	8
Phy 140	4
Mth 148-149—Anal I & II	8
Eng—Composition	6
PE—Activity	6
	32-34

Second Year

Phy 241-222	6
Mth 241—Analysis III	4
Egr 2331—Computation	3
Egr 114—Graphics	1
Egr 230—Statics	3
CE 211—Measurements	1
CE 212—Rt Surveying	1
ME 231—Dynamics	3
Eng—Literature	6
PE 227-228—Swim, Life	4
	32

Third Year

CE 331—Environ Sci	3
CE 339—Soils Sci	3
IE 333—Egr Economics	3
Geo 344—General Ocean	4
CE 232—Mech of Solids	3
Egr 233—Circuits & Flds	3
Egr 234—Thermodynamics	3
Gov 231	3
Gov 232	3
His—Soph Am His	6
	34

Fourth Year

Geo 4370—Meterology	3
Geo 417—Ocean Seminar	1
Geo 430—Physical Ocean	3
Geo 433—Geophysics	3
EE 438—Instrumentation	3
CE 413—Photogrammetry	1
CE 213—Exp Stress Anal	1
ChE 331—Momentum Trans	3
CS 439—Comp Appl	3
Electives	9
	30

Third or Fourth Summer

Geo 361—Field Course 6

Minimum Total — 134

Bachelor of Science — Oceanographic Technology — Cooperative Education Plan

Note: In order to pursue this plan the student must be recommended by the Department and by Lamar's Director of Cooperative Education.

First Year

Geo 141—Physical	4
Phy 140—Intro Mech	4
Bio 141-142—General	8
Mth 148-149—Analysis I, II	8
Eng—Composition	6
HPE—Activity	2-4
	32-34

Second and Third Years

(Semesters and summers spent alternately on campus and on job training.)

Geo 142—Historical	4
Geo 231-232—Job Trng	6
Geo 233-234—Job Trng	6
Geo 4370—Meteorology	3
Geo 341—Stat, Data Proc	4
Geo 344—Ocean	4
Chm 141-142—General	8
Phy 241-242—Intro	8
Mth 241—Analysis III	4
Egr 133—Comput I	3
Egr 230—Statics	3
Egr 233—Circuits—Flds	3
ME 231—Dynamics	3
CE 331—Environ Sci	3
CE 335—Hydraulics	3
Eng—Literature	6
His—Soph Am His	6
PE 227-228—Swim, Life	4
	81

Fourth Year

Geo 417—Ocean Seminar	1
Geo 430—Phys Ocean	3
Bio 445—Marine Bio	4
Psy 131—Intro	3
Psy 330—Commun Psy	3
EE 438—Instrumentation	3
Gov 231	3
Gov 232	3
Eco 231—Principles	3
Electives	6
	31

Fourth Summer

Geo 361—Field Course	6

Minimum Total — 150

Bachelor of Science — Energy Resources Management

First Year

Geo 141-142—Phys, Hist	8
Chm 143-144—Intro	8
Mth 1335—Pre-Calculus	3
Mth 236—Calculus I	3
Eng—Composition	6
PE—Activity	2-4
	30-32

Second Year

Phy 141—General	4
CS 133—Intro Comput	3
BA 230—Fortran	3
Acc 231-232—Principles	6
Eco 131-132—Principles	6
Eng—Literature	3
Spc 238 or 331	3
PE—Activity	2-4
	30-32

Third Year

Geo 4350—Earth Materials	3
Geo 419—Seminar	1
Geo 437—Econ Geology	3
Eco 434—Econ Develop	3
BA 3301-3302—Bus Stat	6
BA 331—Bus Law	3
BA 335—Principles Mgmt	3
BA 4314—Adm Policy	3
BA 438—Petroleum Law	3
Gov 231	3
Gov 232	3
	34

Fourth Year

Geo 4380—Oceanography	3
Geo 433—Geophysics	3
Geo 438—Petroleum Geo	3
Geo 419—Seminar	1
Che 438—Petroleum Egr	3
His—Soph Am His	6
Eco 335—Intl Trade	3
Electives	12
	34

Minimum Total — 128

COOPERATIVE EDUCATION (COOP) PROGRAM

A Cooperative Education Program, in which the student spends alternate terms at study and at work, is available to qualified students in the Department of Geology. Details may be obtained from the department head.

GEOLOGY (Geo)

141 — Physical Geology (4:3:2)*
Earth materials, structures, land forms, mineral resources and the processes which formed them.

142 — Historical Geology (4:3:2)
History of the earth and its life. Prerequisite: Geo 141.

220 — Geology for Engineers (2:2:2)
A survey of physical geology for engineering students. A student may not recieve credit for both Geo 220 and Geo 141.

231 — Career Developmnt I (3:A:0)**
Work-learn training. Registration by special permission only.

232 — Career Development II (3:A:0)**
Work-learn training. Registration by special permission only.

233 — Career Development III (3:A:0)**
Work-learn training. Registration by special permission only.

234 — Career Development IV (3:A:0)**
Work-learn training. Registration by special permission only.

237 — Physical Geography (3:3:0)
The fundamental concepts of local, regional and global geography. Prerequisite: sophomore standing.

238 — Cultural Geography (3:3:0)
History and distribution of cultural groups with emphasis upon the interaction between geographic environment and human cultures.

239 — History of Life (3:3:0)
History of the earth and its life forms. Includes the study of geologic time, fossils and prehistoric man. A student may not receive credit for both Geo 239 and Geo 142.

241 — Mineralogy (4:3:3)
The classification, properties, occurrence and identification of minerals. Field trip required. Prerequisite: Geo 141 and Chm 141 or 143.

242 — Petrology (4:3:3)
The classification, properties, occurrence and identification of igneous, sedimentary and metamorphic rocks. Field trip required. Prerequisite: Geo 241.

336 — Geology of Texas (3:3:0)
The topography, physiography, structure, geologic history and mineral deposits of Texas. Field trip required. Prerequisite: Geo 142 or Geo 239.

339 — Environmental Geography (3:3:0)
The environmental significance of man's development of his atmospheric, aquatic and mineral resources. Field trips required. Prerequisite: Geo 141 or 237.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

341 — Statistics and Data Processing (4:3:3)
The application of digital computer and statistical techniques to the analysis of earth science data. Prerequisites: CS 133 or Egr 2331.

342 — Structural Geology (4:3:3)
Rock deformation and the resulting structures. Field trip required. Prerequisite: Geo 142, Mth 236.

343 — Paleontology (4:3:3)
The classification, morphology and identification of invertebrate fossils. Field trips required. Prerequisite: Geo 142 or 239.

344 — General Oceanography (4:3:3)
Principles of oceanography. Geological, chemical, physical and biological environments of the ocean. Prerequisite: Geo 141, Chm 141 or 143.

360 — Summer Field Course (6:5:40)
Description of stratigraphic sections, preparation of geologic maps and field reports. Prerequisite: Geo 342 and Egr 114.

361 — Field Course in Estuarine and Coastal Oceanography (6:5:40)
Near shore processes. The application of sampling devices. Laboratory analysis of samples. Small boat handling. Duration: 6 weeks. Prerequisite: Geo 344 and PE 228.

417 — Oceanographic Technology Seminar (1:1:0)
Reports on current literature in oceanography. May be repeated for credit. Prerequisite: Geo 344.

418 — Earth Science Literature (1:1:0)
Reports on current source materials. Not open to geology majors. Prerequisite: 12 hours of Geology.

419 — Seminar (1:1:0)
Reports on current literature. May be repeated for credit. Prerequisite: 16 semester hours of Geology.

422 — X-ray Crystallography (2:0:6)
X-ray techniques to identify crystalline substances. For advanced science and engineering students. Prerequisite: one year of Chemistry or Physics.

427, 428 — Special Project (4*:A:0)**
An individual library, laboratory or field project. To receive credit, an acceptable typewritten report is required.

430 — Physical Oceanography (3:3:0)
Physical processes and properties of oceans. Dynamics of oceanic current systems. Wind currents, waves and tides. Prerequisite: Geo 344, Mth 237.

431 — Sedimentation (3:2:3)
The derivation and deposition of sediments. Laboratory techniques for the study of sediments. Field trip required. Prerequisite: Geo 242.

432 — Stratigraphy (3:2:3)
The history, distribution and correlation of sedimentary strata. Field trip required. Prerequisite: Geo 342.

433 — Geophysics (3:3:0)
Application of the principles of physics to geologic problems. Use of geophysical techniques in petroleum exploration. Prerequisite: Geo 342, Phy 142, Mth 237.

434 — Geology of the United States (3:3:0)
A regional study of the geomorphology, structural geology and geologic history of the United States. Prerequisite: Geo 342.

435 — Geomorphology (3:3:0)
The development and classification of land forms. Field trip required. Prerequisite: Geo 342.

436 — Optical Mineralogy (3:2:3)
Optical properties of minerals. Use of polarizing microscope in the identification of minerals and rocks. Prerequisite: Geo 242.

*Maximum
**Arranged

437 — Economic Geology (3:3:0)
Origin and of occurrence of commercially valuable minerals and rocks. Field trip required. Prerequisite: Geo 242 or 4350.

438 — Petroleum Geology (3:3:0)
Origin and occurrence of oil and gas deposits. Field trip required. Prerequisite: Geo 242 or 4350.

4101, 4201, 4301, 4401 — Special Topics in Earth Science (4:A:0)**
Topics in the earth sciences. May be repeated for credit when the area of study is different. Prerequisite: Permission of the instructor.

4350 — Earth Materials (3:3:0)
The study of minerals and rocks. Field trip required. A student may not receive credit for both Geo 4350 and Geo 241-242. Prerequisite: Geo 141, Geo 237 or Geo 239.

4370 — Meteorology (3:3:0)
The composition and processes of the atmosphere. Weather and climate and their effect on man's activities. Field trip required. Prerequisite: 8 hours of science.

4380 — Oceanography (3:3:0)
The structure, properties and processes of the hydrosphere. The role of the seas and oceans in the total environment. Prerequisite: 8 hours of science.

Department of Physics

Department Head — Joseph F. Pizzo. *Professors* — Roy H. Biser, Carl J. Rigney. *Associate Professors* — G. F. Landegren, Hugh O. Peebles, J. G. Shepherd. *Assistant Professor* — Oscar T. Goines. *Stockroom Supervisor* — Joseph Accardo. *Departmental Secretary* — Rosalinda Gonzales.

High School preparation for the physics major must include two units of algebra and ½ unit of trigonometry. Those having inadequate high school mathematics must take Math 1334 to make up the deficiency, preferably in the Summer Session preceding the freshman year of college.

Physics is the fundamental science. A major in physics can serve as an excellent basis for almost any career. Accordingly, the program of study in physics at Lamar University is offered with many possible options. The individual student may choose a listed option or plan an alternative with the departmental counselor.

Bachelor of Science — Physics Major

A total of 128 semester hours are required for this degree. In addition to general university requirements for the bachelor's degree (listed in this catalog under Academic Regulations), the degree requirements in physics are 26 semester hours in physics with at least 13 semester hours at the junior-senior level, including 333 and 335 and one of the three laboratory courses (324, 346 or 448); 15 semester hours of mathematics including 331 or 4301; and chemistry 142. Physics 110 is required of all freshman physics majors.

Although the preparation for some careers requires study in graduate school or professional school, at least the following options are available to the physics major:

1. Physics (Graduate School)
2. Pre-medical
3. Life Science
4. Oceanography
5. Teaching
6. Chemistry
7. Liberal Arts
8. Environmental Science
9. Engineering
10. Geology

Recommended Program of Study

First Year

Chm 141-142—General	8
Eng—Composition	6
Mth 148-149—Cal & An G I & II	8
Phy 140—Intro	4
Phy 110—Phy Today	1
Electives	4-7
PE/MLb*/AFROTC (2 sem)	2 or 4
	33-38

Second Year

Bio 141-142—General (or option)	8
Eng—Literature	6
Mth 241—Cal & An G III	4
Phy 241-212-222—Intro	7
Electives	5-7
PE/MLb*/AFROTC (2 sem)	2 or 4
	32-37

Third Year

Gov—231-232	6
His—Soph American	6
Mth 331 or 4301—Diff. Eq.	3
Phy 335—Modern Phy	3
Phy Electives	3-4
Option	12-15
	33-36

Fourth Year

Phy 448—Optics	
or	
Phy 346—Elected Measmnts	
or	
Phy 324—Modern Phy Lab.	2-4
Phy Electives	6-8
Option	12-18
Electives	10-15
	30-35

*Offered Fall Semester only. If MLb 124 option is desired it should be added to third and fourth year as four semesters are required.

Cooperative Education (Coop) Program

A Cooperative Education Program, in which the student spends alternate terms at study and at work, is available to qualified students in the Department of Physics. Details may be obtained from the department head.

List of options:

Preparation for graduate school in physics: nine additional semester hours of mathematics and 12-16 additional semester hours of advanced physics. Suggested electives: two years of German.

Pre-medical: 16-20 additional semester hours of biology, 8-16 additional semester hours of chemistry, including Chm 341-342. Suggested electives: psychology and sociology.

Life Science: 16 additional semester hours of biology, 8-12 semester hours of geology, 8-12 additional semester hours of chemistry. Electives unrestricted.

Oceanography: 8-12 additional semester hours of biology, eight additional semester hours of chemistry, 16 semester hours of geology. Suggested electives: electronics, fluid mechanics.

Teaching: 18 semester hours of education, completion of 24 semester hours for second teaching field. Suggested electives: psychology and sociology.

Chemistry: 16-24 additional hours of chemistry. 8-12 additional semester hours of biology. Electives unrestricted.

Liberal Arts: 24-36 semester hours from English, history, government, sociology or philosophy. Electives unrestricted.

Environmental Science: 16-20 additional semester hours of chemistry, 8-12 additional semester hours of biology, three semester hours of civil engineering. Suggested electives: psychology and sociology.

Engineering: 12 semester hours of engineering (Egr), 12-24 semester hours of advanced engineering. Suggested electives: economics and sociology.

Geology: 20 semester hours of geology, eight additional semester hours of biology, 3-9 semester hours of electronics. Electives unrestricted.

PHYSICS (Phy)

110 — Physics Today (1:1:0)*
A descriptive introduction to recent developments and noteworthy current problems, such as gravitational collapse.

111 — Astronomy Laboratory (1:0:2)
Measurements with astronomical instruments such as telescopes and spectroscopes. Use of photographs from astronomical observatories to identify variable stars and classify individual stars according to spectra and magnitudes. Prerequisite: Credit for or registration in Phy 137.

132 — Basics of Photography (Light & Optics) (3:2:1)
Light, cameras, lenses, film, filters, intensity, exposure, development, enlargement, color, infrared photography, Kirlian photography.

137 — Descriptive Astronomy (3:3:0)
A survey of facts and an introduction to important astronomical theories. The solar system, stars, nebulae and star systems.

140 — Introductory Mechanics (4:3:3)
Emphasis is placed on derivation, units and problem solving. Prerequisite: credit for or registration in Mth 148.

141 — General Physics-Mechanics and Heat (4:3:2)
Designed for majors in the physical or natural sciences. Emphasis is placed upon understanding and application of basic physical laws. Prerequisite: Mth 1212 or 1335 or high school trigonometry.

142 — General Physics — Sound, Light, Electricity and Magnetism (4:3:2)
A continuation of Phy 141. Prerequisite: Phy 141.

143 — Physical Science (4:3:2)
Designed for non-science majors. Appropriate topics from physics and chemistry are covered. A student already having acceptable credit for Mth 1341, 148, 236 (or equivalent) or for Phy 140 or 141 may not receive credit for Phy 143.

144 — Physical Science (4:3:2)
Covers topics not treated in Phy 143. Phy 143 is not a prerequisite for Phy 144. A student already having acceptable credit for Mth 1341, 148, 236 (or equivalent) or for Phy 142, 241 or 242 may receive credit for neither Phy 143 nor Phy 144.

212 — Introductory Physics — Laboratory on Vibrations and Waves (1:0:3)
Laboratory course to accompany or follow Physics 222. Prerequisite: Credit for or registration in Phy 222.

222 — Introductory Physics — Vibrations, Sound and Light (2:2:0)
Emphasis is placed on derivations, units and problem solving. Prerequisite: Physics 241.

234 — Career Development I (3:A*:0)
Career related special projects, with detailed written report evaluated by a faculty member in physics. Registration only by special permission of department head.

235 — Career Development II (3:A*:0)
Career related special projects, with detailed written report evaluated by a faculty member in physics. Prerequisite: Physics 234.

241 — Introductory Physics — Heat, Electricity and Magnetism (4:3:3)
Emphasis is placed on derivations, units and problem solving. Prerequisite: Phy 140 and Mth 148.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week
**Arranged

242 — Introductory Physics — Sound, Light and Quanta (4:3:3)
Emphasis is placed on derivations, units and problem solving. Prerequisite: Phy 241.

245 — Introductory Acoustics (4:3:2)
Vibrations, waves, intensity and loudness, pitch and frequency, quality, intervals and scales, room acoustics, musical instruments, the human voice, electronic production of sound. Prerequisite: knowledge of scales and some ability to identify intervals.

324 — Modern Physics Laboratory (2:1:3)
Selected experiments such as determination of the electronic charge and mass, and of Planck's constant; blackbody radiation; gamma ray spectroscopy; specific heats of crystalline solids, mobility of electrons in semiconductors. Prerequisite: Registration in or credit for Phy 335.

330 — Modern General Physics (3:3:0)
Electronics, the photoelectric effect, atomic structure, X-rays, molecular and crystal structure, radioactivity and nuclear reactions. A student may not receive credit for both Phy 335 and Phy 330. Prerequisite: Physics 142 and a year of chemistry.

333 — Analytical Mechanics (3:3:0)
Use of vector notation in formulating and applying Newton's laws and the principles of momentum and energy. Dynamics of particles and rigid bodies emphasized. Statics treated briefly. Prerequisite: Phy 140 or 141-142 and credit for or registration in Mth 331 or 4301.

334 — Career Development III (3:A*:0)
Career related special projects, with detailed written report evaluated by a faculty member in physics. Prerequisite: Physics 235.

335 — Modern Physics (3:3:0)
Conservation laws; special relativity; quantum effects; atomic structure; X-rays, nuclear and solid state physics. Prerequisites: Phy 241-222 or Phy 141-142 and Mth 241.

338 — Electricity and Magnetism (3:3:0)
Electrostatic fields; potential; capacitance; dielectrics; electromagnetic waves. Maxwell's equations; conduction in gases; thermoelectricity. Prerequisites: Phy 241-222 or 141-142 and credit for or registration in Mth 331 or 4301.

339 — Thermal Physics (3:3:0)
Temperature and thermometry; internal energy, entropy and thermodynamic potentials; introduction to the kinetic theory of gases and the Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac statistics. Prerequisites: Phy 241-222 or Phy 141-142 and Mth 241.

346 — Electrical Measurements (4:2:4)
Theoretical and practical definitions of electrical units; data handling and analysis; precision DC measurement of resistance, potential difference and current; galvanometer characteristics; AC bridge measurement of self and mutual inductance, capacitance and frequency; magnetic measurements. Prerequisite: Phy 241-242 or 141-142 and Mth 241.

4101, 4201, 4301 — Special Topics in Physics (1-3:A*:0)
Topics in undergraduate mechanics, electromagnetism, energy conversion or particle physics. Library work and conferences with a staff member. Student may repeat the course for credit when the area of study is different.

414, 415 — Experimental Projects (1:0:3)
Building or assembly of experimental apparatus, and its use, under the supervision of a faculty member. Prerequisite: 6 hours of physics numbered above 300.

416, 417 — Seminar (1:1:0)
Reports on current publications and on topics not treated in other physics courses. Prerequisite: 6 hours of physics numbered above 300.

431 — **Classical Mechanics (3:3:0)**
Variational principles and Lagrange's equations; the kinematics of rigid body motion; the Hamilton equations of motion; small oscillations. Prerequisite: Mth 331 or 4301, and Phy 333 or M.E. 231.

432 — **Introductory Quantum Mechanics (3:3:0)**
Basic concepts of quantum mechanics. Schrodinger's equation; wave functions. Prerequisites: Phy 333 or 431, Phy 335 and Mth 331 or 4301.

433 — **Solid State Physics (3:3:0)**
Crystal structure; binding forces; mechanical and thermal properties; electrical conductivity; semiconductors; dielectric properties; magnetic properties; surface effects; phosphors and photoconductivity. Prerequisite: Phy 335.

434 — **Career Development IV (3:A*:0)**
Career related special projects, with detailed written report evaluated by a faculty member in physics. Prerequisite: Physics 334.

436 — **Nuclear Physics (3:3:0)**
Elementary particles; nuclear scattering of particles; reactions and nuclear structure. Prerequisite: Phy 335.

437 — **Astrophysics (3:3:0)**
Analysis of light; stellar spectroscopy; atomic theory as applied to stars, double stars; luminosities; temperature and diameters of stars; variable stars; star clusters; the nebulae; stellar atmospheres and interiors; evolution of the stars. Prerequisite: Phy 335.

448 — **Optics (4:3:3)**
Physical and Quantum Optics. Propagation of light; interference; diffraction; optics of solids; thermal radiation and light quanta; optical spectra; lasers. Prerequisite: Phy 241-222 or Phy 141-142 and Mth 241.

Department of Psychology

Department Head — Myrtle L. Bell. *Professors* — Billy R. Barrington, James R. Hawker. *Associate Professor* — Otto R. Flocke. *Assistant Professors* — Henry P. Buller, Ann M. Die, James K. Esser, Richard G. Marriott, James E. Schroeder, James L. Walker Jr. *Secretary* — Patsy Stroud.

Bachelor of Arts — Psychology Major

The degree of Bachelor of Arts in Psychology will be awarded upon completion of the following:

1. General Requirements:
   English — Composition — six semester hours
   Literature — six semester hours
   Mathematics — six semester hours
   Biology 141-142 — General — eight semester hours
   Foreign Language — 12 semester hours (completion of the 232 course in a foreign language)
   Government 231, 232 — American Government — six semester hours
   Sophomore American History — six semester hours
   Physical Activity — four semesters

*Arranged

2. Major:
   Psychology 131 — Introduction to Psychology
   Psychology 241 — Statistical Methods in Psychology
   Psychology 242 — Methods in Psychology
   Psychology — Additional 15 semester hours — a minimum of 12 semester hours must be on the advanced level
3. Minor:
   An approved minor of 18 semester hours — a minimum of six semester hours must be on the advanced level
4. Electives:
   A sufficient number of approved electives to complete a total of 126 semester hours

Recommended Program of Study

First Year

Bio 141, 142—General	8
Eng—Composition	6
Foreign Language	6
Mth	6
Psy 131	3
PE—Activity	2-4
	31-33

Second Year

Eng—Literature	6
Foreign Language	6
Soph Am His	6
Psy 241—Intro Stat Methods	4
Electives	8
PE—Activity	2-4
	32-34

Third Year

Gov 231, 232—Intro Am Gov	6
Psy 242—Methods in Psychology	4
Psy (Advanced — 3 hrs)	6
Minor	9
Electives	6
	31

Fourth Year

Psy (Advanced)	9
Minor	9
Electives	12
	30

Total 126 Hours

Bachelor of Science — Psychology Major

The degree of Bachelor of Science in Psychology will be awarded upon completion of the following:

1. General Requirements:
   English — Composition — six semester hours
   Literature — six semester hours
   *Mathematics — 6-12 semester hours
   completion of Mth 236, 237 or the equivalent — maximum of 6 semester hours in computer science may be substituted for the 200 level mathematics courses upon completion of six semester hours in mathematics including Mth 1335.
   Biology 141-142 — General — eight semester hours
   Government 231, 232 — American Government — six semester hours
   Sophomore American History — six semester hours
   Science — eight semester hours
   Physical Activity — four semesters
2. Major:
   Psychology 131 — Introduction to Psychology
   Psychology 241 — Statistical Methods in Psychology
   Psychology 242 — Methods in Psychology
   Psychology 343 — Experimental Psychology
   Psychology — Additional 15 semester hours — a minimum of nine semester hours must be on the advanced level.
3. Minor:
   An approved minor of 18 semester hours — a minimum of six semester hours must be on the advanced level

4. Electives:
   A sufficient number of approved electives to complete a total of 128 semester hours.

Recommended Program of Study

First Year

Bio 141-142	8
Eng—Composition	6
Mth	6
Science	4
Psy 131—Intro to Psy	3
Psy 241—Intro to Stat Methods	4
PE—Activity	2-4
	33-35

Second Year

Eng—Literature	6
Mth	6
Science	4
Psy 242—Methods in Psychology	4
Minor	6
Electives	3
PE—Activity	2-4
	31-33

Third Year

Gov 231, 232—Intro Am Gov	6
Psy 343—Experimental Psy	4
Psy	6
Minor	6
Electives	9
	31

Fourth Year

Soph Am His	6
Psy (Advanced)	9
Minor	6
Electives	12
	33

Total 128 hours

*Deviations from the Mth 236, 237 sequence require prior approval of department head.

*Bachelor of Science in Psychology
*Bachelor of Science in Biology

First Year

Bio 141, 142—General	8
Chm 141, 142—General	8
Eng—Composition	6
Mth 1335—Precalculus	3
Psy 131—Intro to Psy	3
Psy 241—Intro to Stat Meth	4
PE Activity	2-4
	34-36

Summer

Gov 231, 232—Intro Am Gov	6
PE—Activity	2-4
Electives	6
	14-16

Second Year

Chm 341, 342—Organic	8
Bio 240—Comparative Anatomy	4
Bio 342—Embryology	4
Psy 242—Methods	4
Eng—Soph Literature	6
Mth 236—Calculus I	3
Mth 237—Calculus II	3
Psy—Electives	3
	35

Third Year

Soph Am His	6
Phy 141, 142—General	8
Bio 347—Genetics	4
Bio 344—Adv Physiology	4
Psy 343—Experimental Psy	4
Psy Electives (Adv-6 hrs)	9
	35

Fourth Year

Bio 444—Vert Natural History	4
Bio 416—Bio Literature	1
Bio 446—Ecology	4
Bio 447—Cellular	4
Bio Electives	8
Psy Elective (Adv)	3
Electives	13
	37

*Both degrees must be awarded simultaneously.

PSYCHOLOGY (Psy)

120 — Psychological Processes in Career Selection (2:2:0)*
A study of the factors influencing the decision making process and methods used in resolving conflicts regarding career selection. Includes lectures, administration of standardized interest inventories and observation in employment settings. Prerequisite: undeclared major or consent of instructor.

131 — Introduction to Psychology (3:3:0)
An introductory survey of the major areas of psychology such as learning, personality, social, testing, developmental and physiological. Emphasis is on psychology as the scientific study of behavior and includes both human and animal behavior.

234 — Child Psychology (3:3:0)
A study of the growth and development of behavior patterns in children.

235 — Adolescent Psychology (3:3:0)
A study of the growth and development of behavior patterns in adolescents.

241 — Introduction to Statistical Methods (4:3:2)
Statistical concepts and techniques used in behavioral science research. Topics include graphs, measures of position, central tendency and dispersion, correlation and regression, probability, tests of significance and introduction to non-parametric techniques.

242 — Methods in Psychology (4:3:2)
An introduction to the methods of research employed in the scientific study of behavior. Topics include nature and philosophy of science, experimental design, data analysis and report writing. Several experiments are designed, conducted and reported by students. Prerequisites: Psy 131 and 241.

330 — Psychology of Communication (3:3:0)
A study of the theory, structure and function of communication patterns in various group settings. Prerequisite: Psy 131.

331 — Systems and History of Psychology (3:3:0)
Historical development of psychology. Emphasis on the evolution of major systems of psychology. Prerequisite: Psy 131.

332 — Psychology of Personality (3:3:0)
A study of several of the major theories of personality organization and adjustment processes. Prerequisite: Psy 131.

333 — Psychology of Social Interaction (3:3:0)
Investigation of psychological basis of interpersonal behavior. Emphasis is on the study of individual experience and behavior in relation to the social environment, and how individual behavior both affects and is affected by social interaction. Prerequisite: Psy 131.

334 — Industrial Psychology (3:3:0)
Introducton to psychological processes and techniques as they apply in industrial settings. Emphasis on selecting, training and evaluating workers. Emphasis also on organizational influences on behavior. Prerequsite: Psy 241.

335 — Motivation (3:3:0)
A study of contemporary concepts, theories and research in motivation. Prerequisite: Psy 131.

336 — Psychological Tests and Measurements (3:3:0)
Theory and use of instruments for measurements of intelligence, interests, aptitude and attitudes. Prerequisite: Psy 131 and 241.

337 — Psychology of Adjustment (3:3:0)
A study of normal adjustment and commonly used defenses against anxieties.

*Code explanation
First number: Semester hours of credit
Second number: Class hours of lecture, recitation or seminar meetings per week
Third number: Laboratory hours required per week

342 — Statistical Methods (4:3:2)
A continuation of Psy 241 with emphasis upon design and analysis of experiments. Includes Chi square, Student's *t*, analysis of variance and linear regression. Prerequisite: Psy 241.

343 — Experimental Psychology (4:3:2)
Techniques to demonstrate and investigate concepts in psychology. Includes planning and executing an original research project. Prerequisite: Psy 242.

410, 420, 430 — Undergraduate Research (1-3:A*:0)
Designed to provide an opportunity for advanced psychology students to pursue an individual research project under the direction and supervision of a faculty member. May be repeated for credit. Prerequisite: 9 hours of psychology and permission of instructor.

4101, 4201, 4301 — Special Topics in Psychology (1-3:A*:0)
Topics in developmental, physiological, social, differential, experimental, quantitative, cognitive or clinical psychology. Includes library and/or laboratory work and conferences with a staff member. A description of the particular area of study will be indicated. A student may repeat the course for credit when the area of study varies.

431 — Sensation and Perception (3:3:0)
A review of research and theory regarding the structure and function of the basic sensory processes and sensory perception. Prerequisite: Psy 131.

432 — Abnormal Psychology (3:3:0)
A study of abnormal behavior. Special emphasis on the symptomatology, etiology and therapeutic approaches. Prerequisite: Psy 131.

433 — Differential Psychology (3:3:0)
Individual and group behavior differences and similarities. Prerequisite: Psy 131.

434 — An Introduction to Group Psychotherapy (3:3:0)
An introduction to the theory and techniques of group psychotherapy. Instruction will be combined with experimental learning of the basic skills used in group psychotherapy. Prerequisite: Psy 131.

435 — Leadership and Group Dynamics (3:3:0)
A study of the nature, evaluation and utilization of intra and inter-personal forces producing behavior in various group structures. Prerequisite: Psy 131.

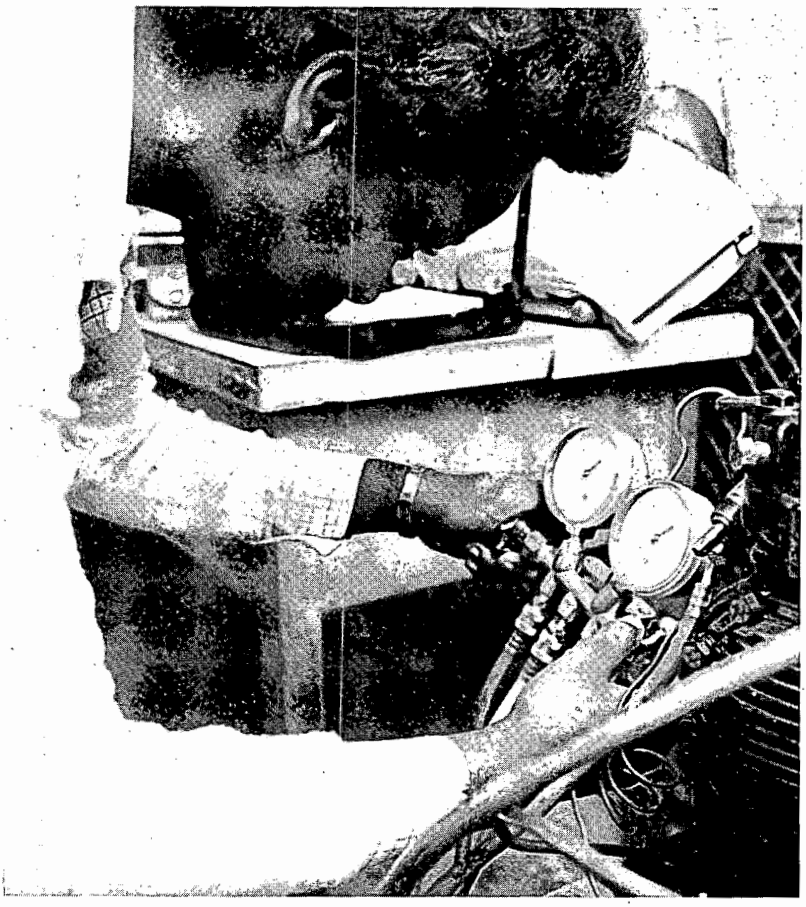
436 — Learning (3:3:0)
Theories and research concerning learning processes, with a consideration of practical implications. Prerequisite: Psy 131.

437 — Quantitative Psychology (3:3:0)
Theory and application of psychophysical and psychological scaling methods. Prerequisite: Psy 241.

438 — Physiological Psychology (3:3:0)
Survey of the physiological bases of behavior with emphasis on the mechanisms in the central nervous system. Prerequisite: Psy 131.

439 — Contemporary Problems in Psychology (3:3:0)
A critical and comprehensive examination of current problems in selected areas of psychology. Topics will vary from semester to semester. Prerequisite: 9 hours in psychology or permission of instructor. May be repeated for credit when topics vary.

*Arranged



College of Technical Arts

Departments: Industrial, Related Arts, Technical

Kenneth E. Shipper, Ph.D., Dean
Debbie Munoz, Secretary

The College of Technical Arts offers two-year Associate of Applied Science degrees in automotive mechanics, business data processing, diesel mechanics, drafting technology, electronics technology, fire protection technology, general secretary, industrial electricity and electronics technology, legal secretary, machine tools, medical secretary, mid-management, real estate, refrigeration and air conditioning technology and welding. Diploma programs include accounting clerk, automotive mechanics, clerical, cosmetology, general secretary, legal secretary, marine construction, medical secretary. Certificates of Completion are offered in seven Adult Training Programs.

Course descriptions and further information about the College of Technical Arts are included in a separate bulletin. Requests for copies of the College of Technical Arts catalog should be addressed to the Office of the Dean, College of Technical Arts, Box 10043, Lamar University Station, Beaumont, Texas 77710.

College of Graduate Studies

Ralph A. Wooster, Ph.D., Dean
James L. Cooke, Ph.D., Director
Louise Mullin, Secretary

The Graduate College

The Dean of the College of Graduate Studies is responsible for the direction of graduate programs of the University. The Dean is assisted by the Graduate Council, a body that serves in an advisory capacity to the Dean. The Council consists of representatives from each College offering graduate degrees.

Degrees Offered

Master of Arts in
English
Government
History

Master of Business Administration

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

Master of Engineering

Master of Engineering Science

Master of Music

Master of Music Education

Master of Science in
- Biology
- Chemistry
- Health and Physical Education
- Home Economics
- Mathematics
- Psychology
- Speech
- Speech (Audiology and Pathology)

Master of Public Administration

Doctor of Engineering

The Graduate Bulletin

The Graduate Bulletin contains a complete listing of courses, admission requirements and other information of value to graduate students. Requests for copies should be directed to the Office of the Dean of the College of Graduate Studies, Lamar University, Box 10004, Lamar University Station, Beaumont, Texas 77710.

Admission

Applicants seeking admission to the College of Graduate Studies must present evidence that their academic record and personal attributes indicate the ability to pursue graduate work successfully. The policies for admission set forth by the Graduate Council are as follows:

Admission to a Degree Program

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

D. Applicants for the Doctor of Engineering degree also should write a letter to the Dean of the College of Engineering. This letter should include information about the applicant, engineering experience, present employment and chief interests. The applicant also should indicate what type of work he/she would like to undertake for his/her field study.
E. All students are required to complete the University Health Form.
F. An application for admission sent to the office of Admissions and Records.
G. The applicant's undergraduate grade point average and GRE scores must be above the minimum standard established by the College of Graduate Studies. For all students (except those wishing to pursue the Master of Business Administration degree) *one* of the following requirements must be met for admission:
   (1) A minimum overall grade point average of 2.5 on a four point scale, and a minimum composite score (verbal, quantitative and analytical) of 1100 on the aptitude section of the GRE.
   (2) A minimum grade point average of 2.5 on junior and senior work and a minimum composite score of 1100 on the aptitude section of the GRE.
   (3) A grade point average lower than 2.5 but with a score of at least 540 on an appropriate section of the GRE aptitude test. (Some departments use the verbal score, some the quantitative, some the analytical and some use any one score.) A composite score of 1100 is also required.
   (4) A minimum overall grade point average of 2.5 on a four point scale and a score at or above the 25th percentile on the appropriate Advanced Test of the GRE (appropriate test will be determined by the department in which the graduate program is offered) or, in the case of students applying to the College of Education, a score at or above the 25th percentile on the appropriate Area Exam of the National Teachers Examination. This does not exempt such students from submitting GRE aptitude scores prior to admission.
   (5) A minimum grade point average of 3.0 on all work and the recommendation of the department in which the graduate program is offered. This does not exempt such students from submitting GRE aptitude scores prior to admission.
   (6) The Graduate Council has approved higher standards for admission to some particular programs. These are stated in the particular departmental section of the Graduate Bulletin.

2. Students wishing to pursue the Master of Business Administration degree should refer to the College of Business section of the Graduate Bulletin for specific requirements.
3. Provisional admission to a degree program for one term may be granted to some applicants who show promise of the ability to successfully complete a graduate degree program, but who have not submitted the necessary credentials (see above) four weeks prior to registration.

   Students admitted with provisional admission may not register for more than twelve hours graduate credit and must submit all required credentials and meet the minimum standards stated above during the first term. Provisional admission may not be extended past one term and students so admitted who do not meet the minimum standards will not be allowed to re-enroll.

   International students will not be admitted on a provisional basis.
4. Admission requirements for international students are evaluated on an individual basis after the following information is received:
   A. Two official transcripts from each college previously attended. Complete and official English translations must be furnished along with the certified copies of the transcripts.
   B. Scores on the aptitude section of the GRE and scores on the Test of English as a Foreign Language (TOEFL) must be submitted. In general, an international student whose native language is not English is expected to score 500 or above on the TOEFL and over 1100 on the aptitude section of the GRE. Application form, test scores, financial statement and complete educational records for

international students must be on file by the dates indicated: term beginning in August, by June 15; January, by November 1; June by March 15.
   C. An original statement of financial resources. The University provides a form for this purpose. Other forms will not be accepted.
5. Any other applicant whose native language is not English and who attended foreign secondary schools, colleges or universities must submit TOEFL scores of 500 or above in addition to the requirements stated above. Individual departments may require even higher scores.
6. A student who wishes to pursue graduate work in any area for which he/she 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 24 semester hours (12 of which must be on the junior-senior level) of undergraduate work in the subject chosen as the graduate major. For a minor, 12 semester hours of undergraduate work are required.
7. Admission to the College of Graduate Studies does not imply candidacy for a degree.
8. The Dean of Admissions will notify the applicant of his admission to the College of Graduate Studies. All transcripts, certificates, etc. become the property of Lamar University and are not returnable.
9. Admission requirements stated above are minimum requirements and the applicant must also have the approval of the department in which the degree program is offered.

Post Baccalaureate Admission

1. Students who wish to take graduate courses but do not wish to be admitted to the College of Graduate Studies (or who have not met all requirements for admission to the College of Graduate Studies) may be admitted as Post Baccalaureate students in one of the undergraduate colleges under the following conditions:
   A. The applicant must hold the bachelor's degree.
   B. The applicant must submit an application for admission to the Post Baccalaureate program.
   C. The applicant must submit official transcripts from each college previously attended.
   D. The applicant must complete the University Health Form.
   E. The applicant must be approved for admission by the Dean of Admissions.
2. International students will not be admitted to the Post Baccalaureate Program.
3. If application for admission to a graduate degree is received in a subsequent semester and requirements for admission to the College of Graduate Studies are complete and the minimum standards (see above) are met, a maximum of 12 semester hours previously completed *may*, with the approval of the department and the Graduate Dean, be counted for degree credit (only 12 semester hours taken prior to meeting all admission requirements to a degree program may be counted; this includes hours taken both as a provisional graduate and post baccalaureate student).

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