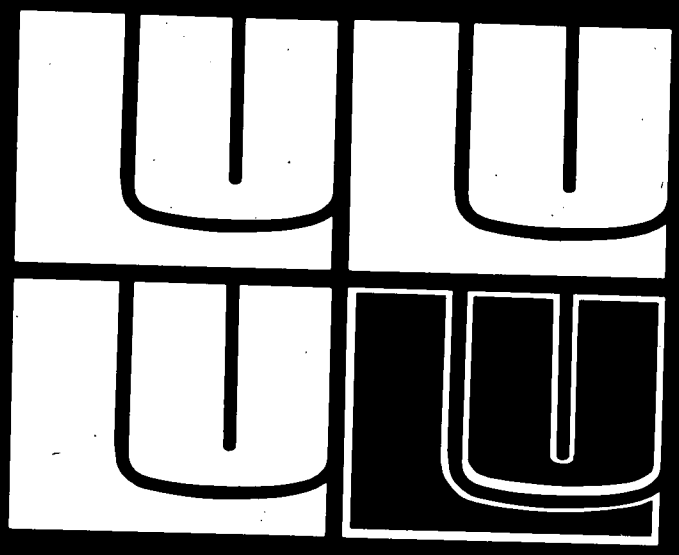


LAMAR UNIVERSITY

Bulletin
1979-81

College of Technical Arts

Board of Regents

Otho Plummer, Chairman	Beaumont
A. H. Montagne, Vice-Chairman	Orangefield
Bryan D. Beck, Jr., Secretary	Beaumont
Tolbert T. Crowder	Port Arthur
Lloyd L. Hayes	Port Arthur
Ocie R. Jackson	Anahuac
Thomas M. Maes, II	Beaumont
Hubert Oxford, III	Beaumont
J. C. Zbranek	Liberty

EMERITI

J. B. Morris, Chairman Emeritus	Beaumont
John E. Gray, President Emeritus	Beaumont
O. B. Archer, Dean Emeritus	Beaumont
Celeste Kitchen, Registrar Emeritus	Nederland
C. A. Davis, Professor Emeritus of Sociology	Beaumont

Lamar University

1979-81 College of Technical Arts Bulletin

Vol. 29 No. 3

TWENTY-FIFTH 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.

DIRECTORY FOR CORRESPONDENCE COLLEGE OF TECHNICAL ARTS

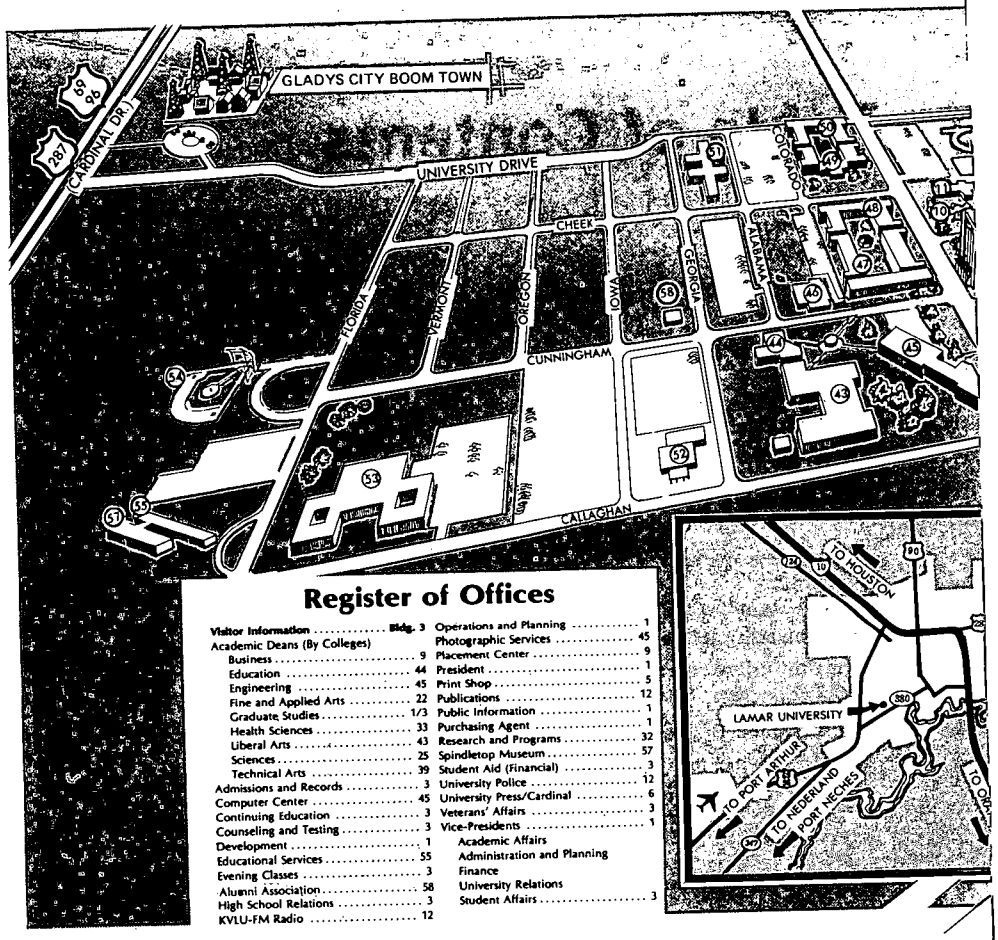
Information concerning the College of Technical Arts may be obtained by calling the Dean's office, 838-8321. All mail should be addressed to Box 10043, Lamar University Station, Beaumont, Texas 77710.

Dean	Kenneth E. Shipper
Vocational Counselor	Harry L. Williams
Extended Day Coordinator and Supervisor of Adult Training	Norman E. Lowrey
Industrial Department	M. Paul Roy, Head
Related Arts Department	Joe I. Juarez, Head
Technical Department	Robert J. Lawrence, Head
Vocational-Technical Continuing Education	James D. Spencer, Coordinator
Real Estate	Alice W. Cater, Coordinator

The following persons or agencies are available to serve students enrolled in the College of Technical Arts.

President	C. Robert Kemble, Box 10001
Administration and Planning	Andrew J. Johnson, Vice-President, Box 10014
Academic Affairs	David D. Geddes, Vice-President, Box 10002
University Relations	W. S. Leonard, Vice-President, Box 10546
Financial Affairs	Oscar K. Baxley, Vice-President, Box 10003
Student Affairs	George E. McLaughlin, Jr., Vice-President, Box 10006
Admissions and Records	Norris H. Kelton, Dean, Box 10009
Applications/Information	Dana Ransom, Director, High School Relations, Box 10007
Books/Supplies	Bookstore Manager, Box 10019
Counseling/Testing	Ysleta Kudlaty, Director, Box 10040
Division of Public Service	W. Richard Hargrove, Dean, Box 10008
Financial Aid/Awards	Robert Bell, Director, Box 10042
Public Information/Publications	Martha Ann Reed, Director, Box 10011
Library Services	R. Blaine Thomas, Director, Box 10021
Placement	Jack Martin, Director, Box 10012
Student Housing	Bruce E. Stracener, Director, Box 10041
Student Health	Lamar C. Bevil, M.D., Director, Box 10015
University Police	Eugene W. Carpenter, Director, Box 10013
Veterans' Affairs	Darrell Fondren, Director, Box 10017
LU at Orange	J. B. Welch, Dean, 410 Front St., Orange, Texas 77630
LU Port Arthur	W. Sam Monroe, Dean, 1500 Procter St. Port Arthur, Texas 77640

Table of Contents



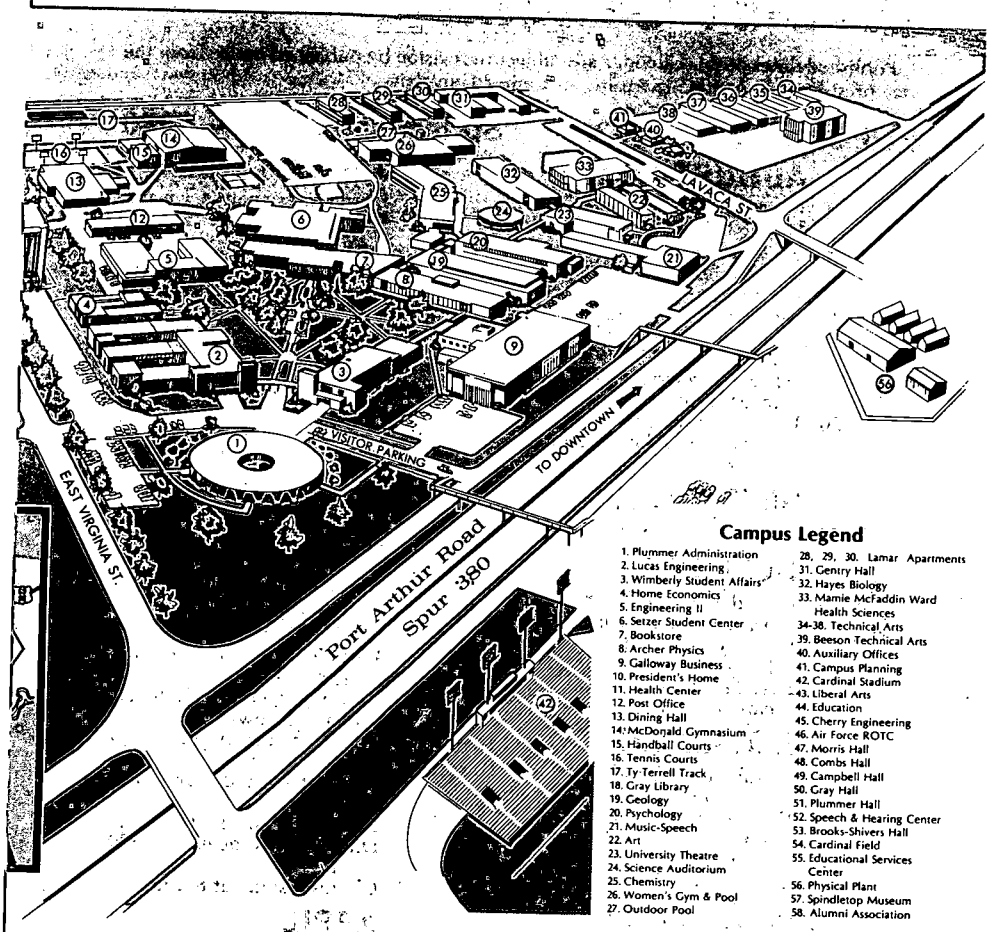
Register of Offices

THE CAMPUS

Lamar University's campus has expanded rapidly during the past decade and now encompasses some 200 acres.

The Cecil Beeson Technical Arts Building and several other buildings have been completed recently. 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 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. Galloway 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 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
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

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

Summer Session — 1980
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
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

Directory

Officers of Administration

General

C. ROBERT KEMBLE, Ph.D., President
ANDREW J. JOHNSON, Ph.D., Vice President for Administration and Planning
DAVID D. GEDDES, Ph.D., Vice President for Academic Affairs
W. S. LEONARD, M.S., Vice President for University Relations
OSCAR K. BAXLEY, M.B.A., Vice President for Finance
GEORGE E. McLAUGHLIN, B.S., Vice President for Student Affairs
NORRIS H. KELTON, M.A., Dean of Admissions and Records
W. RICHARD HARGROVE, Ed.D., Dean, Division of Public Service
ROBERT BLAINE THOMAS, Ph.D., Director of Library Services

Colleges

W. BROCK BRENTLINGER, Ph.D., Dean, College of Fine and Applied Arts
M. L. McLAUGHLIN, Ed.D., Dean, College of Education
EDNA LEE NEUMANN, Ph.D., Dean, College of Health Sciences
JOHN A. RYAN, Ph.D., Dean, College of Business
KENNETH E. SHIPPER, Ph.D., Dean, College of Technical Arts
PRESTON B. WILLIAMS, Ph.D., Dean, College of Liberal Arts
RALPH A. WOOSTER, Ph.D., Dean, College of Graduate Studies and Dean of Faculties
ROGER E. YERICK, Ph.D., Dean, College of Sciences
FRED M. YOUNG, Ph.D., Dean, College of Engineering

Centers

W. SAM MONROE, LL.D., Dean, Lamar University at Port Arthur
JOE BEN WELCH, Ed.D., Dean, Lamar University at Orange

College of Technical Arts

KENNETH E. SHIPPER, Ph.D., Dean
NORMAN E. LOWREY, B.S., Supervisor, Adult Training Programs
HARRY L. WILLIAMS, M.Ed., Vocational Counselor

KATHERINE KIMBLE, Secretary
CATHERINE KRAEMER, Secretary
DEBORAH MUNOZ, Secretary
ROBERT HARRIS, Technician
STONE RICHARDSON, Technician

FACULTY

WILLIAM R. BURKETT, Instructor I of Drafting Technology, 1977
B.S., Lamar University.

JERRY W. CAMPBELL, Instructor I of Diesel Mechanics, 1976
C.C., Lamar University.

ALICE W. CATER, Instructor II of Real Estate, 1974
B.B.A., Southern Methodist University; M.B.A., The University of Texas at Austin.

LYNNWOOD M. CLARK JR., Instructor I of Business Data Processing, 1972
B.S., Lamar University.

ROY W. CLARK, Instructor I of Business Data Processing, 1975
B.A., Oklahoma State University.

TARLTON J. DAIGLE, Instructor III of Industrial Electricity and Electronics Technology, 1951, 1971
B.S., University of Southwestern Louisiana.

IRIS S. DRODDY, Instructor II of Drafting Technology, 1970, 1974
Senior Engineering Technician.

DIANNA L. DUNCAN, Instructor I of Drafting Technology, 1978
Certificate, Angelina College.

*MARCIA L. GREEN, Instructor II of Related Arts, 1972, 1976
B.A., Bishop College; M.A., Stephen F. Austin State University; M.Ed., Lamar University.

DONALD R. GRUBBS, Instructor I of Welding, 1974, 1975
B.S., Lamar University.

WILLIAM H. HARTFORD, Instructor III of Job Relations, 1947, 1971

MARVIN H. HOGAN, Instructor II of Industrial Electricity and Electronics Technology, 1970, 1974

BEN M. JARRELL, Instructor II of Refrigeration and Air Conditioning Technology, 1973, 1978

JOE I. JUAREZ, Instructor II of Basic Communications, Head, Related Arts Department, 1968, 1974
B.F.A., University of Houston; B.S., Lamar University: M.Ed., University of Houston.

OTTO A. KRIEGEL, Instructor II of Machine Tools, 1973, 1978

ROBERT J. LAWRENCE, Instructor III of Industrial Electricity and Electronics Technology, Head, Technical Department, 1958, 1971

NORMAN E. LOWREY, Supervisor, Adult Training Programs, 1967, 1970
B.S., Lamar University.

RONALD I. MARBLE, Instructor III of Welding, 1967, 1973
C.C., Lamar University.

PETE MATAK III, Instructor I of Diesel Mechanics, 1978
A.A.S., Lamar University.

VERBIE T. MATHIS, Instructor I of Mid-Management, 1978
B.S., Texas Eastern University; M.B.E., S.F. Austin State University.

MARTIN D. MATTOX, Adjunct Instructor of Drafting, 1978

RALPH K. MOCK, JR., Instructor III of Drafting Technology, 1966, 1971
Senior Certified Engineering Technician.

JERRY B. MOSELEY, Instructor I of Basic Communications, 1970
B.S., M.Ed., Lamar University.

MYRON M. MYRICK, Instructor III of Drafting Technology, 1967, 1971
Certified Engineering Technician

LIBBIE C. NYLIN, Instructor I of Related Arts, 1976, 1978
B.A., B.S., Lamar University.

M. PAUL ROY, Instructor IV of Machine Tools, Head, Industrial Department, 1963, 1974

KENNETH E. SHIPPER, Dean, College of Technical Arts, 1971
B.S., Sam Houston State University; M.A., Ph.D., The University of Texas at Austin.

LENOX L. SIGLER, Instructor II of Industrial Electricity and Electronics Technology, 1965, 1970

JAMES H. SMITH, Instructor III of Diesel Mechanics, 1968, 1978
A.A.S., Lamar University.

JAMES D. SPENCER, Coordinator of Continuing Education, 1970
B.S., M.Ed., Texas A&M University.

DEANNA K. STAHL, Instructor II of Technical Mathematics, 1972
B.A., M.S., Lamar University.

TROY STANDLEY, Instructor II of Fire Protection Technology, 1977
LL.B., Baylor University.

BRIAN K. TANNER, Instructor I of Machine Tools, 1975
A.A.S., Lamar University.

FRANCIS E. THIBODAUX, Instructor I of Industrial Electricity and Electronics Technology, 1978
B.S., University of Southwestern Louisiana.

ELLIS THOMPSON, Instructor III of Refrigeration and Air Conditioning Technology, 1956, 1971

CAREY B. WESLEY, Instructor III of Welding, 1966, 1976
A.A.S., Lamar University.

HARRY L. WILLIAMS, Vocational Counselor, 1968, 1972
B.B.A., Stephen F. Austin State University; M.Ed., Lamar University.

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
B.S., M.Ed., Lamar University.

*On leave for 1978-79

Part-Time Faculty

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

FRANCIS L. BARGA, Adjunct Instructor of Industrial Supervision, 1971

CLEMENT C. BERRYMAN, Adjunct Instructor of Plant Maintenance and Operations, 1974
B.S., The University of Texas at Austin.

JOHN E. BERWICK, Adjunct Instructor of Refrigeration and Air Conditioning, 1978
A.A.S., Lamar University.

RONNELL H. BERWICK, Adjunct Instructor of Business Data Processing, 1976
B.B.A., Lamar University.

LAWRENCE BONURA, Adjunct Instructor of Industrial Supervision, 1975
B.S., M.E., Lamar University.

ROBERT S. BOUDREAUX, Adjunct Instructor of Plant Maintenance and Operations, 1976
B.S., Louisiana State University.

CLETUS J. BREHME, Adjunct Instructor of Plant Maintenance and Operations, 1975
B.S., M.S., University of Louisville.

BARBARA Y. BURRIS, Adjunct Instructor of Related Arts, 1971
B.A., Lamar University.

OTIS E. CATER, III, Adjunct Instructor of Real Estate, 1978
B.S., M.Ed., Lamar University.

ROGER G. CORLEY, Adjunct Instructor of Occupational Safety and Health; 1975

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

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

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

VOLLIE C. DRODDY, Adjunct Instructor of Maintenance Pipefitting, 1978

DANIEL J. DUPLANTIS, Adjunct Instructor of Real Estate, 1977
A.A.S., Lamar University.

LARRY R. ELLIOTT, Adjunct Instructor of Real Estate, 1977

WANDA G. FRANKS, Adjunct Instructor of Related Arts, 1978
B.S., M.Ed., Lamar University.

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

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

PAMELA F. GLACH, Adjunct Instructor of Child Care Technology, 1977
B.S., M.S., Lamar University.

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

DONALD GLOVER, Adjunct Instructor of Plant Maintenance and Operations, 1978

TANYA K. GOLDBECK, Adjunct Instructor of Child Care Technology, 1977
B.S., M.S., Lamar University.

ROBERT A. GREEN, Adjunct Instructor of Plant Maintenance and Operations, 1975
B.S., M.S., Lamar University.

RICHARD P. GRIFFIN, Adjunct Instructor of Occupational Safety and Health, 1977
B.S., Baylor University; M.B.A., Lamar University.

PHILLIP V. HALL, Adjunct Instructor of Real Estate, 1977
B.A., Centenary College.

JAMES D. HEBERT, Adjunct Instructor of Diesel Mechanics, 1977

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

THOMAS R. HERRINGTON, Adjunct Instructor of Welding, 1978
A.A.S., Lamar University.

JOYCE L. IRVING, Adjunct Instructor of Child Care Technology, 1978
B.A., University of Michigan; M.A., Atlanta University.

MARY KLAUS, Adjunct Instructor of Child Care Technology, 1978
B.S., M.S., University of Missouri.

PERRY G. LEE, Adjunct Instructor of Plant Maintenance and Operations, 1977
B.S., Lamar University.

JAMES K. LOVELL, JR., Adjunct Instructor of Occupational Safety and Health, 1977

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

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

WILLIAM McCLAIN, Adjunct Instructor of Fire Protection Technology, 1977
B.S., Lamar University.

CALVIN J. McKAY, Adjunct Instructor of Industrial Supervision, 1966
B.S., University of Southwestern Louisiana.

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

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

CHARLES K. OREM, III, Adjunct Instructor of Plant Maintenance and Operations, 1976

BILLY E. PATTERSON, Adjunct Instructor of Plant Maintenance and Operations, 1975

WESLEY C. PAULUS, Adjunct Instructor of Industrial Electricity and Electronics Technology, 1975
B.S., Lamar University.

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

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

CHARLES A. PROTHRO, Adjunct Instructor of Plant Maintenance and Operations, 1975

RAYMOND D. ROBERTSON, Adjunct Instructor of Plant Maintenance and Operations, 1974
B.A., University of Houston.

WILLIAM E. SCHROETER, Adjunct Instructor of Real Estate, 1977

JAMES E. SHANKS, JR., Adjunct Instructor of Related Arts, 1977
B.S., Lamar University.

ROY O. SHAVER, Adjunct Instructor of Industrial Supervision, 1977
B.S., M.S., Ph.D., University of Houston.

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

SAMUEL O. SMITH, Adjunct Instructor of Real Estate, 1976
B.S., Texas A & I University.

VERNON K. TANDBERG, Adjunct Instructor of Fire Protection Technology, 1975

WILLIAM A. THOMAS, Adjunct Instructor of Occupational Safety and Health, 1976
A.A.S., Oklahoma State University.

G. H. VANZANDT, Adjunct Instructor of Occupational Safety and Health, 1977

ANTHONY J. VENZA, JR., Adjunct Instructor of Real Estate, 1977
B.A., B.B.A., M.B.A., Lamar University.

DELIA A. WALKER, Adjunct Instructor of Drafting, 1978

WILBUR O. WEBSTER, Adjunct Instructor of Related Arts, 1972
B.S., University of Southwestern Louisiana.

THOMAS R. WHIDDON, JR., Adjunct Instructor of Industrial Supervision, 1973
B.B.A., The University of Texas at Austin.

JAMES T. WHITE, Adjunct Instructor of Drafting Technology, 1977
A.A.S., Lamar University.

ELMER H. WHITING, III, Adjunct Instructor of Industrial Supervision, 1975
B.S., University of Houston.

ANITA J. WOODS, Adjunct Instructor of Related Arts, 1971
B.A., Sam Houston State University.

LAMAR UNIVERSITY AT ORANGE

Full-Time

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

DON EARL HORTON, Instructor 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.

JAMES R. RIPLEY, Instructor I of Welding, 1975

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.

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

Part-Time

KENNETH D. ARMSTRONG, Adjunct Instructor of Basic Communications, 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.

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

JIM 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 Basic Communications, 1977
B.A., Southwestern 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.

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

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

Full-Time

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

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

JEAN CARUTHERS, Instructor I of Cosmetology, 1975

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

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

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

LINDA S. LANGLEY, Instructor I of Office Occupations, 1975
B.S., M.S., Stephen F. Austin State University.

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

W. L. PATE, JR., Instructor I of Mid-Management, 1977
B.B.A., M.B.A., Lamar University.

FRANKLIN C. SAVAGE, Instructor I of Automotive Mechanics, 1975

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

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

VELMA J. YOUNG, Instructor I of Cosmetology, 1977

Part-Time

BENNY BAXTER, Adjunct Instructor of Automotive Mechanics, 1977

DENNIS E. DOVE, Adjunct Instructor of Automotive Mechanics, 1977

LEROY FORSE, Adjunct Instructor of Welding, 1977

INELL R. MOORE, Adjunct Instructor of Office Occupations, 1975

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

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

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, and expanded the occupational programs available to students. 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.

Vocational subjects were among the first courses offered by Lamar and have played an important role in the development of Lamar University. A Division of Vocations was established in 1946 and became the Lamar School of Vocations in 1955. In 1970, the name was changed to the School of Technical Arts and in 1972, it became the College of Technical Arts. During 1971, the College began awarding Associate of Applied Science degrees in certain two-year programs. The College offers the Certificate of Completion in programs of one year or less in duration.

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.

ACCREDITATION

Lamar University 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.

OBJECTIVES

The basic objective of the College of Technical Arts is to help students equip themselves for effective living and for responsible citizenship in our society by offering educational programs and training which will extend their basic knowledge, encourage their continued development and give them marketable skills. In working toward this goal, the College encourages students to assume a major share of the responsibility for the development of their potentialities and for utilization of their abilities, for their own purposes and for the good of society.

In order to stimulate students to have open minds, emphasis is placed upon the development of creative and scientific thinking for the solution of problems in the social and physical environment of their time. An effort is also made to provide guidance which will encourage the students to reach mature and responsible decisions, whatever the nature of the problems they may encounter.

The College of Technical Arts recognizes its obligation to make available to the community all the opportunities implicit in its function as a part of Lamar University. In an effort to achieve this goal, the specific objectives of the college are as follows:

1. To provide guidance services that will assist each student in making an appropriate vocational choice.
2. To provide certificate, diploma and degree programs designed to prepare students for employment in various fields.
3. To provide education and training which allows the graduate to advance rapidly in his/her chosen field.
4. To instill in the student the desire to learn which will guide his/her growth in his/her profession.
5. To provide in-service training to persons currently employed in Southeast Texas.

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, R. 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.

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.

STUDENTS WITH PHYSICAL HANDICAPS

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.

Handicapped students at Lamar 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 and Testing Center is staffed with qualified counselors to assist with problems handicapped students may have.

THE 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.

VETERANS' EDUCATION

Lamar holds a contract for educating veterans under the Vocational Rehabilitation Law, known as Public Law Number 16, and is an approved university for veterans under Public Law Number 346 and Public Law Number 550. The vocational training has been especially prepared for those who wish to establish themselves in business and industry in the Sabine-Neches area.

Veterans who are interested in continuing their education under federal laws providing such training are directed to secure approval from the Office of Veterans' Affairs, Wimberly Student Affairs Building. Advice on program and training opportunities, academic assistance and counseling is available from this office or by writing to Box 10017, LU Station.

Admissions

ADMISSIONS REQUIREMENTS

Students who desire to enter programs in the College of Technical Arts must satisfy the following admission requirements:

1. File an application for admission.
2. Submit required health data form.
3. Have transcript of high school grades sent directly to the Dean of Admissions and Records, Lamar University. Students transferring from another institution must 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. Further information concerning transfer students may be found in the "Admissions" section of the general university bulletin.
4. One of these prerequisites must be met:
   a. Graduation from an accredited high school, or
   b. Transfer with transcript from an accredited college or university, or
   c. Individual approval from the Dean of Admissions and Records. Persons 19 years of age or older whose high school class has been graduated for at least one year who demonstrate the ability to benefit from college coursework may request consideration for individual approval. Students wishing to enter under this prerequisite should first contact the Dean of the College of Technical Arts for admission to the Beaumont campus; the director of the Orange campus or the director of the Port Arthur campus.

ENTRANCE EXAMINATION

Although students entering the College of Technical Arts are not required to take an entrance examination, those students who wish to take an entrance examination may submit either SAT or ACT scores. These examinations are useful for counseling purposes. 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 these 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.

WHERE TO APPLY

All required admission forms should be addressed to the Office of Admissions and Records, Lamar University, Lamar University Station, Box 10009, Beaumont, Texas 77710.

READMISSION

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.

Fees and Expenses

PAYMENT OF FEES

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

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.

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 Fall or Spring Semester	1	$50	$ 40	$200	$ 2.50	$20	$15.00	$ 1	$ 88.50	$ 78.50	$238.50
	2	50	80	200	5.00	20	15.00	2	92.00	122.00	242.00
	3	50	120	200	7.50	20	15.00	3	95.50	165.50	245.50
	4	50	160	200	10.00	24	15.00	4	103.00	213.00	253.00
	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 Six-Week Summer Session	1	$25	$ 40	$100	$ 2.50	$20	$ 7.50	$ 1	$ 56.00	$ 71.00	$131.00
	2	25	80	100	5.00	20	7.50	2	59.50	114.50	134.50
	3	25	120	100	7.50	20	7.50	3	63.00	158.00	138.00
	4	25	160	100	10.00	24	7.50	4	70.50	205.50	145.50
	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.

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 Fees

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 veteran's 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 the 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 Degree Diploma	$ 7.50
Certificate of Completion	7.50
Bachelor's Diploma	7.50
Bachelor's Cap and Gown Rental	9.00
Returned Checks	5.00
Re-entry Fee	5.00
Transcript Fee	.50
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.

STUDENT RESPONSIBILITY FOR RESIDENCE CLASSIFICATION

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

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

Students failing to comply with the residence provisions of the state tuition bill (Art. 2645c, V.C.S. as amended 1957) are subject to penalties as set forth in the law and/or appropriate disciplinary action.

RULES AND REGULATIONS FOR DETERMINING RESIDENCE STATUS

See the general catalog for complete information on how residence status is determined, or consult the Coordinating Board, Texas College and University System "Rules and Regulations for Determining Residence Status" as revised, October 17, 1975. The latter publication is available at the Admissions and Records Office.

Academic Affairs

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.

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 courses 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 and punctual attendance in classes and laboratories is expected of all students. Instructors should maintain attendance records and adhere to attendance policies formulated by their departments.

In general, the individual instructor approves absences. Absences approved because of engagement in a university activity are published by the Admissions and Records Office. An approved absence allows the student to make-up examinations and written assignments without penalty. Although the student must make up the work missed, additional laboratory time is not granted the student.

All instructors should announce these policies concerning unexcused absences at the beginning of each semester.

Students who miss classwork to the extent that their laboratory performance may be unsafe or that they have no reasonable chance to pass the course may be dropped from that course by the department head. The department head should notify the student prior to this action. 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.

OVERLOADS

The Dean of the College of Technical Arts must approve all overloads. In general, the student must demonstrate that he/she is capable of maintaining a high performance level in all classes.

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.

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, an 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) of 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).

Academic Progress

CLASSIFICATION OF STUDENTS

Student 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.

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 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.

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 is enrolled in an applicable course of study is disregarded once the student enters a four-year program.

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.

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 providing 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.

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 bulletin.

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."

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.

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 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 whole 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 at Lamar.

Graduation Requirements

ASSOCIATE OF APPLIED SCIENCE

Generally, students are eligible for graduation when they have completed an approved program of study. Specifically, a student must:

1. Satisfy all admission requirements.
2. Complete an approved degree plan.
3. Have at least a 2.0 grade point average on all courses attempted in the College of Technical Arts, at least a 2.0 grade point average on all courses used to meet degree requirements and at least a 2.0 grade point average on all courses in the major field. These grade point requirements must be met before applying for graduation.
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.
6. Attend the official graduation exercise or receive prior approval from the Associate Dean of Admissions and Records to be absent.

DIPLOMA

1. Satisfy all admission requirements.
2. Complete an approved diploma plan.
3. Have at least a 2.0 grade point average on all work submitted on the diploma plan and at least a 2.0 on all courses in the major field submitted on the diploma plan.
4. Complete 18 semester hours of major work at Lamar.
5. Make final application for graduation and pay all fees by the deadline date as stated in the current catalog.

CERTIFICATE OF COMPLETION

Generally, students are eligible for graduation when they have completed an approved program of study. Specifically, a student must:

1. Satisfy all admission requirements.
2. Complete an approved certificate plan.
3. Have at least a 2.0 grade point average on all work submitted on the certificate plan.
4. Make application for certification to the person responsible for the program.

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 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.

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/her 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.

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.

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.

Bachelor of Science Degree

Bachelor of Science in Industrial Technology.

In 1973-74, the College of Technical Arts offered a Bachelor of Science degree in Industrial Technology to students who successfully completed an approved program of study. *This program has been suspended.* Students who are enrolled in the four year program will be allowed to complete their degree as long as they are enrolled at Lamar University. Should a student fail to enroll for a Fall or Spring Semester, he/she will be dropped from the program. Students may submit, in writing prior to the beginning of a semester, a request to skip a semester without being dropped from the program.

The Department of Industrial Engineering in the College of Engineering is offering a new version of the Bachelor of Science degree in Industrial Technology. Most of a student's Technical Arts work will apply to this four year degree. Students should refer to the general bulletin for a description of this non-engineering 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.

FINANCIAL AID AND AWARDS

Financial assistance in the form of scholarships, grants, loans and employment is available to a number of qualified students. Complete information about financial aid is available in the Student Aid Office located in the Wimberly Student Affairs Building. Students also are encouraged to contact the vocational counselor about special awards which are restricted to full-time technical arts students.

Scholarships

Lamar University offers a scholarship to the highest ranking graduate of each fully accredited high school of Texas. Details are available from the Student Aid Office. Other scholarships supported by industries, organizations and individuals are available upon application for technical arts students. Further information may be obtained from the Student Aid Office or the vocational counselor.

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 Street 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.

PART-TIME EMPLOYMENT

The University, as well as many local businesses and industries, provides a number of part-time jobs that enable worthy students to earn part or all of their expenses. Applicants should contact the director of student aid.

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 students in developing a meaningful context for their 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 the established 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.

College of Technical Arts

The College of Technical Arts provides technical and industrial education for thousands of men and women from Texas, other states and many foreign countries. It is housed in a modern plant consisting of six buildings containing 125,000 feet of classroom, shop and office space. The new Cecil R. Beeson Technical Arts classroom and office building was completed for occupancy for the fall of 1977. Parking for 480 cars is provided adjacent to these buildings. Entrance to this area, located in the 4400 block of Spur 380 (Beaumont-Port Arthur Highway), is on Lavaca Street. The College of Technical Arts also offers courses and programs on campuses located in Orange and Port Arthur. Off-campus courses are offered in several cities in the area.

An Associate of Applied Science degree is awarded in the following fields of study: automotive mechanics; business data processing; child care technology; drafting technology; diesel mechanics; fire protection technology; electronics technology; general secretary; industrial electricity and electronics technology; legal secretary; medical secretary; mid-management; machine tools; occupational safety and health; refrigeration and air conditioning technology; maintenance pipefitting; real estate and welding.

A student may earn a diploma upon satisfactory completion of one of the following programs: accounting clerk; automotive mechanics; clerical; cosmetology; electronics; marine construction or office occupations.

The child care technology, industrial supervision, maintenance pipefitting, occupational safety and health, plant maintenance plate welding, real estate and refrigeration programs have provisions for offering a Certificate of Completion when the specified course requirements have been satisfied.

ASSOCIATE DEGREE PROGRAMS

The College of Technical Arts offers career-oriented education in 14 degree programs in three departments in the College. The 14 programs that lead to the Associate of Applied Science degree are

Adult Training Programs:
- Child Care Technology*‡
- Maintenance Pipefitting*
- Occupational Safety and Health*

Industrial Department:
- Automotive Mechanics‡
- Diesel Mechanics*
- Machine Tools*
- Refrigeration and Air Conditioning Technology*
- Welding*†‡

Related Arts Department
- Mid-Management*†
- Real Estate*†‡

Technical Department:
- Business Data Processing*
- Drafting Technology*†‡
- Fire Protection Technology*
- Electronics Technology‡
- General Secretary†‡
- Industrial Electricity and Electronics Technology*†
- Legal Secretary‡
- Medical Secretary‡

*Offered at Beaumont
†Offered at Orange
‡Offered at Port Arthur

All of the above two-year programs are designed to give the student training prior to entry into an occupation. Successful completion of one of these programs should provide the student with sufficient knowledge, skill and confidence to enter and advance rapidly in a selected field.

The curriculum of each program is designed to allow a student to enter in any semester and is arranged so that a student can take supporting work in either the College of Technical Arts or in other colleges in the University.

DIPLOMA PROGRAMS

Three departments in the College of Technical Arts offer diploma programs in seven fields of study. The departments that offer these programs are

Adult Training Programs
- Cosmetology (Port Arthur)
- Marine Construction (Orange)

Industrial Department
- Automotive Mechanics (Port Arthur)
- Welding (Orange and Port Arthur)

Technical Department (Orange and Port Arthur)
- Accounting Clerk
- Clerical
- General Secretary
- Legal Secretary
- Medical Secretary

CERTIFICATE PROGRAMS

In addition to the above degree and diploma programs, the College of Technical Arts offers Certificates of Completion in seven programs. These programs are

Adult Training Programs:
- Child Care Technology (Port Arthur and Beaumont)
- Industrial Supervision (Beaumont and Orange)
- Maintenance Pipefitting (Beaumont)
- Occupational Safety and Health (Beaumont)
- Plant Maintenance and Operations (Beaumont and Orange)

Industrial Department:
- Refrigeration (Beaumont)
- Plate Welding (Beaumont)

Related Arts Department:
- Real Estate (Beaumont, Orange, Port Arthur)

Technical Department:
- Fire Protection Certification School (Beaumont)

LAMAR UNIVERSITY AT ORANGE

Lamar University began offering courses in Orange, Texas, in 1969 on an extension basis. In 1971, the Texas Legislature created Lamar University at Orange and the citizens of Orange provided facilities for the educational center. The facilities have been expanded with the acquisition of land formerly owned by the U.S. Navy. An extensive remodeling of the main building was completed in 1976 at a cost exceeding $500,000.

Lamar University offers first and second year courses in the principal fields of the University in addition to complete programs in drafting technology, real estate, office occupations, industrial electricity and electronics, mid-management, industrial supervision, marine construction, welding and other career-oriented courses. Most courses are offered during the evening hours for the convenience of working students. For additional information, see the Lamar University at Orange catalog.

LAMAR UNIVERSITY AT 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 and liberal arts, as well as vocational and technical arts programs. Fields of study located only at the Port Arthur campus include automotive mechanics, electronics technology, cosmetology, drafting, welding, child care technology, real estate, general secretary, legal secretary and medical secretary.

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

NEW PROGRAMS

Because this publication covers a two-year time period, new programs may be created and described in an official supplement to this bulletin. Prospective students are encouraged to contact the College of Technical Arts to determine the status of several new programs being considered.

Adult Training Programs

Supervisor — Norman E. Lowrey.

Child Care Technology

Adjunct Instructors: Pamela Glach, Tanya Goldbeck, Mary Klaus, Joyce Irving

This course of study is provided for persons preparing for, or employed in, the field of early childhood care. The courses may be used as academic instruction in working toward national Child Development Associate requirements, but do not provide Child Development Associate certification by themselves. An Associate of Applied Science degree will be awarded upon completion of the program.

Recommended Program of Study

First Semester

*CCT 131—Survey of Early Childhood Development	3:3:0
*CCT 132—Nutrition and Health	3:3:0
HEc 137—Marriage and Family Relationships	3:3:0
BC 131—Basic Communications or Eng 131	3:3:0
TM 131—Fundamentals of Math I or Mth 1313	3:3:0
	15:15:0

Second Semester

*CCT 136—The Infant 0 to 18 Months	3:3:0
*CCT 163—Curriculum Planning and Teaching Techniques	6:3:20
MM 231—Small Business Management	3:3:0
TM 134—Business Mathematics or Mth 1315	3:3:0
Humanities elective	3:3:0
	18:15:20

Third Semester

*CCT 231—Advancing Language Use	3:2:2
*CCT 232—Toddlers 18 to 36 Months	3:3:0
CCT 235—Working with the Exceptional Child	3:3:0
*CCT 263—Child Care Practicum	6:3:20
Gov 231—Introduction to American Government	3:3:0
	18:13:22

Fourth Semester

*CCT 236—Developing and Advancing Creativity	3:1:4
CCT 237—Development and Administration of Child Care Centers	3:3:0
CCT 265—Special Problems Seminar and Practicum	6:3:20
**Elective	5:5:0
	17:12:24

*A certificate of completion will be awarded upon satisfactory completion of these courses.

**At least 2 semester hours to be chosen from
Art 139 — Art Appreciation
WPE 123 — Basic Movement Fundamentals
Psy 131 — Introduction to Psychology
Soc 131 — Introduction to Sociology
JR 232 — Human Relations

CHILD CARE TECHNOLOGY (CCT)

131 — Survey of Early Childhood Development (3:3:0)*
This course includes an overview of the basic development in children zero to six years of age with emphasis placed on working with children in all areas on their developmental level.

132 — Nutrition and Health (3:3:0)
This course will cover instruction in basic health, safety and first aid, including an overview of common childhood illnesses and recognition of them.

136 — The Infant 0 to 18 Months (3:3:0)
This course will provide an in depth study of the infant from conception to 18 months. All phases of infant development will be included. Appropriate ways of working with infants in a day care center situation will be discussed.

163 — Curriculum Planning and Teaching Techniques (6:20:3)
This course deals with planning curricula for pre-school age children and a survey of learning methods and theories with practical application of these theories in the child care facility.

231 — Advancing Language Use (3:2:2)
This course is designed to teach methods of increasing language use in children. These techniques include role-playing, puppetry, dramatization, etc. This course also includes an insight into the vast world of literature available for young children at different age levels and instructions on how teachers may effectively present stories to them.

*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

232 — Toddlers 18 to 36 Months (3:3:0)
This course provides an in-depth study of the toddler's development in all areas. Means of working with a toddler in a day care center will be discussed.

235 — Working with the Exceptional Child (3:3:0)
This course is designed to help the student deal with exceptional children in a day care situation. Simple testing procedures for determination of a child's developmental levels will be presented. The course will include discussions of ways to work with children who do not have "normal" development.

236 — Developing And Advancing Creativity (3:1:4)
This course will emphasize arts and crafts made by the teacher for use with young children, and will include innovative methods for children's use of these crafts. Emphasis will also be placed on art and craft materials for use by children.

237 — Development and Administration of Child Care Centers (3:3:0)
This course includes an overview of the types of centers, equipment needs, licensing requirements, choosing and working with staff and current issues concerning day care center operation.

263 — Child Care Practicum (6:3:20)
This course will offer instruction in methods of working with different age groups of children with emphasis on the types of materials and tasks with which each age group should be involved. The course will require active participation in an operating day care center.

265 — Special Problems Seminar and Practicum (6:3:20)
This course will include discussions concerning situations arising in the operation of day care centers and how to deal with them, offering practical experience through actual participation in a day care center.

Cosmetology

Instructor I — Jean Caruthers.

The objective of the program is to prepare persons for the profession of beauty operator or instructor of cosmetology. The course of study is designed to meet the requirements for licensure established by the Texas Cosmetology Commission. These requirements include 1,500 hours of instruction, written application, health certificate and birth certificate. These requirements must be met prior to taking the licensure examinations.

A diploma is awarded upon completion of each of these one-year programs.

Recommended Programs of Study

Cosmetology Operator

First Semester		Second Semester	
Cos 141—Cosmetology I	4:2:8	Cos 145—Cosmetology V	4:2:8
Cos 142—Cosmetology II	4:2:8	Cos 146—Cosmetology VI	4:2:8
Cos 143—Cosmetology III	4:2:8	Cos 147—Cosmetology VII	4:2:8
Cos 144—Cosmetology IV	4:2:8	Cos 148—Cosmetology VIII	4:2:8
	16:8:32		16:8:32

Summer Semester

Cos 1409—Cosmetology IX	4:4:16
Cos 1410—Cosmetology X	4:4:16
	8:8:32

Cosmetology Instructor

First Semester		Second Semester	
Cos 181—Cosmetology: Instr I	8:5:11	Cos 183—Cosmetology: Instr III	8:5:11
Cos 182—Cosmetology: Instr II	8:5:11	Cos 184—Cosmetology: Instr IV	8:5:11
	16:10:22		16:10:22

COSMETOLOGY (Cos)

141 — Cosmetology I (4:2:8)
Development of personalities, hygienic living, professional ethics and sanitation, safety rules and state laws on cosmetology. A general orientation to cosmetology including basic fundamentals of skills.

142 — Cosmetology II (4:2:8)
Includes shampooing, rinsing, hair and scalp treatments and related theory.

143 — Cosmetology III (4:2:8)
Shaping of nails, nail styling and cosmetics that apply, including disorders and diseases of the nails. Practice in manipulative skills of facials, theory of massage and the art of applying make-up and the related theory.

144 — Cosmetology IV (4:2:8)
Practice of basic hair shaping technique and the development of practical manipulative skills of cold waving, chemical hair relaxing, hair pressing and thermal waving and curling.

145 — Cosmetology V (4:3:8)
The study of practice of creativity in hair styling through development of line and design. Includes combing and arranging.

146 — Cosmetology VI (4:2:8)
The scientific art of applying hair tints, bleaches and frostings.

147 — Cosmetology VII (4:2:8)
Shaping, styling and coloring wigs and hairpieces.

148 — Cosmetology VIII (4:2:8)
Advanced techniques in hair shaping including new trend cuts and razor shaping.

1409 — Cosmetology IX (4:4:16)
Beauty salon management, selling principles, preparation of applications and interviews, business records and supplies. Usually taught during a summer session.

1410 — Cosmetology X (4:4:16)
The development of all skills to speed requirements and proficiency of profession. Review of theory and preparation for examination by the Texas Cosmetology Commission. Usually taught during a summer session.

181 — Cosmetology: Instructor I (8:5:11)
A program to develop methods and techniques of teaching skills; including orientation and the theory of teaching. Basic unit planning and daily lesson plan development. Prerequisite: Cosmetology Operator License.

182 — Cosmetology: Instructor II (8:5:11)
A program to develop practical clinic management techniques, to include supervision of student skills in classroom. Prerequisite: Cosmetology Operator License.

183 — Cosmetology: Instructor III (8:5:11)
A program to develop methods and techniques of teaching informational theory relative to cosmetology. Prerequisite: Cosmetology Operator License.

184 — Instructor IV (8:5:11)
A program to prepare students for passing the Texas Cosmetology Commission Examination for Cosmetology Instructor's License. Prerequisite: Cosmetology Operator License.

Industrial Supervision

Adjunct Instructors: Francis L. Barga, Lawrence Bonura, Calvin J. McKay, Roy O. Shaver, Thomas R. Whiddon Jr., Elmer H. Whiting III.

This adult education program is planned for supervisory personnel employed in business and industry. A supervisory or leadership position in this field is a prerequisite for admission to the program. Content of the program covers the entire range of supervisory responsibilities. Each class meeting is carefully planned to be of maximum usefulness to the student's job assignment.

A person who successfully completes 24 semester hours of industrial supervision or supervisory related courses is awarded a Certificate of Completion in Industrial Supervision. Most of the IS courses are taught only on the Beaumont campus.

The following 15 semester hours of course work are required for the Certificate of Completion in Industrial Supervision:

MM 233 — Fundamentals of Supervision
IS 1312 — Applied Supervision
OSH 131 — Introduction to Occupational Safety and Health
IS 1325 — Industrial Communications I
IS 1326 — Industrial Communications II

The remaining nine semester hours necessary to receive the Certificate of Completion may include other Industrial Supervision courses, Technical Arts courses and courses offered in other colleges. However, these electives must be related to the occupational goal of the student.

INDUSTRIAL SUPERVISION (IS)

1312 — Applied Supervision (3:3:0)
A continuation of MM 233 with a study of methods of applying psychology to the handling of people; the use of testing methods, consideration of such factors as morale, group attitudes, motivation, frustration and fatigue; and application of psychological studies to human behavior on the job. Prerequisite: MM 233.

1313 — Critical Path Scheduling (3:3:0)
A study of the mechanics of the CPM and PERT method and their specific applications to business and industry. How to introduce CPM into a company and set up the procedures necessary to adapt it to various types of organizations.

1315 — Cost Reduction (3:3:0)
Methods of carrying out a comprehensive continuing cost reduction and control program including how to get all levels of supervisory management to participate in the cost reduction effort and to include cost control as an integral part of the supervisor's total job.

1317 — Construction Materials (3:3:0)
An in-depth study of the nature, origin, properties and use of construction materials. All types of materials used in construction will be covered with particular emphasis on their physical characteristics.

1318 — Construction Methods and Equipment (3:3:0)
The analysis of up-to-date construction techniques with emphasis upon undertanding the organization and equipment used in excavating; pile driving; and concrete, wood, brick, stone and steel construction.

1319 — Construction Management (3:3:0)
An introductory course covering the total responsibilities of a construction manager, project manager and construction supervisor.

1322 — Labor Relations and Legislation (3:3:0)
Company policy, labor history, legislation and labor unions, the labor contract, grievances and arbitration are included in this course.

1325 — Industrial Communications I (3:3:0)
Basic information and techniques for effectively communicating with employees, management, customers and the public. Some of the topics covered in the course are logical and creative thinking, making a speech, dictating and telephoning.

1326 — Industrial Communications II (3:3:0)
Basic information and techniques for effectively communicating with employees, management, customers and the public through letter and report writing.

Maintenance Pipefitting

Adjunct Instructor: Vollie Droddy

This course of study is provided for persons preparing for, or employed in, the occupation of maintenance pipefitting. The courses may be used as related instruction in company apprentice training programs. Liberal substitution of courses will be allowed in consideration of the diversity of skill requirements among companies in the area. However, a program of study must be agreed upon prior to enrollment.

An Associate of Applied Science Degree will be awarded upon completion of the program of study.

Recommended Program of Study

First Semester

*Pip 131—Pipefitting	3:3:0
*Pip 132—Potable Water Systems	3:3:0
*Pip 136—Pipefitting Lab	3:0:7
*Pip 137—Sanitary Systems Lab I	3:0:7
TM 132—Fundamentals of Math II	3:3:0
BC 131—Basic Communications	3:3:0
	18:12:14

Second Semester

*Pip 134—Pipe Layout	3:3:0
*Pip 135 — Drainage Waste and Vent Systems	3:3:0
*Pip 138 — Piping Systems Lab I	3:0:7
*Pip 139—Sanitary Systems Lab II	3:0:7
TM 133—Applied Trigonometry	3:3:0
PM 1318—Related Physics	3:3:0
	18:12:14

Third Semester

*Pip 231—Blueprint Reading for Pipefitters	3:3:0
*Pip 232—Instrument Piping Systems	3:3:0
*Pip 236—Piping Systems Lab II	3:0:7
*Pip 237—Instrument Piping Techniques	3:0:7
BC 132—Business Communications	3:3:0
JR 231—Job Relations	3:3:0
	18:12:14

Fourth Semester

*Pip 234—Field Measurements	3:3:0
*Pip 238—Field Sketching	3:0:7
*RAC 231—Principles of Air Conditioning	3:3:0
*RAC 236—Forced Air Heating and Cooling Systems	3:0:7
Elective	6:6:0
	18:12:14

*A Certificate of Completion will be awarded upon the satisfactory completion of these courses.

MAINTENANCE PIPEFITTING (Pip)

131 — Pipefitting (3:3:0)
Methods of fabricating pipe are studied. The use of layout tools, full scale layout methods and practices, layout of miters and saddles and the use of the steel square in pipe layout is stressed.

132 — Potable Water Systems (3:3:0)
A study of potable water systems, its treatment and protection from contamination. Sizing and installation of water systems will be covered with emphasis on materials and tools needed to accomplish the installation.

134 — Pipe Layout (3:3:0)
A course in planning, scheduling and laying out of work to be performed by the craftsman. An introduction to the estimation of material, labor and miscellaneous costs.

135 — Drainage Waste and Vent Systems (3:3:0)
A study of drainage, waste and vent systems including sanitary and storm systems. Tools, materials and maintenance of installations will be discussed in this course.

136 — Pipefitting Laboratory (3:0:7)
The use of layout tools, full scale layout methods and practices, layout of miters and saddles is studied in this laboratory course.

137 — Sanitary Systems Laboratory I (3:0:7)
A laboratory course providing practice in the repair, replacement and adjustment of fixtures and appliances used in commercial and industrial installations.

138 — Piping Systems Laboratory I (3:0:7)
A study of layout problems that includes template making, offset problems, hangers and supports, rigging and hoisting, and other fabrication procedures utilized in the maintenance and repair of process piping systems.

139 — Sanitary Systems Laboratory II (3:0:7)
A laboratory course in sanitary fixture repairs, adjustments and replacement. Emphasis will be placed on fixtures used in commercial and industrial installations.

231 — Blueprint Reading for Pipefitters (3:3:0)
An introduction to piping drawings, symbols and schematics. Shop fabrication drawings, specifications and material takeoff also will be covered in the course.

232 — Instrument Piping Systems (3:3:0)
A study of the piping required for pressure flow and temperature controllers both transmitting and recording.

234 — Field Measurement (3:3:0)
A study of the use of the transit and level with emphasis on field dimensioning and sketching for fabrication.

236 — Piping Systems Laboratory II (3:0:7)
A continuation of Pip 138 with emphasis on systems layout.

237 — Instrument Piping Techniques (3:0:7)
A laboratory course designed to develop skills in the layout and piping of pneumatic instrument systems and associated equipment.

238 — Field Sketching (3:0:7)
A laboratory course designed to teach field measurements and sketching. Conversion of field sketches to detailed drawings will also be covered in the course.

Marine Construction

Marine Construction is a program designed to prepare workers for entry level employment into the following occupations: shipfitting, structural fitting, layout and marine pipefitting. The Marine Construction courses also may be used to upgrade workers in apprenticeship and company training programs.

The major course work is offered primarily at the Orange campus. Other courses may be taken at either the main campus or Port Arthur campus. A person entering this program could not expect to complete the program without taking courses at Orange.

A Certificate of Completion in Marine Construction will be awarded upon successful completion of one of the programs of study listed below. The certificate will indicate the emphasis completed and a person could receive a certificate for each emphasis.

Recommended Programs of Study

I. Emphasis: Structural and Shipfitting

First Semester		Second Semester	
MC 111—Orientation	1:1:0	MC 231—Structural Fitting	3:0:6
MC 131—Shipfitting	3:0:6	MC 232—Marine & Structural Layout	3:0:6
Dft 133—Intro to Drafting	3:1:4	MC 233—Marine & Structural Bpr Reading	3:1:4
Wld 131—Study of Tools, Mat'l & Process	3:3:0	Wld 235—Metals & Heat Treatment	3:3:0
Wld 136—Oper of Weld Tools	3:0:7	Wld 137—Welding & Cutting	3:0:7
TM 131—Fund of Math I	3:3:0	TM 231—Applied Geometry	3:3:0
JR 231—Job Relations	3:3:0		18:7:23
	19:11:17		

II. Emphasis: Marine Pipefitting

First Semester		Second Semester	
MC 111—Orientation	1:1:0	MC 234—Gaseous Piping Systems	3:3:0
MC 132—Liquid Piping Systems	3:3:0	MC 235—Marine Piping Drawings	3:1:4
MC 137—Marine Fire Systems	3:0:7	MC 238—Fuel & Exhaust Systems	3:0:7
MC 138—Potable Water Systems	3:0:7	MC 239—Air & Steam Systems	3:0:7
Dft 133—Intro to Drafting	3:1:4	Dft 230—Smoley's Fundamentals	3:3:0
JR 231—Job Relations	3:3:0	RAC 131—Basic Refrigeration Principles	3:3:0
TM 131—Fund of Math I	3:3:0		18:10:18
	19:11:18		

MARINE CONSTRUCTION (MC)

111 — Orientation (1:1:0)
A history of the development of shipbuilding and marine structures for the exploration and production of oil. Organization of the shipyard and related industries.

131 — Shipfitting (3:0:6)
A problem lab in shipfitting designed to provide the student with exercises similar to those that a shipfitter would normally encounter and respond to in the routine performance of duties.

132 — Liquid Piping Systems (3:3:0)
A study of the piping schemes used in ship construction for potable water, sanitary and fire fighting systems.

137 — Marine Fire Systems (3:0:7)
The design and layout of water, steam and chemical fire fighting systems will be studied in this course.

138 — Potable Water System (3:0:7)
A study of the system of piping used in the conveyance and protection of the water used for human consumption in the marine installation.

231 — Structural Fitting (3:0:6)
A problems lab in structural fitting designed to provide the student with problem exercises similar to those that a structural fitter would normally encounter and respond to in the routine performance of his/her duties.

232 — Marine and Structural Layout (3:0:6)
Layout problems lab designed to provide the student with problem exercises similar to those that a layerout would normally encounter and respond to in the routine performance of his/her duties.

233 — Marine and Structural Blueprint Reading (3:1:4)
A study of the engineering drawings and specifications used in the fabrication and erection of structural members used in buildings, spans, drilling and production platforms, barges and ships.

234 — Gaseous Piping Systems (3:3:0)
A study of fuel exhaust, compressed air and steam systems.

235 — Marine Piping Drawings (3:1:4)
A study of piping symbols, schematics, shop fabrication drawings, specifications and the take-off of materials from these drawings.

238 — Fuel and Exhaust Systems (3:0:7)
Problems associated with the layout and installation of systems that provide fuel for engine room, galley and heating equipment.

239 — Air and Steam Systems (3:0:7)
Problems associated with the layout and installation of compressed air to shop and engine room equipment and the steam system used for heating purposes.

Occupational Safety and Health

Adjunct Instructors: Richard Griffin, James Lovell, William Thomas, Roger Corley, Perry Van Zandt, Richard Hemmings

This program is designed to prepare the individual for employment as a safety specialist in business or industry. Courses may be taken individually to upgrade persons already employed as safety specialists. Occupational Safety and Health courses will be taught in the evening hours as well as the regular day schedule to accommodate the shift worker.

A graduate of this two-year instructional program is awarded the Associate of Applied Science Degree. A Certificate of Completion will be awarded upon completion of those courses marked with an asterisk. Persons interested in pursuing the Bachelor of Science in Industrial Technology are required to take the alternate general education courses.

Recommended Program of Study

First Semester

*OSH 131—Introduction to Occupational Safety and Health	3:3:0
*OSH 132—Safety and Health Standards, Codes, and Regulations	3:3:0
BC 131—Basic Communications or English Composition	3:3:0
TM 132—Fundamentals of Math II or Mth 1334	3:3:0
Chm 143—Introductory	4:3:2
	16:15:2

Second Semester

*OSH 133—Physical Hazards Control I	3:3:0
*OSH 134—Vehicle and Traffic Safety	3:3:0
IS 1325—Industrial Communications I or Spc 131	3:3:0
MM 233—Fundamentals of Supervision	3:3:0
*JR 232—Human Relations or + Soc	3:3:0
PM 1318—Related Physics or Phy 141	3:3:0
	18:18:0

Third Semester

*OSH 231—Physical Hazards Control II	3:3:0
*OSH 232—Health Hazard Recognition	3:3:0
*FT 133—Industrial Fire Protection I	3:3:0
IS 1326—Industrial Communications II or Eng 4335	3:3:0
IS 1312—Applied Supervision	3:3:0
**Elective	3:3:0
	18:18:0

Fourth Semester

*FT 133—Industrial Fire Protection II	3:3:0
*OSH 253—Industrial Hygiene Measurement	5:3:4
*OSH 233—Human Factors in Safety	3:3:0
*OSH 234—Safety Program Management	3:3:0
**Elective	3:3:0
	17:15:4

*A Certificate of Completion will be awarded upon the satisfactory completion of these courses.

**Persons desiring to continue in the Bachelor of Science in Industrial Technology will be required to take Mth 1341 in place of one of these electives.

+300 or 400 level required.

OCCUPATIONAL SAFETY AND HEALTH (OSH)

131 — **Introduction to Occupational Safety and Health (3:3:0)**
An introduction to the principles of occupational safety and health. A survey course covering the basic principles and techniques. Required for OSH majors and suitable for management and supervisory certificate students.

132 — **Safety and Health Standards, Codes and Regulations (3:3:0)**
A review of the important occupational safety and health standards and codes with particular emphasis on application of the codes to typical work situations as prescribed by the Occupational Safety and Health Act of 1970.

133 — **Physical Hazards Control I (3:3:0)**
An in-depth study of the basic responsibilities and techniques for safety inspections and control of, or removal of hazards from the site.

134 — **Vehicle and Traffic Safety (3:3:0)**
A basic introduction to problems and practices of vehicle and traffic safety programming with emphasis on regulatory requirements.

231 — **Physical Hazards Control II (3:3:0)**
Continuation of physical hazards inspections and studies in the work environment. Covers the principles of protective equipment, guarding, material handling, chemical and electrical hazards and illuminations.

232 — **Health Hazard Recognition (3:3:0)**
The subject matter of the course deals with the fundamentals of industrial hygiene and surveying techniques.

233 — **Human Factors in Safety (3:3:0)**
Designed to acquaint the student with the physiological and psychological factors that contribute to accident causation. An exploration of theoretical and research findings.

234 — **Safety Program Management (3:3:0)**
Designed to acquaint the student with the common elements of a modern safety program covering management responsibility, roles of committees, budgeting maintenance and accident investigation.

253 — **Industrial Hygiene Measurements (5:3:4)**
Methods of hazard evaluation will be studied in this course including gas and vapor sampling, air flow measurements, particulate sampling, industrial ventilation, heat stress, radiation and noise.

Plant Maintenance and Operations

Adjunct Instructors: Clement C. Berryman, Robert Boudreaux, Cletus Brehme, Ralph Glenn, Donald Glover, Robert Green, Perry Lee, Charles Orem, Billy Patterson, Charles Prothro, Raymond Robertson.

This course of study is provided for persons engaged in the maintenance and operations of the various petrochemical plants in the area.

Objectives of this program are to reinforce the practical work skills developed by the student as a result of his/her work experience and to insure that he/she has the necessary skills to maintain a position and fulfill a vital role in area industry.

A person who completes 30 semester hours of Plant Maintenance courses, or approved related courses, is awarded a Certificate of Completion in Plant Maintenance and Operations. Some Plant Maintenance courses are offered at Port Arhtur and Orange, but students must enroll in courses on the main campus to complete the program.

PLANT MAINTENANCE AND OPERATIONS (PM)

1212 — Pumps Laboratory (2:0:4)
Diagnosis and remedy of pump malfunctions will be covered in this laboratory course. Replacement of seals, couplings and impellers; alignment; and disassembly for inspection will be emphasized in this course.

1215 — Instrument Lab I (2:0:4)
A study of the various instruments used in the control of industrial processes. Demonstration and application of calibration procedures will be the major emphasis in this lab course. Corequisite: PM 1315.

1217 — Instrument Lab II (2:0:4)
A lab course designed to prepare the student to align and repair electronic/electromechanical controllers, recorders and transmitters. Corequisite: PM 1317.

1230 — Electrical Wiring Systems Laboratory (2:0:4)
A laboratory course designed to give the student practice in basic wiring procedures and the use of tools and materials required to install electrical wiring systems. Corequisite: PM 1330.

1231 — AC-DC Motors and Control Laboratory (2:0:4)
Practical experiments with electrical machines, controls and accessories will be conducted in this laboratory course.

1238 — Chromatography Laboratory (2:0:4)
A laboratory course in the operation and maintenance of the gas chromatography. Corequisite: PM 1338.

1311 — Compressors (3:3:0)
The application, operation and maintenance of air and gas compressors, proper installation and power requirements.

1312 — Pumps (3:3:0)
The application, care and operation of centrifugal rotary and reciprocating pumps and the study of direct and belt drives.

1315 — Pneumatic Instruments (3:3:0)
A study of the physical and chemical laws affecting pressure and temperature measuring and recording instruments. The operation and application of instruments for controlling manufacturing processes is covered.

1316 — Control Systems (3:3:0)
The basic control theory and methods for obtaining various control effects are studied. Practical industrial installations of control systems, controller adjustments and checking and testing procedures are stressed.

1317 — Electronic Instruments (3:3:0)
A review of basic electricity including components and basic laws. A study is made of electron tubes, elementary electronic circuits and some of the more generally used electronic instrument circuits.

1318 — Related Physics (3:3:0)
A study of matter, energy, mechanics, heat and basic electrical principles as they relate to the refining and chemical processes.

1319 — Related Chemistry (3:3:0)
A study of organic and inorganic chemistry, the safety consideration in the handling of chemicals and the physical properties of organic homologs.

1320 — Unit Operations (3:3:0)
This course will include an investigation of fluid flow and transport, distillation, evaporation, extraction and other unit functions.

1321 — Blueprint Reading (3:3:0)
A study of lines, views, symbols and dimensions involved in reading blueprint and shop sketches. Practice in making freehand sketches of simple objects.

1322 — **Structural Blueprint Reading (3:3:0)**
A study of the various engineering drawings and specifications used in the fabrication and erection of strutural steel members.

1323 — **Electrical Blueprint Reading (3:3:0)**
This course includes a study of the provisions of the National Electrical Code and its application to electrical installations. Block diagrams and schematics of industrial controls, power plants, distribution systems and motor controls also will be studied.

1324 — **Blueprint Reading for Pipefitters (3:3:0)**
An introduction to piping drawings, symbols and schematics. Shop fabrication drawings, specifications and material take-off also will be covered in the course.

1325 — **Water Plant Operations (3:3:0)**
The source and chemistry of water and the operation of equipment necessary to make it suitable for human and/or industrial consumption will be studied in this course.

1326 — **Electrical Generation (3:3:0)**
Study of the operation and maintenance of electrical generators and the drive mechanisms utilized in industrial and public utility applications.

1327 — **Boiler Operation (3:3:0)**
Start-up and shut-down procedures, routine operation, boiler instrumentation, fueling and water requirements of the boiler and auxiliary equipment are topics to be discussed in this course.

1328 — **Marine Blueprint Reading (3:3:0)**
A study of marine and shipbuilding blueprints, and the symbols and conventions relating to them. The course also includes a study of A.I.S.C. standards and specifications.

1329 — **Industrial Blueprint (3:3:0)**
A study of plot plans, foundation drawings, schedules, sections and specifications used in commercial and industrial construction.

1330 — **Electrical Wiring Systems I (3:3:0)**
A study of basic AC theory, its generation and distribution, basic electrical wiring procedures, systems, tools and materials will be covered in depth.

1331 — **AC-DC Motors and Control Theory (3:3:0)**
A study of rotating electrical machines, their characteristics, uses and control devices including application and troubleshooting procedures.

1333 — **Construction Estimating (3:3:0)**
A study of building codes, plans, specifications, contracts, and the general techniques of estimating building construction costs.

1335 — **Southern Standard Building Code (3:3:0)**
An overview of the Southern Standard Building Code, its organization and history. Specific instruction on the interpretation of the code emphasis on foundations, framing and occupancy requirements.

1336 — **Southern Standard Plumbing Code (3:3:0)**
An overview of the Southern Standard Plumbing and Gas Code. Specific instruction will be given in the interpretation of the code with emphasis on sizing the waste, vent and gas piping systems.

1338 — **Chromatography (3:3:0)**
History, theory of operation, application and maintenance of the chromatograph will be discussed in this course.

1340 — **Industrial Hydraulics (3:3:0)**
The operation and maintenance of hydraulic equipment, including basic hydraulics and all types of pumps, motors and controls, will be studied in this course.

SPECIAL TRAINING ACTIVITIES

The purpose of Special Training Activities is to serve the educational and training needs of adults by offering short courses, workshops and conferences designed to achieve a specific objective. The flexibility of these training activities allows the College of Technical Arts to react quickly to a training need expressed by industrial firms, governmental agencies or groups of concerned individuals. Technical Arts, in cooperation with the Division of Public Service, negotiates the nature and length of the training with the group requesting the training. College facilities, equipment and faculty are available to insure that the training objective is successfully achieved.

Special Training Activities include:

Defensive Driving Classes — National Safety Council approved classes in defensive driving are offered regularly by the College of Technical Arts. Successful completion of the eight hour class allows students to receive a reduction in their automotive insurance rates as well as learn safe driving techniques.

Industrial Safety Conference — Faculty members in the Fire Protection Technology and Occupational Safety and Health programs periodically sponsor safety related conferences and workshops. Recent workshops covered safety for supervisors and OSHA regulations.

Industrial Start-Up Training — New industries and existing firms undergoing expansions may qualify for industrial start-up training operated by Lamar and funded by the Texas Education Agency. To date, several extensive training programs have been conducted by Adult Training.

CETA Training Programs — Funds are provided by the Comprehensive Employment and Training Act to prepare unemployed persons for existing jobs. Lamar University has participated in several training programs including appliance repair, engine lathe operators and truck driving.

Child Care Conferences — Grants from the Department of Human Resources have allowed Adult Training to offer conferences for persons who work in child care centers. These conferences allow participants to meet the licensing requirements of the State.

Industrial Workshops — The College of Technical Arts has extensive resources both in personnel and equipment to assist companies and groups with their training. Workshops on pumps, National Electrical Codes, waste water treatment, diesel fuel injection and welding inspection are examples of the types of workshops that are conducted.

Information concerning Special Training Activities can be obtained from the supervisor of adult training. The telephone number of this office is (713) 838-8627.

Industrial Department

Department Head — M. Paul Roy.

Automotive Mechanics

Instructor — Franklin C. Savage.

Automotive Mechanics is a course of study designed to prepare the student for a career in the field of automotive repair and servicing. The objectives of the program are to provide a student with the technical background to understand the operation of the modern automobile and to offer experience which will develop skills in the repair and servicing of automobiles and trucks.

This program is presently offered only at the Port Arthur campus and a student may receive a diploma for one year of study or an Associate of Applied Science degree for completion of the full two year program of study.

Recommended Program of Study

First Semester

AMe 131—Intro to Auto Mech*	3:3:0
AMe 132—Fund of Internal Comb Eng*	3:3:0
AMe 136—Basic Shop Proc*	3:0:7
AMe 137—Shop Equip & Instrumentation Appl*	3:0:7
TM 131—Fund of Math I or Approved Math (Math Dept)*	3:3:0
BC 131—Basic Comm or Eng Comp (Eng Dept)*	3:3:0
	18:12:14

Second Semester

AMe 134—Auto Elec Systems*	3:3:0
AMe 135—Fuel & Emis Control*	3:3:0
AMe 138—Engine Tune-Up*	3:0:7
AMe 139—Auto Troubleshooting*	3:0:7
TM 132—Fund of Math II or Approved Math (Math Dept)*	3:3:0
BC 132—Bus Comm or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Third Semester

AMe 231—Auto Chassis	3:3:0
AMe 232—Auto Eng Overhaul*	3:3:0
AMe 236—Chassis Repairs & Alignment Procedures	3:0:7
AMe 237—Adv Engine Maint*	3:0:7
JR 231—Job Rel or Soc 131 (Soc Dept)*	3:3:0
Elective	3:3:0
	18:12:14

Fourth Semester

AMe 234—Auto Transmissions	3:3:0
AMe 235—Auto Air Cond	3:3:0
AMe 238—Appl of Drive Train Repairs	3:0:7
AMe 239—Heater & Air Cond Service	3:0:7
TM 232—Industrial Math	3:3:0
Elective	3:0:3
	18:12:14

*Students taking these courses may receive an Automotive Mechanics diploma. Suggested Electives JR 232; MM 131; Wld 136; Dft 136; IEE 136.

AUTOMOTIVE MECHANICS (AMe)

131 — Introduction to Automotive Mechanics (3:3:0)*
A study of shop safety, basic mechanical tool usage, and basic engine and component systems functions.

132 — Fundamentals of Internal Combustion Engines (3:3:0)
Study and skills in inspection and diagnosis of engine problems. Assembly and repair of automotive engines.

134 — Automotive Electrical Systems (3:3:0)
Study of automotive electrical and charging system components. Prerequisite: AMe 137.

135 — Fuel and Emission Control (3:3:0)
An in-depth study of carburetors, repairs and adjustment of fuel system components. Prerequisite: AMe 132.

136 — Basic Shop Procedures (3:0:7)
Practical application of shop operations, general shop safety and maintenance, use of hand tools and shop equipment.

137 — Shop Equipment and Instrumentation Application (3:0:7)
Application of study in the use of shop electrical and related equipment. Correct usage and safety will be stressed. Testing equipment operations.

138 — Engine Tune-up. (3:0:7)
A program of continued study and application of carburetion and engine electrical components and valve reconditioning. Safety related to engine operation will be stressed. Application of engine timing, inspection, adjustments and repairs of automotive ignition systems. Prerequisite: AMe 137.

139 — Automotive Trouble Shooting (3:0:7)
Practical application of skills in diagnosis and repair. Prerequisite: AMe 137.

*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

231 — Automotive Chassis (3:3:0)
Study of automotive suspension parts and front-end alignment. Prerequisite: AMe 137.

232 — Automotive Engine Overhaul (3:3:0)
Study and development of skills in engine overhaul and repair of malfunctions. Prerequisite: AMe 139.

234 — Automobile Transmission (3:3:0)
Theory and repair of automatic and manual transmissions. Prerequisite: AMe 137.

235 — Automobile Air Conditioning (3:3:0)
Auto air conditioning and heater service. Prerequisite: AMe 137.

236 — Chassis Repairs and Alignment Procedures (3:0:7)
Application of study of AMe 231 in developing skills in service and repair of springs, shocks, steering components, brakes and wheel alignment. Prerequisite: AMe 137.

237 — Advanced Engine Maintenance (3:0:7)
Study and application of major engine and component repairs, inspection and service. Prerequisite: AMe 139.

238 — Application of Drive Train Repairs (3:0:7)
Application and study of manual and automatic transmissions. Actual repairs, adjustment and inspection of transmissions, clutch assemblies, propeller shafts, joints and rear axle differentials. Prerequisite: AMe 137.

239 — Heater and Air Conditioning Service (3:0:7)
An in-depth study of heater and air conditioning service and repairs. Prerequisite: AMe 137.

Diesel Mechanics

Instructors: James H. Smith, Jerry W. Campbell, Pete Matak III

Diesel Mechanics is a course of study designed to prepare the student for a career in the operation, repair and maintenance of diesel engines.

Objectives of the program are to provide the student with the technical background in the design and construction of diesel engines, and to offer experiences which will develop skills in their operation, repair and maintenance.

A graduate of this two-year instructional program is awarded the Associate of Applied Science degree.

Recommended Program of Study

First Semester

DM 131—Intro to Diesel Mech	3:3:0
DM 132—Diesel Cycle Appl	3:3:0
DM 136—Basic Shop Proc	3:0:7
DM 137—Precision Inst Usage	3:0:7
TM 131—Fund of Mth I or Approved Mth (Math Dept)	3:3:0
BC 131—Basic Comm or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Second Semester

DM 134—Related Sys	3:3:0
DM 135—Maint & Repair Prob	3:3:0
DM 138—Tune-up	3:0:7
DM 139—Accessory Serv	3:0:7
TM 132—Fund of Mth II or Approved Mth (Math Dept)	3:3:0
BC 132—Bus Comm or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Third Semester

DM 231—Ignition and Comb Prin	3:3:0
DM 232—Diesel Fuel & Lub	3:3:0
DM 236—Troubleshooting & Install	3:0:7
DM 237—Adv Diesel Eng Maint	3:0:7
TM 231—App Geo	3:3:0
JR 231—Job Rel or Soc 131 (Soc Dept)	3:3:0
	18:12:14

Fourth Semester

DM 234—Overhaul Proc	3:3:0
DM 235—Fuel Injec System	3:3:0
DM 238—Dynamometer Oper & Anal	3:0:7
DM 239—Diesel Eng Hydr	3:0:7
TM 232—Industrial Math	3:3:0
Elective†	3:3:0
	18:12:14

†By Approval

Suggested Technical Arts electives: BC 231; JR 232; MM 131, 132, 231, 233; MT 133; Wld 133; Dft 133; IEE 133; TM 134; BDP 131.

DIESEL MECHANICS (DM)

131 — **Introduction to Diesel Mechanics (3:3:0)**
General description and construction of engines, diesel engine principles, frames, cylinders, heads and pistons.

132 — **Diesel Cycle Application (3:3:0)**
The diesel cycle, its advantages and applications. The basic problems of operations and the design and construction of diesel engines are studied.

133 — **Small Engines (3:3:0)**
The operation and repair of small internal combustion engines. Diagnosis and troubleshooting will be emphasized.

134 — **Related Systems (3:3:0)**
Engine cooling, air intake systems, exhaust systems and starting systems. Prerequisite: DM 131 and 132.

135 — **Maintenance & Repair Problems (3:3:0)**
Maintenance and repair problems of the diesel engine. The checking of bearing clearances and the installation of piston rings are stressed. Prerequisite: DM 131 and 132.

136 — **Basic Shop Procedures (3:0:7)**
Installation, operation, maintenance and repair of diesel engines, hand tools and precision instruments, shop safety, fastening devices and tubing fabrication.

137 — **Precision Instrument Application (3:0:7)**
Installation, operation, maintenance and repair of diesel engines; disassembly, measuring, checking for wear, proper assembly, correct use of taps and dies, flaring tools and torque wrenches.

138 — **Tune-up and Repair (3:0:7)**
Valve reconditioning, cylinder head repairs, engine operation and testing, diesel engine operation, shop safety, engine adjustments, cylinder and piston reconditioning. Prerequisite: DM 136 and 137.

139 — **Accessory Servicing (3:0:7)**
Repair of water pumps, oil pumps, fuel pumps, blowers, minor engine tune-up, valve and turbocharger repair. Prerequisite: DM 136 and 137.

231 — **Ignition and Combustion Principles (3:3:0)**
Electrical systems, governors, fuels and combustion and fuel systems. Prerequisite: DM 131 and 132.

232 — **Diesel Fuel and Lubrication (3:3:0)**
A comprehensive study of diesel fuel and lubricating oils. Basic electricity, electrical and gasoline starting systems are also stressed. Prerequisite: DM 131 and 132.

234 — **Overhaul Procedures (3:3:0)**
Engine overhauling, special repairs, salvaging, hydraulics and terms used in diesel engineering. Prerequisite: DM 231 and 232 or DM 134 and 135.

235 — **Fuel Injection Systems (3:3:0)**
Fuel injection systems, hydraulics and its application, engine tune-up and troubleshooting. Prerequisite: DM 231 and 232 or DM 134 and 135.

236 — **Troubleshooting and Installation (3:0:7)**
Installation, operation, maintenance and repair of diesel engines, electrical systems, generators, alternators, cranking motors, regulators, governors, steering clutches, final drives, track and roller frames. Prerequisite: DM 138 and 139 or DM 136 and 137.

237 — **Advanced Diesel Engine Maintenance (3:0:7)**
Installation, operation, maintenance and repair of diesel engines, fuel systems, oil pumps, filters, oil pressure regulators, natural gas carburetors, natural gas regulators and preventive maintenance. Prerequisite: DM 138 and 139 or DM 136 and 137.

238 — **Dynamometer Operation and Analysis (3:0:7)**
Installation, operation, maintenance and repair of diesel engines, fuel injection systems, fuel injection pumps, injector nozzles, unit injectors, engine

performance, testing and engine dynamometer. Prerequisite: DM 236 and 237 or DM 138 and 139.

239 — Diesel Engine Hydraulics (3:0:7)

Installation, operation, maintenance and repair of diesel engines, hydraulic pumps, hydraulic controls, hydraulic power applications, advanced engine overhaul, special repairs, diagnosing and tune-up. Prerequisite: DM 236 and 237 or DM 138 and 139.

Machine Tools

Instructors: M. Paul Roy, Otto A. Kriegel, Brian K. Tanner.

Machine Tools is a two-year program designed to train students in the proper use of metal-removing machine tools in the modern machine shop. The curriculum is designed to develop those skills, abilities and perceptions needed to permit the graduate to advance in the industrial complex as a competent craftsman.

Objectives of the program include the promotion of desirable attitudes and the development of needed manipulative skills. Students are consistently encouraged to develop a sense of responsibility and self-reliance.

A graduate of this two-year instructional program is awarded the Associate of Applied Science degree.

Recommended Program of Study

First Semester

MT 131—Intro to Hand & Mac Tools	3:3:0
MT 132—Fund of Lathe	3:3:0
MT 136—Basic Drill Press & Lathe	3:0:7
MT 137—Bench Tools & Layout	3:0:7
TM 131—Fund of Math I or Approved Mth (Math Dept)	3:3:0
BC 131—Basic Comm or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Second Semester

MT 134—Milling Machines	3:3:0
MT 135—Intro to Grinding Mac	3:3:0
MT 138—Milling Processes	3:0:7
MT 139—Milling & Grinding Proc	3:0:7
TM 132—Fund of Math II or Approved Math (Math Dept)	3:3:0
BC 132—Basic Comm or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Third Semester

MT 231—Adv Lathe & Drill Press	3:3:0
MT 232—Appl of Lathe & Drill Press	3:3:0
MT 236—Multi-Machine Projects	3:0:7
MT 237—Gauges & Inspection	3:0:7
TM 231—App Geo	3:3:0
JR 231—Job Rel or Soc 131 (Soc Dept)	3:3:0
	18:12:14

Fourth Semester

MT 234—Adv Grinding & Milling Tech	3:3:0
MT 235—Prob in Grinding & Milling	3:3:0
MT 238—Layout & Set-up	3:0:7
MT 239—Mach Design & Maint	3:0:7
TM 232—Ind Math	3:3:0
Elective†	3:3:0
	18:12:14

†By Approval

Suggested Technical Arts electives: MM 131, 132, 231, 233; BC 231; JR 232; DM 133; Dft 133; IEE 133; Wld 133, 235; TM 133, 134; BDP 131.

MACHINE TOOLS (MT)

131 — Introduction to Hand and Machine Tools (3:3:0)

Study of hand and machine tools used in the machine shop, with emphasis on safety, measuring tools, layout and drilling machines. Basic blueprint reading.

132 — Fundamentals of the Lathe (3:3:0)

Consideration of the engine lathe, its uses and capabilities. Basics of material selection. Cut off machines. Blueprint interpretation.

133 — Machine Shop (3:3:1-3)

Practice in the use of hand and machine tools of the modern machine shop.

134 — **Milling Machines (3:3:0)**
Applications of vertical and horizontal milling machines. Setups and operations. Gears. Indexing devices. Vertical band machines. Blueprint interpretation.

135 — **Introduction to Grinding Machines (3:3:0)**
Grinding machines, grinding wheels and cutter sharpening. Shapers, planers and their uses. Basic metal heat treatment. Blueprints.

136 — **Basic Drill Press and Lathe (3:0:7)**
A laboratory study with use of various hand and machine tools. Special emphasis is placed on safety, bench work, the lathe and drill press.

137 — **Bench Tools and Layout (3:0:7)**
A continuation of the development of manipulative skills with bench tools, gauges, layout and setups common to the drill press, lathe and shaper.

138 — **Milling Process (3:0:7)**
Typical processes, jobs and setups are employed to further develop skills and understanding of the machining process. Additional projects are aimed at gaining experience with companion machine tools.

139 — **Milling and Grinding Procedures (3:0:7)**
Additional emphasis is placed on implementation of different types of mills and their attachments. The association of the grinder with the mill is introduced.

231 — **Advanced Lathe and Drill Press (3:3:0)**
Lathe, drill press and details of layout, setup and operations are extended. Continued emphasis on blueprint interpretations. Prerequisite: MT 131 and 132.

232 — **Applications of Lathe and Drill Press (3:3:0)**
Problems encountered in diverse applications of lathes and drill presses. Precision measuring and gauging instruments. Further blueprint study. Prerequisite: MT 131 and 132.

234 — **Advanced Grinding and Milling Techniques (3:3:0)**
Advanced treatment of various machine tools involved in planing, milling and grinding of metals. Problems in blueprint reading. Prerequisite: MT 134 and 135.

235 — **Problems in Grinding and Milling (3:3:0)**
Further discussion of grinding and milling principles and problems. Fundamental treatment of hydraulics as applied to machine tools. Advanced study of blueprints and sketches. Prerequisite: MT 134 and 135.

236 — **Multi-Machine Projects (3:0:7)**
Jobs and processes involving the use of various machine tools with close tolerances throughout. Stress is placed on improving time consumption. Prerequisite: MT 136 and 137.

237 — **Gauges and Inspection (3:0:7)**
A continuation of the development of manipulative skills with additional practice in close tolerance measuring and inspection. Prerequisite: MT 136 and 137.

238 — **Layout and Setup for Mills and Grinders (3:0:7)**
Laboratory practice in the proper procedures and methods for layout and setup. Tool and cutter grinding is treated. Time utilization and accuracy are pronounced. Prerequisite: MT 138 and 139.

239 — **Machine Design and Maintenance (3:0:7)**
Maintenance and repair of laboratory machine tools is implemented to expand ability and manipulative skills. Assembly projects which involve several machine tools are promoted. Prerequisite: MT 138 and 139.

Refrigeration and Air Conditioning Technology

Instructors: Ellis Thompson, Ben M. Jarrell.

Refrigeration and Air Conditioning Technology is a two-year program planned to afford the student the skills and knowledge required to install, repair and maintain environmental control equipment. Students also receive practice in troubleshooting inoperative equipment and performing preventive maintenance on air conditioning and refrigeration equipment.

Students who complete the required twenty-four semester hours of RAC courses may apply for a Certificate of Completion in Refrigeration. Students who successfully complete the entire program of study are awarded the Associate of Applied Science in Refrigeration and Air Conditioning Technology.

Recommended Program of Study

First Semester

RAC 131—Basic Refrig Prin*	3:3:0
RAC 132—Basic Elec & Elec Devices*	3:3:0
RAC 136—Basic Refrig*	3:0:7
RAC 137—Basic Elec Wiring & Testing Proc*	3:0:7
TM 131—Fund of Math I or Approved Mth (Math Dept)	3:3:0
BC 131—Basic Comm.or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Second Semester

RAC 134—Refrig Theory*	3:3:0
RAC 135—Comm Refrig*	3:3:0
RAC 138—Basic Refrig & Service Proc	3:0:7
RAC 139—Basic Elec Wiring & Control Sys*	3:0:7
TM 132—Fund of Math II or Approved Mth (Math Dept)	3:3:0
BC 132 — Bus Comm or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Third Semester

RAC 231—Prin of Air Cond	3:3:0
RAC 232—Load Estimation—Heating & Cooling	3:3:0
RAC 236—Forced Air Heating & Cooling Sys	3:0:7
RAC 237—Air Cooled Heating & Cooling Sys	3:0:7
TM 231—App Geo	3:3:0
JR 231—Job Rel or Soc 131 (Soc Dept)	3:3:0
	18:12:14

Fourth Semester

RAC 234—Adv Air Cond	3:3:0
RAC 235—Cooling Towers	3:3:0
RAC 238—Adv Air Cond	3:0:7
RAC 239—Heat Pumps & Absorption Sys	3:0:7
TM 232—Ind Math	3:3:0
Elective†	3:3:0
	18:12:14

*These courses are required for a Certificate of Completion in Refrigeration.

†By Approval

Suggested Technical Arts electives: MM 131, 132, 231, 233; BC 231; JR 232; DM 133; Dft 133; IEE 133; Wld 133; BDP 131.

REFRIGERATION AND AIR CONDITIONING TECHNOLOGY (RAC)

131 — Basic Refrigeration Principles (3:3:0)
The history of refrigeration, theory of heat, compression cycle, metering devices and components of the refrigeration cycle.

132 — Basic Electricity and Electrical Devices (3:3:0)
Servicing commercial refrigeration, heat loads, defrosting, basic electric control, wiring diagrams, capacitors and relays.

134 — Refrigeration Theory (3:3:0)
Related knowledge in chemistry necessary for refrigeration, cooling coil and condenser design, refrigerant flow controls, electrical control requirements, manufacturers' tables, charts, diagrams and engineering specification sheets. Safety to be used in refrigeration work. Prerequisite: RAC 131 and 132.

135 — **Commercial Refrigeration (3:3:0)**
Introduction to and history of commercial refrigeration trade. Knowledge necessary in servicing and repairing electrical motors, motor controllers, measuring power in electrical circuits, calculating compressor tonnage capacities, steps in the systematic analysis of refrigeration circuits and applications of commercial refrigeration. Prerequisite: RAC 131 and 132.

136 — **Basic Refrigeration (3:0:7)**
Methods of cutting, flaring and bending copper tubing, soldering (hard and soft), leak testing, evacuating and charging of reciprocating equipment. Gauge installation, removal and calibration.

137 — **Basic Electrical Wiring and Testing Procedure (3:0:7)**
Electric motors, controls and transformers. Finding common start and run on sealed units, changing motor starting switches, testing and wiring single phase and shaded pole motors.

138 — **Basic Refrigeration and Service Procedure (3:0:7)**
Adding and removing refrigerant, repair of domestic refrigerators and freezers. Tracing and installation of refrigeration circuits, leak testing, evacuating and system charging. Prerequisite: RAC 136 and 137.

139 — **Basic Electrical Wiring and Control Systems (3:0:7)**
Commercial refrigeration. Installation of time clocks, automatic defrosting and pressure defrost. Wiring of low pressure controls, magnetic starters and temperature controls. Prerequisite: RAC 136 and 137.

231 — **Principles of Air Conditioning (3:3:0)**
Refrigeration for summer comfort cooling systems, air cycles, properties of air, psychrometric processes, application of warm air heating systems, sizing and balancing air ducts, and application and selection of humidification equipment. Prerequisite: RAC 134 and 135.

232 — **Load Estimation — Heating and Cooling (3:3:0)**
Estimation of summer cooling loads, winter heat loss, refrigeration for comfort cooling and air conditioning, automatic controls for heating and cooling systems and interpretation of electrical wiring schematics. Prerequisite: RAC 134 and 135.

234 — **Advanced Air Conditioning (3:3:0)**
Air conditioning survey for commercial and/or residential system design, cost estimates, codes, calculations for conditioned air supply, fan types, room air conditioning and heat pumps. Prerequisite: RAC 231 and 232.

235 — **Cooling Towers (3:3:0)**
Selecting, sizing and installing cooling towers, piping and pumps. Central station equipment, water chillers, boilers, absorption refrigeration, refrigerant piping data, steam lines, electrical data and tools of the estimator. Prerequisite: RAC 231 and 232.

236 — **Forced Air Heating and Cooling (3:0:7)**
Skills in the correct use of instruments, fitting and installing ducts, service of limit switches, fan controls, blowers and filters. Setting and checking oil failure switches. Prerequisite: RAC 138 and 139.

237 — **Air Cooled Heating and Cooling Systems (3:0:7)**
Installation and service of residential and commercial cooling and heating systems. Electronic air cleaners. Humidification equipment. Capacity testing by refrigeration and air methods. Prerequisite: RAC 138 and 139.

238 — **Advanced Air Conditioning (3:0:7)**
Sizing, installing and checking small tonnage commercial air conditioning systems. Design and installation of primary and secondary electrical circuits. Sizing, installation and capacity testing water pumps and water circuits for air conditioning systems. Capacity testing refrigerant circuits. Acidizing condensers. Prerequisite: RAC 236 and 237.

239 — **Heat Pumps and Absorption Systems (3:0:7)**
Installation, operation, maintenance and repair of natural gas systems.

Total electric heating and cooling systems, electrical circuits, electronic instruments, three phase motors and controls. Prerequisite: RAC 236 and 237.

Welding

Instructors: Carey B. Wesley, Ronald I. Marble, Donald R. Grubbs, James R. Ripley, Lee R. Trahan.

Welding is a program designed to prepare the student for a career in the field of industrial or construction welding, either as a competent welder or in a position which requires knowledge of welding, welding equipment or supplies.

Objectives of the program include the development of skills required in modern welding techniques. Safety and proper work habits also are stressed.

Students who complete the required twenty-four semester hours of Welding courses may apply for a Certificate of Completion in Plate Welding. Students who successfully complete the entire program of study are awarded the Associate of Applied Science Degree in Welding.

Recommended Program of Study

First Semester

Wld 131—Study of Tools, Mat'ls & Processes*	3:3:0
Wld 132—Prin of Flame Cutting & Arc Wld Equip*	3:3:0
Wld 136—Operation of Wld Tools*	3:0:7
Wld 137—Wld & Cutting*	3:0:7
TM 131—Fund of Math I or Approved Mth (Math Dept)	3:3:0
BC 131—Basic Comm or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Second Semester

Wld 134—Processes Related to Wld*	3:3:0
Wld 135—A.C. & D.C. Supplies*	3:3:0
Wld 138—Test Qualifications*	3:0:7
Wld 139—Wld and Brazing*	3:0:7
TM 132—Fund of Math II or Approved Math (Math Dept)	3:3:0
BC 132—Bus Comm or Eng Comp (Eng Dept)	3:3:0
	18:12:14

Third Semester

Wld 231—Ferrous & Nonferrous Metals	3:3:0
Wld 232—Fund of Inert Gas Wld	3:3:0
Wld 236—Ferrous Metals & Pipe	3:0:7
Wld 237—Layout & Fabrication	3:0:7
TM 231—App Geo	3:3:0
JR 231—Job Rel or Soc 131 (Soc Dept)	3:3:0
	18:12:14

Fourth Semester

Wld 234—Special Wld Appl	3:3:0
Wld 235—Metals & Heat Treatment	3:3:0
Wld 238—Inert Gas & Nonferrous Metal	3:0:7
Wld 239—Adv Wld	3:0:7
TM 232—Ind Math	3:3:0
Elective†	3:3:0
	18:12:14

*These courses are required for a Certificate of Completion in Plate Welding.

†By Approval

Suggested Technical Arts electives: MM 131, 132, 231, 233; BC 231; JR 232; DM 133; Dft 133; IEE 133; MT 133; TM 133; 134.

WELDING (Wld)

131 — Study of Tools, Materials and Processes (3:3:0)*

A study of welding tools and materials and their relation to the welding process. Blueprint reading and sketching are initiated.

132 — Principles of Flame Cutting and Arc Welding Equipment (3:3:0)

Study of tools, safety, flame cutting and arc welding equipment and processes. Blueprint reading is also studied.

133 — Welding (3:3:1-3)

Arc welding, acetylene welding and cutting.

134 — Processes Related to Welding (3:3:0)
Tools, materials and processes as related to welding are continued. Emphasis on blueprint reading and sketching. Prerequisite: 131 and 132.

135 — AC and DC Supplies (3:3:0)
Study of AC and DC arc welding supplies. Various arc cutting processes are studied. Layout work along with blueprint reading will be stressed. Prerequisite: Wld 131 and 132.

136 — Operation of Welding Tools (3:0:7)
Operation and use of arc welding tools and equipment; acetylene welding tools and equipment. Emphasis on safety.

137 — Welding & Cutting (3:0:7)
Continuation of arc welding in horizontal, vertical and overhead positions. Gas welding in horizontal position. Cutting straight lines.

138 — Test Qualifications (3:0:7)
Butt plate welding and test qualifications. Flat and vertical welds on Vee groove plate. Prerequisite: 136 and 137.

139 — Welding and Brazing (3:0:7)
Welding Vee groove plate in all positions. Testing for qualification in all positions. Cutting and gas welding. Introduction to brazing. Prerequisite: 136 and 137.

231 — Ferrous and Nonferrous Metals (3:3:0)
Special welding techniques for ferrous and nonferrous metals. Testing procedures. Pipe layout. Sketching and blueprint interpretation. Prerequisite: Wld 131 and 132.

232 — Fundamentals of Inert Gas Welding (3:3:0)
TIG, MIG (GMAW, GTAW) and submerged arc. The heliarc, microwire, submerged arc and innershield processes of welding and their applications. Blueprint reading and layout. Prerequisite: Wld 131 and 132.

233 — Advanced Metallurgy (3:3:0)
A study of the effects of heat on the exotic metals. Specific application of metals is also covered. A study of corrosion, machining, foundry operations and materials testing is included in the course of study.

234 — Special Welding Application (3:3:0)
Special welding applications, brazing, soldering and resistance welding will be studied in this course. Continuation of blueprint reading and layout. Prerequisite: Wld 134 and 135 or Wld 231 and 232.

235 — Metals and Heat Treatment (3:3:0)
Introduction to metallurgy, metal manufacture, metal identification and heat treatment. Procedures for welder qualification. Blueprint reading and pipe layout continued. Prerequisite: Wld 134 and 135, or Wld 231 and 232.

236 — Ferrous Metals and Pipe (3:0:7)
Introduction to heliarc process used with ferrous and nonferrous metals. Emphasis on arc welding ferrous metals and pipe. Safety precautions stressed. Prerequisite: Wld 136 and Wld 137.

237 — Layout and Fabrication (3:0:7)
Thorough instruction in layout, fabrication and welding pipe installations. Precision flame cutting. Advanced heliarc welding of aluminum, stainless steel and alloys. Prerequisite: Wld 136 and 137.

238 — Inert Gas and Nonferrous Metals (3:0:7)
Operation of metal inert gas welding (MIG) of steel plate and pipe. Extensive arc welding of pipe. Oxy-acetylene flame cutting and fitting. Prerequisite: Wld 138, 236 and 237.

239 — Advanced Welding (3:0:7)
Advanced ferrous and nonferrous welding. Extended TIG (GMAW, GTAW) and MIG welding. Setup and operation of submerged arc welding. Advanced pipe welding and test qualifications. Plasma arc cutting. Safety. Prerequisite: WLD 138 and WLD 139, or WLD 236 and WLD 237.

Related Arts Department

Department Head — Joe I. Juarez.

Mid-Management

Instructors: Don E. Horton, Ira Wilsker, Matt Mathis

Mid-Management is a program in business and supervisory management designed to develop the fundamental skills, knowledge, attitudes and experience which will enable men and women to function in decision-making positions as supervisors or junior executives. All new students must be counseled by a mid-management coordinator before registering. This program is offered at the Beaumont and Orange Campuses.

A graduate of this two-year instructional program is awarded the Associate of Applied Science degree.

Recommended Program of Study

First Semester

MM 131—Intro to Bus	3:3:0
MM 1311—Internship Seminar	3:1:15
English Composition	3:3:0
Mth 1313—Self Paced Comp Ski	3:3:0
BDP 133—Intro to Bus Data Proc or CS 131 (IE Dept)	3:3:0
Electives*	3:3:0
	18:16:15

Second Semester

MM 132—Basic Eco or Eco 131 (Eco Dept)	3:3:0
MM 1312—Internship Seminar	3:1:15
English Composition	3:3:0
Mth 1315—Self-Paced Con Math	3:3:0
MM 134—Personal Finance	3:3:0
BDP 131—Elem Accounting or Acc 231 (Acc Dept)	3:3:0
	18:16:15

Third Semester

MM 231—Small Bus Mgt	3:3:0
MM 2311—Internship Seminar	3:1:15
BDP 136—Inter Accounting or Acc 232 (Acc Dept)	3:3:0
Soc 131—Intro to Soc	3:3:0
Electives*	3:3:0
	15:13:15

Fourth Semester

MM 232—Personnel and Labor Prob	3:3:0
MM 2312—Internship Seminar	3:1:15
Spc 131—Speech Comm	3:3:0
MM 233—Fund of Supervision	3:3:0
Electives*	3:3:0
	15:13:15

*By Approval

Suggested Electives: BDP 142, 144; BC 231; MM 133, 237; REs 1311, 1312, 1313, 1314, 1315, 1316; BA 331, 332, 3301, Eco 230, 132

MID-MANAGEMENT (MM)

131 — Introduction to Business (3:3:0)*

Survey of the functional areas of business and their interrelationships. Economics of industry and business; ownership and organization; marketing; production; personnel; finance and business controls.

1311, 1312, 2311, 2312 — Internship Seminar (3:1:15)

This course includes a one-hour seminar designed to build or strengthen a specific management skill. A requisite for this course is that the enrolled student must have at least 15 hours per week of approved supervised employment toward his/her career plan.

*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 — **Basic Economics (3:3:0)**
A practical application of economic theory to business situations, emphasizing problems most frequently faced today.

133 — **Principles of Selling (3:3:0)**
Precepts of effective selling in the American economy. Sales process; prospecting; presentation; objections; closing.

134 — **Personal Finance (3:3:0)**
Advice on how to make the student a better money manager in personal and family affairs. This includes budgets, purchases, taxes, savings, insurance, Social Security, investments, wills and estates.

231 — **Small Business Management (3:3:0)**
A practical view of the problems of initiating and operating a small business. Should clarify some questions of career choice and decision-making in business.

232 — **Personnel and Labor Problems (3:3:0)**
An elementary and practical approach to the problems with employees as individuals and groups, including those represented by unions.

233 — **Fundamentals of Supervision (3:3:0)**
Methods and techniques of supervision; included are basic skills for the beginning supervisor, as well as new ideas and broader concepts for the more experienced. Topics included are new employees, interviewing, job methods, training, safety, human relations, grievances, motivation and discipline.

237 — **Retailing (3:3:0)**
The development, organization, methods, policies of operation and problems in the marketing structure.

Basic Communications, Technical Mathematics and Job Relations

Instructors: William H. Hartford, Joe I. Juarez, Jerry B. Moseley, Deanna K.Stahl, Marcia Green

These courses are designed to relate to and complement the various programs offered in the College of Technical Arts. The objectives are to develop student competence in the areas of reading, applied grammar and public speaking; to develop student competence in applied mathematics and to develop student understanding of job and human relations.

BASIC COMMUNICATIONS (BC)

131 — **Basic Communications (3:3:0)**
The objectives of this course are to develop student competence in speaking and writing and to increase student competence in the use of the library for research in his major field.

132 — **Business Communications (3:3:0)**
The preparation of specifications, inventories, orders for supplies, tools and equipment and the basic elements of business letters and report writing through the use of practice letters and case studies.

231 — **Technical Writing (3:3:0)**
A study of the techniques of technical writing and its application to the individual student's major field. Prerequisite: Students must have taken BC 131 and 132 or its academic equivalent.

JOB RELATIONS (JR)

231 — Job Relations (3:3:0)
The purpose of this course is to present and analyze the roles of the worker and management. Included in the course will be a presentation of labor-management relations, evolution and growth of the American labor movement, development and structure of American business, communicative channels, state and federal legislation that affects the worker and management and personnel problems encountered in association with employers and employees.

232 — Human Relations (3:3:0)
The purpose of this course is to survey the social sciences that help explain human behavior and motivation. This course will include such topics as maturation, deviant behavior, cultural and social problems and interpersonal relationships in the job situation. These topics are designed to help individuals better understand themselves and society.

MATHEMATICS (TM)

131 — Fundamentals of Mathematics I (3:3:0)
Review and application of the fundamentals of mathematics; fractions, decimals, ratio and proportion, weights and measures, metric system, introduction to algebra.

132 — Fundamentals of Mathematics II (3:3:0)
Introduction to algebra, polynomials, exponents, powers and roots, solutions of simple equations, introduction to trigonometry and logarithms. Prerequisite: TM 131 or the equivalent.

134 — Business Mathematics (3:3:0)
A comprehensive course in basic business mathematics. Presenting work in interest, payrolls, taxes, financial statements and special problems for the mid-manager. Prerequisite: TM 131 or the equivalent.

135 — Fundamentals of Metric Measure for the Craftsman (3:3:0)
An introduction to the "Think Metric" approach of learning the International System of Measurement. Presentation of units on prefixes, length, volume, mass, area and temperature.

1331 — Algebra — Trigonometry (3:3:0)
A study of basic algebraic and trigonometric techniques needed by a technician. Includes simultaneous equations, logarithms, solutions of triangles, radian measure and complex numbers. Prerequisite: TM 131 or the equivalent.

231 — Applied Geometry (3:3:0)
Introduction to geometry, areas of polygons, triangles, circles, prisms, cylinders, pyramids, cones, frustrums, spheres and special solids. Prerequisite: TM 132 or the equivalent.

232 — Industrial Mathematics (3:3:0)
Introduction to trigonometry; strength of materials; work and power problems; speed ratios and pulleys and gear. Prerequisite: TM 231.

Real Estate

Instructor: Alice W. Cater.

The program of study is designed to prepare a student to enter the real estate industry in the fields of real estate sales, appraising, brokerage, finance, development, investment and management. It is planned for those entering the real estate industry, as well as for those who wish to expand their professional knowledge. These courses may be taken to satisfy the educational requirements of the Texas Real Estate Com-

mission for salesman's licenses, renewals and broker's licenses.

Upon successful completion of 60 semester hours in the real estate degree program, a student is awarded an Associate of Applied Science degree in Real Estate.

After successful completion of 15 semester hours of real estate courses, a person is awarded a Certificate of Completion in Real Estate, upon request.

The real estate program is offered at the Beaumont, Orange and Port Arthur Campuses.

Recommended Program of Study

First Semester

Eng Comp	3:3:0
Mathematics	3:3:0
Eco 131—Eco or MM 132	3:3:0
REs 1311—Real Es Prin & Prac	3:3:0
REs 1319—Real Estate Marketing	3:3:0
	15:15:0

Second Semester

Eng Comp	3:3:0
Mth 1315—Consumer Math	3:3:0
Acc 231—Acct or BDP 131	3:3:0
REs 1312—Real Es Finance	3:3:0
REs 1313—Real Es Appraising	3:3:0
	15:15:0

Third Semester

Gov 231—Amer Gov	3:3:0
Spc 131—Speech Comm	3:3:0
MM 231—Small Business Mgt	3:3:0
REs 1314—Real Es Law	3:3:0
REs 1318—Real Es Brokerage	3:3:0
	15:15:0

Fourth Semester

Soc 131—Soc or JR 232	3:3:0
REs 1315—Real Es Development	3:3:0
REs 1316—Real Es Invest & Mgt	3:3:0
REs 1317—Real Es Current Trends & Problems	3:3:0
Approved Elective	3:3:0
	15:15:0

Suggested electives: Eco 132; Acc 232; REs 1301; MM 133; 237; BA 331, 332, 3301; BDP 133, 136.

REAL ESTATE (REs)

1311 — Principles and Practices (3:3:0)
This is a study of the basic concepts and characteristics of real estate. It includes specialized areas such as real estate financing, investment, management, development, planning and property appraising.

1312 — Real Estate Finance (3:3:0)
This course deals with the finance involved in the real estate transaction, including the economic basis for mortgage financing, second mortgage and individual versus group or corporate financing. Prerequisite: REs 1311.

1313 — Real Estate Appraising (3:3:0)
Methods of appraising real property from the income approach to value through residual techniques will be covered in this study. Prerequisite: REs 1311.

1314 — Real Estate Law (3:3:0)
Law as it relates to real estate activities, including contract law, the law of agency and a study of legal characteristics influencing the capacity of real estate to produce a flow of services and income are topics explored in this course. Prerequisite: REs 1311.

1315 — Real Estate Development (3:3:0)
This course is a study of the techniques and related areas of residential, industrial, recreational and marine (coastal) development, including certain ecological ramifications. Prerequisite: REs 1311.

1316 — Real Estate Investment and Management (3:3:0)
This course is concerned with the analysis of real estate for investment decisions, including estimates of cash flow, impact of transaction and management of investment. Prerequisite: REs 1311.

1317 — Real Estate Current Trends and Problems (3:3:0)
This course is designed to cover current problems related to the practice of real estate. Prerequisite: REs 1311.

1318 — Real Estate Brokerage (3:3:0)
This course consists of procedures to establish a real estate office; selling; securing and listing prospects; showing the property; financing the sale; legal factors of the transaction and closing the sale. Prerequisite: REs 1311.

1319 — Real Estate Marketing (3:3:0)
Concepts for effective marketing of real estate through the sales process; prospecting, listing techniques, presentations, contracts, closings and basic objectives.

1301 — Real Estate Internship (3:3:0)
The student works with a real estate related business for 15 hours a week. The duties and activities are aimed at providing a training program for the student. Students, as a group, meet once a week with the instructor to analyze their work experience and relate it to their course in real estate. Prerequisite: REs 1311.

Technical Department

Department Head — Robert J. Lawrence.

Business Data Processing

Instructors: Lynnwood M. Clark, Roy W. Clark.

The objective of this course of study is to prepare the student for a career in computer programming within the field of business data processing. Each business data processing student will be assisted in the preparation of a program of study that combines the proper balance of programming theory and application with supervised operation of Lamar University's modern high-speed computer. While this program has no admission restrictions, students are advised to examine their aptitude in this field before enrolling.

A graduate of this two-year instructional program is awarded the Associate of Applied Science degree.

Recommended Program of Study

First Semester

BDP 131—Elem Acc or Acc 231 (Acc Dept)	3:3:0
BDP 133—Intro to Bus Data Proc or CS 131 + (IE Dept)	3:3:0
BDP 144—COBOL I	4:3:2
BC 131—Basic Comm or Eng Comp (Eng Dept)	3:3:0
TM 131—Fund of Mth I or Approved Mth (Mth Dept)	3:3:0
	16:15:2

Second Semester

BDP 136—Intermediate Acc or Acc 232 (Acc Dept)	3:3:0
BDP 142—Fortran I or CS 133 + (I.E. Dept)	4:3:2
BDP 241—Cobol II	4:3:2
TM 1331—Algebra—Trig or Approved Mth (Mth Dept)	3:3:0
BC 132—Bus Comm or Eng Comp (Eng Dept)	3:3:0
	17:15:4

Third Semester

BDP 247—Assembly Language	4:3:2
BDP 244—Business Applications	4:3:2
BDP 232—RPG	3:3:0
MM 131—Intro to Business	3:3:0
Elective*	3:3:0
	17:15:4

Fourth Semester

BDP 231—System Design	3:3:0
BDP 233—Cost Accounting	3:3:0
BDP 243—Fortran II	4:3:2
Electives*	6:6:0
	16:15:2

*By Approval

+Students who enroll in CS courses will need to take an additional elective to meet the required number of semester hours.

Suggested Electives. JR 231, 232; MM 132, 133, 231, 233, BC 231; Psy 131; Soc 131; Spc 131; BA 331, 332, 3301, 3302; Eco 230; OA 121, 122.

BUSINESS DATA PROCESSING (BDP)

131 — Elementary Accounting (3:3:0)*
Double-entry accounting practices and procedures applied to special journals, working papers, subsidiary records and the preparation of financial statements for a sole proprietorship with an introduction to partnerships.

133 — Introduction to Business Data Processing (3:3:0)
A survey of data processing from its beginning. Introduction to internal data representation, file concepts, record layouts and an overview of programming languages to be encountered in later courses.

136 — Intermediate Accounting (3:3:0)
A continuation of accounting principles begun in BDP 131. Prerequisite: BDP 131.

142 — Fortran I (4:3:2)
A study of the Fortran programming language. Progressive techniques are developed through program definition, flowcharting, coding, documentation and execution.

144 — Cobol I (4:3:2)
A study of the Cobol programming language. Progressive techniques are developed through program definition, flow charting, coding, documentation and program execution.

231 — System Design (3:3:0)
Fundamentals of system design analysis and documentation. Problems in designing, analyzing, changing and existing system, and implementation.

232 — RPG (3:3:0)
A study of the RPG language. Progressive techniques are developed through problem definition, flowcharting and coding. Prerequisite: BDP 142 or consent of the instructor.

233 — Elementary Cost Accounting (3:3:0)
Accounting for material, labor and overhead under job cost, process cost and standard cost systems. Prerequisite: BDP 136 or consent of the instructor.

241 — Cobol II (4:3:2)
A continuation of BDP 144 with emphasis on table handling and disk file processing. Prerequisite: BDP 144.

243 — Fortran II (4:3:2)
The application of Fortran to business and numerical problems. Prerequisite: BDP 142.

244 — Business Applications (4:3:2)
Defining problems for business application and programming the solutions using primarily the Cobol Language. Prerequisite: BDP 241.

247 — Assembly Language (4:3:2)
An introduction to the GMAP (Honeywell) language using computer registers, opcode interpretation/execution and assembled program structure. Prerequisite: BDP 142 or BDP 144.

*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

Drafting Technology

Instructors: Ralph K. Mock, Myron M. Myrick, Iris S. Droddy, Hyman K. Taylor, William R. Burkett, Dianna L. Duncan, Harold O. Thiele, Martin D. Mattox.

This program is designed to provide basic technical information required for entry into the occupation of drafting. Engineering draftsmen prepare precise drawings and specifications from sketches, field notes and other information furnished by an engineer or designer. The majority of draftsmen specialize in some particular field of work such as piping, structural, architectural or machine manufacturing.

A graduate of this two-year instructional program is awarded the Associate of Applied Science degree. Drafting technology is offered on all of Lamar's campuses.

Recommended Program of Study

First Semester

Dft 131—Drafting Instrumentals	3:3:0
Dft 132—Fund of Drafting	3:3:0
Dft 136—Basic Drafting Lab I	3:0:6
Dft 137—Basic Drafting Lab II	3:0:6
BC 131—Basic Comm or Eng Comp (Eng Dept) +	3:3:0
TM 131—Fund of Math I or Approved Mth (Math Dept)	3:3:0
	18:12:12

Second Semester

Dft 134—Civil-Arch Drafting	3:3:0
Dft 135—Civil-Arch Techniques	3:3:0
Dft 138—Civil-Arch Lab I	3:0:6
Dft 139—Civil-Arch Lab II	3:0:6
BC 132—Bus Comm or Eng Comp (Eng Dept) +	3:3:0
TM 1331—Algebra-Trig or Approved Math (Math Dept) +	3:3:0
	18:12:12

Third Semester

Dft 231—A.S.M. Standards, Pipe and Fitting Designs	3:3:0
Dft 232—Process Pipe Drafting	3:3:0
Dft 236—Systems Drafting Lab I	3:0:6
Dft 237—Systems Drafting Lab II	3:0:6
Dft 230—Smoley's Tables	3:3:0
JR 231—Job Relations or Soc 131 (Soc Dept)	3:3:0
	18:12:12

Fourth Semester

Dft 234—A.I.S.C. Spec and Standards	3:3:0
Dft 235—Structural Design	3:3:0
Dft 238—Structural Design Lab I	3:0:6
Dft 239—Structural Design Lab II	3:0:6
Dft 233—Drafting Design Proc	3:3:0
Elective +	3:3:0
	18:9:12

+ By Approval

Suggested Technical Arts electives: Dft 261, 1311; MM 131, 132, 231; BC 231; JR 232; MT 133; IEE 133; DFT 1331.

DRAFTING TECHNOLOGY (Dft)

131 — Drafting Instruments (3:3:0)
The proper use of all drafting instruments, the construction of freehand and mechanical lettering, dimensioning, multiview projection and geometrical construction.

132 — Fundamentals of Drafting (3:3:0)
Instruments and materials of the professional draftsman. The course will include geometric construction, orthographic projections, sections, conventions, various methods of pictorial drawing and other technology as required in the profession.

133 — Introduction to Drafting (3:1:4)
A course designed to develop illustrative and graphic communication skills, with emphasis on presenting information effectively by using diagrams, drawings, prints, sketches, graphs and charts drawn freehand and employing commonly available drawing aids such as straight edges, squared and graph paper and similar aids.

134 — Civil-Architectural Drafting (3:3:0)
Architectural drafting, covering FHA specifications, drafting techniques rendering techniques, elevations, building codes, electrical plans and schematics, architectural styles and history. Prerequisite: Dft 131 and 132.

135 — Civil-Architectural Drafting Techniques (3:3:0)
Architectural drafting, covering floor plans, sectional views, electrical plans, theory of design, cost analysis, plumbing, specification and pictorial drawings. Prerequisite: Dft 131 and 132.

136 — Basic Drafting Laboratory I (3:0:6)
This is the first in a series of four courses in the use of drafting instruments, freehand and mechanical lettering, conventional signs and symbols, orthographic projection and pictorial drawing. This is a comprehensive laboratory course in basic drafting procedures and skills and is planned as a preparation for the three succeeding courses which will provide practice in the skills required in specialized types of drafting.

137 — Basic Drafting Laboratory II (3:0:6)
This course is a continuation of Dft 136.

138 — Civil-Architectural Drafting Laboratory I (3:0:6)
Drafting of plans for construction in wood, metals and masonry; including foundations, floor and roof plans, window and door sections, electrical plans and drawing of miscellaneous types of electrical schematics. Prerequisite: Dft 136 and 137.

139 — Civil-Architectural Drafting Laboratory II (3:0:6)
This is a continuation of Dft 138. Prerequisite: Dft 136 and 137.

1311 — Blueprint Reading (3:3:0)
A study of lines, views, symbols and dimensions involved in reading blueprint and shop sketches. Practice in making freehand sketches of simple objects.

1331 — Electrical and Electronics Drawing (3:0:6)
This course is designed to enhance the background of the electrical-electronics student as well as the professional draftsman, by treating the main areas of the electrical industry, such as electronics, automation, microelectronics, electric power and architectural wiring.

230 — Smoley's Tables (3:3:0)
Introduction and applications of Smoley's Tables. Prerequisite: TM 1331 or equivalent.

231 — ASM Standards, Pipe and Fitting Designs (3:3:0)
A study of pipe and fittings, designs, symbols and specifications, sizing process lines and process symbols. Drafting of flow diagrams, vessels, heat exchangers, pumps, instruments, compressors and mechanical equipment. Prerequisite: Dft 131 and 132.

232 — Process Pipe Drafting (3:3:0)
Process pipe drafting covering nomenclature, plans, elevations, details and process equipment. Prerequisite: Dft 131 and 132.

233 — Drafting Design Procedures (3:3:0)
The solutions of essential miscellaneous elements in the design and drawing of problems in the electrical, architectural, piping, structural and other types of drafting by the use of Smoley's Tables and the calculator. Prerequisite: Dft 230 and approval of instructor.

234 — AISC Specifications and Standards (3:3:0)
AISC specifications and standards, basic strength of materials, structural theory and data. Detailing structure members and connections. Prerequisite: Dft 131 and 132.

235 — Structural Design (3:3:0)
Structural steel, completion of column details, brace details, skewed connections, moment connections, seated connections, erection drawings, stair and miscellaneous details. Design using AISC standards of beams and columns working with kip loads. Prerequisite: Dft 131 and 132.

236 — Systems Drafting Laboratory I (3:0:6)
A study of pipe and fittings, designs, symbols and specifications, sizing process lines and process symbols. Drafting of flow diagram, vessels, heat exchangers, pumps, instruments, compressors and mechanical equipment. Prerequisite: Dft 136 and 137.

237 — Systems Drafting Laboratory II (3:0:6)
This course is a continuation of Dft 236. Prerequisite: Dft 136 and 137.

238 — Structural Design Laboratory I (3:0:6)
Drafting of plans, sections and details and AISC specifications for industrial structures which will include structural steel, pipe and concrete reinforcing rods. Prerequisite: Dft 136 and 137.

239 — Structural Design Laboratory II (3:0:6)
This course is a continuation of Dft 238. Prerequisite: Dft 136 and 137.

261 — Design Project Seminar (6:1:10)
This course designed to stimulate and develop the design drawing skills of the student. The course will include one major design project which includes a scale model and complete set of working drawings, selected by the student and approved by the instructor. Prerequisite: consent of the instructor.

Fire Protection Technology

Instructor: Troy Standley.

The objectives of this program are to provide training for supervisory personnel for fire departments and industrial safety departments, provide inservice education for fire fighters and prepare graduates for related careers, such as fire insurance sales personnel. The fire protection technology courses are generally taught during the extended day hours and the schedule of classes allows attendance by students working shifts.

A graduate of this two-year instructional program is awarded the Associate of Applied Science degree.

Students who successfully complete FT 1311, 1312 and 1313 will be awarded a Certificate of Completion in Fire Protection Technology. This program is approved by the Texas Commission on Fire Protection Personnel Standards and Education.

Recommended Program of Study

First Semester

FT 131—Fund of Fire Protection	3:3:0
FT 133—Indus Fire Protection I	3:3:0
Eng 1311—English Comp	3:3:0
Chm 143—Intro Chem	4:3:2
Mth	3:3:0
	16:15:2

Second Semester

FT 132—Fire Protection Systems	3:3:0
FT 134—Fire Prevention	3:3:0
FT 135—Ind Fire Protection II	3:3:0
Spc 131—Speech Comm	3:3:0
Chm 144—Intro Chem	4:3:2
	16:15:2

Third Semester

FT 230—Fire Admin I	3:3:0
FT 231—Bldg Codes & Const	3:3:0
FT 232—Fire & Arson Inves	3:3:0
BC 231—Tech Writing	3:3:0
Gov 231—Intro to Amer Gov	3:3:0
*Approved Elective	3:3:0
	18:18:0

Fourth Semester

FT 233—Hazardous Mat	3:3:0
FT 234—Fire Admin II	3:3:0
FT 241—Fire Fighting Tactics	4:3:2
*Approved Electives	9:9:0
	19:18:2

*Six hours of approved electives must be in FT courses for Texas Commission on Fire Protection Personnel Standards and Education approval.

FIRE PROTECTION TECHNOLOGY (FT)

1311 — Introduction to Fire Protection (3:0:6)
Organization of fire departments and general rules and regulations; fire apparatus; ventilation practices, rescue operations; first aid; fire alarm and communications are covered in this required course for state certification. Prerequisite: Admission to the Basic Certification School for Fire Fighters and consent of instructor.

1312 — Fire Science (3:0:6)
Fire service ladder practices, fire stream practices, water supplies; automatic sprinklers; arson detection; report writing and other fire science topics are in this basic certification course. Prerequisite: Admission to the Basic Certification School For Fire Fighters and consent of instructor.

1313 — Fire Fighting (3:0:6)
Fire hose practices; forcible entry; inspection practices; aircraft fire protection; community relations; civil disorder; emergency driving and other fire fighting tactics are included in this basic certification course. Prerequisite: Admission to the Basic Certification School For Fire Fighters and consent of instructor.

131 — Fundamentals of Fire Protection (3:3:0)
History and philosophy of fire protection; review of statistics of loss of life and property by fire; introduction to agencies involved in fire protection; current legislative developments and career orientation; recruitment and training for fire departments; position classification and plans; employee organization; a discussion of current related problems and review of expanding future fire protection problems.

132 — Fire Protection Systems (3:3:0)
Study of the required standard for water supply; special hazards protection systems; automatic sprinkler and special extinguishing system; automatic signaling and detection system; rating organizations and underwriting agencies.

133 — Industrial Fire Protection I (3:3:0)
Specific concerns and safeguards related to business and industrial organizations. A study of industrial fire brigade organization and development, plant layout, fire prevention programs, extinguishing factors and techniques, hazardous situations and prevention methods. Gaining cooperation between the public and private fire department organization. Study of elementary industrial fire hazards in manufacturing plants.

134 — Fire Prevention (3:3:0)
The objectives and views of inspections, fundamental principles, methods, techniques and procedures of fire prevention administration. Fire prevention organization; public cooperation and image; recognition of fire hazards; insurance problems and legal aspects; development and implementation of a systmatic and deliberate inspection program; survey of local, state and national codes pertaining to fire prevention and related technology; relationship between building inspection agencies and fire prevention organization. Engineering as a solution to fire hazards.

135 — Industrial Fire Protection II (3:3:0)
Development of fire and safety organizations in industry; relation between private and public fire protection organizations; current trends, deficiencies and possible solutions for industrial fire problems; role of insurance problems and other special organizations; an in-depth study of specific industrial processes, equipment, facilities and work practices to understand potential hazards and techniques to detect and control such hazards. Field trips to selected plants and demonstrations of new techniques, equipment and innovations.

230 — Fire Administration I (3:3:0)

An in-depth study of organization and management as related to a fire department including budgeting, maintenance of records and reports and management of fire department officers. Personnel administration and distribution of equipment and personnel and other related topics, including relation of various government agencies to fire protection areas. Fire Service Leadership as viewed from the company officer's position.

231 — Building Codes and Construction (3:3:0)

Fundamental consideration and exploration of building construction and design with emphasis on fire resistance of building materials and assemblies, exposures and related data focused on fire protection concerns; review of related statutory and suggested guidelines, both local and national in scope. Review of Model Building Codes and Life Safety Code.

232 — Fire and Arson Investigation (3:3:0)

A study of the detection of arson, investigation techniques, case histories, gathering and preserving of evidence; preparing for a court case; selected discussion of laws, decisions and opinions; kinds of arsonists, interrogation procedures, cooperation and coordination between fire fighters and arson investigators and other related topics.

233 — Hazardous Materials I (3:3:0)

Study of chemical characteristics and behavior of various materials that burn or react violently related to storage, transportation, handling hazardous materials, i.e., flammable liquids, combustible solids and gases. Emphasis on emergency situation and most favorable methods of handling fire fighting and control.

234 — Fire Administration II (3:3:0)

Study to include insurance rates and ratings, preparation of budgets, administration and organization of training in the fire department; city water requirements, fire alarm and communications systems; importance of public relations, report writing and record keeping; measurements of results, use of records to improve procedures and other related topics; legal aspects relating to fire prevention and fire protection with stress on municipal and state agencies, design and construction of fire department buildings.

235 — Hazardous Materials II (3:3:0)

Hazardous materials covering storage, handling, laws, standards and fire fighting techniques associated with chemicals, gases, flammable liquids, corrosives, poisons, explosives, rocket propellants and exotic fuel and radioactive materials. The formation of toxic fumes and health hazards is also stressed. Ignition and combustion characteristics of gases, liquids and solids related to free-burning fire and explosion phenomena. Familiarization with radiological instruments, human exposure to radiation, decontamination procedures, common uses of radioactive materials and operational procedures.

236 — Field Safety Education (3:3:0)

A survey of physical, chemical and electrical hazards and their relationship to loss of property and/or life. Study of codes, laws, problems and cases. Detailed examination and study of the physical and psychological variables related to the occurrence of casualties. Safe storage, transportation and handling techniques are stressed to eliminate or control potential risks.

237 — Legal Aspects of Fire Protection (3:3:0)

A study of legal rights and duties, liability concerns and responsibilities of the fire department while carrying out their duties. Introduction and basic concepts of Civil and Criminal law, the Texas and Federal judicial structure and cities' liability for acts of the fire department and fire prevention bureaus. An in-depth study of various cases concerning fire fighters, fire departments, municipalities.

238 — Fire Service Communications (3:3:0)
The development of fire alarm systems, the various types of systems, installation, operation and testing of the most common systems, receiving, dispatching and radio communication procedures; FCC regulations; the fire alarm operations office; mutual aid systems; fire station communications and facilities; response and fire ground procedures; emergency operations; code and numbering systems; required records and reports; technological advances.

241 — Fire Fighting Tactics and Strategy (4:3:2)
Essential elements in analyzing the nature of fire and determining the requirements. Efficient and effective utilization of manpower, equipment and apparatus. Emphasis to be placed on pre-planning, study of conflagration problems, fire ground organization problem solving related to fire ground decision making and attack tactics and strategy. Use of Mutual Aid and large scale command problems.

Industrial Electricity and Electronics Technology

Instructors: Tarlton J. Daigle, Robert J. Lawrence, Lenox L. Sigler, Marvin H. Hogan, Jerry L. Wilson, Leslie G. Walley, Francis E. Thibodaux.

This program is designed to provide the student with an opportunity to develop the necessary skills involved in the repair and maintenance of industrial electrical and electronics equipment.

The objective of this program is to develop an understanding of the underlying theories, technical information, safety factors and related occupational information to assure sound judgments and proper procedures needed for an electronics technician trainee. Graduates will be prepared to enter one of the many specialized fields associated with the electronics trade.

A graduate of this two-year instructional program is awarded the Associate of Applied Science degree. This program is offered at the Beaumont and Orange campuses.

Recommended Program of Study

First Semester

IEE 131—DC Theory & Circuits	3:3:0
IEE 132—AC Theory	3:3:0
IEE 136—DC Elem Lab	3:0:6
IEE 137—Basic AC Elec Lab	3:0:6
TM 131—Fund of Math I or approved Mth (Math Dept)	3:3:0
BC 131—Basic Comm or Eng Comp (Eng Dept)*	3:3:0
	18:12:12

Second Semester

IEE 134—AC & DC Circuit Analysis	3:3:0
IEE 135—Vacuum Tube and Basic Transistors	3:3:0
IEE 138—AC & DC Lab Anal	3:0:6
IEE 139—Vacuum Tube and Solid State	3:0:6
TM 1331—Algebra-Trig or Approved Mth (Math Dept)	3:3:0
BC 132—Bus Comm or Eng Comp (Eng Dept) +	3:3:0
	18:12:12

Third Semester

IEE 231—Transistor Characteristics & Circuits	3:3:0
IEE 232—Transistor Circuit Analysis	3:3:0
IEE 236—Solid State Transistor Experiments	3:0:6
IEE 237—Solid State Circuits	3:0:6
IEE 230—Radio-tele Prep	3:3:0
JR 231—Job Rel or Soc 131 (Soc Dept)	3:3:0
	18:12:12

Fourth Semester

IEE 234—Theory of TTL	3:3:0
IEE 235—CMOS Devices	3:3:0
IEE 238—TTL Experiments	3:0:6
IEE 239—CMOS Logic Lab	3:0:6
IEE 233—Trans & Rec	3:3:0
Elective*	3:3:0
	18:12:12

*By approval

Suggested Technical Arts electives: Dft 133, Dft 1331, MM 131, 132, 231, 232, BC 231, JR 232, MT 133, Wld 133.

INDUSTRIAL ELECTRICITY AND ELECTRONICS TECHNOLOGY (IEE)

131 — DC Theory and Circuits (3:3:0)
Electron theory, Ohm's Law, power, simple series and parallel circuits, combined series/parallel circuits, and Kirchoff's laws.

1311 — International Morse Code for Amateur Radio Operators (3:3:0)
Code speeds for up to five words per minute, necessary for the Novice License and code speeds of 13 and 20 wpm necessary for the General Advanced and Extra Class Amateur Radio License will be taught.

1312 — Citizens Band Transceiver Analysis (3:0:6)
The repair of citizens band transceivers requires the holding of a Second Class FCC Radio License. Troubleshooting, repair, testing and frequency measurements are covered in this class.

132 — AC Theory (3:3:0)
Electromagnetism, generation and characteristics of alternating voltage and current, inductance transformers, inductive reactance capacitance and capacitive reactance. Prerequisite: Credit for or registration in IEE 131.

133 — Basic Electricity (3:3:0)
Introduction to the field of electricity and electronics.

134 — AC and DC Circuit Analysis (3:3:0)
Simple RL, RC, RLC circuits; series, parallel and combination circuits; series and parallel resonance. Prerequisite: IEE 132.

135 — Vacuum Tube and Basic Transistor Theory (3:3:0)
Principles of vacuum tubes, audio and RF amplifiers, introduction to solid state devices including diodes and junction transistors. Prerequisite: Credit for or registration in IEE 134.

136 — Basic DC Electronic Laboratory (3:0:6)
Basic electronic component and symbol familiarization, wiring techniques for DC series, parallel and combination circuits; voltmeter, ohmmeter and ammeter hookup and reading techniques and DC power supply use and operation.

137 — Basic AC Electronics Laboratory (3:0:6)
Familiarization with VTVM, oscilloscope and audio generator; experimentation and analysis of the characteristics of series and parallel inductance and capacitance and transformers. Prerequisite: Credit for or registration in IEE 136.

138 — AC and DC Laboratory Analysis (3:0:6)
Familiarization with the RF generator; construction and analysis of AC circuits containing resistance, inductance and capacitance; series and parallel resonance. Prerequisite: IEE 137.

139 — Vacuum Tubes and Solid State (3:0:6)
Construction techniques using vacuum tubes and solid state devices; audio and RF circuits; power supplies.

230 — Radio Telephone License Preparation (3:3:0)
A course designed to prepare the student to take the Federal Communications Commission test. It is oriented primarily toward two-way radio communication services. Elements I and II prepares for the third-class license; Elements III for the second-class license.

231 — Transistor Characteristics and Circuits (3:3:0)
The theory of CE-CB-CC Transistor Circuits. Oscillators and troubleshooting. Prerequisite: IEE 135.

232 — Transistor Circuit Analysis (3:3:0)
The theory of audio and linear circuits. TTL basic logic. N and D, nor gates. Truth tables. Prerequisite: Credit for or registration in IEE 231.

233 — Transmitters and Receivers (3:3:0)
Principles of modulation and transmitter, transmitter circuits, principles of

t-r-f and superheterodyne receiver circuits.

234 — **Theory of TTL (3:3:0)**
The theory of TTL, including timers. Readouts, OP Amps, the use of Truth Tables and the binary number system. Prerequisite: IEE 232.

235 — **CMOS Devices (3:3:0)**
The theory and application to practical circuits using CMOS devices. Memories and three state logic. Microcomputer machine language and programming. Prerequisite: Credit for or registration in IEE 234.

236 — **Solid State Transistor Experiments (3:0:6)**
CE-CB-CC Circuits. Audio and linear circuits oscillators. Transistor testing devices. Prerequisite: IEE 139.

237 — **Solid State Circuits (3:0:6)**
Special transistors: FET; MOSFET; IGFET; etc. TTL basic circuits. N and D, nor gates. Visual-audio oscillators. Prerequisite: Credit for or registration in IEE 236.

238 — **TTL Experiments (3:0:6)**
Timers, registers, readouts, counters, OP Amps. Prerequisite: IEE 237.

239 — **CMOS Logic Lab (3:0:6)**
Practical experiments with CMOS circuits. Memories, three state logic, basic microcomputer, programming, testing malfunctions. Prerequisite: Credit for or registration in IEE 238.

331 — **Synthesis of Transistor Amplifiers I (3:3:0)**
The review and expansion of transistor amplifiers, volt-ampere characteristics, bias circuits and stability, cascaded and feedback amplifiers, frequency response and amplifier design. Prerequisite: IEE 235.

332 — **Synthesis of Transistor Amplifiers II (3:3:0)**
Continuation of IEE 331. Prerequisite: IEE 331.

336 — **Transistor Circuit Measurements (3:0:6)**
The advanced study of the practical operations of basic network analysis, transistor circuit configurations and desired circuit characteristics. Prerequisite: IEE 239.

337 — **Transistor Circuit Analysis (3:0:6)**
A continuation of the principles developed in IEE 336. Prerequisite: IEE 336.

431 — **Introductory Microwave Techniques (3:3:0)**
The introduction to transmission theory, measurements of microwave quantities, microwave propagation, common wave guide components, microwave antennas and microwave electronic circuits.

432 — **Telemetering Devices and Analysis (3:3:0)**
The remote control of devices through the use of microwaves: RPM, liquid level and gaseous content monitoring. Communication links using telemetering will also be studied. Prerequisite: IEE 431.

ELECTRONICS TECHNOLOGY

The program is designed to provide the student with an opportunity to develop the skills needed for a career as an electronics technician. The student may specialize in one of six fields of study in electronics: Industrial Electronics and Instrumentation; Marine Radio Operator; Medical Electronics; Radio and TV Broadcast Technician; Television Servicing or Two-Way Communications Technician. A graduate of the two-year program of study will receive an Associate of Applied Science degree.

This program is offered at the Port Arthur campus.

Recommended Program of Study

First Semester

IEE 131—DC Theory and Circuits	3:3:0
IEE 132—AC Theory	3:3:0
IEE 136—Basic DC Lab	3:0:6
IEE 137—Basic AC Lab	3:0:6
TM 131—Fundamentals of Math I or Math 134 (Math Dept)	3:3:0
BC 131—Basic Communications or Eng. Composition (English Dept.)	3:3:0
	18:12:12

Second Semester

IEE 134—AC and DC Circuit Analysis	3:3:0
ET 1313—Fundamentals of Vacuum Tubes	3:2:1
IEE 138—AC and DC Lab Analysis	3:0:6
ET 236—Solid State Devices I	3:0:6
ET 231—Transistors	3:3:0
TM 132—Fundamentals of Math II	3:3:0
	18:11:13

Third Semester

JR 231—Job Relations	3:3:0
ET 232—Transistor Analysis	3:3:0
IEE 233—Transmitters and Receivers	3:3:0
ET 1314—Linear Integrated Circuits	3:3:0
ET 237—Solid State Devices II	3:0:6
IEE Elective*	3:3:0
	18:15:6

Fourth Semester

IEE 230—Second Phone License Preparation	3:3:0
ET 234—TTL Integrated Circuits I	3:3:0
ET 235—TTL Integrated Circuits II	3:3:0
ET 238—Digital Logic Lab I	3:0:6
ET 239—Digital Logic Lab II	3:0:6
IEE Elective*	3:3:0
	18:12:12

*ET Electives: Industrial Electronics and Instrumentation: 2315, 2333; Marine Radio Operator: 2317, 2320, (2322 rather than 230); Medical Electronics: 2331, any other elective; Radio and TV Broadcast Technician: 2327, 2328; TV Servicing: 2325, 2326; Two-Way Communications Technician: 2334, 2335.

ELECTRONICS TECHNOLOGY (ET)

1313 — Fundamentals of Vacuum Tubes (3:2:1)
An introduction to the theory and applications of vacuum tubes, vacuum tube power supplies and basic amplifiers. Associated laboratory work is included. Prerequisite: Credit for or registration in IEE 134.

1314 — Linear Integrated Circuits (3:3:0)
A study of operational amplifier characteristics, general applications, testing and breadboarding of IC operational amplifiers, regulators and control circuits, and precision/instrumentation operational amplifiers. Prerequisite: IEE 231.

231 — Transistors (3:3:0)
Semiconductor materials, junction diodes and transistors, characteristic curves, transistor circuits, common-emmitter, common-base and common-collector configurations. Prerequisite: IEE 135.

232 — Transistor Analysis (3:3:0)
Analysis using the direct current and graphical methods, linear circuits oscillators, temperature considerations and transistor power supplies. Prerequisite: Credit for or registration in IEE 231.

234 — TTL Integrated Circuits I (3:3:0)
Basic TTL circuits, data on TTL devices, basic logic designs, monostable and bistable circuits and astable signal sources are covered in this course. Prerequisite: IEE 232.

235 — TTL Integrated Circuits II (3:3:0)
Oscillators, JK and D type flip-flops, counters and counting techniques, shift-registers and whole-systems application are taught in this course. Prerequisite: Credit for or registration in IEE 234.

236 — Solid State Devices I (3:0:6)
Laboratory experiments in the characteristics of solid state devices, transistor familiarization and basic transistor circuit arrangement. Prerequisite: IEE 139.

237 — Solid State Devices II (3:0:6)
Laboratory experiments in the construction of solid state circuitry, audio voltage and power amplifiers, oscillators, SCR rectifiers and transistorized cathode ray oscilloscopes. Prerequisite: Credit for or registration in IEE 236.

238 — Digital Logic Laboratory I (3:0:6)
Laboratory experiments designed to give a thorough basic knowledge of the various types of TTL devices. Prerequisite: IEE 237.

239 — Digital Logic Laboratory II (3:0:6)
Laboratory experiments designed to put the TTL devices and IC chips to practical use. Prerequisite: Credit for or registration in IEE 238.

2315 — Industrial Electronics (3:3:0)
The application of active and passive networks in control on industrial control and manufacturing processes. Prerequisite: The core material offered in IEE 135 and IEE 231

2317 — Code. International Morse Code (3:0:6)
Receiving is taught by the use of magnetic tapes and notes. Code sending is taught by actual practice in sending, using a hand key and oscillator. A code speed of 16 wpm groups and 20 wpm plain language is required.

2320 — Marine Equipment (3:3:0)
A coverage of shipboard radiotelegraph and communication equipment. Direction finders loran is included. Prerequisite: IEE 131 and IEE 132.

2322 — FCC Radiotelegraph License Preparation (3:3:0)
This course consists of FCC Rules and Regulations and reviews the theory necessary for the student to pass the FCC Second Class Radiotelegraph License test. Prerequisite: IEE 135 and IEE 231.

2325 — Television Servicing Laboratory I (3:0:6)
A coverage of television from the aspect of home entertainment, including repair and maintenance. Prerequisite: IEE 233.

2326 — TV Servicing Laboratory II (3:0:6)
A continued coverage of television from the aspect of home entertainment, including repair and maintenance. Prerequisite: IEE 2325.

2327 — Radio Broadcast Equipment (3:3:0)
A study of the equipment used at a radio broadcast studio and transmitter such as the console, microphones, reel-to-reel and cartridge recorder and playback units, turntables, mixers, transmitting and monitor equipment. Also included is FCC first phone license preparation material as applied to radio broadcasting.

2328 — Television Broadcast Equipment (3:3:0)
A study of the equipment used at a TV broadcast station; television camera chain, video tape recorder, transmitter, monitors. Also included is FCC First Class License preparation material as applied to television broadcasting.

2331 — Medical Instrumentation (3:3:0)
A study of patient safety, electrocardiographs, pacemaker-alarm monitors, electrocardioscope, electromyograph and electroencephalograph. Prerequisite: IEE 135 and IEE 231.

2333 — Industrial Instrumentation (3:3:0)
A study of the practical application of the use of instruments in the petrochemical operation and manufacturing processes. This includes fundamental theory of thermocouples, Rayotube temperature detectors, electrolytic conductivity measurements, pH measurements, chart records, servicing equipment, position adjusting and current adjusting control systems. Prerequisite: IEE 2315

2334 — Practical FM Communications Equipment (3:3:0)
Direct FM transmitters, phase modulation (indirect FM), receivers, squelch circuits, noise elimination for mobile equipment, installation of base and

mobile stations, practical considerations of power sources. Prerequisite: IEE 233, IEE 231.

2335 — Antennas, Transmission Lines and Frequency Measurements (3:3:0)
The radio wave, ionosphere and its effect on reception, half-wave and quarter-wave antennas, loading antennas, transmission lines, different antenna configurations, feeding the antenna, phase monitor, field intensity and field gain, means of measuring frequency tolerance, absorption wavemeter, primary frequency standards, secondary frequency standards, heterodyne frequency meter, constant frequency indicator, counters to measure frequency. Prerequisite: IEE 233.

Office Occupations

Instructors: Glenda Barron, Jean Cole, Gayle Dobbs, Linda Langley, Patricia Schipplein, Patricia Foster, Sharon Gray, Shirley Burris

The objectives of the Office Occupations program are to provide skills needed for a career in five different secretarial areas and to provide in-service education for office personnel wanting to improve their skills. Students may obtain an Associate of Applied Science degree as a medical secretary, legal secretary or general secretary. Students also may receive a diploma in one of the following areas: accounting clerk, clerical, general secretary, legal secretary or medical secretary.

The Associate of Applied Science degree programs are offered only at Port Arthur. The one-year diploma programs are offered at the Orange and Port Arthur Campuses.

Recommended Programs of Study

General Secretary

First Semester

OO 141—Beginning Typing*†	4:3:3
BC 131—Basic Comm or Eng 131*†	3:3:0
TM 134—Business Math*†	3:3:0
OO 143—Beginning Shorthand*†	4:4:1
MM 131—Intro to Business†	3:3:0
	17:16:4

Second Semester

OO 142—Inter Typing* (or OA 123†)	4:3:3
OO 144—Inter Shorthand*†	4:4:1
BC 132—Bus Comm or Eng 133*†	3:3:0
OO 131—Bus Machines*†	3:0:3
OO 135—Bus Legal Procedures*†	3:3:0
	17:13:7

Third Semester

OO 241—Adv Shorthand*†	4:4:1
OO 231—Adv Typing*	3:1:2
BDP 133—Intro to Bus Data Proc†	3:3:0
OO 133—Bookkeeping-Acc.	3:3:0
OO 232—Office Practice	3:2:1
	16:13:4

Fourth Semester

OO 238—Machine Transcription*	3:3:0
OO 235—Sec Office Procedures	3:0:6
Spc 131—Speech Comm	3:3:0
JR 232—Human Relations or Soc 131*	3:3:0
Elective	3:3:0
	15:12:6

Suggested Electives: MM 132, 231, 232; Gov 231; OO 137, 138, 134

*These courses are required for a general secretary diploma at Port Arthur.

†These courses are required for a general secretary diploma at Orange.

Legal Secretary

First Semester

OO 141—Beginning Typing*†	4:3:3
BC 131—Basic Comm or Eng 131*†	3:3:0
TM 134—Bus Mathematics*†	3:3:0
OO 143—Beginning Shorthand*†	4:4:1
MM 131—Intro to Business	3:3:0
	17:16:4

Second Semester

OO 142—Intermediate Typing* (or OA 123†)	4:3:3
OO 144—Intermediate Shorthand*†	4:4:1
BC 132—Bus Comm or Eng 133*†	3:3:0
OO 131—Bus Machines*†	3:0:6
OO 135—Bus Legal Procedure*†	3:3:0
	17:13:10

Third Semester

OO 241—Adv Shorthand*†	4:4:1
OO 231—Adv Typing* (or OA 222†)	3:2:1
BDP 133—Intro to Bus Data Proc	3:3:0
OO 133—Bookkeeping-Acc	3:3:0
OO 232—Office Practice	3:2:1
	16:14:3

Fourth Semester

Gov 2321—Intro to Amer Gov	3:3:0
OO 235—Sec Office Proc*†	3:0:6
Spc 131—Speech Comm	3:3:0
JR 232—Human Relations* or Soc 131	3:3:0
OO 238—Machine Transcription*†	3:3:0
	15:12:6

*These courses are required for a Legal Secretary diploma at Port Arthur.

†These courses are required for a Legal Secretary diploma at Orange.

Medical Secretary

First Semester

OO 141—Beginning Typing*†	4:3:3
BC 131—Basic Comm or Eng 131*†	3:3:0
TM 134—Bus Mathematics*†	3:3:0
OO 143—Beginning Shorthand*†	4:4:1
MM 131—Intro to Business†	3:3:0
	17:16:4

Second Semester

OO 142—Intermediate Typing* (or OA 123†)	4:3:3
OO 144—Intermediate Shorthand*†	4:4:1
BC 132—Bus Comm or Eng 133*†	3:3:0
OO 131—Bus Machines*†	3:0:6
OO 139—Medical Term	3:3:0
	17:13:10

Third Semester

OO 238—Machine Transcription*†	3:3:0
OO 231—Adv Typing* (or OA 222)†	3:1:2
BDP 133—Intro to Bus Data Proc†	3:3:0
OO 133—Bookkeeping-Acc	3:3:0
OO 232—Office Practice	3:2:1
	15:12:3

Fourth Semester

OO 135—Bus Legal Procedure*†	3:3:0
OO 235—Sec Office Proc*†	3:0:6
Spc 131—Speech Comm	3:3:0
JR 232—Human Relations* or Soc 131	3:3:0
Elective	3:3:0
	15:12:6

Suggested Electives: MM 132, 231, 232; OO 134, 241, 137, 138; Bio 133, 134.

*These courses are required for a medical secretary diploma at Port Arthur.

†These courses are required for a medical secretary diploma at Orange.

Accounting Clerk (Port Arthur)

First Semester

OO 141—Beginning Typing	4:3:3
BC 131—Basic Comm	3:3:0
OO 131—Business Machines	3:0:6
TM 134—Business Math	3:3:0
OO 134—Elem Acc	3:3:0
	16:12:9

Second Semester

BDP 133—Intro to Bus Data Proc	3:3:0
OO 137—Partnership and Corp Acct	3:3:0
OO 138—Payroll Procedures	3:3:0
OO 142—Intermediate Typing	4:3:3
JR 232—Human Relations or Soc 131	3:3:0
	16:15:3

Third Semester

OO 233—Acc Applications	3:3:0
OO 235—Sec Office Proc	3:0:6
OO 232—Office Practice	3:2:1
	9:5:7

Accounting Clerk (Orange)

First Semester

OO 141—Beginning Typing	4:3:3
OO 134—Elem Acc	3:3:0
BC 131—Basic Comm or Eng Comp (Eng Dept)	3:3:0
MM 131—Intro to Business	3:3:0
TM 134—Bus Mathematics or Mth 1315 (Math Dept)	3:3:0
	16:15:3

Second Semester

OO 131—Bus Machines	3:0:3
OO 135—Bus Legal Procedures	3:3:0
OA 123—Intermediate Typing	2:2:1
OO 137—Partnership and Corporate Acct	3:3:0
BC 132—Bus Comm or Eng Comm (Eng Dept)	3:3:0
	14:11:4

Third Semester

OA 231—Secretarial Practice	3:3:2
OO 233—Acct or Acc 231 (Acc Dept)	3:3:0
BDP 133—Intro to Bus Data Proc	3:3:0
Elective	3:3:0
	12:12:2

Suggested Electives: MM 132, 231, 232; JR 231, 232; Psy 131; Soc 131; Eco 230

Clerical (Port Arthur)

First Semester

OO 141—Beginning Typing	4:3:3
BC 131—Basic Comm	3:3:0
JR 232—Human Relations or Soc 131	3:3:0
TM 134—Bus Mathematics	3:3:0
OO 135—Bus Legal Procedure	3:3:0
	16:15:3

Second Semester

OO 142—Intermediate Typing	4:3:3
BC 132—Bus Comm	3:3:0
OO 133—Bookkeeping-Acc	3:3:0
OO 132—Key Punch	3:0:6
OO 131—Bus Machines	3:3:0
Elective	3:3:0
	19:15:9

Third Semester

OO 231—Adv Typing	3:1:2
OO 235—Sec Off Proc	3:0:6
OO 232—Office Practice	3:2:1
	9:3:9

Suggested Electives: MM 132, 231, 232; OO 134, 137, 138

Clerical (Orange)

First Semester

OO 141—Beginning Typing	4:3:3
OO 133—Bookkeeping-Acc	3:3:0
BC 131—Basic Comm or Eng Comp (Eng Dept)	3:3:0
MM 131—Intro to Business	3:3:0
TM 134—Bus Mathematics or Mth 135 (Math Dept)	3:3:0
	16:15:3

Second Semester

OO 131—Bus Machines	3:3:0
OO 135—Bus Legal Procedure	3:3:0
OO 134—Elem Acct or Acct 231 (Acct Dept)	3:3:0
OA 123—Intermediate Typing	2:1:2
BC 132—Bus Comm or Eng Comp (Eng Dept)	3:3:0
	14:13:2

Third Semester

OA 222—Production Typing	2:1:2
OA 231—Secretarial Practice	3:3:2
Spc 1311—Voice Voc & Pron	3:3:0
Elective	3:3:0
	11:10:4

Suggested Electives: MM 132, 231, 232; JR 231, 232; Psy 131; Soc 131, Eco 230

OFFICE OCCUPATIONS (OO)

130 — Introductory Typewriting (3:3:0)*
For students with no previous typewriting instruction. Emphasis is placed on mastery of keyboard, development of correct typewriting techniques, centering and personal-use typewriting. May be used as elective, but not as a required course in Office Occupations programs.

131 — Business Machines (3:0:6)
Instruction and practice on the 10-key adding machine, the printing calculator, the electronic display calculator and the posting machine. Prerequisite: Departmental permission.

132 — Key Punch (3:0:4)
With regards to the IBM 029 and IBM 129, this course consists of an in-depth study in making program cards and verifying pre-punched cards with concentration on becoming familiar with the keyboard and emphasis on accuracy, as well as speed. Prerequisite: 45 WPM on typewriter. (A certificate is offered for key punch upon successful completion of the course.)

133 — Bookkeeping/Accounting (3:3:0)
Basic course in bookkeeping/accounting designed for students with no previous accounting instruction. Provides basic understanding of accounting through the explanation of procedures involved in the accounting cycle for service and manufacturing businesses.

134 — Elementary Accounting (3:3:0)
Double-entry accounting practices and procedures applied to a sole proprietorship utilizing special journals, working papers and the preparation of financial statements.

135 — Business Legal Procedure (3:3:0)
Basic business legal procedures and forms. This will include contracts, sales commercial paper, bailments, insurance, agencies, transferring of property; also visit to Small Claims Court.

137 — Partnership and Corporate Accounting (3:3:0)
An in-depth study of the organization and accounting procedures of a partnership and corporation. Prerequisite: OO 134.

138 — Payroll Procedures (3:3:0)
Instruction on principles and procedures of payroll including computing and paying wages and salaries, social security benefits and taxes, federal and state unemployment insurance and taxes, personnel and payroll records, withholding for income tax purposes and examination of current federal income tax laws and instruction in preparing income tax returns. Prerequisite: TM 134, OO 134.

139 — Medical Terminology (3:3:0)
Detailed course in medical terminology covering medical prefixes and suffixes and phonetics.

141 — Beginning Typewriting (4:3:3)
This course develops key-board skills and includes speed-accuracy skill development, tabulation, manuscript typewriting, business forms and business letters. Prerequisite: OO 130 or departmental permission.

142 — Intermediate Typing (4:3:3)
This course continues to develop the basic typewriting skills and applies these skills to on-the-job activities in staff offices (such as a general office, an accounting office and an executive office) and in service offices (such as a technical office, a professional office and a government office). Prerequisite: OO 041 with a grade of "C" or better.

*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

143 — Beginning Shorthand (4:4:1)
Introduction to the principles of Gregg Shorthand including shorthand alphabet, brief forms and phrasing. Reading, dictation at 60 wpm, basic transcription. Prerequisite: Ability to type or must take typewriting concurrently; or departmental permission.

144 — Intermediate Shorthand (4:4:1)
Development of student's ability to take new-matter dictation at 60-100 wpm and transcribe into mailable copy. Prerequisite: OO 143 Beginning Shorthand with grade of "C" or better or departmental permission.

231 — Advanced Typing (3:1:3)
Course provides additional on-the-job typing activities. Emphasis is placed on production typing. Prerequisite: OO 142 with grade of "C" or better.

232 — Office Practice (3:2:1)
Introduces the student to three important aspects of secretarial work — filing, duplicating machine processes and machine transcription. Spelling and punctuation are also emphasized. Prerequisite: OO 142.

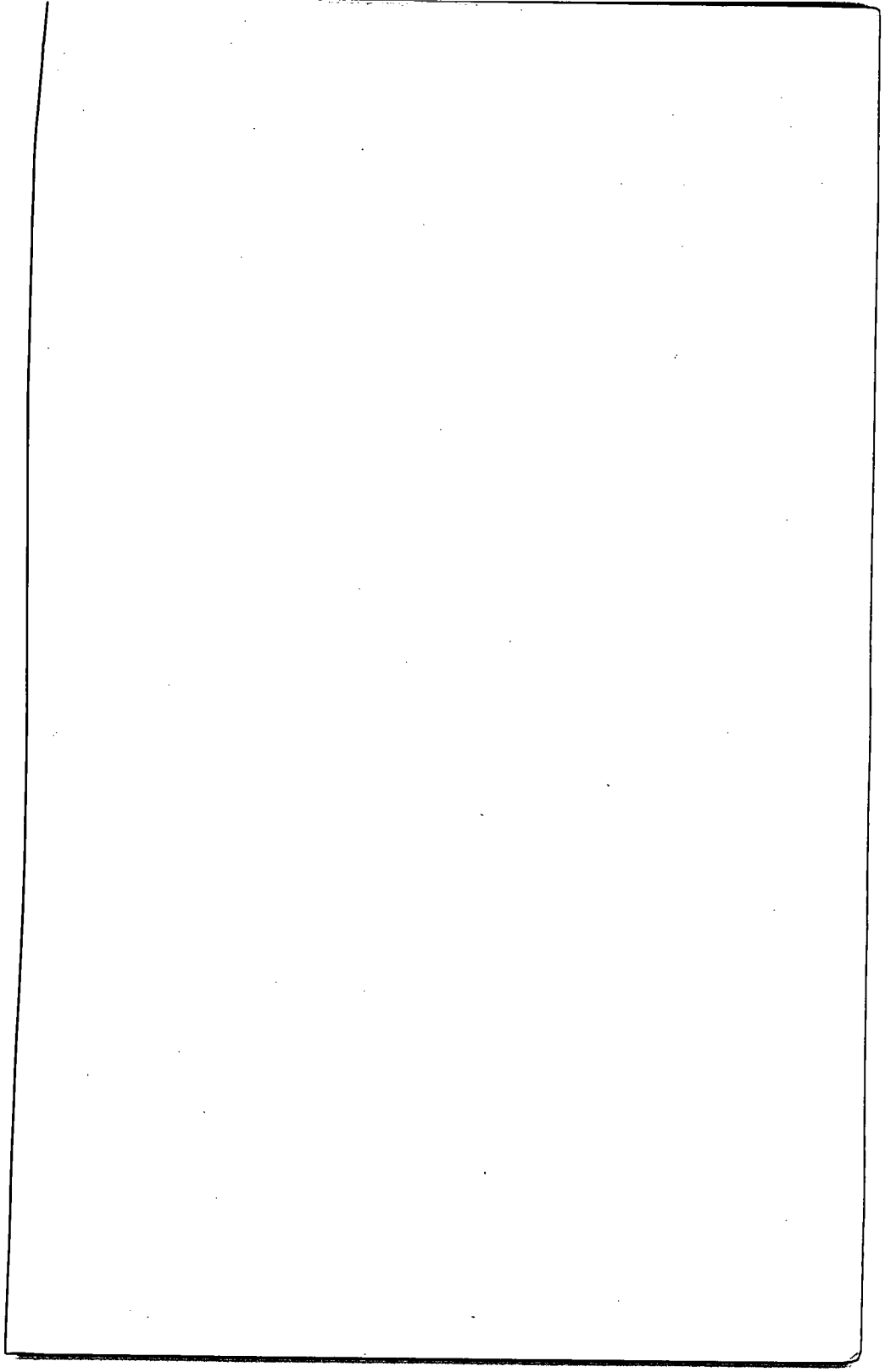
233 — Accounting Applications (3:3:0)
Proper accounting procedures applied to practical situations involving the use of practice sets. Prerequisite: OO 134, OO 137.

235 — Secretarial Office Procedures (3:0:6)
Course readies student for general secretarial training, but student may specialize in general, legal or medical secretarial work. Prerequisite: OO 142 with grade of "C" or better.

238 — Machine Transcription (3:0:3)
Course introduces student to the use of machine transcription for general secretarial training, but student may specialize in general, legal or medical transcription. Prerequisite: OO 142 with grade of "C" or better.

241 — Advanced Shorthand (4:4:1)
Continued development of speed in taking dictation at 90-120 wpm and transcribing into mailable copy. Introduction to chemical terms used in area industry. Prerequisite: OO 144 with grade of "C" or better or departmental permission.

INDEX



Bulletin of
LAMAR UNIVERSITY (USPS 074-420)
Beaumont, Texas 77710

Second Class
Postage Paid
at
Beaumont, Texas