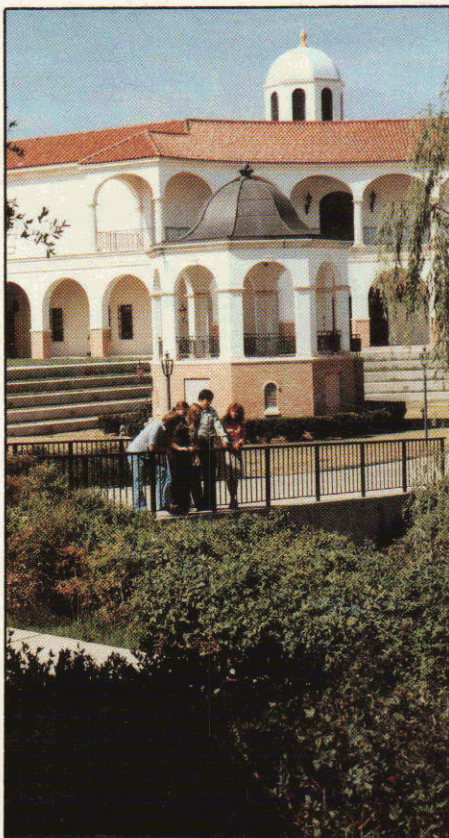




A Part of the
American Educational Complex
Consortium



**CENTRAL
TEXAS
COLLEGE**
**1979-1981
CATALOGUE**

South Entrance

SA
PP

the campus
Central Texas College

8

Housing
Kilmer

Registration

Loop Road South

Loop Road East



Towns County

Loop Road North

Legend:

- A Academic
- ADM Administration
- AG Agriculture
- AT Advanced Technology
- EE Educational Complex
- G Geomassim
- I Lady Bird Johnson Center for the Performing Arts
- L Library
- M Telecommunications Media
- N Nursing
- PM Power Maintenance
- PP Physical Plant
- R Student Residence
- SA Student Air Conditioning
- SC Roy J. Smith Student Center
- U American Technological University

4

5

PM

M

AT

A

S

ADM

L

SC

I

N

G

E

3

2

1

7

6

C

U

R

K

J

H

F

Service Road

Loop Road North

Bell Tower

Loop Road West

United States Highway 180 West

Kilmer

Coppens Cove

Service Road

Parking lots designated by numbers

CAMPUS ADDRESSES

MAIN CAMPUS

CENTRAL TEXAS COLLEGE
U.S. Highway 190 West
Bell/Coryell Counties
Killeen, Texas 76541
1-817-526-1211

BRANCH CAMPUSES

ALASKA

Central Texas College-Fort Richardson
Building 658-Kiska Hall
Fort Richardson, Alaska 99505
&
Central Texas College-Fort Greeley
Army Education Center - Building 661
APO Seattle 98733

EUROPE

Central Texas College-Europe
Yorkhof Kaserne
Hanau Military Community
APO New York 09165

FAR EAST (KOREA)

Central Texas College-Far East
APO San Francisco 96301

FORT LEE

Central Texas College-Fort Lee
P.O. Box B
Fort Lee, Virginia 23801

FORT LEONARD WOOD

Central Texas College-Fort Leonard Wood
Truman Education Center-Box 216
Fort Leonard Wood, Missouri 65473

U.S. NAVY - PACE

Central Texas College - PACE (Pacific)
P.O. Box A82568
San Diego, California 92138

CORRESPONDENCE AND INQUIRIES

Correspondence and inquiries should be addressed to the appropriate office, e.g. Admissions, Records, Financial Aid, etc., as listed in the catalog, at the campus where the student currently attends.

Students departing branch campus locations must notify the branch administrative office of their departure to insure their records are transferred to the main campus at Killeen, Texas. Records and transcript services will be provided through the Killeen campus for students not in attendance at a branch campus.

Students should become familiar with the contents of this catalog and should bring their catalogs with them to the campus for degree planning and scheduling.

Central Texas College

Eighth

1979-1981

GENERAL CATALOGUE

Accredited By
Southern Association of Colleges and Schools

Approved By
Coordinating Board,
Texas College and University System
Texas Education Agency

Listed In
Report of Credit Given By
American Association of Collegiate
Registrars and Admissions Officers

and
Accredited Institutions of Postsecondary Education by
Council On Postsecondary Education

and
Education Directory of Colleges and Universities by
U.S. Department of Health, Education and Welfare

Member Of
American Association of Collegiate Registrars and Admissions Officers
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Association of Texas Colleges and Universities
Southern Association of Collegiate Registrars and Admissions Officers
Texas Association of Public Junior Colleges
Texas Association of Collegiate Registrars and Admission Officers

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M.L., The University of Houston
Ph.D., The University of Texas
J.D., St. Mary's University
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University of Colorado

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Post Graduate Studies: The University of
Kentucky

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M.A., Southwest Texas State University
Post Graduate Studies: The University
of Texas, Nova University

Richard D. Wilson, Assistant Chancellor
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B.S., Lamar University
M.A., Stephen F. Austin University
Post Graduate Studies: The University
of Texas

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Ted Woehl	Comptroller
Jim M. Yeonopolus	Dean of Public Services

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Marjory I. Crane	Assistant Deputy Chancellor
------------------	-----------------------------

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George R. Criswell	Dean of Student Services
Lee W. Grimm	Deputy Comptroller

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Harry W. Powers	Director of Plant Maintenance and Operations
Noel H. Schnitz	Dean of Library Services
Charlotte O. Smith	Dean of Educational Program Development
T. C. Smith	Dean of Educational Program Evaluation

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Robert R. Dunlap	Dean of Occupational Education
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E. Jeanene Jasuta	Director of Student Affairs
Nolan Kinsey	Director of Evening College
David N. McLane	Registrar
L. Keith Requa	Director of Audio-Visual Services
Ned Roehrig	Director of Computer Services

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James B. Baker	Airport Manager
Larry Barton	Director of Fiscal Management
Martha A. Cranford	Assistant Director of Library Services
Wanda L. Edwards	Counselor
Kenneth G. Fairfield	Director of Communications Engineering
Cathy D. Harris	Director of Adult Education
Helen K. Henry	Director of BSEP Programs, Fort Hood Campus
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Mary H. Klierer	Director of Student Financial Aid
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Joseph Palumbo	Assistant to Director of Plant Maintenance and Operations
Homer E. Shelton	Director of College Programs, Fort Hood Campus
Raymond Tharp	Director of Placement Services

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Board of Trustees



Standing from left to right: Marvin A. Mickan, Copperas Cove; William S. Bigham, Killeen, President; Dr. Luis M. Morton, Jr., Chief Executive Officer and Chancellor of Central Texas College; W. A. Roach, D.V.M., Killeen, Treasurer.

Seated from left to right: Cleo W. Bay, Killeen; Mrs. L. D. Frederick, Copperas Cove, Secretary; Guinn C. Fergus, Killeen; J. A. Darossett, Copperas Cove, Vice-President.

Chancellor's Welcome

What an unusual story there is to tell about the growth and development of Central Texas College.

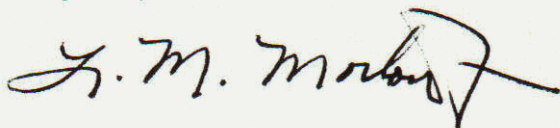
From modest beginnings this college has expanded its services across the nation and into foreign lands, in quest of its dedicated purpose... "to the service of the people"...

Why has this institution succeeded in such a dramatic fashion? Obviously, the reasons for success have been multiple. The people of this college district have supported this institution. The Board of Trustees, the administration and the faculty have worked in harmony to develop services for the students. Perhaps of greatest significance, the students have understood the frustrations of creating and expanding the institution to fulfill its dedicated purpose. Like older brothers and sisters looking after the younger, they have sacrificed, helped and protected the institution through the years. Returning students and students to arrive at our doors in future years will be the benefactors of these unselfish contributions.

As we continue to serve tens of thousands of students, both at the Killeen campus and throughout the worldwide branch campuses, our mark of excellence will continue to be... "to the service of the people"...

On behalf of the Board of Trustees, the administration and the faculty, I take the sincere and simple pleasure of welcoming you to Central Texas College. Thank you.

Respectfully,



Luis M. Morton, Jr.
Chancellor



Dedication

Central Texas College Dedicated by the 36th President of the United States

An excerpt from the speech delivered by the President of the United States, Lyndon Baines Johnson, at the dedication of this College Dec. 12, 1967:

"...just as our country lived through a great age of exploration in the last century, we have entered in this century another age. It will be remembered—I hope you are remembered with it—as the era of education.

"This college is proof of that.

"...we come here today to dedicate this college...to dedicate it forever to the service of the people, and to the progress of America."

An excerpt from the speech delivered by the President of Central Texas College, Dr. Luis M. Morton, Jr., introducing the President of the United States, Lyndon Baines Johnson:

"How fitting it is that one so concerned with the cause of education and so dedicated to the welfare of our servicemen should dedicate a college so committed to helping not only our local citizens, but also the men in uniform who come from all parts of this Nation. No greater honor could come to Central Texas College than to have the President of the United States of America dedicate this new and dynamic institution of higher learning. The honor is doubly significant because the man who holds this highest office is a great humanitarian—dedicated to the causes of freedom, peace, and education in our land and throughout the world."



CENTRAL TEXAS COLLEGE

Following unparalleled achievement, Central Texas College, a public community college, has evolved from a barren field in Central Texas to a multimillion-dollar educational complex. It all began in 1965, when Central Texans secured permission from the state of Texas and voted to create a college district. From the beginning, the challenge was enormous. The question was clear—whether to develop a traditional community college or dare to create a master plan for the future. Only time would reveal that Central Texas College was destined to become the agent for revolutionary change in education.

The Board of Trustees, together with business and industrial personnel, educators, military leaders, and a dedicated staff under the guidance of Dr. Luis M. Morton, Jr., formed the master plan for one of the most successful educational experiences America has ever witnessed. The union of minds developed a totally new educational complex to serve the total career development needs of a local population, as well as the needs of military and civilian personnel throughout the world.

Considering cost effectiveness, efficiency, and immediate application to present needs and future growth, it was clearly recognized that no single education institution could provide all the programs to meet the career development needs of people in commerce, business and industry, military, government, and the world society. Central Texas College has become part of an educational consortium consisting of three fully accredited educational institutions supported by research, thereby providing a “total career educational program” from the elementary grade level through the graduate level of instruction. This consortium, known as the American Educational Complex, consists of American Preparatory Institute, a pre-secondary and secondary school; Central Texas College, a two-year college; and American Technological University, a senior university. Each organization represents unique educational offerings which contribute to the total effectiveness of services provided through education.

Worldwide Services:

Having locally supported the United States Army with a wide variety of educational programs tailored to meet the specific needs of the military, Central Texas College was chosen to serve our armed forces across the nation and overseas. This commitment to provide expanded educational opportunities carries the same thrust of dedication which is characteristic of Central Texas College.

Central Texas College—Continental and Overseas Services—provides the opportunity for higher education to military personnel serving our country in the United States and in foreign lands. Technical-vocational programs are offered by the College at over 150 locations throughout Europe and the Far East, as well as at military bases in the United States and to the United States Navy, in the Pacific. For further information concerning College offerings around the world, the Continental and Overseas Catalog Supplement should be consulted.

Campus

Central Texas College claims many distinctions, one of which is its beautiful Killeen campus.

Central Texas College is located in the hill and lake country between Killeen and Copperas Cove. The classical Spanish exterior of each building is enriched by the soft blend of brick and mission tile roof.

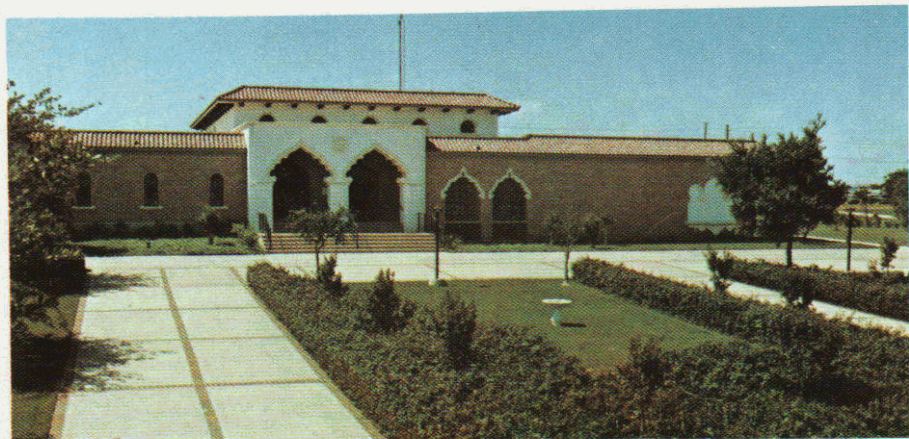
Modern facilities, advanced instructional methods and an excellent faculty provide the maximum support to help each student succeed in whatever career he or she chooses.



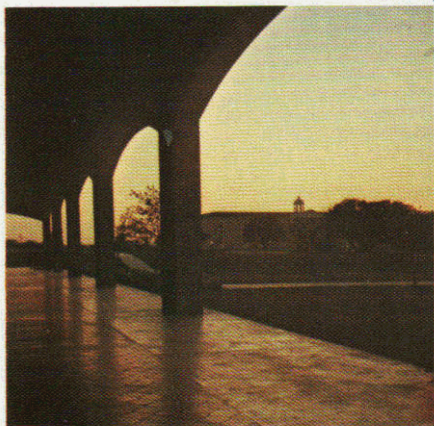
Advanced Technology Building



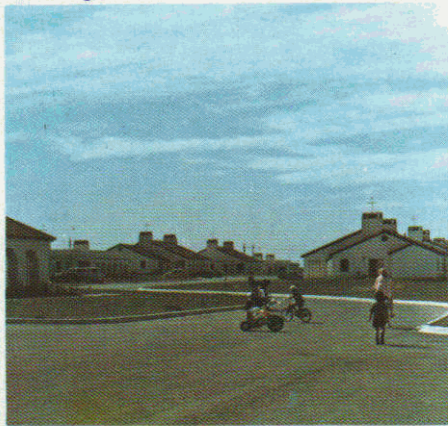
Roy J. Smith Student Center



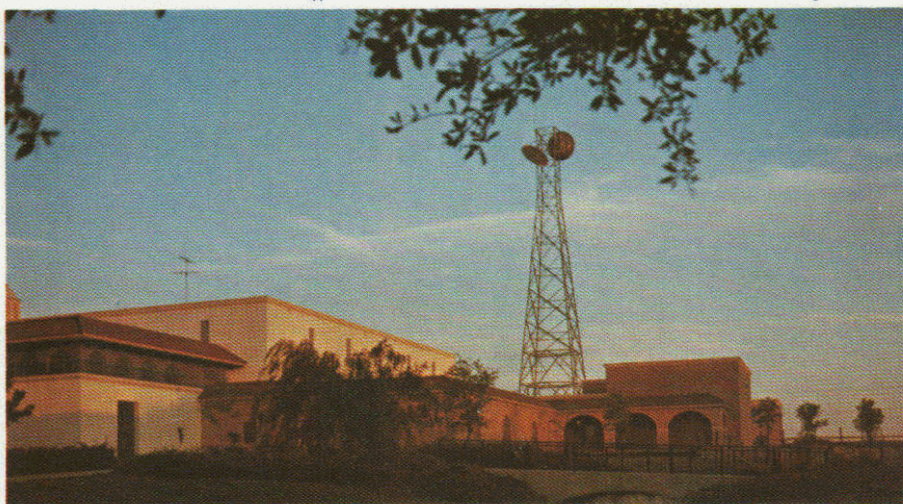
Nursing Building



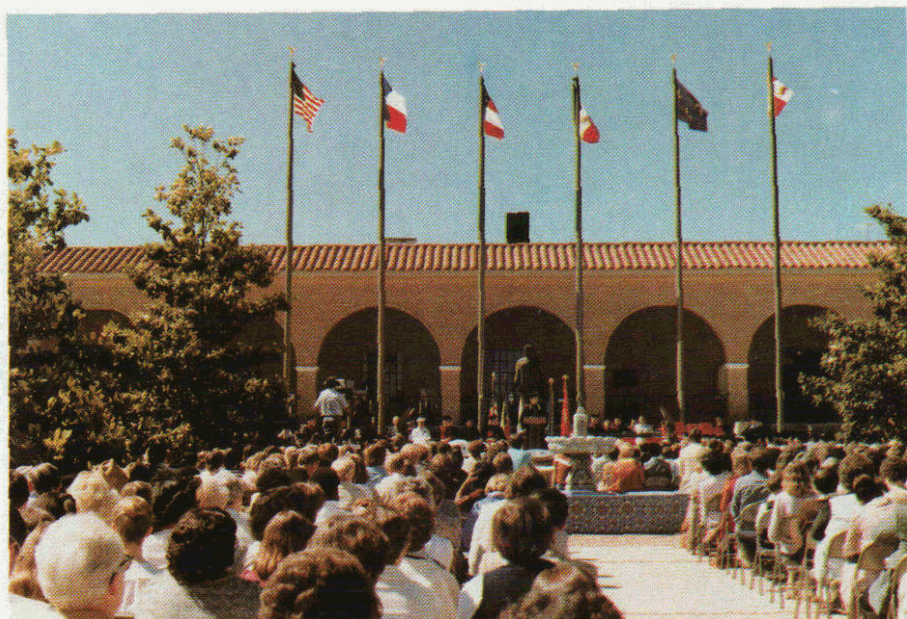
Academic Building



Married Student Housing



Telecommunications Facility



Graduation 1979

COLLEGE CALENDAR

The following calendar displays major activity dates of the academic year. Not all activities are displayed herein and students are cautioned to read bulletin boards and other announcements publishing dates of other scheduled academic and social activities.

Prior to each registration period, a detailed Schedule Bulletin is prepared, providing a finalized calendar of activities, registration procedures and schedules of course offerings. For administrative purposes, the Schedule Bulletin becomes the official calendar for the semester for which it is published.

1979-1980

DATES

JUL 30-AUG 24
AUG 20-21
AUG 21
AUG 22
AUG 27
AUG 27-31
SEP 3
SEP 12
OCT 1
NOV 12
NOV 14-15
NOV 22-25
DEC 10-15

FALL 1979

Registration
Faculty Meetings
Dormitory Open for Occupancy
New Student Orientation
Classes Begin
Late Registration
Labor Day Holiday (No classes)
12th Class Day
Last Day to File for Fall Graduation
Veteran's Day Holiday (No classes)
Final Exams - 12 week courses
Thanksgiving Holiday (No classes)
Final Exams - 16 week courses

SPRING 1980

Registration
Dormitory Open for Occupancy
New Student Orientation
Faculty Meetings
Classes Begin
Late Registration
12th Class Day
Last Day to File for Spring Graduation
Spring Vacation (No classes)
Final Exams - 12 week courses
Final Exams - 16 week courses
Graduation Practice
Graduation

SUMMER 1980

Summer Sessions (SS1 and SS2) plus
11-week session
Registration SS1, SS2, and 11 week
courses
Memorial Day Holiday (No classes)
Dormitories Open for Occupancy
Classes Begin, SS1 and 11 week
courses
Late Registration, SS1, and 11 week
courses

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

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

SEPTEMBER						
S	M	T	W	T	F	S
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30						

OCTOBER						
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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER						
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9	10	11	12	13	14	15
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30	31					

DECEMBER						
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JANUARY						
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23	24	25	26	27	28	29
30	31					

FEBRUARY						
S	M	T	W	T	F	S
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2	3	4	5	6	7	8
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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

MARCH						
S	M	T	W	T	F	S
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30	31					

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

JAN 2-11
JAN 9
JAN 10
JAN 10-11
JAN 14
JAN 14-18
JAN 29
FEB 1
MAR 31-APR 6
APR 9-10
MAY 2-8
MAY 8
MAY 10

MAY 5-30
MAY 26
JUN 2
JUN 2-5

COLLEGE CALENDAR

1979-1980

DATES

SUMMER 1980 (Cont'd)

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

JUN 5
JUN 10

JUN 11
JUL 4

JUL 8

JUL 9-11
JUL 9
JUL 14
AUG 13-14

4th Class Day - SS1
Last Day to File for Summer Graduation
8th Class Day - 11 week session
Independence Day Holiday (No classes)
Final Exams - for 5½ week courses (SS1)
Late Registration SS2
Classes Begin, SS2
4th Class Day - SS2
Final Exams for 5½ week (SS2) and 11 week courses

1980-1981

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

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

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

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

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

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

AUG 4-29
AUG 26-27
AUG 27
AUG 28
SEP 1
SEP 2
SEP 2-5
SEP 11
OCT 1
NOV 10
NOV 19-20
NOV 27-30
DEC 15-20

JAN 5-16
JAN 14
JAN 15
JAN 15-16
JAN 19
JAN 19-23
FEB 2

FEB 3
APR 8-10
APR 13-19
MAY 8-14
MAY 15
MAY 16

FALL 1980

Registration
Faculty Meetings
Dormitory Open for Occupancy
New Student Orientation
Labor Day Holiday (No classes)
Classes Begin
Late Registration
12th Class Day
Last Day to File for Fall Graduation
Veteran's Day Holiday (No classes)
Final Exams - 12 week courses
Thanksgiving Holiday (No classes)
Final Exams - 16 week courses

SPRING 1981

Registration
Dormitory Open for Occupancy
New Student Orientation
Faculty Meeting
Classes Begin
Late Registration
Last day to file for Spring Graduation
12th Class Day
Final Exams - 12 week courses
Spring Vacation (No classes)
Final Exams - 16 week courses
Graduation Practice
Graduation

COLLEGE CALENDAR

1980-1981

DATES

SUMMER 1981

Summer Sessions (SS1 and SS2) plus
11 week session

Registration SS1, SS2, and 11 week
courses

Memorial Day Holiday (No classes)

Dormitories Open for Occupancy

Classes Begin, SS1, and 11 week
courses

Late Registration, SS1 and 11 week
courses

4th Class Day - SS1

8th Class Day - 11 week session

Last Day to File for Summer

Graduation

Independence Day Holiday (No
classes)

Final Exams - for 5½ week courses
(SS1)

Late Registration SS2

Classes Begin, SS2

4th Class Day - SS2

Final Exams for 5½ week (SS2) and
11 week courses

MAY 4-29

MAY 25

JUN 1

JUNE 1-4

JUNE 4

JUNE 10

JUL 4

JUL 7

JUL 8-10

JUL 8

JUL 13

AUG 12-13

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

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

1981-1982

FALL 1981

Registration

Faculty Meetings

Dormitory Open for Occupancy

New Student Orientation

Classes Begin

Late Registration

Labor Day Holiday (No classes)

12th Class Day

Last Day to File for Fall

Graduation

Veteran's Day Holiday (No classes)

Final Exams - 12 week courses

Thanksgiving Holiday (No classes)

Final Exams - 16 week courses

AUG 3-28

AUG 26-27

AUG 26

AUG 27

AUG 31

AUG 24-SEPT 4

SEP 7

SEP 12

OCT 1

NOV 9

NOV 18-19

NOV 26-29

DEC 14-19

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

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

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

GENERAL INFORMATION

HISTORY

To provide increased opportunities in higher education, the citizens of the Killeen and Copperas Cove Independent School Districts and the Nolanville Common School District created the Central Texas College School District in July, 1965. A \$2,000,000 bond issue to construct and equip the campus followed in October, 1965. In January, 1966, the Board of Trustees employed Dr. Luis M. Morton, Jr., as President of Central Texas College and offices were opened in Killeen that same month. In June of that same year, ground breaking ceremonies were held. Since that time Central Texas College has expanded its physical plant to the present twenty-nine buildings. Current student population at the Killeen Campus is approximately 5,000 per semester.

The 560-acre campus, located on U.S. Highway 190 between Killeen and Copperas Cove, Texas, was dedicated "...to the service of the people..." on December 12, 1967, by the 36th President of the United States, Lyndon Baines Johnson.

EDUCATIONAL PHILOSOPHY

Central Texas College is dedicated to the philosophy that in a democracy, the well-being of the individual, as well as the whole of the society, depends upon the sound moral and educational development of its people. Since education is an individual, evolutionary, and never-ending process, the College curricula are necessarily both flexible and extensive.

In order to ensure the fullest service possible to the civilians of the surrounding area, to the personnel of the large military installation adjacent to the Killeen campus and to the personnel of military installations around the world, the educational programs of the College are designed to meet the needs of full-time and part-time students. To accommodate diverse educational needs, Central Texas College provides a variety of educational programs. The objective of Central Texas College is to become a total learning environment, encompassing traditional and non-traditional forms of education. The guiding principle of the total learning environment is the College's commitment to meet the real educational needs of all the people. The College proposes to make available, in its total environment, the opportunity to success in life, which is the birthright of every American.

EDUCATIONAL OBJECTIVES

1. **UNIVERSITY TRANSFER EDUCATION** - The College provides the first two years of college work for those students planning to achieve a baccalaureate or higher degree.
2. **GENERAL EDUCATION** - The College provides general education courses which develop competence, skills, and attitudes essential to effective performance as an individual, as a citizen, and as a productive member of society. Within this academic framework are studies in communication and languages, social sciences and humanities, mathematics, physical and social development, as well as a program of co-curricular activities.
3. **OCCUPATIONAL EDUCATION** - The College provides courses which qualify students in vocational and/or technical fields and equip them for occupational competency.
4. **AREA SERVICE** - The College provides life-long education for adults, opportunities for cultural enrichment, special interest courses, lectures, and meetings designed to satisfy the special needs of business, of the military and of area groups.

5. **COUNSELING AND PERSONAL GUIDANCE** - The College provides counseling and guidance services which enable the student to select, with proper perspective, the educational program that is compatible with individual abilities, aptitudes and ambitions.
6. **PLACEMENT** - The College provides an employment/placement service to assist graduating students and alumni in bringing their qualifications to the attention of possible employers.

THE CATALOG

This catalog is an official bulletin of Central Texas College containing policies, regulations, procedures, tuition and fees in effect at the time this catalog was published. The College reserves the right to make changes at any time to reflect current board policies, administrative regulations and procedures, amendments required by State Law, and tuition and/or fee changes.

Students are urged to study the contents of this catalog carefully, as they are responsible for observing the regulations contained herein.

Other official bulletins published by the College include the *Catalog Supplement* describing policies, procedures, regulations and fees for branch campuses, and the *Student Handbook*, which includes the institution's policies and regulations relating to student conduct and student activities at the main campus.

EQUAL OPPORTUNITY POLICY

Central Texas College admits students without regard to race, color, sex, age, religion, national origin, or handicap. This policy also applies to the employment of personnel, faculty and staff.

PROGRAM/COURSE AVAILABILITY

Programs of study displayed in this catalog are offered when sufficient interest indicates a level of enrollment required for program continuation. Students desiring to enter specific programs of study are advised to seek confirmation of program availability prior to their first registration.

The College further reserves the right to adjust course scheduling, including class cancellations, when enrollment or other circumstances require this action.

ADMISSIONS AND REGISTRATION

GENERAL ADMISSION INFORMATION

Requests for application materials or questions concerning admission should be addressed to the Admissions Office.

Central Texas College is an open-door comprehensive community college. An open-door admission policy is maintained to insure that all persons who can profit from post-secondary education have the opportunity to enroll. New students will be admitted to the College unconditionally, providing all admission requirements are met. ACT/SAT entrance examinations are required for admission. Students are encouraged to submit applications and ACT or SAT scores early in order to facilitate their pre-registration advisement process.

Admission to the College does not guarantee admission to specific programs and courses. Departmental approval is required to register for certain courses, as published in the registration schedule.

ADMISSION REQUIREMENTS - ALL STUDENTS

Students who hold diplomas from accredited secondary (high) schools or GED equivalency certificates will be admitted to Central Texas College. Students transferring from another accredited college will be admitted if they are eligible to return to the institution last attended. Adults, veterans and military personnel who have not completed a high school course, but who are prepared to undertake post high school studies, may be admitted to certain areas of study, if in the judgement of College officials, such study will be of value to the individual. NOTE: An adult, for purposes of admission, is defined as an individual 18 years of age or older.

FORMS REQUIRED

HOW TO BEGIN

In addition to the above criteria, students must provide the following documents prior to being considered for admission:

- Application for Admission
- Immunization Certificate
- Residency Certificate

RECORDS REQUIRED

TRANSCRIPTS AND TEST SCORES

Records of all previous education must be on file with the Records Office prior to unconditional admission. Students whose records have not been provided by the end of their first semester will be ineligible to receive grades or transcripts.

1. **HIGH SCHOOL GRADUATES:** Must submit official high school transcript or High School GED Equivalency scores.
2. **COLLEGE TRANSFER STUDENTS:** Official transcript must be provided for all college study.

3. **INDIVIDUAL ADMISSIONS STUDENTS** (except transient students): Must provide official transcripts for all previously attended institutions, high school and/or college, and/or GED scores.

NOTE: Students are responsible for requesting their official records (signed and sealed) to be forwarded directly from the issuing institution to the Central Texas College campus serving the student's location. Addresses are listed in the front of this catalog.

TRANSIENT STUDENTS

Students not seeking a degree or certificate from Central Texas College are not required to provide previous education records, as noted above. Records will be required if student later elects to seek a diploma or certificate.

READMISSION REQUIREMENTS

Central Texas College students who have missed one semester or more at the College must re-complete the admission process. Students who have attended other institutions during their absence from Central Texas College must provide transcripts from all institutions attended during the absence.

EARLY ADMISSION

Early admission offers the opportunity for high school juniors and seniors to earn college credits while concurrently enrolled in high school. Early admission is open to any high school junior or senior, subject to the following conditions:

- a) An Early Admission Form with the signatures of *high school principal or counselor** and parent or legal guardian must be submitted.
- b) Student must provide an official high school transcript.
- c) The student will be expected to adhere to all policies of the College and the high school, to include attendance.

Students who meet the above criteria will be accepted at Central Texas College on individual approval.

***NOTE:** Central Texas College assumes no responsibility for loss of Interscholastic League eligibility of high school students enrolled under this program.

FOREIGN STUDENTS

INTERNATIONAL ADMISSION REQUIREMENTS:

Sixty days prior to intended registration, in addition to completing Application and Admission requirements, international students must provide:

1. **IMMIGRANT AND REFUGEE STUDENTS:**

- a) Immigrant Card, or
- b) I-94 Refugee permit

2. **NON-IMMIGRANT ALIEN STUDENTS:** (applies to all students holding visa category A-L issued by U.S. Immigration and Naturalization Service):

- a) Official copy of transcript for last four years of secondary school. The official transcript must be an original copy translated into English and must show each course completed and grade earned.

- b) Official copy of transcript from each college or university attended. All foreign transcripts must be certified English translations.

NOTE: Transcripts must bear original mark or seal and signature of the Registrar to be acceptable.

- c) Test of English as a Foreign Language (TOEFL): Minimum acceptable score is 500.
- d) ACT/SAT (American College Testing Program or College Entrance Examination Board Scholastic Aptitude Test). Recommended minimum scores for admission are: ACT 17, SAT 780. Students whose scores are below recommended minimum must receive advisement from the Admissions & Counseling Office.
- e) Financial Statement indicating sufficient funding for tuition, fees, and personal expenses.
- f) Tuition Deposit - A non-refundable deposit of \$100 must be on file with the Admissions Office prior to issuance of Form I-20. The \$100 will be applied toward tuition.
- g) Dormitory Application and deposit.
- h) Compliance with all requirements and procedures established for visa category by U.S. Immigration and Naturalization Service.

International students wishing to apply to Central Texas College should address inquiries to the Foreign Student Advisor who will provide forms and instructions to complete the requirements above.

DEPARTMENTAL ADMISSIONS REQUIREMENTS

NURSING STUDENTS

Students entering the Associate Degree Nursing program, in addition to completing regular admission procedures, must also meet the following:

1. Nursing Admission Requirements:

- a) ACT (American College Testing program). Minimum composite score of 17 or equivalent SAT score of 780.
- b) Personal interview with a member of the Nursing Department.

2. Nursing Application Requirements: Each prospective Associate Degree Nursing student must submit directly to the Nursing Department the following items by the deadlines indicated:

For admission in the Fall Semester - by June 1

For admission in the Spring Semester - by October 1

- a) Application Form for Nursing.
- b) Physical exam results attesting to good health, signed by a licensed physician.

CAREER PILOT STUDENTS

All career pilot students must pass FAA physical exams appropriate to their level of training prior to admission to flight training. Written evidence of FAA medical certification must be presented to the department chairperson at the time of pre-registration advisement for admission to this department.

REGISTRATION

NEW STUDENT PRE-REGISTRATION ADVISEMENT

All first-time students will be required to participate in the pre-registration advisement process on campus. This process includes meeting with counseling staff and may include testing to aid in appropriate course placement, departmental advisement, and referral to other specialized services, such as Financial Aid and Veterans Affairs.

WHEN TO REGISTER FOR CLASS

REGISTRATION PERIODS

Registration periods for regularly scheduled classes are tentatively scheduled in the college calendar published in this catalog. Specific times, dates, and class information are published separately in the class schedule, distributed prior to each registration period.

Special registrations are conducted for classes offered at locations other than the main campus and for courses scheduled other than in the semester calendar. Details of special registration are published and distributed separately.

LATE REGISTRATION

Students are permitted to register late as published in the Schedule Bulletin. Students who complete registration after courses begin are not excused from meeting attendance or academic requirements and must arrange with the instructor to make up any assignments missed. No students are permitted to register after the scheduled late registration date.

COURSE ADMISSION

TO BE OFFICIALLY REGISTERED

Students must complete the published registration procedure each term, including payment of all tuition and fees to gain admission to classes. Installment paying of tuition is not permitted. Students who withdraw are not entitled to remain in class on an unofficial basis.

WITHDRAWAL - see page 26

COST OF CLASSES

TUITION AND FEES

All tuition and fees are subject to change without notice. All tuition and fees must be paid at the time of enrollment. A student is not officially registered until payment is made in full. Until all the student's obligations to the college have been satisfied, the student may not graduate or have transcript(s) issued. For tuition and fee schedules in effect at the time of publication, see page 7.

SCHEDULE OF TUITION AND FEES

KILLEEN CAMPUS 1979-1981 TUITION

Semester Hours	Resident	Non-Resident
1	\$ 25.00	\$ 85.00
2	25.00	100.00
3	32.00	110.00
4	40.00	135.00
5	48.00	140.00
6	54.00	170.00
7	62.00	185.00
8	70.00	210.00
9	74.00	235.00
10	78.00	245.00
11	82.00	255.00
12	85.00	260.00
13	87.00	270.00
14	91.00	280.00
15	95.00	290.00
16	99.00	300.00
17	103.00	310.00
18	105.00	320.00

INDIVIDUALIZED INSTRUCTION

(Tuition in addition to above semester hour tuition)

Career Pilot

CP 130	\$1,017.00
CP 134	1,000.00
CP 234	1,188.00
CP 235	1,454.00
CP 235A	1,169.00
CP 235B	1,385.00
CP 236	858.00
CP 238	824.00
CP 238A	694.00
CP 238B	1,573.00
CP 238C	3,325.00
CP 238D	1,463.00
CP 239	1,910.00

Criminal Justice

Firearms	15.00
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Music

Piano

1 Semester Credit Hour	\$ 75.00
2 Semester Credit Hours	90.00
3 Semester Credit Hours	100.00

Other

1 Semester Credit Hour	50.00
2 Semester Credit Hours	60.00
3 Semester Credit Hours	75.00

Physical Education

Bowling	20.00
Equitation	55.00

Welding

4 Semester Credit Hours	40.00
5 Semester Credit Hours	50.00

FEES

COLLEGE ANNUAL	\$ 3.50
LABORATORY FEE (All Laboratory Courses)	8.00
STUDENT SERVICES FEES (Per Semester)	
10 or more hours	20.00
Less than 10 hours	3.00
SPECIAL SERVICE FEES	
Graduation	10.00
Transcript/Records** (per copy)	2.00
Institutional Challenge Exam	25.00
RETURNED CHECK FEE	10.00

RENT, ROOM & BOARD, AND DEPOSITS

General Property Deposit	10.00
Dormitory Property Deposit	25.00
College Housing Deposit (without pet)	100.00
College Housing Deposit (with pet)	200.00
Married Housing (monthly rental)	
One-Bedroom Apartment	225.00
Two-Bedroom Apartment	260.00
Student Resident Hall Room and Board Plan (Per Semester)	
Five-Day Plan	720.00
Seven-Day Plan	807.00
Athletic Plan	945.00
Daily Occupancy Rate (without board)	10.00

*NOTE: All tuition and fees are subject to change as approved by the Board of Trustees.

**NOTE: Refund of overpayment of transcript/record fees will be made only upon written application of the student.

GETTING YOUR MONEY BACK

REFUNDS OF TUITION AND FEES

No tuition refunds will be made except in the case of course cancellation or official withdrawal from the college or from a course.

All refunds for tuition will be computed from the date the Application for Withdrawal/Refund is filed with the Records Office (not from the date of last attendance) according to the following schedule:

1. Prior to the first day of class, the College will refund 100% of the tuition.

2. A refund of 50% of tuition will be made if the withdrawal is filed by the close of business on the:

6th class day for 16 week classes

4th class day for 12 week classes

3rd class day for 8 week classes

2nd class day for 6 week classes

3. A refund of 20% of tuition will be made if the withdrawal is filed by the close of business on the:

12th class day for 16 week classes

8th class day for 12 week classes

6th class day for 8 week classes

4th class day for 6 week classes

4. No refund will be made for withdrawals filed after the time specified in No. 3 above.

5. Emergency withdrawal will be considered to be filed as of the date of the emergency. Students must submit written proof of emergency such as military emergency leave orders or medical certification of family emergency. Refund under emergency conditions will follow the refund of tuition schedule, above.

RESIDENCE CLASSIFICATION

The responsibility of registering under the proper residence classification is that of the student. If a student has any question concerning residence classification as a resident of Texas, it is the student's obligation to raise the question with the Registrar prior to registration. **A STUDENT WHO IS A LEGAL NON-RESIDENT, BUT WHO REGISTERS AS A RESIDENT, IS SUBJECT TO DISCIPLINARY ACTION.**

Copies of the *Rules and Regulations for Determining Residence Status, Coordinating Board, Texas College and University System*, may be obtained from the Registrar or the Records Office. Below is a summary of this publication. It should not be construed to cover all situations.

CITIZENS OF THE UNITED STATES OF AMERICA

RESIDENT: An individual 18 years or older who moves into Texas *and* who is gainfully employed within the state for a period of 12 consecutive months immediately prior to enrolling is entitled to classification as a resident. The legal residence of an individual under 18 years of age is ordinarily that of the father.

NON-RESIDENT: An individual 18 years or older who resides outside Texas or who has not been a resident of Texas 12 months subsequent to his 18th birthday, or for 12 months immediately preceding the date of registration, is classified a non-resident. An individual under 18 years of age whose family resides in another state, or whose family has not resided in Texas for the 12 months immediately preceding the date of registration, is classified a non-resident.

For any person over 18 years of age who has not established his residence separate from his parents, dependency upon a parent may be considered in determining classification.

CITIZENS OF ANY COUNTRY OTHER THAN THE U.S.A.

An alien living in the United States under a visa permitting permanent residence, or one who has filed with proper Federal authorities a declaration of intention to become a citizen, has the same privilege of qualifying for Texas resident status for tuition purposes as has a citizen of the United States.

EXEMPTIONS

Under certain conditions an out-of-state or foreign student is entitled to pay the same tuition as a resident of Texas. A request for an exemption should be made at the Records Office prior to registration. Documentation to support exemption request is required:

1. The non-resident student who marries a person who is, at that time, a resident of Texas is entitled to pay resident tuition at the following registration. The legal residence of a husband and wife are normally presumed to be the same; however, it is possible for either the husband or wife to establish a residence different from the other.
2. Members of the Armed Forces *who are assigned to active duty in Texas* are entitled to enroll themselves, their spouse, and their dependent children by paying resident tuition.

NOTE: Military personnel, separating from active duty service, whose home of record is other than Texas are not automatically considered residents for tuition purposes.

3. A student employed by the college at least half-time in a position may pay resident tuition while employed.
4. If a non-resident receives a competitive scholarship of at least \$200 per academic year, he may pay resident tuition during the registration period in which the scholarship is in effect.

RECORDS ACCESS

STUDENT RECORDS

The following information concerning student records maintained by Central Texas College is published in compliance with the Family Education Rights and Privacy Act of 1975 (PL 93-380).

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.

Further information concerning access to student records is available through the Office of the Dean of Student Services, Admissions Office, and Registrar's Office.

STUDENT SERVICES

COUNSELING

As a service to students and to the community, Central Texas College maintains a staff of professional counselors, in addition to faculty advisors in each instructional program.

The counseling center functions to assist students in making intelligent decisions regarding their vocational, educational, and personal-social plans. As a part of this program, counselors assist in interpretation of tests, inventories, and occupational and educational information.

COURSE PLANNING

WHO TO SEE FOR CLASSES

Proper planning of courses is important for each student in order to assure that individual objectives may be attained. Guidance in educational planning is available to students and prospective students through the Admissions and Counseling Office, by appointment and at announced registration periods. Students who are undecided as to their major field of study should contact the Admissions and Counseling Office for assistance in course planning before beginning the registration process. Students who have decided on a major field of study should contact the appropriate Departmental Advisor for assistance in course planning. Final responsibility for a proper and successful educational venture rests with the student.

CAREER PLACEMENT SERVICES

The Career Placement Services office provides career planning and placement services for students and alumni seeking part-time and full-time employment. Placement personnel assist students in obtaining positions compatible with their education and experience.

Students interested in this service should register with the Placement Office and provide an individual credential file (application/resumes and reference letters) to be maintained by the Placement Office. These files will be forwarded to prospective employers when requested by the candidate for employment.

Students requiring part-time and seasonal employment are encouraged to use the job listing service of the Placement Office.

Representatives of business and industry seeking potential employees may contact the Placement Office for information and to arrange interviews with student when appropriate.

INTERNATIONAL STUDENT ADVISEMENT

Central Texas College maintains a special office and staff to assist non-resident alien students in matters related to their enrollment. Services include admissions assistance and academic counseling.

Inquiries should be addressed to the Foreign Student Advisor at the Main Campus address listed in the front of the catalog.

TESTING SERVICES

Central Texas College provides an extensive testing program for interested students and residents of the area. For further information and testing dates, individuals may contact the Testing and Evaluations Office at the Main Campus address listed in the front of the catalog.

ENTRANCE EXAMINATIONS - The ACT (American College Test) is administered by Central Texas College on five national test dates each year. All new students who have not previously taken the ACT or SAT are required to take the ACT for guidance purposes.

ADVANCED STANDING EXAMINATIONS - CLEP (College Level Examination Program) examinations, which are nationally prepared tests for students desiring to receive credit for knowledge already obtained, are administered by Central Texas College two days each month. By this means students may accelerate their college program and may take courses at the next higher level.

OCCUPATIONAL AND CAREER TESTING - The CPP (Career Planning Profile), the Strong-Campbell Vocational Interest Inventory and the DAT (Differential Aptitude Test) are available to help inventory interests in a variety of occupations. The ACT Assessment also assists students in making educational and career decisions.

HIGH SCHOOL EQUIVALENCY EXAMINATION - Central Texas College offers the GED (General Educational Development) examination for those who have not completed a formal high school education. The successful completion of this examination may result in a certificate of high school equivalency.

INSTITUTIONAL CHALLENGE EXAMINATIONS - Students may request, through the Testing Office, permission to take challenge examinations for *certain courses*. An application for challenging a course must be completed and returned to the Business Office with the appropriate non-refundable fee. The student will then be notified of the time and place to take the examination. Failure to appear for the examination will result in the loss of the challenge fee. Students must not have previously enrolled in the course for college level credit.

To obtain credit, the student must pass the examination with a grade of "A" or "B" and have completed a minimum of 6 semester hours of course work at Central Texas College with a 2.0 grade point average.

OTHER TESTS - Central Texas College also administers other tests as may be useful to people of the community. For a complete listing of available tests or additional information, students are invited to contact the Testing Office.

EVALUATION OF PREVIOUS EDUCATION

TRANSFER STUDENTS Transfer of credit from accredited colleges and universities may be accepted when the grade earned was "C" or better and the course work applies to the student's curriculum. Passing grades lower than "C" may be considered for transfer in accordance with current evaluation procedures and curriculum requirements.

NON-TRADITIONAL EDUCATION

Central Texas College recognizes that each student's educational needs, goals, and experiences are unique and that individuals are proficient in many areas of college work that

are not formally documented on transcripts. It is the policy of the College to recognize non-traditional learning experiences and to award course credit in all cases where such credit is appropriate. In keeping with this policy, CTC has established the Individualized Career Evaluation Process (ICEP).

The purpose of ICEP is to systematically correlate business, industry, government, and military education received by non-traditional methods with institutional curricular requirements.

All students, including military and former military personnel, are eligible for credit consideration based upon documentation of their previous learning experiences.

The non-traditional methods usually considered applicable toward a degree at Central Texas College are:

1. USAFI and/or DANTES Courses and Subject Standardized Tests.
2. College Level Examination Program (CLEP) - both the General Examination and Subject Examination.
3. Institutional Course Challenge Examinations.
4. Credit for military schools attended as recommended by the American Council on Education and recognized by Central Texas College - ICEP.
5. Credit for Physical Education and Psychology 111 for military service.
6. MOS Training and Experience as recommended by the American Council on Education and recognized by Central Texas College - ICEP.
7. American College Testing Program - (ACT).
8. College Board Admission Testing Program.
9. Correspondence/Extension Courses offered by accredited institutions which are members of the National University Extension Association.
10. Other - To include certain types of civilian training and specialized testing.

EVALUATION PROCEDURES

Curriculum plans outlining transfer and/or non-traditional credit, as well as remaining requirements are available from college or education center advisors upon student request.

Final degree plans are provided upon receipt of all official transcripts and documents. Evaluated credit must be validated through successful completion ("C" grade or higher) of six semester hours of traditional credit, earned through Central Texas College.

Application for a final degree plan may be made by submitting an Evaluation Request form to Evaluations, Central Texas College, at the administrative office serving your area. Addresses are listed in the front of this catalog.

Evaluated credit awarded by Central Texas College applies to its programs of study and may transfer to other institutions according to the policies of the receiving institution. Students planning to transfer to other institutions should consult with those institutions regarding their policies on acceptance of evaluated credit.

SERVICEMEN'S OPPORTUNITY COLLEGE Because of its efforts to serve the educational needs of servicemen, Central Texas College has been designated a Servicemen's Opportunity College by the American Association of Community and Junior Colleges.

SOC DEGREE COMPLETION AGREEMENT

Students can continue their Central Texas College degree programs regardless of location. Through the "credit bank" provisions of the Servicemen's Opportunity College, a student may study at any other accredited college and apply the work toward Central Texas College degree requirements, so long as 12 semester hours have been completed with Central Texas College, and the courses taken at other institutions satisfy the requirements of the Central Texas College degree program. The course work must be approved in advance by the Central Texas College SOC Advisor. Requests for SOC agreements should be addressed to the SOC Advisor, at the administrative office serving the student's location. Addresses are listed in the front of this catalog.

STUDENT ACTIVITIES

Social and cultural activities play an important part in the life of the college student. Often classroom instruction can be supplemented and enhanced by a well-developed program of activities. Central Texas College believes that in order to develop good qualities of leadership and to help create good fellowship and social goodwill, each student should be given the opportunity to develop to his or her full potential.

In support of this philosophy two offices have been established to support and guide student development. Both the Student Affairs Office and the Student Activities Office provide informal opportunities for individual and group interaction. An organized program of student-to-student and student-faculty related activities is provided to help each student gain insight and understanding of self, society and the quality of life.

Fifteen clubs and organizations, officially approved, in addition to the Council of Student Representatives, operate on the main campus. Clubs include religious, political, social and recreational organizations. Activities of the various clubs and organizations are coordinated at weekly or bimonthly meetings. Movies, speakers, dances, workshops, concerts and related programs are also presented.

ROY J. SMITH STUDENT CENTER

This building, which provides the setting for many student activities, also becomes a gathering place for students during leisure time. It is one of the most popular buildings on campus.

The center houses a bookstore; dining area; inner landscaped court, snack bar; and a carpeted lounge area with a wood-burning fireplace, beamed ceiling and color television. A large game room and a spacious recreation center complete with pinball machines, pool tables and ping-pong tables is provided.

FOOD SERVICE

Hot and cold food, full meals or snacks, and beverages are available from the cafeteria or the snack bar located in the Roy J. Smith Student Center.

BOOKSTORE

The College operates a bookstore for the convenience of students and staff. New and used textbooks, supplies and equipment, and a selection of general merchandise are available. Textbook buy-back policies are printed in the Student Handbook.

INTRAMURAL SPORTS

Intramural sports programs have been organized for both men and women. These programs include football, basketball, volleyball, softball, table tennis, and tennis. Students interested in participating in these activities should contact the Student Affairs Office.

GYMNASIUM AND DORMITORY POOL

The college gymnasium and dormitory swimming pool are open during specified times for student use. Rules and regulations regarding use and access are published in the Student Handbook.

HOUSING

DORMITORY

Requests for dormitory rooms should be addressed to the Director of Student Activities located in the Student Center. Central Texas College operates a modern, air-conditioned dormitory for full-time male and female students. Room requests are honored on a first-come, first-served basis. A reservation deposit of \$25 is required for each room application. This deposit is not refundable after 30 days prior to the beginning of the semester for which it was first intended. Five-day and seven-day board plans are available. Payments for dormitory and board may be made in three equal installments. Dormitory policy and regulations will be supplied by the Student Activities Office upon request.

MARRIED HOUSING

Fifty-two air-conditioned, carpeted student apartments located on campus are available for married couples. Those interested may apply through the Married Student Housing Office to rent unfurnished or furnished, one or two bedroom apartments. The Married Student Housing Office is located in the Student Center.

PARKING FACILITIES

Parking space is available to students who desire to bring their cars to the campus. Each student who drives and parks a car on campus will be required to register the car with the college. Vehicle registration is conducted during announced registration periods. For vehicle registration at other times, see the Student Handbook. Students, faculty and staff will be required to park in designated parking areas and are required to display the campus parking permit decal. Parking and traffic regulations are set forth in detail in the Student Handbook.

LIBRARY

The Oveta Culp Hobby Memorial Library is one of the outstanding junior college libraries in the nation. Over 40,000 hard-bound volumes and over 50,000 volume equivalents on microfiche are housed in this beautifully appointed building which was dedicated to a native of Killeen, the first Secretary of the Department of Health, Education and Welfare.

President Lyndon B. Johnson joined the President of the College Board of Trustees, William S. Bigham, in the dedication to Mrs. Oveta Culp Hobby. Audiovisual resources and other advanced facilities to assist the student in reading and research are located in the library. The American Technological University has constructed an adjoining library at the main campus. Resources of the ATU library are also available for Central Texas College students.

COPYING SERVICE

Duplicating services may be purchased at the Library, the Information Center, and other coin-operated copy machines located on campus.

STUDENT FINANCIAL AID PROGRAMS

Central Texas College participates in numerous financial aid programs designed to assist students who demonstrate financial need and show education ability. Students who participate in the various programs for financial aid must comply with the rules and regulations of the College, as well as those of the program itself, to retain eligibility for the programs. Federal regulations require financial aid recipients to make satisfactory progress toward their current degree objective. Academic transcripts are monitored and financial aid will be denied when a student falls within the probationary status as defined in the current college catalogue. Appeal of denied financial aid may be made to the Financial Aid Review Committee.

Central Texas College participates in the following financial assistance programs:

BASIC EDUCATIONAL OPPORTUNITY GRANT: The BEOG is authorized by the Higher Education Act Amendments of 1972 to assist students in pursuing their first undergraduate degree. The intent of the BEOG is to provide a foundation of financial assistance to supplement the cost of postsecondary education. The amount of the BEOG award is based on the actual cost of the student's education while attending Central Texas College. Applications are available in the Office of Student Financial Aid.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT: This grant, authorized by the Higher Education Act Amendments of 1972, is available only to those students who demonstrate exceptional financial need and who, without the grant, would be unable to continue their education. The grants under the program range from \$200 to \$1,500 per academic year. No more than one-half of the total amount of student financial aid provided to the student may be awarded as a grant. Grant awards and renewals are made on the basis of demonstrated financial needs and satisfactory academic progress. To be considered for the SEOG, a student must complete the Family Financial Statement from the needs analysis services of the American College Testing Service. This form is available in the Office of Student Financial Aid.

TEXAS PUBLIC EDUCATIONAL GRANT: The TPEG is a State of Texas grant program available to students who are Texas residents and who demonstrate financial need. The student must be enrolled full-time (12 semester hours or more) to be considered for this grant. Application for the TPEG is the Family Financial Statement from the needs analysis services of the American College Testing Service. This form is available from the Student Financial Aid Office.

LAW ENFORCEMENT EDUCATION PROGRAM: This federal program provides funds for tuition fees, and books (not to exceed \$400/semester) to students who are currently employed full-time by a law enforcement agency. Applications, which are available in the Student Financial Aid Office, should be completed prior to the beginning of the semester for which the grant is desired.

COLLEGE WORK-STUDY PROGRAM: This program provides part-time employment opportunities for students who are in need of earnings in order to complete their educational goals. In arranging a job and determining how many hours per week a student may work, the Financial Aid Officer will consider: (1) financial need; (2) class schedule; and (3) student's health and academic progress. To be considered for the CWSP, a student must complete the Family Financial Statement from the need analysis services of the American College Testing Service. This form is available in the Office of Student Financial Aid.

NURSING STUDENT SCHOLARSHIP AND LOAN PROGRAMS: These programs are available to students who have been officially accepted in the Central Texas College Nursing Program. The student must demonstrate financial need through the needs analysis services of the American College Testing Service. Further information regarding application, repayment, deferment, and cancellation of the Nursing Student Loan is available in the office of Student Financial Aid.

NATIONAL DIRECT STUDENT LOAN: Central Texas College participates in the NDSL Program as authorized by the National Defense Education Act of 1958. Interest rate on the loan is 3% per annum beginning nine months after the date on which the borrower ceases to carry at least 6 semester hours of coursework. The minimum repayment is \$30 per month with a maximum repayment period of ten years. Awards are based on financial need and academic performance. Interested students must complete the Family Financial Statement from the needs analysis services of the American College Testing Service.

FEDERALLY INSURED STUDENT LOAN: These are loans secured from a lending agency such as a bank, savings and loan association, credit union, etc., but are guaranteed by the Federal Government. A student may borrow up to \$2500 per academic year, with a maximum amount for undergraduate or vocational study of \$7500.

The interest rate is 7% per annum simple interest. The Federal Government will pay the interest charge while the student is enrolled at least half-time. Repayment begins between nine and twelve months after graduation.

Interested students should obtain detailed information and application forms directly from lending institutions.

SCHOLARSHIPS: Information regarding various scholarship programs available to Central Texas College students may be obtained from the Office of Student Financial Aid.

Inquiries concerning student financial aid should be sent to the Office of Student Financial Aid.

VETERAN BENEFITS

Central Texas College is an approved college for those who wish to attend and receive benefits under the Veterans Readjustment Benefits Act of 1966.

Students attending with the aid of their veteran benefits should inquire at the office of Veterans Services, prior to registration, to obtain needed information relative to their enrollment and "certification" of attendance to the Veteran Administration. All new students must furnish the Veterans Services office an original copy of DD 214 or a copy certified by the County Clerk. The veteran must also furnish marriage certificates, divorce and birth certificates of dependents, if any.

Students must provide an approved degree plan to the Veterans Services office prior to certification of their initial semester. Degree plans are available through the Admissions and Counseling office or through Departmental Advisors. Transfer students should have copies of all previous transcripts for initial counseling sessions. It is the student's responsibility to inform the office of Veterans Services of any changes in enrollment status. The monthly rates of payment to Veterans are provided for by Public Law 94-502.

MILITARY EDUCATION BENEFITS

Active duty military personnel may wish to attend Central Texas College under the military Tuition Assistance Program which pays for 75% of tuition. (Department of Defense Appropriations Act of 1966, P.L. 80-213.) Information and application for military Tuition Assistance is available through military Education Centers.

WAR ORPHANS AND KOREAN VETERANS

Central Texas College is an approved college for those who qualify under these classifications.

VOCATIONAL REHABILITATION

The Texas Rehabilitation Commission offers assistance for tuition to students who have certain physical disabilities, provided the vocational objective selected by the disabled person has been approved by a representative of the Commission. Application for this assistance should be made to the nearest Texas Rehabilitation Office.

COLLEGE POLICIES AND REGULATIONS

ACADEMIC POLICY

ACADEMIC LOAD:

Students are responsible for determining the academic load they may successfully complete during each semester.

FULL TIME: Students registering for 12 or more semester hours during Fall or Spring are considered to be full time students. Students who register for 9 or more semester hours during the eleven week summer session or 4 or more semester hours during the first or second summer session are considered to be full time students.

NORMAL LOAD: The normal load, for students wishing to complete degree requirements in two academic years is 15 to 18 semester hours per term, depending upon the number of one-semester-hour courses taken.

MAXIMUM LOAD: Students may not take more than five courses or 18 semester hours during Fall or Spring semester without overload permission. Summer session students may not exceed two courses or 7 semester hours in the short session or four courses and 14 semester hours in the eleven week summer term.

MINIMUM LOAD: No minimum load is required.

NOTE: Students attending college with Financial Aid or Veteran Benefits assistance may be required to meet other academic course load standards than noted above. Details should be obtained from the Student Financial Aid Office prior to registering for courses.

ATTENDANCE POLICY

ABSENCES AND TARDINESS

Students are required to attend classes regularly. No unexcused absences or "cuts" will be allowed. Students are responsible for all class work covered during an absence from class, even in cases where you were able to satisfy the instructor that the absence was unavoidable. Failure to attend class regularly may result in administrative withdrawal of a student from a class or from the College. This type of non-attendance withdrawal results in the student receiving a grade of "F".

Students are required to be in class on time.

The following specific rules apply to absences:

1. Each instructor shall keep a record of class attendance and shall determine when a student's absence is excused.
2. An administrative withdrawal may be initiated by the instructor after a student has accrued a total of ten unexcused absences. The instructor will note administrative withdrawals as the grade of "F" "Non-Attendance" on the roll and record book. Absences are computed on class hours of instruction. Example: A class meeting of 50 minutes equals 1 absence.
3. As a matter of policy, administrative excuses from classes are not provided for any reason. Regardless of the nature of the absence, students are responsible for completing all course work covered during any absence.

ARE YOU OFFICIALLY ENROLLED

CLASS MEMBERSHIP

The only way to become an official member of a class at Central Texas College is by following the established procedures for registering and paying tuition and fees. No person is an official student until all charges have been paid in full. Installment payment of tuition is not permitted. When a student officially withdraws from a course, that person is not entitled to remain in class on an unofficial basis. Only those students who are officially enrolled have the privilege of attending classes.

YOUR CLASSIFICATION IS

FRESHMAN - with thirty semester hours or less recorded on your permanent record.

SOPHOMORE - with thirty-one semester hours or more recorded on your permanent record.

RESIDENT CREDIT

ALL CAMPUSES

A student may earn an Associate Degree entirely through study at branch campuses or in combination with study at the Killeen Campus. At least twelve semester hours must be earned by formal study at Central Texas College, regardless of campus location. Courses offered at all Central Texas College campuses meet the same academic standards and carry the same resident credit.

CREDIT TRANSFERS

TO OTHER COLLEGES AND UNIVERSITIES

Central Texas College is accredited by the Southern Association of Colleges and Schools. Credits earned at Central Texas College are transferable to other institutions in accordance with policies of the receiving institution. Students who plan to transfer to other institutions for degree completion or to pursue a more advanced degree are advised to consult with officials of the receiving school for degree requirements and transfer policy.

TO AMERICAN TECHNOLOGICAL UNIVERSITY

Through cooperative agreement between Central Texas College and American Technological University degree programs at the Baccalaureate and Masters level have been formulated to permit students to continue their education beyond the Associate Degree.

Course work taken at Central Texas College is transferrable to American Technological University. Courses taken at Central Texas College may be used to fulfill degree requirements at American Technological University with prior ATU approval, when courses apply to ATU degree requirements.

Students planning to continue their education beyond the Associate Degree level are encouraged to contact Departmental Faculty Advisors at ATU to plan their educational efforts and insure maximum degree applicability.

CREDIT TRANSFER LIMITS

MAXIMUM HOURS FOR TRANSFER TO OTHER COLLEGES

As a general rule, senior colleges will accept a maximum of sixty-six (66) semester hours of transfer credit from junior colleges. A student should not take more than this number of hours with the objective of transfer of credit unless written permission is secured from the chosen senior college.

HOW TO CHOOSE COURSES

COURSE NUMBERS

The unit of credit for Central Texas College is the semester hour. Course numbers contain three digits. The first digit "1" reading from the left, indicates a freshman level course. If the first digit is a "2" it indicates a sophomore level course. The second digit indicates the semester hour value of the course. The third digit indicates the recommended sequence in which the course is to be taken.

WHAT TO DO ABOUT COURSE PREREQUISITES

COURSES OUT OF SEQUENCE

Students who, for scheduling reasons, find it desirable to take an advanced course prior to completing the prerequisite must secure approval from the Department Advisor prior to registering for the course. The final responsibility for taking advanced courses without completing the required prerequisites rests with the students.

HOW YOU RECEIVE GRADES

GRADE REPORTING

Grades are assigned by faculty members based on attendance, class and laboratory performance, test scores and other departmental academic requirements. Students are encouraged to become familiar with each instructor's requirements for grades.

Grades are reported by two methods:

- Grade Reports are mailed by the College to the student's address of record at the end of each term. This method of reporting grades permits students to judge their performance at the end of each term.
- Transcripts are provided by the Records Office and are the official report of completed courses, grades, and credit awarded by the College. For information on ordering transcripts, see page 26.

GRADES AND POINT AVERAGE

The grading system at Central Texas College is as follows:

Numerical Value	Grades	Quality Points
90-100	A-Superior	4
80-89	B-Above Average	3
70-79	C-Average	2
60-69	* D-Passing, but Unsatisfactory	1
	** F-Failure	0
	*** I-Incomplete	0
	**** W-Withdrawal	
	***** N-No Credit	

*Students who receive a "D" grade are advised not to enroll in the next course for which this course was a prerequisite.

**The grade of "F" may be given for either academic failure or non-attendance.

INCOMPLETE GRADES

***An incomplete grade may be given in those cases where, because of personal illness, death in the immediate family, or military orders, the student is unable to complete all the requirements for a course. Notice of absence with supporting documentation may be required by the instructor. Students are requested to notify instructors in advance of absence whenever possible. The instructor makes the final decision concerning the granting of the Incomplete grade.

In awarding the grade of "I" the instructor may set a deadline for completing the remaining course requirements; in no case will the deadline exceed 90 days after the scheduled end of the class. It is the responsibility of the student to arrange with the instructor for the assignment of work necessary to complete the course and change the "I" grade within the time specified. An "I" grade cannot be removed by the grade of "W". If a student elects to repeat the course, the individual must register, pay full fees and repeat the entire course.

NOTE: In calculating the grade-point average for graduation or other purposes, the "I" grade is calculated as an "F". Students must complete course requirements to remove the "I" within the period specified above.

OTHER GRADES

****If a student officially withdraws, a grade of "W" will be given provided the student's work is passing at the time of the official withdrawal.

*****The grade of "N" is reserved for use with designated non-traditional, modular, courses and will be awarded to students who have made satisfactory progress, but lack the completion of certain modules required for course completion. The grade of "N" indicates that the student must enroll the following semester and complete those modules for a final grade in the course. Re-enrollment requires the payment of usual tuition and fees for the course.

GRADE POINT AVERAGING

A student's grade point average is calculated by dividing the total quality points by the total accumulated semester hours. Grades of "W" and "N" are not included in these calculations.

GRADES AND FINANCIAL AID

The student attending college with military tuition assistance, tuition aid, or VA benefits should be familiar with the requirements and possible obligations incurred particularly upon receiving a grade of "F", "I", "W" or "N". For additional information, contact the Director of Student Financial Aid.

CHANGE OF GRADES

Students who feel that there has been a computational error in grading must immediately contact the instructor for the course in question. If the instructor finds that an error has been made, the instructor must submit the grade change notice to the Records Office. Students must bring this matter to the attention of the instructor involved no later than 180 days from the end of the course in order that a grade change may be considered. Administrative personnel of Central Texas College are not authorized to change an instructor's grade.

GRADES FOR REPEATED COURSES

REPEATING A COURSE

The total hours earned toward a degree are not increased if a student repeats a course in which a passing grade has already been earned. The latter grade will be used in computing the final grade point average for graduation.

ACADEMIC STANDARDS

STUDENT RESPONSIBILITY

Students are expected to be aware of their grade point average. Calculation of grade point average is noted above. Students are encouraged to compute their grade point average frequently. Students are responsible for knowing whether or not they are eligible to continue in the College. An ineligible student, who, nevertheless, registers in the College shall be withdrawn and the student shall not receive special consideration for the plea of lack of knowledge of scholastic status. To aid the student, scholastic probation or suspension will be printed on the semester grade report. Students who receive grades below "C" (2.0) for any courses, should seek academic counseling to determine the causes of unsatisfactory work and receive recommendations for improving grades in subsequent classes.

HONOR ROLL

Students whose scholastic achievement is notable are given recognition by publication of the "Dean's Honor Roll." The Honor Roll includes the names of all students who have earned a grade point average of 3.5 in 12 or more semester hours during the term.

HONOR FRATERNITY

Students who carry a minimum of 15 semester hours and who meet the scholastic requirement for inclusion of the Dean's Honor Roll are also eligible for membership in Phi Theta Kappa, National Honor Fraternity of American Junior Colleges.

GRADE REQUIREMENTS

MINIMUM FOR SATISFACTORY PROGRESS

GRADUATION - requires an overall grade point average of 2.0.

SATISFACTORY PROGRESS - Students at Central Texas College must achieve a 2.0 cumulative grade point average to maintain satisfactory progress toward graduation.

IF YOU DON'T MAKE THE GRADE

PROBATION will be imposed after the first seven semester hours earned, when the student fails to maintain a 2.0 cumulative grade point average. Probation will be imposed during the next term in which the student registers. Students who do not maintain a "C" or 2.0 grade point average during the probation period will be suspended and cannot register for classes until completing requirements for return to class, listed below.

Students who fail to maintain a 2.0 grade point average during their initial seven semester hours of courses will be required to participate in an academic counseling session prior to re-enrollment.

SUSPENSION will be imposed for students enrolled in 8 or more semester hours if the student fails to achieve a 1.0 grade point average during the term. Suspended students may register for classes upon completion of requirements for return to class, listed below. *NOTE:* Students who use VA benefits and who are suspended will be reported to the Veterans Administration. Current VA regulations require suspended students to receive counseling from the VA prior to reinstatement of VA benefits.

HOW YOU MAY RETURN

RETURN TO CLASS AFTER SUSPENSION

Students attending Central Texas College who have been suspended will be permitted to re-enter the college on an individual basis. Students wishing immediate re-entry must:

1. Complete a re-entry petition/probation agreement *and*
2. Receive counseling *and*

3. Complete developmental studies courses to remove academic deficiencies as stipulated by a Guidance Counselor, *or*
4. Complete a suspension period of one semester (term).

Students who have been suspended will be readmitted under PROBATION and must meet academic standards required while on probation.

ARE CLASSROOM VISITS ALLOWED VISITORS IN CLASS

Permission to visit a class may be granted by the Dean of the College. Such permission carries with it permission to listen and observe, but not to enter into class discussion or laboratory work. Permission to visit is not to be considered auditing on a full-time basis, nor will permission be granted to allow small children in class. Parents must make arrangements for care of their children during class meetings. College policy does not permit a student to audit courses.

REGULATIONS GOVERNING STUDENT ACTIVITIES

STUDENT RESPONSIBILITIES

ADDRESS CHANGE

Students attending Central Texas College must keep current permanent and local mailing addresses on file with the college. Address changes must be reported promptly to the Records Office. Students are responsible for all communication mailed to the last address on file.

FALSIFICATION OF RECORDS

Students who knowingly falsify official College records, or who knowingly submit any falsified records to the College, are subject to disciplinary action which may include suspension and/or expulsion from the College.

HAZING, DISRUPTIVE ACTIVITIES

Central Texas College enforces the Texas state laws prohibiting hazing, disruptive activities, or disruption of lawful assemblies on college property. Information regarding these prohibited activities appears in the official Student Handbook, available to regularly enrolled students at orientation sessions or in the office of the Director of Student Affairs.

SCHOLASTIC HONESTY

All students are required and expected to maintain the highest standards of scholastic honesty in the preparation of all course work and during examinations. The following will be considered examples of scholastic dishonesty and must be avoided:

1. *Plagiarism* - The taking of passages from writings of others without giving proper credit to the sources.
2. *Collusion* - (a) using another's work as one's own, or (b) working together with another person in the preparation of work, unless such joint preparation is specifically approved in advance by the instructor.

3. *Cheating* - giving or receiving information on examinations, as well as using such information during examinations.

Students guilty of scholastic dishonesty will be administratively dropped from the course with a grade of "F" and are subject to disciplinary action.

STUDENT DISCIPLINE

PHILOSOPHY

Students are admitted to Central Texas College for the purpose of educational, social, and personal enhancement. As students, they have rights, privileges, duties, and responsibilities, as prescribed by State and Federal Constitutions and statutes and policies of the *Governing Board of the institution*.

In all orderly, democratic societies, citizens enjoy certain freedoms and privileges prescribed and protected by society for the benefit of all. Likewise, students at Central Texas College enjoy certain freedoms and privileges prescribed and protected for the maintenance of an orderly environment conducive to the fulfillment of the objectives of the institution. Organized societies operate by laws, regulations, ethical and moral codes of conduct, and mutual respect for the role, authority, and responsibility of each segment within the society. The College campus exists for the purpose of providing a place where students may acquire the knowledge, understanding, judgment, and maturity necessary to function as well-adjusted members of society. A college which fails to provide this atmosphere for the learning experience which will enable its students to achieve these qualities has failed both the society which provides for its existence and the students who have sought its services.

Central Texas College is dedicated and committed to fulfilling its mission in society. All students who enroll are expected to understand, respect and support the role and purposes of the College. To teach students to become mature, capable, and productive members of society, the College has planned and organized every aspect of its operation to provide for an atmosphere conducive to the learning experience. This is true of student organizations, student social functions, extracurricular activities, and even the disciplinary procedures.

It is the desire and wish of the College Board members, administrators, and faculty that the necessity for disciplinary procedures could be eliminated. Unfortunately, as in all societies, there are some who refuse to accept and understand the necessity for orderly and *organized procedures and for regulations designed to protect the interests and welfare of the institution itself, as well as the majority of its members.*

For those few students who fail to understand and accept their role in an educational institution, the College has prescribed in the Student Handbook procedures for counseling and disciplinary action which are designed to help the students in every way possible. In essence, the disciplinary procedures are a part of the learning process for students, and students will be suspended or expelled from the college only if they fail to respond positively to disciplinary procedures.

DISCIPLINARY ACTION

Disciplinary action may be written reprimand, disciplinary probation, suspension, or expulsion from the college.

Students on disciplinary probation may not receive honors from Central Texas College. The probation status is permanent unless the student has earned the privilege of being released from disciplinary probation.

SUMMONS TO ADMINISTRATIVE OFFICES

On some occasions it will be necessary for a faculty member, counselor or administrative official to contact an individual student. Any student receiving a summons from an administrative office must respond promptly as requested. A summons may take the form of a call from class, a notice on the official bulletin boards, or a notice by mail. Failure to respond to a summons renders the student subject to disciplinary action.

HOW TO OBTAIN CTC TRANSCRIPTS

TRANSCRIPT ORDERING

A student's records are considered as confidential in nature. Convenient forms for ordering of transcripts are available from the Records Office.

The first transcript is issued free of charge. Graduates are provided an information transcript free of charge upon graduation. The fee of \$2.00 for all other transcripts must accompany the written request signed by the student.

Requests for transcripts should be addressed to the Records Office at the main campus address listed in the front of this catalog. Transcript requests should include full name, social security number, date of birth, last month, year, and location of attendance, as well as the complete address to which the transcript is to be sent.

NOTE: Records of students attending branch campuses are maintained at branch campus offices until the branch campus Director of Student Services is informed by the student in writing that the student has moved. Academic records are then transferred to the Killeen, Texas offices.

NOTE: Transcripts may be provided only upon the written request of the student.

WITHDRAWAL POLICY

Any student who desires to, or must, withdraw from a course after the first scheduled class meeting must file an Application for Withdrawal/Refund at the Records Office. The withdrawal form must be signed by the student, and in the case of Military Tuition Assistance students, by the Education Service Officer. In order for the withdrawal to be official it must be filed, by the student, in writing, with the Records Office. Applications for Withdrawal/Refund will not be accepted after the close of business on the last working day before the last week of class.

Students using Financial Aid, Military Tuition Assistance, VA benefits or other than personal funds may be required to repay tuition and fees to the funding agency. For specific repayment requirements, students are referred to the Student Financial Aid office. Military Tuition Assistance students are referred to the military Education Center.

Students who are administratively withdrawn from classes without officially withdrawing will receive an "F" grade and are ineligible for refunds.

Emergency withdrawal will be considered, when documentary evidence is presented. See section of Refund, Page 8.

CERTIFICATE & DEGREE REQUIREMENTS

WHAT DEGREES ARE OFFERED

Central Texas College confers the Associate in Arts, the Associate in Science, the Associate in Applied Science, or the Associate in General Studies degree upon students who have completed all the general and specific requirements for graduation. Degrees are conferred three times each year, at the end of fall, spring, and summer respectively. It is the student's responsibility to make application for the degree. Each degree candidate must earn a minimum of 12 semester hours residence credit in Central Texas College classrooms.

A person may normally be awarded one degree from Central Texas College. Students wishing to be awarded a second degree must satisfy all requirements for the second degree including at least 12 additional semester hours of traditional courses in residence at Central Texas College. This requirement is in addition to those requirements already completed for the award of the first degree. The Associate in General Studies Degree may not be awarded more than once to any student.

WHAT REQUIREMENTS MUST BE MET FOR ASSOCIATE IN ARTS DEGREE

Complete a minimum of sixty-one semester hours which must include:

1. *Twelve semester hours of English.*
2. Six semester hours of American History.
3. Six semester hours of American Government.
4. Fourteen semester hours of foreign language or eight semester hours of foreign language and eight semester hours of science.
5. Four semesters of physical education.
6. Psychology 111.
7. *A minimum of eighteen semester hours of sophomore courses.*
8. A minimum of twelve semester hours of credit earned anywhere within the Central Texas College system.
9. A minimum overall grade-point average of 2.0 ("C" average).
10. Meeting all other college requirements.

Transferability—See Note Below.

ASSOCIATE IN SCIENCE DEGREE

Complete a minimum of sixty-six semester hours which must include:

1. Twelve semester hours of English.
2. Six semester hours of American History.
3. Six semester hours of American Government.
4. Four courses of science.
5. Six semester hours of math.
6. Four semester hours of physical education.
7. Psychology 111.
8. A minimum of fifteen semester hours of sophomore courses.
9. A minimum of twelve semester hours credit earned anywhere within the Central Texas College system.
10. A minimum overall grade-point average of 2.0 ("C" average).
11. Meeting all other college requirements.

NOTE: Transferability

Students are urged to consult the catalogue of the institution to which he or she may transfer for the detailed information concerning transfer. This catalogue should be used by the student as the basis for course planning. Courses taken in Developmental Studies may not be used to satisfy degree requirements.

ASSOCIATE IN GENERAL STUDIES DEGREE

Complete a minimum of sixty-one semester hours which must include:

1. Three semester hours of written communications and three semester hours of written or oral communications.
2. Three semester hours of mathematics or science.
3. Three semester hours of U.S. History of U.S. Government.
4. Psychology 111.
5. A minimum of 12 semester hours of sophomore courses.
6. A minimum of 12 semester hours of credit earned anywhere within the Central Texas College system.
7. A minimum overall grade point of 2.0 ("C" average).
8. Meeting all other college requirements.

ASSOCIATE IN APPLIED SCIENCE DEGREE

The Associate in Applied Science Degree will be awarded to students who meet curricular requirements in specific vocational and clinical programs. The number of semester hour requirements vary according to the curriculum involved. A minimum overall grade-point average of 2.0 ("C") is required. A minimum of twelve semester hours must be completed in traditional study at Central Texas College.

DEVELOPMENTAL STUDIES

The Developmental Studies courses offered by the College are designed to provide means for students to remove specific deficiencies or provide refresher course work prior to attempting academic or occupational/technical programs.

Students on academic suspension may be required to complete Developmental Studies courses to satisfy readmission/probation requirements. DEVELOPMENTAL STUDIES COURSES MAY NOT BE USED TO SATISFY DEGREE REQUIREMENTS. HOWEVER, DEVELOPMENTAL STUDIES COURSES ARE COMPUTED IN SEMESTER HOUR CREDIT, AND THE GRADE POINT AVERAGE EARNED WILL BE USED TO MEASURE SATISFACTORY PROGRESS.

HOW TO EARN A CERTIFICATE

A Certificate of Completion will be awarded to students who fulfill the curricular requirements of special courses and programs.

WHEN ARE CERTIFICATES & DEGREES AWARDED

CERTIFICATE/DEGREE AWARD

Central Texas College awards Certificates and Degrees in January, May, and August of each year.

HOW TO APPLY FOR CERTIFICATE/DEGREE

Request for Certificate/Degree with appropriate fees must be submitted to the Counseling Office:

For Certificate or Degree in January, by October 1st

For Certificate or Degree in May, by February 1st

For Certificate or Degree in August, by June 10th

NOTE: All course requirements must be complete prior to Certificate/Degree award. Requests for certificate/degree received from students who have not completed course requirements and who are not enrolled in the remaining courses by the date specified above will not be processed.

WHEN IS COMMENCEMENT HELD

GRADUATION

Central Texas College holds one consolidated graduation exercise annually, at the end of the Spring Semester. Degrees and certificates will be awarded three times a year for students who, by virtue of military duties or other valid reasons, are unable to attend the annual graduation exercise.

GRADUATION EXERCISES

All students applying for a degree or certificate, which is to be awarded at the end of the Spring Semester, are expected to measure for cap and gown and participate in practices for, and in, the actual graduation exercises. Students who do not participate in practice will not be permitted to participate in the graduation exercises.

In cases of extreme hardship, permission may be granted by the Director of Student Affairs to be excused from the graduation ceremony and practices. If the student feels that extreme hardship circumstances exist which will prevent attendance at graduation exercises, a written request to be excused from graduation must be submitted to the Director, Student Affairs. This must be done three weeks prior to the graduation exercise date, and the reasons for not participating in the graduation exercises must be stated. Students not participating in the graduation ceremony will not be recognized as graduating "in absentia." Excused graduates will be mailed their degree after graduation exercises have been completed.

HONORS

GRADUATION WITH HONORS

Candidates for degrees from Central Texas College may graduate with HIGHEST HONORS or HONORS based upon the following criteria:

1. To graduate with HONORS a candidate must have a 3.5 grade point average on a 4.0 scale with no grades below "B" on all course work taken. In computing the candidate's grade point average for HONORS, the grades in all courses taken at Central Texas College, as well as courses transferred from other accredited institutions of higher learning, are included.
2. In any graduating class the students with the highest grade point average and who meets all requirements above will be designated as graduating with HIGHEST HONORS.
3. Public recognition for graduation with honors or highest honors is conferred only when the student participates in the formal commencement ceremonies.
4. To qualify for honors consideration, students must have earned a minimum of 30 semester hours with Central Texas College.

PROGRAMS OF STUDY

PROGRAM OFFERINGS

Curriculum plans for various degrees and/or certificates are listed alphabetically. Course descriptions for all courses offered are listed in numerical and alphabetical order. Many of the curricula presented on the following pages have been designed for students who wish to transfer to a senior college or university. The College counselors are available to assist the student in choosing from these suggested curricula or in working out special arrangements to meet particular educational plans.

Although academic counseling is available, it will remain the responsibility of each student to determine major area of study, the senior college or university to which the student wishes to transfer, and the required courses and their prerequisites.

PROGRAM AND COURSE AVAILABILITY

Programs of study displayed in this catalog are offered when sufficient interest indicates a level of enrollment required for program continuation. Students desiring to enter specific programs of study are advised to seek confirmation of program availability prior to their first registration.

Not all courses are available every semester due to the specialized nature of the course content, equipment requirement and/or facility availability. Students must consult the class schedule published each term for courses offered. The College reserves the right to cancel offered courses when enrollment or other circumstances require this action.

PREREQUISITE COURSES

Students should be familiar with the course descriptions. If the course description indicates a prerequisite, the prerequisite should be met prior to registering for the advanced course.

Example: ET 132 - Technical Math II requires that ET 131 - Technical Math I be successfully completed prior to registering for ET 132.

Students who cannot schedule prerequisites must obtain prior approval to enroll in these courses from their Departmental Advisor or Counselor.

SEMESTER CREDIT HOURS

One semester hour of credit represents 1 hour of lecture class time or usually 2 hours of laboratory class time per week for 16 weeks. Lecture and lab proportions may vary depending on the nature of the course. The relationship of lecture and lab is included, in parentheses, with each course description. For example, (3-0) for a 3 semester hour course means there are 3 lecture hours per week for one 16-week semester and no lab hours required. (2-4) means there are 2 lecture hours and 4 lab hours per week for the same 16-week semester. This weekly requirement will be adjusted as necessary to compensate for courses with lengths other than 16 weeks.

TECHNICAL ELECTIVES

Technical electives are courses designed to strengthen the major area of the student's program.

APPROVED ELECTIVES

Approved electives are courses which, although not specifically related to the major, are designed to broaden the student's exposure to various disciplines considered supportive of the program's objectives.

DEGREE OR CERTIFICATE AWARDED

ALPHABETICAL INDEX TO PROGRAMS
OF STUDY

ADMINISTRATIVE SECRETARIAL
AGRICULTURE
AIR CONDITIONING AND REFRIGERATION
ANIMAL PRODUCTION
APPLIANCE SERVICE AND REPAIR
APPLIED MANAGEMENT
APPLIED MGM1 WITH TECH OPTIONS
AUTOMOTIVE TUNE-UP
ELECTRONICS SERVICING
FOOD SERVICE OPERATIONS
HOME APPLIANCE SERVICING
HOME ENTERTAINMENT SERVICING
RESIDENTIAL AIR COND. SERVICING
SMALL ENGINE SERVICING
ART
ASSOCIATE DEGREE NURSING
AUTOMOTIVE BODY REPAIR
AUTOMOTIVE SERVICE AND REPAIR
AVIATION MAINTENANCE TECHNOLOGY
BIOLOGY
BUSINESS ADMINISTRATION
BUSINESS MANAGEMENT
CAREER PILOT
CHEMISTRY
CHILD DEVELOPMENT
COMMERCIAL ART
COMPUTER MAINTENANCE
COMPUTER OPERATOR
COMPUTER SCIENCE
CONSUMER ELECTRONICS SERVICING
CRIMINAL JUSTICE
DIESEL MECHANICS
DRAFTING AND DESIGN
EDUCATION
ELECTRONIC DATA PROCESSING CLERK
ELECTRONICS TECHNOLOGY
ENGINEERING
ENGLISH
ENVIRONMENTAL CONTROL
FARM AND RANCH MANAGEMENT
FARM AND RANCH PRODUCTION
FIRE PROTECTION TECHNOLOGY
FOOD PRODUCTION
FOOD SERVICE MANAGEMENT
FOREIGN LANGUAGE
GENERAL SECRETARIAL
GENERAL STUDIES
GEOLOGY
HORSE MANAGEMENT
HOTEL/MOTEL MANAGEMENT
INFORMATION SYSTEMS SPECIALIST
JOURNALISM
JUVENILE CORRECTIONS
MAINTENANCE TECHNOLOGY
MANAGEMENT
MATHEMATICS
MEDICAL TECHNOLOGY
MID-MANAGEMENT
MUSIC
OFFICE ASSISTANT
OFFICE MANAGEMENT
OFFSET PRINTING
PETROLEUM TECHNOLOGY
PHOTOGRAPHY
PHOTOGRAPHY (2 year)
PHYSICAL EDUCATION
PLANT PRODUCTION
PRE-MED
REAL ESTATE
RECREATION
RECREATION LEADERSHIP
SMALL GAS ENGINE REPAIR
SOCIAL SCIENCE
SOLAR ENERGY SYSTEMS SPECIALIST
SOLAR ENERGY SYSTEMS TECHNOLOGY
SPEECH
TELECOMMUNICATIONS
VOCATIONAL NURSING
WELDING
WELDING TECHNOLOGY

AA DEGREE	AS DEGREE	AAS DEGREE	ACS DEGREE	1 YEAR CERTIFICATE	2 YEAR CERTIFICATE	CURRICULUM PAGE
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ADMINISTRATIVE SECRETARIAL

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
OA	131*	Beginning Shorthand		3	OA	132*	Intermediate Shorthand		3
OA	133*	Beginning Typewriting		3	OA	134*	Intermediate Typewriting		3
OA	135	Clerical Practice		3	OA	136*	Secretarial Practice		3
OA	139	Business Machines & Calculations		3	OA	138	Business Correspondence		3
ENGL	137	Business English		3	MATH	137	Business Mathematics		3
PSYC	111	Psychology of Personal & Social Development		1	PE		Physical Education		1
PE		Physical Education		1					16
				17					

SECOND YEAR

First Semester				Second Semester			
Subject			Credit Hours	Subject			Credit Hours
OA	231*	Advanced Shorthand	3	OA	233*	Advanced Transcription	3
OA	232*	Advanced Typewriting	3	OA	235	Bookkeeping II	3
OA	234	Bookkeeping I	3	OA	237	Office Administration &	
BUS	231	Principles of Eco-				Procedures	3
		nomics I	3	CS	130	Computers & Society	3
CS	131	Beginning Key punch-		Elctv*		Approved Elective	3
		ing	3				
			<u>15</u>				<u>15</u>

TOTAL HOURS: 63

*Beginning or advanced levels of shorthand and typewriting will be determined by the student's previous training in these skills and/or by placement tests. Electives may be chosen by students who receive advanced standing in shorthand and typing. Courses may be chosen leading toward general, medical, or legal secretarial programs upon department approval.

AGRICULTURE

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester				Credit	Second Semester		Credit
Subject				Hours	Subject		Hours
AG	131	Animal Husbandry	3	Elctv*	Approved Agriculture Elective		3
BIOL	141	General Biology I	4	Elctv*	Approved Agriculture Elective		3
ENGL	131	Composition & Rhetoric I	3		Elective		3
HIST	131	History of the U.S. to 1877	3	BIOL	142	General Biology II	4
MATH	131	Intermediate Algebra	3	ENGL	132	Composition & Rhetoric II	3
PE		Physical Education	1	HIST	132	History of the U.S. from 1877	3
PSYC	111	Psychology of Personal & Social Development	1	PE		Physical Education	1
				18			17

AGRICULTURE (Cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
AG 234 Entomology	3	Elctv* Approved Agriculture Elective	3
CHEM 141 General Chemistry I	4	CHEM 142 General Chemistry II	4
GOVT 231 State & Federal Government I	3	GOVT 232 State & Federal Government II	3
ENGL 232 English Literature I	3	ENGL 232 English Literature II	3
Elctv* Approved Elective	3	Elctv* Approved Elective	3
PE Physical Education	<u>1</u>	PE Physical Education	<u>1</u>
	17		17

TOTAL HOURS 69

*Electives must be approved by the Department Manager. Student should check requirements of the institution to which they intend to transfer.

AIR CONDITIONING & REFRIGERATION

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
AC 140 Air Conditioning & Refrigeration, Theory & Application	4	AC 142 Household Refrigeration	4
AC 141 Basic Electrical Circuits	4	AC 143 Heating Systems	4
WELD 141 Beginning Gas Welding	4	AC 144 Residential Air Conditioning	4
MGMT 157A Safety (OSHA)	3	TMTH 130 Technical Math I	3
PSYC 111 Psychology of Personal & Social Development	1	PE Physical Education	<u>1</u>
PE Physical Education	<u>1</u>		16
	17		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
AC 241 Control Theory and Application	4	AC 243 Commercial Air Conditioning Systems	4
AC 242 Commercial Refrigeration Systems	4	AT 145 Automotive Air Conditioning	4
Elctv* Approved Elective	3	ENGL 139 Communication Skills	3
BUS 131 Introduction to Business	3	Elctv* Approved Elective	<u>4</u>
DD 131 Fundamentals of Drafting	<u>3</u>		15
	17		

TOTAL HOURS 65

*SESY 131, SESY 141, MGMT 136, MTNT 243, DD 134, or other elective approved by the Department Manager.

ANIMAL PRODUCTION

A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FRMG	237	Livestock Production	3	FRMG	134	Range Management	3
FRMG	137	Animal Health	3	AG	136	Poultry Science	3
FRMG	233	Feeds & Feeding	3	FRMG	236	Livestock Marketing	3
AG	131	Animal Husbandry	3	FRMG	248	Food Preservation	4
AG	234	Entomology	3				13
			15				
TOTAL HOURS							28

APPLIANCE SERVICE & REPAIR

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
APPR	141	Introduction to Major Appliances	4	APPR	142	Resistance Heating Appliances	4
ET	141	Direct Current Circuits	4	ET	142	Alternating Current	
ET	144	Basic Test Equipment	4			Circuits	4
TMTH	130	Technical Mathematics I	3	DD	130	Blueprint Reading	3
PSYC	111	Psychology of Personal & Social Development	1	ENGL	137	Business English	3
PE		Physical Education	1	PE		Physical Education	1
			<u>17</u>				<u>15</u>

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
APPR	241	Motor Driven Appli- ances I	4	APPR	242	Motor Driven Appli- ances II	4
APPR	243	Air Conditioning & Refrigeration I	4	APPR	244	Air Conditioning & Refrigeration II	4
APPR	245	Microwave Cooking Devices I	4	APPR	246	Microwave Cooking Devices II	4
ET	135	Assembly Methods	3	APPR	248	Small Appliance Ser- vicing	4
Elctv*		Approved Elective	3				
PE		Physical Education	1	Elctv*		Approved Elective	3
			19	PE		Physical Education	1
							20
				TOTAL HOURS			71

*Approved electives: As approved by the Department Manager.

APPLIED MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
BUS	132	Consumer Economics	3	BUS	236	Personal Finance	3
Elctv*		Computer Science		MATH	137	Business Mathematics	3
		Elective	3	OA	138	Business Correspondence	3
MGMT	135	Introduction to Man- agement	3	SPCH	131	Fundamentals of Speech	3
MGMT	136	Human Relations	3	Elctv*		Approved Elective	3
ENGL	137	Business English	3	PE		Physical Education	1
PSYC	111	Psychology of Personal & Social Development	1				16
PE		Physical Education	1				
			17				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
BUS	237	Principles of Accounting I	3	HIST	231	International Relations &	
MGMT	232	Personnel Management	3			U.S. Foreign Policy	3
MGMT	239	Supervision	3	MGMT	232A	Law & Legal Assistance	3
SPCH	233	Business Speech	3	MGMT	239A	Personnel Counseling	3
Elctv*		Approved Elective	3	Elctv*		Approved Elective	3
PE		Physical Education	1	Elctv*		Approved Elective	3
			16	PE		Physical Education	1
							16

TOTAL HOURS 65

*BUS 131, BUS 238, MGMT 130A, MGMT 134, MGMT 134A, MGMT 137, MGMT 137A, MGMT 138R, MGMT 139, MGMT 231, MGMT 232B, MGMT 233R, MGMT 234, MGMT 235, MGMT 236, MGMT 238R, MGMT 239B, OA 237, SOC 239, CS 130, CS 143.

APPLIED MANAGEMENT

WITH TECHNICAL OPTIONS

A Two-Year Associate in Applied Science Degree

OPTION I. AUTOMOTIVE TUNE-UP

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
MGMT 135	Introduction to Man- agement		3	MGMT 134	Work Organization		3
MGMT 137A	Safety (OSHA)		3	MGMT 136	Human Relations		3
AT 141	Automotive Engines		4	AT 144	Fuel Systems		4
AT 142	Automotive Electrical Systems		4	AT 146	Engine Diagnosis & Emission Control		4
BUS 131	Introduction to Business		3	MATH 137	Business Mathematics		3
PE	Physical Education		1	PE	Physical Education		1
			18				18

APPLIED MGMT./TECH. OPTION 1 (cont'd)

SECOND YEAR

First Semester			Second Semester		
Subject		Credit Hours	Subject		Credit Hours
MGMT 137	Insurance	3	MGMT 139	Income Tax	3
ENGL 137	Business English	3	MGMT 235	Business Law I	3
OA 234	Bookkeeping I	3	AT 242	Shop Organization & Management	4
SPCH 233	Business Speech	3	OA 235	Bookkeeping II	3
Elctv*	Approved Elective	3-4	Elctv*	Approved Elective	3-4
PE	Physical Education	1	PE	Physical Education	1
		<u>16-17</u>			<u>17-18</u>

TOTAL HOURS 69-71

*Approved Electives: BUS 231, BUS 232, BUS 236, ET 131, MATH 130, MGMT 230, MGMT 231, MGMT 236, MTNT 141, MTNT 142, MTNT 143, MTNT 144, MTNT 243, MTNT 244, OA 133, OA 134, OA 138, OA 139, TMTH 130.

OPTION 2. ELECTRONICS SERVICING

FIRST YEAR

First Semester			Second Semester		
Subject		Credit Hours	Subject		Credit Hours
MGMT 135	Introduction to Management	3	MGMT 134	Work Organization	3
MGMT 137A	Safety (OSHA)	3	MGMT 136	Human Relations	3
ET 151	Basic Electricity for Electronics	5	ET 135	Assembly Methods	3
BUS 131	Introduction to Business	3	ET 152	Intermediate Electricity for Electronics	5
PE	Physical Education	1	ENGL 137	Business English	3
		<u>15</u>	PE	Physical Education	1
					<u>18</u>

SECOND YEAR

First Semester			Second Semester		
Subject		Credit Hours	Subject		Credit Hours
MGMT 137	Insurance	3	MGMT 139	Income Tax	3
ET 143	Introduction to Electron Devices	4	MGMT 235	Business Law I	3
ET 153	Advanced Electricity for Electronics	5	ET 144	Basic Test Equipment	4
OA 234	Bookkeeping I	3	OA 235	Bookkeeping II	3
SPCH 233	Business Speech	3	Elctv*	Approved Elective	3-4
PE	Physical Education	1	PE	Physical Education	1
		<u>19</u>			<u>17-18</u>

TOTAL HOURS 69-70

*Approved Electives: BUS 231, BUS 232, BUS 236, ET 131, MATH 130, MGMT 230, MGMT 231, MGMT 236, MTNT 141, MTNT 142, MTNT 143, MTNT 144, MTNT 243, MTNT 244, OA 133, OA 134, OA 138, OA 139, TMTH 130.

APPLIED MGMT./TECH. OPTIONS (cont'd)

OPTION 3. FOOD SERVICE OPERATIONS

FIRST YEAR

First Semester		Credit	Second Semester		Credit
Subject		Hours	Subject		Hours
MGMT 135	Introduction to Man- agement	3	MGMT 134	Work Organization	3
MGMT 137A	Safety (OSHA)	3	MGMT 136	Human Relations	3
HM 130	Food & Beverage Man- agement	3	RMGT 132	Nutrition	3
RMGT 141	Food Preparation & Serving	4	RMGT 133	Sanitation & Safety	3
BUS 131	Introduction to Business	3	MATH 137	Business Mathematics	3
PE	Physical Education	1	PE	Physical Education	1
		17			16

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
MGMT 137	Insurance		3	MGMT 139	Income Tax		3
RMGT 135	Food Purchasing		3	MGMT 235	Business Law I		3
ENGL 137	Business English		3	RMGT 136	Menu Planning		3
OA 234	Bookkeeping I		3	OA 235	Bookkeeping II		3
SPCH 233	Business Speech		3	Elctv*	Approved Elective		3-4
PE	Physical Education		1	PE	Physical Education		1
			16				16-17

TOTAL HOURS 65-66

*Approved Electives: BUS 231, BUS 232, BUS 236, ET 131, MATH 130, MGMT 230, MGMT 231, MGMT 236, MTNT 141, MTNT 142, MTNT 143, MTNT 144, MTNT 243, MTNT 244, OA 133, OA 134, OA 138, OA 139, TMTH 130.

OPTION 4. HOME APPLIANCE SERVICING

FIRST YEAR

First Semester		Credit	Second Semester		Credit
Subject		Hours	Subject		Hours
MGMT 135	Introduction to Man- agement	3	MGMT 134	Work Organization	3
MGMT 137A	Safety (OSHA)	3	MGMT 136	Human Relations	3
APPR 141	Introduction to Major Appliances	4	ET 141	Direct Current Circuits	4
APPR 142	Resistance Heating Ap- pliances	4	ET 142	Alternating Current Circuits	4
BUS 131	Introduction to Busi- ness	3	MATH 137	Business Mathematics	3
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		18			18

APPLIED MGMT./TECH OPTION 4 (cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
MGMT 137	Insurance	3	MGMT 139	Income Tax	3		
APPR 241	Motor Driven Appli-		MGMT 235	Business Law I	3		
	ances I	4	APPR 248	Small Appliance Ser-			
ENGL 137	Business English	3		vic-ing	4		
OA 234	Bookkeeping I	3	OA 235	Bookkeeping II	3		
SPCH 233	Business Speech	3	Elctv*	Approved Elective	3-4		
PE	Physical Education	1	PE	Physical Education	1		
		17			17-18		

TOTAL HOURS 70-71

*Approved Electives: BUS 231, BUS 232, BUS 236, ET 131, MATH 130, MGMT 230, MGMT 231, MGMT 236, MTNT 141, MTNT 142, MTNT 143, MTNT 144, MTNT 243, MTNT 244, OA 133, OA 134, OA 138, OA 139, TMTH 130.

OPTION 5. HOME ENTERTAINMENT SERVICING

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
MGMT 135	Introduction to Man-			MGMT 134	Work Organization		3
	agement		3	MGMT 136	Human Relations		3
MGMT 137A	Safety (OSHA)		3	ET 141	Direct Current Circuits		4
TV 141	Home Music Systems		4	ET 142	Alternating Current Cir-		
TV 145	Electronic Communica-				cuits		4
	tions Fundamentals		4	MATH 137	Business Mathematics		3
BUS 131	Introduction to Business		3	PE	Physical Education		1
PE	Physical Education		1				18
			18				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
MGMT 137	Insurance	3	MGMT 139	Income Tax	3		
TV 246	Sound Systems	4	MGMT 235	Business Law I	3		
ENGL 137	Business English	3	TV 149	Television Theory &			
OA 234	Bookkeeping I	3		Servicing	4		
SPCH 233	Business Speech	3	OA 235	Bookkeeping II	3		
PE	Physical Education	1	Elctv*	Approved Elective	3-4		
		17	PE	Physical Education	1		
						17-18	

TOTAL HOURS 70-71

*Approved Electives: BUS 231, BUS 232, BUS 236, ET 131, MATH 130, MGMT 230, MGMT 231, MGMT 236, MTNT 141, MTNT 142, MTNT 143, MTNT 144, MTNT 243, MTNT 244, OA 133, OA 134, OA 138, OA 139, TMTH 130.

APPLIED MGMT./TECH. OPTIONS (cont'd)

OPTION 6. RESIDENTIAL AIR CONDITIONING SERVICING

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject	Credit Hours
MGMT 135	Introduction to Management	3	MGMT 134	Work Organization 3
MGMT 137A	Safety (OSHA)	3	MGMT 136	Human Relations 3
AC 140	Air Conditioning & Refrigeration Theory & Application	4	AC 142	Household Refrigeration Systems 4
AC 141	Basic Electrical Circuits	4	AC 143	Heating Systems 4
BUS 131	Introduction to Business	3	MATH 137	Business Mathematics 3
PE	Physical Education	<u>1</u>	PE	Physical Education <u>1</u>
		18		18

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject	Credit Hours
MGMT 137	Insurance	3	MGMT 139	Income Tax 3
ENGL 137	Business English	3	MGMT 235	Business Law I 3
OA 234	Bookkeeping I	3	AC 144	Residential Air Conditioning 4
SPCH 233	Business Speech	3	OA 235	Bookkeeping II 3
Elctv*	Approved Elective	3-4	Elctv*	Approved Elective 3-4
PE	Physical Education	<u>1</u>	PE	Physical Education <u>1</u>
		16-17		17-18

TOTAL HOURS 69-71

*Approved Electives: BUS 231, BUS 232, BUS 236, ET 131, MATH 130, MGMT 230, MGMT 231, MGMT 236, MTNT 141, MTNT 142, MTNT 143, MTNT 144, MTNT 243, MTNT 244, OA, 134, OA 138, OA 133, OA 139, TMTH 130.

OPTION 7. SMALL ENGINE SERVICING

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject	Credit Hours
MGMT 135	Introduction to Management	3	MGMT 134	Work Organization 3
MGMT 137A	Safety (OSHA)	3	MGMT 136	Human Relations 3
SGER 141	Gas Engine Fundamentals	4	SGER 143	Shop Practices 4
SGER 142	Ignition Systems	4	SGER 144	Carburetion, Fuel & Lubricating Systems 4
BUS 131	Introduction to Business	3	MATH 137	Business Mathematics 3
PE	Physical Education	<u>1</u>	PE	Physical Education <u>1</u>
		18		18

APPLIED MGMT./TECH OPTION 7 (cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 137	Insurance	3	MGMT 139	Income Tax	3
SGER 145	Motorcycle Engine Service	4	MGMT 235	Business Law I	3
ENGL 137	Business English	3	SGER 146	Lawn Care Equipment	4
OA 234	Bookkeeping I	3	OA 235	Bookkeeping II	3
SPCH 233	Business Speech	3	Elctv*	Approved Elective	4
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		17			18

TOTAL HOURS 71

*Approved Electives: BUS 131, BUS 232, BUS 236, ET 131, MATH 130, MGMT 230, MGMT 231, MGMT 236, MTNT 141, MTNT 142, MTNT 143, MTNT 144, MTNT 243, MTNT 244, OA 133, OA 134, OA 138, OA 139, TMTH 130.

ART

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 131	Composition & Rhetoric I	3	ENGL 132	Composition & Rhetoric II	3
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3
FL†	Beginning French, German, or Spanish	4	FL†	Beginning French, German or Spanish	4
ART*	(Two courses)	6	ART*	(Two courses)	6
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			17
		18			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 231	English Literature I	3	ENGL 232	English Literature II	3
GOVT 231	State & Federal Government I	3	GOVT 232	State & Federal Government II	3
ART*	(Two courses)	6	ART*	(Two courses)	6
FL†	Intermediate French or Spanish	3	FL†	Intermediate French or Spanish	3
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		16			16

(†) Foreign Language.

*Students should check the catalogue of the institution to which they plan to transfer for particular art courses.

If German is taken the first year, Beginning French or Spanish may be taken the second year.

ASSOCIATE DEGREE NURSING

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
NU	191	Fundamentals of Nurs- ing	9	NU	192	Medical-Surgical Nurs- ing I	9
BIOL	145	Human Anatomy	4	BIOL	146	Human Physiology	4
PSYC	231	Introduction to Psy- chology	3	PSYC	233	Child Growth & Devel- opment	3
PSYC	111	Psychology of Personal & Soc. Development	$\frac{1}{17}$				$\frac{16}{16}$

Summer Semester Subject

ENGL	131	Composition & Rhetoric I	3
SOC	231	Introduction to Sociology	$\frac{3}{6}$

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
NU	193	Maternal & Child Health Nursing	9	NU	292	Medical-Surgical Nurs- ing II	9
BIOL	244	Microbiology	4	NU	213	Nursing Trends Seminar	$\frac{1}{10}$
ENGL	132	Composition & Rhe- toric II	$\frac{3}{16}$				

Summer Semester Subject

NU	234	Psychiatric Nursing	3
ELCTV		Approved Social Science Elective	$\frac{3}{6}$

TOTAL HOURS 71

CAUTION: This program has special admission requirements. Contact the Director of Nursing for admission requirements and procedures.

AUTOMOTIVE BODY REPAIR

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
AB	141	Shop Practices	4	AB	144	Frame Straightening	4
AB	142	Body and Frame Con- struction	4	AB	145	Body Finishing	4
AB	143	Roughing & Alignment	4	AB	146	Painting	4
WELD	146	Welding Fundamentals	4	AB	147	Body Repair	$\frac{4}{16}$
PSYC	111	Psychology of Personal & Social Development	$\frac{1}{17}$				

AUTOMOTIVE BODY REPAIR (Cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
AB	241	Upholstery & Vinyl Top Repair	4	AB	242	Glass, Electrical & Power Accessory Serv.	4
AT	143	Brakes & Steering	4	AB	243	Management & Estimating	4
ENGL	137	Business English	3	AT	145	Automotive Air Conditioning	4
TMTH	130	Technical Mathematic I	<u>3</u>	ENGL	239	Technical Writing	<u>3</u>
			14				15

TOTAL HOURS 62

AUTOMOTIVE SERVICE & REPAIR

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
AT	140	Shop Practices & Safety	4	AT	141B	Internal Combustion Engine Service	4
AT	141A	Internal Combustion Engine Fundamentals	4	AT	144	Fuel Systems	4
AT	142	Automotive Electrical System	4	AT	147	Brake Systems	4
TMTH	130	Technical Mathematics I	3	Elctv*		Approved Elective	3-4
PSYC	111	Psychology of Personal & Social Development	1	PE		Physical Education	<u>1</u>
PE		Physical Education	<u>1</u>				16-17
			17				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
AT	148	Steering & Suspension Systems	4	AT	146	Engine Diagnosis & Emission Control	4
AT	241A	Standard Transmissions & Differentials	4	AT	241B	Automatic Transmissions	4
AT	149	Ignition, Starting & Charging Systems	4	AT	145	Automotive Air Conditioning	4
Elctv*		Approved Elective	3-4	Elctv**		Elective	<u>4</u>
ENGL	139	Communications Skills	<u>3</u>				16
			18-19				

TOTAL HOURS 67-69

*WELD 141, WELD 146, MGMT 135, or other electives approved by the Department Manager.

**DIEM 141, DIEM 241, DIEM 242, or AT 242.

AVIATION MAINTENANCE TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
AVMT 131	Maintenance Publications	3		AVMT 133	Aircraft Drafting	3	
AVMT 132	Weight & Balance	3		AVMT 134	Airframe Materials &		
AVMT 141	Basic Aircraft Electricity	4			Corrosion Control	3	
ENGL 137	Business English	3		AVMT 241	Aircraft Finishes	4	
Elctv	Approved Mathematics			AVMT 251	Sheet Metal Structures	5	
	Elective	3		Elctv	Approved Elective	3	
PSYC 111	Psychology of Personal &			PE	Physical Education	1	
	Social Development	1				19	
PE	Physical Education	1					
		18					
Summer Semester							
Subject							
AVMT 243	Airframe Inspection	4					
AVMT 244	Aircraft Fuel Systems	4					
AVMT 252	Hydraulics & Pneumatics	5					
		13					

SECOND YEAR

First Semester		Credit	Second Semester		Credit
Subject		Hours	Subject		Hours
AVMT 245	Aircraft Instruments Sys- tems	4	AVMT 247	Engine Lubrication Systems	4
AVMT 246	Engine Electrical Systems	4	AVMT 248	Engine Cooling Systems	4
AVMT 253	Aircraft Electrical Sys- tems	5	AVMT 255	Engine Fuel System	5
AVMT 254	Powerplant Maintenance	5	AVMT 256	Aircraft Propellers	5
		<u>18</u>			<u>18</u>

TOTAL HOURS 86

BIOLOGY

A Two-Year Associate in Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
BIOL	141	General Biology I	4	BIOL	142	General Biology II	4
CHEM	141	General Chemistry I	4	CHEM	142	General Chemistry II	4
HIST	131	History of the U.S. to 1877	3	HIST	132	History of the U.S. from 1877	3
ENGL	131	Composition & Rhe- toric I	3	ENGL	132	Composition & Rhe- toric II	3
MATH	133	Trigonometry	3	MATH	134	Analytic Geometry	3
PE		Physical Education	1	PE		Physical Education	1
PSYC	111	Psychology of Personal & Social Development	1				18
			19				

BIOLOGY (Cont'd)

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
BIOL	241	Invertebrate Zoology	4	BIOL	242	Vertebrate Zoology	4
GEOL	141	Physical Geology	4	GEOL	142	Historical Geology	4
GOVT	231	State & Federal Govern- ment I	3	GOVT	232	State & Federal Govern- ment II	3
ENGL	231	English Literature I	3	ENGL	232	English Literature II	3
PE		Physical Education	<u>1</u>	PE		Physical Education	<u>1</u>
			15				15

TOTAL HOURS 67

Students should check requirements of the institution to which they intend to transfer as requirements may vary.

BUSINESS ADMINISTRATION

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
LAB	SCI	Biology Chemistry, Phy- sics or Geology	4	LAB	SCI	Biology, Chemistry, Phy- sics or Geology	4
BUS	231	Principles of Economics I	3	BUS	232	Principles of Economics II	3
ENGL	131	Composition & Rhetoric I	3	ENGL	132	Composition & Rhetoric II	3
MATH	135*	Finite Mathematics I	3	MATH	136*	Finite Mathematics II	3
PSYC	231	Introduction to Psychology	3	BUS	131	Introduction to Business	3
PSYC	111	Psychology of Personal & Social Development	1	PE		Physical Education	<u>1</u>
PE		Physical Education	<u>1</u>				17
			18				

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
HIST	131	History of the U.S. to 1877	3	BUS	238**	Principles of Accounting II	3
BUS	237**	Principles of Accounting I	3	ENGL	232	English Literature II	3
ENGL	231	English Literature I	3	GOVT	232	State & Federal Gov- ernment II	3
GOVT	231	State & Federal Govern- ment I	3	HIST	132	History of the U.S. from 1877	3
Elctv		Approved Elective	3	SPCH ^{or}	131	Fundamentals of Speech	3
PE		Physical Education	<u>1</u>	SPCH ^{or}	233	Business Speech	<u>3</u>
			16	PE		Physical Education	<u>1</u>
							16

TOTAL HOURS 67

*It is possible to substitute Math 231 (Calculus I) and Math 232 (Calculus II) for Math 135 and Math 136 if the student is going to enter such degree programs as actuarial science, business statistics, industrial management, and engineering as a route to the Bachelor of Business Administration degree.

**BBA majors take two courses in accounting instead of two courses in foreign language to meet Central Texas College requirements for the Associate in Arts degree.

BUSINESS MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 134	Work Organization	3	MGMT 232	Personnel Management	3
MGMT 135	Introduction to Management	3	MGMT 239	Supervision	3
MGMT 136	Human Relations	3	Elctv*	Approved BUS/MGMT/OA Elective	3
BUS 131	Introduction to Business	3	OA 139*	Business Machines & Calculations	3
ENGL Elctv	ENGL 130, 131, or 137	3	SPCH Elctv	SPCH 131 or 233	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	1
PE	Physical Education	<u>1</u>			<u>16</u>
		17			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 231	Marketing Principles	3	BUS 232	Principles of Economics II	3
BUS 231	Principles of Economics I	3	BUS or 238	Principles of Accounting II	3
BUS or 237	Principles of Accounting I	3	OA or 235	Bookkeeping II	3
OA or 234	Bookkeeping I	3	Elctv*	Approved BUS/MGMT/OA Elective	3
Elctv*	Approved BUS/MGMT/OA Elective	3	OA 237	Office Administration & Procedures	3
CS 130*	Computers and Society	<u>3</u>	Elctv	Approved Elective	<u>3</u>
		15			15

TOTAL HOURS 63

*Approved BUS/MGMT/OA Electives may be any course from these programs if approved by the Department Manager.

Mathematics elective may be substituted for OA 139 with approval of the Department Manager. An approved elective may be substituted for CS 130.

CAREER PILOT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
CP 131	Aircraft Science	3	CP 132	Propulsion Systems	3
CP 133	Air Navigation	3	CP 134	Intermediate Flight	3
CP 130	Basic Flight	3	CP 232	Meteorology	3
ENG*	Approved Communication Elective	3	CP 135	Advanced Air Navigation	3
MATH	Approved Mathematics Elective	3	ENG*	Appv'd Communications Elective	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	1
PE	Physical Education	<u>1</u>			<u>16</u>
		17			

CAREER PILOT (Cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CP 231 Aerodynamics	3	CP 233 Air Transportation	3
CP 234* Advanced Flight	3	CP 237 Aviation Radio Systems	3
CP 230 Commercial Aviation	3	CP 235* Commercial Flight	3
Elctv* Approved Elective	3	Elctv* Approved Elective	3
PHY 140 Survey of Physics	4	Elctv* Approved Elective	3
	<u>16</u>		<u>15</u>

TOTAL HOURS 64

*Approved Communication Electives: Students in a four-year program should take ENGL 131 the first semester and ENGL 132 the second semester. Students in an Associate Degree Program may take ENGL 131, ENGL 139, ENGL 239, ENGL 132 (if qualified), or SPCH 131.

*Approved electives are: Career Pilot, Business Management, Social Science, Mathematics, or other courses approved by the Department Manager.

*CP 235A and CP 235B are substitutes for CP 234 and CP 235 for Rotary Wing Transition students.

CHEMISTRY

A Two-Year Associate in Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CHEM 141 General Chemistry I	4	CHEM 142 General Chemistry II	4
MATH 133** Trigonometry	3	MATH 134**Analytic Geometry	3
HIST 131 History of the U.S. to 1877	3	HIST 132 History of the U.S. from 1877	3
ENGL 131 Composition & Rhetoric I	3	ENGL 132 Composition & Rhetoric II	3
PSYC 111 Psychology of Personal & Social Development	1	PSYC 231 Introduction to Psychology	3
PE Physical Education	1	PE Physical Education	1
	<u>15</u>		<u>17</u>

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CHEM 241 Organic Chemistry	4	CHEM 242 Organic Chemistry	4
MATH 231 Calculus I	3	PHYS 242 Modern Physics II	4
GOVT 231 State & Federal Gov- ernment I	3	GOVT 232 State & Federal Gov- ernment II	3
ENGL 231 English Literature I	3	ENGL 232 English Literature II	3
PHYS 241 Modern Physics I	4	MATH 232 Calculus II	3
PE Physical Education	1	PE Physical Education	1
	<u>18</u>		<u>18</u>

TOTAL HOURS 68

*Check senior institution catalogue as requirements vary.

**Students deficient in mathematics must take college algebra as a remedial course. This course should be taken during the summer school term prior to the freshman year.

CHILD DEVELOPMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
CHDV 131	Introduction to Child Development	3	CHDV 132	Infant and Toddler Care	3
CHDV 141	Learning Programs	4	CHDV 134	Developmental Language	3
CHDV 143	Creative Expression	4	CHDV 135	Instructional Aids	3
ENGL 139*	Communication Skills	3	PSYC 233	Child Growth and Development	3
PSYC 111	Psychology of Personal & Social Development	1	SPCH 131	Fundamentals of Speech	3
PE	Physical Education	$\frac{1}{16}$	PE	Physical Education	$\frac{1}{16}$

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
CHDV 231	The Exceptional Child	3	CHDV 232	Parent-Child Relationship	3
CHDV 261	Learning Theories Seminar and Practicum	6	CHDV 241	Pre-School Center Management	4
GOVT 231	State & Federal Government I	3	CHDV 262	Special Projects	6
SOC 231	Introduction to Sociology	3	GOVT 232	State & Federal Government II	3
Elctv*	Approved Elective	$\frac{3}{18}$			$\frac{16}{66}$
			TOTAL HOURS		66

*ENGL 131 may be substituted for ENGL 139. Approved electives are SOC 236, BUS 131, MGMT 135, RGMT 136, or other course approved by the Department Manager.

COMMERCIAL ART

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 131	Composition & Rhetoric I	3	ART 132	Freehand Drawing II	3
ART 131	Freehand Drawing I	3	ART 134	Creative Design II	3
ART 133	Creative Design I	3	HIST 132	History of the U.S. from 1877	3
HIST 131	History of the U.S. to 1877	3	ART 130	Printing for Advertising Art	3
ENGR 131	Engineering Graphics	3	ENGL 132	Composition & Rhetoric II	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	$\frac{1}{16}$
PE	Physical Education	$\frac{1}{17}$			

COMMERCIAL ART (Cont'd)

SECOND YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
ART	136	Figure Drawing		3	ART	238	Interior Design		3
ART	235	Advertising Art I		3	ART	236	Advertising Art II		3
ART	231	Graphic Media		3	Elctv*		Approved Elective		3
Elctv*		Approved Elective		3	ENGL	232	English Literature II		3
ENGL	231	English Literature I		3	GOVT	231	State & Federal Gov-		
PE		Physical Education		1			ernment I		3
				16	PE		Physical Education		1
									16

TOTAL HOURS 65

*Approved electives will be determined by the Art Department Manager.

COMPUTER MAINTENANCE

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
CM	140	Introduction to Computers & Computing	4	CM	142	Core & Memory Circuits	4		
CM	141	Digital Circuits	4	CM	143	Computer Systems & Operational Programming	4		
ET	131	Technical Mathematics I	3	ET	132	Technical Mathematics II	3		
ET	135	Assembly Methods	3	ET	142	Alternating Current Circuits	4		
ET	141	Direct Current Circuits	4	ET	143	Introduction to Electron Devices	4		
PSYC	111	Psychology of Personal & Social Development	1	PE		Physical Education	1		
PE		Physical Education	1						
			20						20

SECOND YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
CM	247	Computer Circuit Analysis	4	CM	246	Microprocessors &			
CM	248	Peripherals & Interfacing	4			Microcomputers			4
ET	144	Basic Test Equipment	4	CM	249	Computer System: Diag-			
ET	244	Solid-State Devices	4			nosis & Maintenance			4
ENGL	137	Business English	3	ENGR	131	Engineering Graphics			3
			19	ET	243	Special Intensive Study			4
				ENGL	239	Technical Writing			3
									18

TOTAL HOURS 77

COMPUTER OPERATOR

A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
CS	135	Introduction to Systems Analysis	3	CS	134	Computer Center Operations	3
CS	140	Introduction to Computer Operations and Library Management	4	CS	138A	RPG Programming	3
CS	143	Introduction to Computer Science & Computer Programming	4	CS	139	Computer Organization	3
OA	234	Bookkeeping I	3	CS	141*	Advanced Operations Lab	4
ENGL	137	Business English	3	BUS	131	Introduction to Business	3
PSYC	111	Psychology of Personal & Social Development	1				<u>16</u>
			<u>18</u>				
TOTAL HOURS							34

*Computer Science course may be substituted if approved by the Department Manager.

COMPUTER SCIENCE

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
CS	143	Introduction to Computer Science & Computer Programming	4	CS	138	COBOL Programming	3
CS	135	Introduction to Systems Analysis	3	CS	139	Computer Organization	3
Elctv*		Approved Elective	3	CS	138A	RPG Programming or Programming Elective	3
ENGL	131	Composition & Rhetoric I	3	ENGL	132	Composition & Rhetoric II	3
MATH	**	Mathematics Option	3	MATH	**	Mathematics Option	3
PSYC	111	Psychology of Personal & Social Development	1	PE		Physical Education	1
PE		Physical Education	1				<u>16</u>
			<u>18</u>				

COMPUTER SCIENCE (Cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
CS	234	Advanced COBOL	3	CS	239A	Introduction to Operating Systems & Job Control Language	3
CS	243	Assembler Language Programming	4	CS	238	Systems Analysis	3
Elctv*		Approved Elective	3	Elctv*		Approved Elective	3
BUS	237	Principles of Accounting I	3	BUS	238	Principles of Accounting II	3
GOVT	231	State & Federal Government I	3	GOVT	232	State & Federal Government II	3
PE		Physical Education	<u>1</u>	PE		Physical Education	<u>1</u>
			17				16
TOTAL HOURS							67

*Electives must be approved by the Department Manager.

**Students without a strong mathematics background should enroll in MATH 131 and MATH 135. All other students should take MATH 135 and MATH 136 or MATH 138.

CONSUMER ELECTRONICS SERVICING

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
TV	141	Home Music System	4	ET	142	Alternating Current Circuits	4
ET	141	Direct Current Circuits	4	ET	143	Introduction to Electron Devices	4
ET	135	Assembly Methods	3	TV	145	Electronics Communications Fundamentals	4
ET	144	Basic Test Equipment	4	BUS	131	Introduction to Business	3
ENGL	137	Business English	3	PE		Physical Education	<u>1</u>
PSYC	111	Psychology of Personal & Social Development	1				16
PE		Physical Education	<u>1</u>				
			20				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
TV	149	Television Theory and Servicing	4	TV	235	TV Shop Practices	3
TV	242	Radio Systems	4	TV	246	Sound Systems	4
TV	248	CATV and MATV Systems	4	TV	249	Advanced TV Servicing	4
CM	141	Digital Circuits	<u>4</u>	Elctv*		Approved Elective	4
			16	ENGL	239	Technical Writing	<u>3</u>
							18
TOTAL HOURS							70

*Electives must be approved by the Department Manager.

CRIMINAL JUSTICE

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CRIJ 131 Introduction to Criminal Justice	3	CRIJ 121 Defensive Tactics	2
CRIJ 132 Criminal Investigation	3	CRIJ 137 Police-Community Relations	3
CRIJ 133 Legal Aspects of Law Enforcement	3	CRIJ 138 Police Role in Crime & Delinquency	3
CRIJ 134 Criminal Procedures and Evidence	3	CRIJ 139 Police Organization & Administration	3
ENGL 131 Composition and Rhetoric I	3	SOC 231 Introduction to Sociology	3
PSYC 111 Psychology of Personal & Social Development	1	ENGL 132 Composition and Rhetoric II	3
PE 218 Physical Conditioning	$\frac{1}{17}$		$\frac{17}{17}$

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CRIJ 221 Firearms	2	CRIJ 238 Patrol Administration	3
CRIJ 234 Juvenile Procedures	3	SPCH 233 Business Speech	3
PE 235 Safety and First Aid	3	Elctv* Criminal Justice Elective	3
GOVT 231 State & Federal Government I or II	3	Elctv* Approved Elective	3
PSYC 231 Introduction to Psychology	3	Elctv* Approved Elective	3
Elctv* Criminal Justice Elective	$\frac{3}{17}$		$\frac{15}{17}$
		TOTAL HOURS	66

Students receive a certificate of competency upon satisfactory completion of the core curriculum (that is all the courses with CRIJ prefix in the first year listed above) CRIJ 221 and PE 235.

*Students desiring to concentrate in a specific option should take the following courses:

Patrol/Traffic Majors: CRIJ 135, CRIJ 233, CRIJ 236, CRIJ 239

Correctional/Courts Majors: CRIJ 136, CRIJ 231, CRIJ 237, CRIJ 239A

Electives must be approved by the Criminal Justice Department Manager.

DIESEL MECHANICS

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
AT 140 Shop Practices & Safety	4	DIEM 141 Fuel Injection Systems	4
AT 141A Internal Combustion Engine Fundamentals	4	AT 141B Internal Combustion Engine Service	4
AT 147 Brake Systems	4	AT 144 Fuel Systems	4
TMTH 130 Technical Mathematics I	3	AT 241A Standard Transmission & Differential	4
PSYC 111 Psychology of Personal and Social Development	1	PE Physical Education	$\frac{1}{17}$
PE Physical Education	$\frac{1}{17}$		$\frac{17}{17}$

DIESEL MECHANICS (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
DIEM 241	Diesel Engine Auxiliary Systems	4	DIEM 242	Diesel Engine Service & Repair	4
AT 148	Steering & Suspension Systems	4	AT 146	Engine Diagnosis & Emission Control	4
AT 149	Ignition, Starting & Charging Systems	4	ENGL 139	Communications Skills	3
Elctv*	Approved Elective	3-4	Elctv*	Approved Elective	3-4
		<u>15-16</u>			<u>15-16</u>
TOTAL HOURS					63-65

*AT 142, AT 145, AT 241B, MGMT 135, MGMT 134, WELD 141, WELD 146, or other elective approved by the Department Manager.

DRAFTING & DESIGN

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGR 131	Engineering Graphics	3	DD 143	Machine Drawing	4
DD 141	Pictorial Drafting	4	ENGR 132	Descriptive Geometry	3
DD 142	Technical Illustrations	4	DD 144	Structural Drafting	4
TMTH 130	Technical Mathematics I	3	Elctv*	Approved Communication Elective	3
PSYC 111	Psychology of Personal and Social Development	1	TMTH 131	Technical Mathematics II	3
PE	Physical Education	1	PE	Physical Education	1
		<u>16</u>			<u>18</u>

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
DD 241	Pipe Drafting	4	DD 245	Topographic Drafting	4
DD 242	Architectural Drafting	4	DD 246	Industrial Practice	4
DD 243	Electronic Drafting	4	DD 248	Principles of Design	4
Elctv*	Approved Elective	3-4	Elctv*	Approved Elective	3-4
		<u>15-16</u>			<u>15-16</u>
TOTAL HOURS					64-66

*Approved communication electives: ENGL 131, 132, 137, 139, or 239.

Other approved electives: DD 130, DD 131, DD 134, MATH 131, MATH 132, MATH 133, ART 131, OP 131, TV 145, or other elective approved by the Department Manager.

EDUCATION

A Two-Year Associate in Arts Degree

Arts Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 131	Composition & Rhetoric I	3	ENGL 132	Composition & Rhetoric II	3
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3
LAB SCI	Biology, Chemistry, Physics or Geology	4	LAB SCI	Biology, Chemistry, Physics or Geology	4
FL†	Beginning French, German or Spanish	4	FL†	Beginning French, German or Spanish	4
Elctv	Approved Elective	3	SPCH 131	Fundamentals of Speech	3
PE	Physical Education	1	PE	Physical Education	<u>1</u>
PSYC 111	Psychology of Personal & Social Development	<u>1</u>			18
		19			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 231	English Literature I	3	ENGL 232	English Literature II	3
GOVT 231	State & Federal Gov- ernment I	3	GOVT 232	State & Federal Gov- ernment II	3
FL†	Intermediate French or Spanish	3	FL†	Intermediate French or Spanish	3
PSYC 231	Introduction to Psychology	3	PSYC 232	Personality Adjustment	3
SOC 231	Introduction to Sociology	3	SOC 232	Contemporary Social Prob- lems	3
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		16			16

†Foreign Language.

TOTAL HOURS 69

If German is taken the first year, Beginning French or Spanish may be taken the second year.

ELECTRONIC DATA PROCESSING CLERK

A One-Year Certificate of Completion

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
CS 130	Computers & Society	3	CS 132	Advanced Data Entry	3
CS 131	Beginning Key punching	3	CS 138A	RPG Programming	3
CS 140	Introduction to Computer Operations & Library Management	4	OA 235	Bookkeeping II	3
OA 234	Bookkeeping I	3	Elctv*	Approved Computer Science Elective	3
ENGL 137	Business English	3	Elctv*	Approved Elective	<u>3</u>
PSYC 111	Psychology of Personal & Social Development	<u>1</u>			15
		17			

TOTAL HOURS 32

*Electives must be approved by Department Manager.

ELECTRONICS TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ET	131	Technical Mathematics I	3	ET	132	Technical Mathematics II	3
ET	135	Assembly Methods	3	ET	142	Alternating Current Circuits	4
ET	141	Direct Current Circuits	4	ET	143	Introduction to Electron Devices	4
ET	144	Basic Test Equipment	4	CM	141	Digital Circuits	4
ENGR	131	Engineering Graphics	3	ENGL	137	Business English	3
PSYC	111	Psychology of Personal & Social Development	1	PE		Physical Education	<u>1</u>
PE		Physical Education	<u>1</u>				19
			19				

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ET	242	Advanced Test Equipment	4	ET	234	Broadcast-Equipment Main- tenance	3
ET	244	Solid State Devices	4	ET	243	Special Intensive Study	4
ET	245	Communications Circuits I	4	ET	247	Communications Circuits II	4
ENGL	239	Technical Writing	3	ET	249	Electronic Systems Trouble- shooting	4
			<u>15</u>	Elctv*		Approved Elective	<u>4</u>
							19

TOTAL HOURS 72

*Electives must be approved by the Department Manager.

ENGINEERING

A Two-Year Associate in Science Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ENGR	131	Engineering Graphics	3	ENGR	132	Descriptive Geometry	3
MATH	134	Analytic Geometry	3	MATH	232	Calculus II	3
MATH	231	Calculus I	3	ENGL	132	Composition & Rhetoric II	3
ENGL	131	Composition & Rhetoric I	3	LAB	SCI*	Biology, Chemistry, Physics or Geology	4
LAB	SCI*	Biology, Chemistry, Physics or Geology	4	PE		Physical Education	1
PSYC	111	Psychology of Personal & Social Development	1	Elctv		Approved Elective	<u>3</u>
PE		Physical Education	<u>1</u>				17
			18				

ENGINEERING (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3
ENGL 231*	English Literature I	3	ENGL 232*	English Literature II	3
GOVT 231	State & Federal Gov- ernment I	3	GOVT 232	State & Federal Gov- ernment II	3
MATH 233	Advanced Calculus	3	PHY 242	Modern Physics II	4
PHY 241	Modern Physics I	4	Elctv	Approved Elective	3
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		17			17
TOTAL HOURS					69

*Students should check the senior college catalogue of the institution to which they plan to transfer for specific science and English requirements. Variations occur with different institutions.

ENGLISH

A Two-Year Associate in Arts or in Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 131	Composition & Rhetoric I	3	ENGL 132	Composition & Rhetoric II	3
MATH 132	College Algebra	3	MATH 133	Trigonometry	3
FL†*	Beginning French, German or Spanish	4	FL†*	Beginning French, German or Spanish	4
LAB SCI	Biology, Chemistry, Physics or Geology	4	LAB SCI	Biology, Chemistry, Physics or Geology	4
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			18
		19			

ENGLISH (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 231,	English Literature I		ENGL 232,	English Literature II	
ENGL 233	World Literature I		ENGL 234	World Literature II	
or			or		
ENGL 237**	American Literature I	3	ENGL 238**	American Literature II	3
FL†	Intermediate French or Spanish	3	FL†	Intermediate French or Spanish	3
LAB SCI	Biology, Chemistry, Physics or Geology	4	LAB SCI	Biology, Chemistry, Physics or Geology	4
GOVT 231	State & Federal Gov- ernment I	3	GOVT 232	State & Federal Gov- ernment II	3
Elctv	Approved Elective	3	Elctv	Approved Elective	3
PE	Physical Education	$\frac{1}{17}$	PE	Physical Education	$\frac{1}{17}$
TOTAL HOURS					71

†Foreign Language.

*Check particular foreign language and science requirements of institution where student wishes to transfer.

**Check sophomore literature requirements at senior institution where student wishes to transfer. Most senior institutions will grant only lower-level credit for these courses.

**NOTE: ENGL 231-232, 233-234, and 237-238 are paired courses. Though department majors may elect any pair of courses, in any order, they must take both courses in the pair to fulfill department degree requirements.

If German is taken the first year, Beginning French or Spanish may be taken the second year.

ENVIRONMENTAL CONTROL

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
EC 131	Water & Waste Water Technology	3	EC 132	Aquatic Biology	3
CHEM 141	General Chemistry I	4	EC 133	Solid Waste Management	3
ENGL 131	Composition & Rhetoric I	4	CHEM 142	General Chemistry II	4
SPCH 131	Fundamentals of Speech	3	ENGL 239	Technical Writing	3
PE	Physical Education	$\frac{1}{14}$	MATH 133	Trigonometry	3
			PE	Physical Education	$\frac{1}{17}$

ENVIRONMENTAL CONTROL (Cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
EC	231	Air Pollution	3	EC	233	Instrumentation	3
EC	232	Industrial Waste Control	3	EC	234	Water Quality Control	3
EC	221	Pollution Abatement Seminar	2	EC	222	Pollution Abatement Seminar	2
BIOL	144	Microbiology	4	EC	243	Water & Waste Water	
PHY	141	College Physics I	4			Chemistry	4
PE		Physical Education	1	BUS	231	Principles of Economics I	3
			<u>17</u>	PE		Physical Education	<u>1</u>
							<u>16</u>
TOTAL HOURS							64

FARM AND RANCH MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FRMG	135	Soil Science	3	FRMG	134	Range Management	3
FRMG	133	Wildlife Management	3	AG	136	Poultry Science	3
FRMG	137	Animal Health	3	FRMG	138	Vegetable Production	3
AG	131	Animal Husbandry	3	AG	132	Agronomy	3
BIOL	141	General Biology I	4	BIOL	142	General Biology II	4
PE		Physical Education	1	PE		Physical Education	<u>1</u>
			<u>17</u>				<u>17</u>

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FRMG	231	Farm Mechanics I	3	FRMG	232	Farm Mechanics II	3
FRMG	233	Feeds & Feeding	3	AG	235	Horticulture	3
FRMG	237	Livestock Production	3	FRMG	236	Livestock Marketing	3
AG	234	Entomology	3	FRMG	248	Food Preservation	4
ENGL	137	Business English	3	MATH	137	Business Mathematics	3
PE		Physical Education	1	PE		Physical Education	<u>1</u>
			<u>16</u>				<u>17</u>
TOTAL HOURS							67

FARM AND RANCH PRODUCTION

A Two-Year Certificate of Completion

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
FRMG 135	Soil Science	3	FRMG 134	Range Management	3
FRMG 133*	Wildlife Management	3	AG 136	Poultry Science	3
FRMG 137	Animal Health	3	FRMG 138	Vegetable Production	3
AG 131	Animal Husbandry	<u>3</u>	AG 132	Agronomy	<u>3</u>
		12			12

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
FRMG 231	Farm Mechanics I	3	FRMG 232	Farm Mechanics II	3
FRMG 233	Feeds & Feeding	3	AG 235	Horticulture	3
FRMG 237	Livestock Production	3	FRMG 236	Livestock Marketing	3
AG 234	Entomology	<u>3</u>	FRMG 248	Food Preservation	<u>4</u>
		12			13

TOTAL HOURS 49

*AG 239 may be selected in place of FRMG 133.

FIRE PROTECTION TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
FPRT 131	Fundamentals of Fire Protection	3	FPRT 132	Fire Prevention	3
FPRT 133	Fire Protection Systems	3	FPRT 135	Fire Administration II	3
FPRT 134	Fire Administration I	3	FPRT 138*	Fire Service Chemistry II	3
FPRT 137*	Fire Service Chemistry I	3	MATH 137	Business Mathematics	3
ENGL 137	Business English	3	SPCH 131	Fundamentals of Speech	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			16
		17			

FIRE PROTECTION TECHNOLOGY (Cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FPRT	231	Industrial Fire Protection I	3	FPRT	232	Industrial Fire Protection II	3
FPRT	233	Hazardous Material I	3	FPRT	236	Fire & Arson Investigation	3
FPRT	235	Building Codes & Construc-		FPRT	244	Fire Fighting Tactics	
		tion	3			and Strategy	4
ENGL	239	Technical Writing	3	Electv**		Fire Protection Technology	
GOVT	239	Introduction to Political				Elective	3
		Science	3	Electv***		Approved Elective	3.4
PE		Physical Education	1	PE		Physical Education	1
			<u>16</u>				<u>17-18</u>
TOTAL HOURS							66-67

*CHEM 141 & CHEM 142 may be substituted for FPRT 137 & FPRT 138.

**Fire Protection Technology Electives: FPRT 238, FPRT 239.

***EMT 141 or other elective approved by the Department Manager.

FOOD PRODUCTION

A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FRMG	135	Soil Science	3	FRMG	138	Vegetable Production	3
FRMG	137	Animal Health	3	AG	235	Horticulture	3
FRMG	233	Feeds & Feeding	3	FRMG	248	Food Preservation	4
FRMG	237	Livestock Production	3	AG	132	Agronomy	3
			<u>12</u>				<u>13</u>
TOTAL HOURS							25

FOOD SERVICE MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
RMGT	141	Food Preparation & Serving	4	MGMT	134	Work Organization	3
RGMT	132	Nutrition	3	RMGT	135	Food Purchasing	3
RGMT	133	Sanitation & Safety	3	RMGT	136	Menu Planning	3
MGMT	135	Introduction to Management	3	MATH	137	Business Mathematics	3
ENGL	139	Communication Skills	3	Electv*		Approved Elective	3
PSYC	111	Psychology of Personal &		PE		Physical Education	1
		Social Development	1				<u>16</u>
PE		Physical Education	1				<u>18</u>
			<u>18</u>				

FOOD SERVICE MANAGEMENT (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
RMGT 234	Marketing & Sales Pro- motion	3	RMGT 233	Cafeteria Management	3
RMGT 237	Hospitality Industry Law	3	RMGT 235	Financial Management	3
RMGT 245	Management Practice I	4	RMGT 246	Management Practice II	4
MGMT 232	Personnel Management	3	MGMT 239	Supervision	3
MGMT 234	Labor Management Relations	<u>3</u>	Elctv*	Approved Elective	<u>2-4</u>
		16			15-17
TOTAL HOURS					65-67

*Restaurant Management courses, HM 130, MGMT 136, or others approved by the Department Manager.

FOREIGN LANGUAGE

A Two-Year Associate in Arts or Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 131	Composition & Rhetoric I	3	HIST 132	History of the U.S. from 1877	3
FL†	Beginning French, German or Spanish	4	ENGL 132	Composition & Rhetoric II	3
Elctv*	Approved Mathematics Elective	3	FL†	Beginning French, German, or Spanish	4
HIST 131	History of the U.S. to 1877	3	Elctv*	Approved Mathematics Elective	3
LAB SCI	Biology, Chemistry, Physics or Geology	4	LAB SCI	Biology, Chemistry, Physics or Geology	4
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			18
		19			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 231	English Literature I	3	ENGL 232	English Literature II	3
FL†	Intermediate French or Spanish	3	FL†	Intermediate French or Spanish	3
GOVT 231	State & Federal Gov- ernment I	3	GOVT 232	State & Federal Gov- ernment II	3
LAB SCI	Biology, Chemistry, Physics or Geology	4	LAB SCI	Biology, Chemistry, Physics or Geology	4
FL†**	Second Language	4	FL†**	Second Language	4
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		18			18

†Foreign Language.

TOTAL HOURS 73

*Check senior college catalogue for specific math or substitute courses.

**Second language requirement varies with senior colleges. Check senior college catalogue carefully.

GENERAL SECRETARIAL

A One-Year Certificate of Completion

First Semester				Credit	Second Semester				Credit	
Subject				Hours	Subject				Hours	
OA	131*	Beginning Shorthand		3	OA	132*	Intermediate Shorthand		3	
OA	133*	Beginning Typewriting		3	OA	134*	Intermediate Typewriting		3	
OA	135	Clerical Practice		3	OA	136	Secretarial Practice		3	
MATH	137	Business Mathematics		3	OA	138	Business Correspondence		3	
ENGL	137	Business English		3	OA	139	Business Machines &			
PSYC	111	Psychology of Personal &					Calculations		3	
		Social Development		1	PE		Physical Education		1	
PE		Physical Education		1					16	
				17						
									TOTAL HOURS	33

*Beginning or advanced levels of shorthand and typewriting will be determined by the student's previous training in these skills and/or by placement tests. Electives may be chosen by students who receive advanced standing in shorthand and typing. Courses may be chosen leading toward general, medical, or legal secretarial programs upon department approval.

GEOLOGY

A Two-Year Associate in Science Degree

FIRST YEAR

First Semester			Credit	Second Semester		Credit
Subject			Hours	Subject		Hours
GEOL 141	Physical Geology	4	GEOL 142	Historical Geology	4	
MATH 132	College Algebra	3	MATH 133	Trigonometry	3	
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3	
CHEM 141	General Chemistry	4	CHEM 142	General Chemistry	4	
ENGL 131	Composition & Rhetoric I	3	ENGL 132	Composition & Rhetoric II	3	
PE	Physical Education	1	PE	Physical Education	1	
PSYC 111	Psychology of Personal & Social Development	1			18	
		19				

SECOND YEAR

First Semester		Credit	Second Semester		Credit
Subject		Hours	Subject		Hours
MATH 231	Calculus I	3	MATH 232	Calculus II	3
BIOL 241	Invertebrate Zoology	4	BIOL 242	Vertebrate Zoology	4
GOVT 231	State & Federal Gov- ernment I	3	GOVT 232	State & Federal Gov- ernment II	3
MATH 134	Analytic Geometry	3	PSYC 231	Introduction to Psychology	3
ENGL 231	English Literature I	3	ENGL 232	English Literature II	3
PE	Physical Education	1	PE	Physical Education	1
		17			17
TOTAL HOURS					71

Students should check the catalogue of the institution to which they plan to transfer as requirements may vary.

HORSE MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FRMG 137	Animal Health		3	FRMG 139B	Intermediate Horsemanship		3
FRMG 139A	Elementary Horsemanship		3	AG 132	Agronomy		3
AG 131	Animal Husbandry		3	BIOL 142	General Biology II		4
BIOL 141	General Biology I		4	MATH 137	Business Mathematics		3
ENGL 137	Business English		3	PE	Physical Education		1
PE	Physical Education		1	Elctv*	Approved Elective		3
PSYC 111	Psychology of Personal & Social Development		1				17
			18				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FRMG 237	Livestock Production		3	FRMG 134	Range Management		3
FRMG 239A	Horse Production		3	FRMG 232	Farm Mechanics II		3
FRMG 239C	Animal Breeding		3	FRMG 233	Feeds & Feeding		3
AG 234	Entomology		3	FRMG 239B	Advanced Equitation		3
Elctv*	Approved Elective		3	Elctv*	Approved Elective		3
			15				15

TOTAL HOURS 65

*Electives: AG 239, FRMG 133, FRMG 135, FRMG 136, FRMG 138, FRMG 231, FRMG 235, FRMG 236, FRMG 248, FRMG 249, or other course approved by the Department Manager.

HOTEL-MOTEL MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
HM	132	Hotel/Motel Organization and Administration	3	HM	130	Food and Beverage Management	3
RMGT	141	Food Preparation & Serving	4	HM	133	Front Office Procedures	3
MGMT	135	Introduction to Management	3	HM	134	Hotel/Motel Sales Promotion	3
ENGL	139	Communications Skills	3	RMGT	133	Sanitation and Safety	3
MATH	137	Business Mathematics	3	RMGT	135	Food Purchasing	3
PE		Physical Education	1	PE		Physical Education	1
PSYC	111	Psychology of Personal & Social Development	1				16
			18				

HOTEL-MOTEL MANAGEMENT (cont'd)

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
HM	232	Supervisory Housekeeping	3	HM	231	Hotel/Motel Law	3
HM	240	Hotel/Motel Internship I	4	HM	234	Hotel/Motel Financial Management	3
MGMT	232	Personnel Management	3	HM	241	Hotel/Motel Internship II	4
Elctv*		Approved Elective	3	RMGT	233	Cafeteria Management	3
BUS	237	Principles of Accounting I	3	BUS	238	Principles of Accounting II	3
			<u>16</u>				<u>16</u>

TOTAL HOURS 66

*HM 235, HM 236, RMGT 232, RMGT 233, or elective approved by the Department Manager.

INFORMATION SYSTEMS SPECIALIST

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester			Credit Hours
CS	130A	Introduction to Computer Concepts	3	CS	238	Systems Analysis	3
CS	135	Introduction to Systems Analysis	3	MGMT	135	Introduction to Management	3
BUS	131	Introduction to Business	3	MGMT	235	Business Law I	3
ENGL	131	Composition & Rhetoric I	3	BUS	237	Principles of Accounting I	3
MATH*		Approved Mathematics	3	MATH*		Approved Mathematics	3
			<u>15</u>				<u>15</u>

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
CS	244	MIS and Information Storage and Retrieval	4	CS	245	Data Information Structures	4
MGMT	136	Human Relations	3	MGMT	232	Personnel Management	3
BUS	238	Principles of Accounting II	3	BUS	235	Introduction to Managerial Accounting	3
ENGL	239	Technical Writing	3	Elctv*		Approved Elective	3-4
MATH	138	Elementary Statistics	3	Elctv*		Approved Elective	3-4
			<u>16</u>				<u>16-18</u>
				TOTAL HOURS			62-64

*Approved Mathematics: MATH 131, MATH 132, or MATH 135, MATH 136.

*Approved Elective: CS 136, CS 138, CS 138A, CS 143, MGMT 234, MGMT 239, PSYC 231, or other courses approved by the Department Manager.

JOURNALISM

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester				Second Semester			
Subject		Credit Hours		Subject		Credit Hours	
JOUR	141	Communications Media	4	JOUR	142	News Gathering & Reporting	4
ENGL	131	Composition & Rhetoric I	3	ENGL	132	Composition & Rhetoric II	3
HIST	131	History of the U.S. to 1877	3	HIST	132	History of the U.S. from 1877	3
SPCH	131	Fundamentals of Speech	3	PSYC	231	Introduction to Psychology	3
Elctv*		Approved Elective	3	Elctv*		Approved Elective	3
PSYC	111	Psychology of Personal & Social Development	1	PE		Physical Education	<u>1</u>
PE		Physical Education	<u>1</u>				17
			18				

SECOND YEAR

First Semester				Second Semester			
Subject		Credit Hours		Subject		Credit Hours	
ENGL	231	English Literature I	3	ENGL	232	English Literature II	3
GOVT	231	State & Federal Government I	3	GOVT	232	State & Federal Government II	3
BUS	231	Principles of Economics I	3	BUS	232	Principles of Economics II	3
SOC	231	Introduction to Sociology	3	SOC	232	Contemporary Social Problems	3
PE		Physical Education	<u>1</u>	PE		Physical Education	1
			13	Elctv*		Approved Elective	<u>3</u>
							16

TOTAL HOURS 64

*Check with senior college or university catalogue for appropriate course choice.

JUVENILE CORRECTIONS

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester				Second Semester			
Subject		Credit Hours		Subject		Credit Hours	
ENGL	131	Composition & Rhetoric I	3	ENGL	132	Composition & Rhetoric II	3
HIST	131	History of the U.S. to 1877	3	HIST	132	History of the U.S. from 1877	3
PSYC	231	Introduction to Psychology	3	PSYC	232	Personality Adjustment	3
SOC	231	Introduction to Sociology	3	PSYC	233	Child Growth & Development	3
PSYC	111	Psychology of Personal & Social Development	1	SOC	232	Contemporary Social Problems	3
PE		Physical Education	<u>1</u>	PE		Physical Education	<u>1</u>
			14				16

JUVENILE CORRECTIONS (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 239	Technical Writing	3	HIST 134	History of Western Civilization II	3
GOVT 231	State & Federal Government I	3	GOVT 232	State & Federal Government II	3
ANTH 232	Cultural Anthropology	3	SOC 233	Criminology	3
HIST 133	History of Western Civilization I	3	Elctv	Approved Elective	3
Elctv	Approved Elective	3	Elctv	Approved Elective	3
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		16			16
TOTAL HOURS					62

MAINTENANCE TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MTNT 141	Carpentry I	4	MTNT 142	Carpentry II	4
MTNT 143	Electricity I	4	MTNT 144	Electricity II	4
AC 140	Air Conditioning & Refrigeration Theory & Application	4	AC 141	Basic Electrical Circuits	4
MGMT 137A	Safety (OSHA)	3	DD 130	Blueprint Reading	3
MATH 137	Business Mathematics	3	Elctv	Approved Small Gas Engine Repair Elective	4
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			20
		20			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MTNT 241	Masonry I	4	MTNT 242	Masonry II	4
MTNT 243	Plumbing I	4	MTNT 244	Plumbing II	4
AC 142	Household Refrigeration Systems	4	MTNT 245	Painting & Refinishing	4
WELD 141	Beginning Gas Welding	4	AC 143	Heating Systems	4
ENGL 137	Business English	<u>3</u>	Elctv	Approved Elective	<u>3</u>
		19			19
TOTAL HOURS					78

MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 134	Work Organization	3	MGMT 136	Human Relations	3
MGMT 135	Introduction to Management	3	MGMT 232	Personnel Management	3
OA 135	Clerical Practice	3	OA 133*	Beginning Typewriting	3
OA 139	Business Machines and Calculations	3	OA 138	Business Correspondence	3
ENGL 137	Business English	3	MATH 137	Business Mathematics	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			16
		17			

SECOND YEAR

OPTION I. BUSINESS MANAGEMENT

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 239	Supervision	3	MGMT 236	Business Law II	3
MGMT 235	Business Law I	3	MGMT 234	Labor-Management Relations	3
OA 234	Bookkeeping I	3	Elctv*	Approved Elective	3
CS 130	Computers and Society	3	OA 235	Bookkeeping II	3
SPCH 233	Business Speech	3	OA 237	Office Administration and Procedures	<u>3</u>
		15			15

TOTAL HOURS 63

OPTION 2.

REAL ESTATE & INSURANCE

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 137	Insurance	3	MGMT 233R	Real Estate Finance	3
MGMT 138R	Real Estate Fundamentals I	3	MGMT 237	Life Insurance	3
MGMT 230	Credit & Collections	3	MGMT 238R	Real Estate Law	3
MGMT 231	Marketing Principles	3	OA 235	Bookkeeping II	3
OA 234	Bookkeeping I	3	OA 237	Office Administration and Procedures	<u>3</u>
		15			15

TOTAL HOURS 63

*Level of Typewriting will be determined by the student's previous training in these skills, and/or by placement tests. Students who receive advanced standing in typewriting may select an approved Management Elective to fulfill hour requirements.

Approved Electives for Option 1: MGMT 137, MGMT 139, MGMT 231, MGMT 137A.

Approved Elective for Option 2: MGMT 139, MGMT 234.

MATHEMATICS

A Two-Year Associate in Arts or Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MATH 132	College Algebra	3	MATH 134	Analytic Geometry	3
MATH 133	Trigonometry	3	Elctv*	Approved Science or Foreign Language Elective	4
Elctv*	Approved Science or Foreign Language Elective	4	Elctv*	Approved Elective	3
ENGL 131	Composition & Rhetoric I	3	ENGL 132	Composition & Rhetoric II	3
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			<u>17</u>
		18			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MATH 231	Calculus I	3	MATH 232	Calculus II	3
ENGL 231	English Literature I	3	ENGL 232	English Literature II	3
GOVT 231	State & Federal Government I	3	GOVT 232	State & Federal Government II	3
LAB SCI	Biology, Chemistry, Physics or Geology	4	LAB SCI	Biology, Chemistry, Physics or Geology	4
Elctv*	Approved Elective	3	Elctv*	Approved Elective	3
PE	Physical Education	1	PE	Physical Education	<u>1</u>
		<u>17</u>			<u>17</u>

TOTAL HOURS 69

Students should check the catalogue of the institution to which they plan to transfer as requirements may vary.

*Students should consult the catalogue of the institution to which they plan to transfer for required or recommended courses.

This curriculum is recommended for students pursuing either an Associate in Arts degree or an Associate in Science degree from Central Texas College. Choice of electives determines the degree. Freshmen with adequate background may enroll in Math 231 (Calculus) during the Fall Semester with the permission of the Manager of the Mathematics Department.

MEDICAL TECHNOLOGY

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
BIOL 145	Human Anatomy	4	BIOL 146	Human Physiology	4
CHEM 141	General Chemistry I	4	CHEM 142	General Chemistry II	4
ENGL 131	Composition & Rhetoric I	3	ENGL 132	Composition & Rhetoric II	3
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3
MATH 131	Intermediate Algebra	3	MATH 133	Trigonometry	3
PSYC 111	Psychology of Personal & Social Development	$\frac{1}{18}$			$\frac{17}{17}$

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 239	Technical Writing	3	PSYC 231	Introduction to Psychology	3
GOVT 231	State & Federal Government I	3	GOVT 232	State & Federal Government II	3
BIOL 244	Microbiology	4	CHEM 243	Quantitative Analysis	4
BIOL 241	Invertebrate Zoology	4	BIOL 233	Genetics	3
CHEM 241	Organic Chemistry I	$\frac{4}{18}$	CHEM 242	Organic Chemistry II	$\frac{4}{17}$

TOTAL HOURS 70

MID-MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 135	Introduction to Management	3	MGMT 138R	Real Estate Fundamentals I	3
MGMT 136	Human Relations	3	MGMT 141M	Mid-Management Internship II	4
MGMT 140M	Mid-Management Internship	4	MGMT 232	Personnel Management	3
BUS 131	Introduction to Business	3	MATH 137	Business Mathematics	3
Elctv	ENGL 130, 131, or 137	3	Elctv*	Approved Social Science Elective	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	$\frac{1}{17}$
PE	Physical Education	$\frac{1}{18}$			

MID-MANAGEMENT (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 239	Supervision	3	MGMT 231	Marketing Principles	3
MGMT 240M	Mid-Management Internship III	4	MGMT 241M	Mid-Management Internship IV	4
BUS 237	Principles of Accounting I	3	BUS 238	Principles of Accounting II	3
Elctv	BUS 231 or 232	3	Elctv	MGMT 235, 236, or 238R	3
Elctv	SPCH 131 or 233	3	Elctv	Approved Elective	3
		<u>16</u>			<u>16</u>

TOTAL HOURS 67

CAUTION: Mid-Management is a controlled entry program with various state and school requirements that apply to the program (i.e., approved training station, hours worked per week, geographic location, etc.). Before completing the curriculum requirements of this particular program, please check with a Mid-Management instructor co-ordinator.

*SOC 231, PSYC 231, GOVT 231, or other elective approved by the Department Manager.

MUSIC

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 131	Composition & Rhetoric I	3	ENGL 132	Composition & Rhetoric II	3
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3
MU 121E	Ear Training I	2	MU 122E	Ear Training II	2
MU 131	Music Fundamentals	3	MU 132	Music Theory	3
MU 111C	Choir	1	MU 111C	Choir	1
Elctv	Approved Applied Music Elective	1-2	Elctv	Approved Applied Music Elective	1-2
PSYC 111	Psychology of Personal & Social Development	1	MU 130	Music Appreciation	3
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		15-16			17-18

MUSIC (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 231	English Literature I	3	ENGL 232	English Literature II	3
GOVT 231	State & Federal Government I	3	GOVT 232	State & Federal Govern- ment II	3
MU 133	Music Literature	3	MU 134	Music Literature	3
MU 241	Intermediate Harmony	4	MU 242	Advanced Harmony	4
MU 111C	Choir	1	MU 111C	Choir	1
Elctv	Approved Applied Music Elective	2-3	Elctv	Approved Applied Music Elective	2-3
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		17-18			17-18
TOTAL HOURS					66-70

OFFICE ASSISTANT

A One-Year Certificate of Completion

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
OA 133*	Beginning Typewriting	3	OA 134*	Intermediate Typewriting	3
OA 135	Clerical Practice	3	OA 138	Business Correspondence	3
OA 234	Bookkeeping I	3	OA 139	Business Machines and Calculations	3
MATH 137	Business Mathematics	3	OA 235	Bookkeeping II	3
ENGL 137	Business English	3	MGMT 135	Introduction to Management	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			16
		17			
TOTAL HOURS					33

*Beginning or advanced levels of typewriting will be determined by the student's previous training in this skill and/or by placement tests. Electives may be chosen by students who receive advanced standing in typing. Courses may be chosen leading toward general, medical, or legal secretarial programs upon department approval.

OFFICE MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
OA 133*	Beginning Typewriting	3	OA 134*	Intermediate Typewriting	3
OA 135	Clerical Practice	3	OA 138	Business Correspondence	3
OA 234	Bookkeeping I	3	OA 235	Bookkeeping II	3
MATH 137	Business Mathematics	3	OA 139	Business Machines & Calculations	3
ENGL 137	Business English	3	MGMT 135	Introduction to Management	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	<u>1</u>
PE	Physical Education	<u>1</u>			16
		17			

OFFICE MANAGEMENT (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 134	Work Organization	3	MGMT 232	Personnel Management	3
MGMT 136	Human Relations	3	MGMT 236	Business Law II	3
MGMT 235	Business Law I	3	MGMT 239	Supervision	3
CS 130	Computers and Society	3	OA 237	Office Administration & Procedures	3
SPCH 233	Business Speech	3	Elctv**	Approved Elective	3
		<u>15</u>			<u>15</u>
TOTAL HOURS					63

*Levels of typewriting will be determined by the student's previous training in this skill and/or by placement tests. Students who receive advanced standing in typewriting may select an approved elective to fulfill hour requirements.

**MGMT 231, MGMT 239A, OA 238, OA 239, or other electives approved by the Department Manager.

OFFSET PRINTING

A One-Year Certificate of Completion

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
OP 131	Introduction to Offset Printing	3	OP 135	Copy Preparation and Layout	3
OP 132	Camera and Darkroom Procedures, Stripping and Platemaking I	3	OP 136	Camera and Darkroom Procedures, Stripping and Platemaking II	3
OP 133	Offset Press Operation I	3	OP 137	Offset Press Operation II	3
OP 134	Bindery Operations, Cost Estimating and Pricing	3	OP 138	Offset Printing Equipment Maintenance	3
OA 133	Beginning Typewriting	3	OA 139	Business Machines and Calculations	3
		<u>15</u>			<u>15</u>
TOTAL HOURS					30

FIRST YEAR

SECOND YEAR

TOTAL HOURS 67

PHOTOGRAPHY

TOTAL HOURS 31

73

PHOTOGRAPHY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
PHOT 141	Introduction to Photog- raphy	4	PHOT 143	Advanced Photography	4
PHOT 142	Portrait Photography	4	PHOT 144	Commercial Photography	4
PHOT 146*	Color Photography I	4	PHOT 145	Advanced Printmaking	4
ENGL 139	Communication Skills	3	PHOT 147†	Color Photography II	4
MATH 137	Business Mathematics	3	Elctv‡	Approved Elective	3
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	1
PE	Physical Education	1			20
		20			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
PHOT 231	Photography Internship I	3	PHOT 232	Photography Internship II	3
PHOT 243	Portrait Retouching	4	PHOT 244	Photographic Production	4
ENGL 239	Technical Writing	3	BUS 131	Introduction to Business	3
JOUR 141	Communications Media	4	OA 234	Bookkeeping I	3
Elctv*	Approved Elective	3	Elctv*	Approved Elective	3
PE	Physical Education	1	PE	Physical Education	1
		18			17

TOTAL HOURS 75

*TELE 231 - Television Film I may be substituted for PHOT 146.

†TELE 237 - Television Film II/Electronic News Gathering may be substituted for PHOT 147.

‡Approved Electives: ART 130, SPCH 131, OP 132, TELE 133, TELE 232, TELE 238, or other elective approved by the Department Manager.

PHYSICAL EDUCATION

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 131	Composition & Rhetoric I	3	ENGL 132	Composition & Rhetoric II	3
HIST 131	History of the U.S. to 1877	3	HIST 132	History of the U.S. from 1877	3
BIOL 141	General Biology I	4	BIOL 142	General Biology II	4
SPCH 131	Fundamentals of Speech	3	Elctv	Approved Mathematics Elective	3
PE 132	Foundations of Health	3	PE 131	Foundations of Physical Education	3
PE	Physical Education	1	PE	Physical Education	1
PSYC 111	Psychology of Personal & Social Development	1	PE	Physical Education	1
		18			18

PHYSICAL EDUCATION (cont'd)

SECOND YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
PSYC	231	Introduction to Psychology	3	ENGL	232	English Literature II		3	
ENGL	231	English Literature I	3	GOVT	232	State & Federal Govern-			
GOVT	231	State & Federal Govern-				ment II		3	
		ment I	3	SOC	231	Introduction to Sociology		3	
PE	231	Sports Officiating	3	PE	235	Safety & First Aid		3	
BIOL	145	Human Anatomy	4	Elctv		Approved Elective		3	
PE		Physical Education	1	PE		Physical Education		1	
PE		Physical Education	1	PE		Physical Education		1	
				18					17

TOTAL HOURS 71

Students majoring in Physical Education may not repeat activity courses for credit.

Students should check the catalogue of the institution to which they plan to transfer as requirements may vary.

PLANT PRODUCTION

A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FRMG	135	Soil Science	3	FRMG	138	Vegetable Production	3
FRMG	231	Farm Mechanics I	3	AG	235	Horticulture	3
AG	234	Entomology	3	FRMG	248	Food Preservation	4
AG	239	Natural Resource Con-		AG	132	Agronomy	3
		serva-tion	3				13
			12			TOTAL HOURS	25

TOTAL HOURS 25

PRE-MED

A Two-Year Associate in Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
BIOL	141	General Biology I	4	BIOL	142	General Biology II	4
CHEM	141	General Chemistry I	4	CHEM	142	General Chemistry II	4
MATH	132	College Algebra	3	MATH	133	Trigonometry	3
ENGL	131	Composition & Rhetoric I	3	ENGL	132	Composition & Rhetoric II	3
HIST	131	History of the U.S. to 1877	3	HIST	132	History of the U.S. from 1877	3
PE		Physical Education	1	PE		Physical Education	1
PSYC	111	Psychology of Personal & Social Development	1				
			<u>19</u>				<u>18</u>

PRE-MED (Cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
BIOL 241 Invertebrate Zoology	4	BIOL 242 Vertebrate Zoology	4
CHEM 241 Organic Chemistry I	4	CHEM 242 Organic Chemistry II	4
GOVT 231 State & Federal Govern- ment I	3	GOVT 232 State & Federal Govern- ment II	3
ENGL 231 English Literature I	3	ENGL 232 English Literature II	3
PE Physical Education	<u>1</u>	Elctv Approved Elective	4
	15	PE Physical Education	<u>1</u>
			19
TOTAL HOURS			71

REAL ESTATE

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MGMT 135 Introduction to Manage- ment	3	MGMT 139R Real Estate Funda- mentals II	3
MGMT 136 Human Relations	3	MGMT 239 Supervision	3
MGMT 138R Real Estate Funda- mentals I	3	BUS 231 Principles of Economics I	3
BUS 131 Introduction to Business	3	MATH 137 Business Mathematics	3
Elctv ENGL 130, 131, or 137	3	Elctv* Approved Social Science Elective	3
PSYC 111 Psychology of Personal & Social Development	1	PE Physical Education	1
PE Physical Education	<u>1</u>		<u>16</u>
	17		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MGMT 240R Real Estate Internship I	4	MGMT 231 Marketing Principles	3
BUS 232 Principles of Economics II	3	MGMT 241R Real Estate Internship II	4
BUS 237 Principles of Accounting I	3	BUS 238 Principles of Accounting II	3
Elctv* Approved Real Estate Elective	3	Elctv* Approved Real Estate Elective	3
Elctv* Approved Elective	<u>3</u>	Elctv* SPCH 131 or 233	3
	16		<u>16</u>

TOTAL HOURS 65

*All electives must be approved by the Department Manager.

Approved Real Estate electives are: MGMT 233R, MGMT 231R, MGMT 238R, MGMT 232R, or other Real Estate courses.

CAUTION: Real estate is a controlled entry program with various state and school requirements that apply to the program (i.e., approved training station, hours worked per week, geographic location, etc.). Before completing the curriculum requirements of this particular program, please check with a Mid-Management instructor/co-ordinator.

RECREATION

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ENGL 131	Composition & Rhetoric I	3		ENGL 132	Composition & Rhetoric II	3	
HIST 131	History of the U.S. to 1877	3		HIST 132	History of the U.S. from 1877	3	
BIOL 141	General Biology I	4		BIOL 142	General Biology II	4	
SPCH 131	Fundamentals of Speech	3		REC 134	Principles of Recreational Leadership	3	
REC 133	Foundations of Recreation	3		PE 131	Foundations of Physical Education	3	
PSYC 111	Psychology of Personal & Social Development	1		PE	Physical Education	1	
PE	Physical Education	<u>1</u>		PE	Physical Education	<u>1</u>	
		18				18	

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ENGL 231	English Literature I	3		ENGL 232	English Literature II	3	
GOVT 231	State & Federal Gov- ernment I	3		GOVT 232	State & Federal Gov- ernment II	3	
ART 239C	Handcrafts I	3		SOC 231	Introduction to Sociology	3	
PSYC 231	Introduction to Psy- chology	3		PE 231	Sports Officiating	3	
PE 235	Safety & First Aid	3		Elctv	Approved Recreation Ac- tivity	3	
PE	Physical Education	1		PE	Physical Education	1	
PE	Physical Education	<u>1</u>		PE	Physical Education	<u>1</u>	
		17				17	
					TOTAL HOURS		70

RECREATION LEADERSHIP

A Two-Year Certificate of Completion

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
Elctv	Approved English Elective	3		Elctv	Approved English Elective	3	
MATH 133	Trigonometry	3		SPCH 131	Fundamenals of Speech	3	
REC 133	Foundations of Recreation	3		REC 134	Principles of Recreational Leadership	3	
PE 131	Foundations of Physical Education	3		REC 135	Theory & Practice of Teaching Sports	3	
PE 111	Volleyball & Softball	1		PE 110	Football & Basketball	1	
PE 117	Beginning Tennis	1		PE 112	Beginning Badminton	1	
PSYC 111	Psychology of Personal & Social Development	<u>1</u>		PE 115	Folk & Square Dance	<u>1</u>	
		15				15	

RECREATION LEADERSHIP (Cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
PSYC	231	Introduction to Psychology	3	SOC	231	Introduction to Sociology	3
ART	239C	Handcrafts I	3	ART	239D	Handcrafts II	3
REC	233	Camp Counseling	3	PE	235	Safety & First Aid	3
REC	237	Theory & Practice of		REC	239	Field Work in Recreation	3
		Teaching Aquatics	3	REC	238	Outdoor Recreational	
PE	231	Sports Officiating	3			Sport	3
PE	214	Tumbling	1	PE	or 215	Figure Development	
			16	PE	or 218	Physical Conditioning	1
TOTAL HOURS							62

Physical Education one-hour activity courses may be taken in any sequence, but may not be repeated.

SMALL GAS ENGINE REPAIR

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
SGER	141	Gas Engine Fundamentals	4	SGER	144	Carburetion Fuel and			
SGER	142	Ignition Systems	4			Lubrication Systems		4	
SGER	143	Shop Practices	4	SGER	145	Motorcycle Engine Service		4	
TMTH	130	Technical Mathematics I	3	SGER	146	Lawn Care Equipment			
PSYC	111	Psychology of Personal &				Service		4	
		Social Development	1	ENGL	137	Business English		3	
PE		Physical Education	<u>1</u>	WELD	141	Beginning Gas Welding		4	
			17	PE		Physical Education		<u>1</u>	
								20	

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
SGER	241	Advanced Motorcycle Repair	4	SGER	244	Stationary Power Plant Service	4
SGER	242	Chain Saw Service	4	SGER	245	Recreational Vehicle Engine Service	4
SGER	243	Marine Inboard/Out-board Service	4	SGER	246	Special Projects	4
MGMT	137A	Safety (OSHA)	3	MGMT	239	Supervision	3
			15				15
TOTAL HOURS							67

SOCIAL SCIENCE

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ENGL 131	Composition & Rhetoric I	3		ENGL 132	Composition & Rhetoric II	3	
HIST 131	History of the U.S. to 1877	3		HIST 132	History of the U.S. from 1877	3	
FL†	Beginning French, Ger- man, or Spanish	4		FL†	Beginning French, Ger- man, or Spanish	4	
LAB SCI	Biology, Chemistry, Phy- sics or Geology	4		LAB SCI	Biology, Chemistry, Phy- sics or Geology	4	
MATH 131	Intermediate Algebra	3		MATH 133	Trigonometry	3	
PSYC 111	Psychology of Personal & Social Development	1		PE	Physical Education	<u>1</u>	18
PE	Physical Education	<u>1</u>					
		19					

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ENGL 231	English Literature I	3		ENGL 232	English Literature II	3	
GOVT 231	State & Federal Govt. I	3		GOVT 232	State & Federal Govt. II	3	
FL†	Intermediate French or Spanish	3		FL†	Intermediate French or Spanish	3	
SOC SCI*		3		SOC SCI*		3	
Elctv	Approved Elective	3		Elctv	Approved Elective	3	
PE	Physical Education	<u>1</u>		PE	Physical Education	<u>1</u>	16
		16					

TOTAL HOURS 69

†Foreign Language.

*Social Science course should be related to major or minor if possible.

Students taking German the first year may take Beginning French or Spanish the second year. Students should check the catalogue of the institution to which they plan to transfer as requirements may vary.

SOLAR ENERGY SYSTEMS SPECIALIST

A One-Year Certificate of Completion

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
SESY 131	Principles of Solar Energy	3		SESY 141	Solar Heating Systems	4	
AC 140	Air Conditioning and Re- frigeration Theory and Application	4		AC 141	Basic Electrical Circuits	4	
				AC 143	Heating Systems	4	
WELD 141	Beginning Gas Welding	4		ET 144	Basic Test Equipment	4	
DD 131	Fundamentals of Drafting	3		TMTH 130	Technical Mathematics I	<u>3</u>	19
MGMT 137A	Safety (OSHA)	3					
PSYC 111	Psychology of Personal & Social Development	<u>1</u>					
		18					

TOTAL HOURS 37

SOLAR ENERGY SYSTEMS TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
SESY	131	Principles of Solar Energy	3	SESY	141	Solar Heating Systems	4
AC	140	Air Conditioning and Re- frigeration Theory and Application	4	AC	141	Basic Electrical Circuits	4
WELD	141	Beginning Gas Welding	4	AC	143	Heating Systems	4
DD	131	Fundamentals of Drafting	3	ET	144	Basic Test Equipment	4
MGMT	137A	Safety (OSHA)	3	TMTH	130	Technical Mathematics I	3
PSYC	111	Psychology of Personal & Social Development	1	PE		Physical Education	<u>1</u>
PE		Physical Education	<u>1</u>				<u>20</u>
			19				

SECOND YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
SESY	241	Solar Cooling Systems	4	SESY	231	Solar Energy Special			
AC	144	Residential Air Con-				Projects			3
		ditioning	4	AC	241	Control Theory			4
ENGL	139	Communications Skills	3	DD	242*	Architectural Drafting			4
PHYS	140	Survey of Physics	4	MGMT	135	Introduction to Manage-			
Elctv*		Approved Elective	3			ment			3
			18	Elctv*		Approved Elective			3
									17

TOTAL HOURS 74

*Electives - Air Conditioning courses, MTNT 141, MTNT 243, or other courses approved by the Department Manager.

DD 134 may be substituted for DD 242.

SPEECH

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
ENGL	131	Composition & Rhetoric I	3	ENGL	132	Composition & Rhetoric I	3		
HIST	131	History of the U.S.		HIST	132	History of the U.S.			
		to 1877	3			from 1877	3		
FL†		Beginning French, Ger-		FL†		Beginning French, Ger-			
		man or Spanish	4			man or Spanish	4		
SPCH	131	Fundamentals of Speech	3	SPCH	133	Oral Interpretation	3		
SPCH	132	Voice & Diction	3	THET	132	Basic Theatre Practice	3		
PSYC	111	Psychology of Personal &		PE		Physical Education			
		Social Development	1						17
PE		Physical Education	1						
			18						

SPEECH (Cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 231	English Literature I	3	ENGL 232	English Literature II	3
GOVT 231	State & Federal Govern- ment I	3	GOVT 232	State & Federal Govern- ment II	3
FL†	Intermediate French or Spanish	3	FL†	Intermediate French or Spanish	3
SPCH 231*	Persuasive Speaking	3	Elctv*	Approved Speech/Theatre Elective	3
Elctv*	Approved Speech/Theatre Elective	3	THET 231	History of the Theatre	3
PE	Physical Education	<u>1</u>	PE	Physical Education	<u>1</u>
		16			16

TOTAL HOURS 67

†Foreign Language.

*Theatre majors should substitute THET 232 for SPCH 231 and should elect to take THET 133 and 134.

Students taking German the first year may take Beginning French or Spanish the second year.

TELECOMMUNICATIONS

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
TELE 131	Introduction to Broad- casting	3	TELE 133	Beginning Television Production	3
TELE 132	Beginning Radio Produc- tion	3	TELE 134	Station Sales/Manage- ment	3
TELE 135	Radio-Television An- nouncing	3	TELE 136	Television Film I	3
JOUR 141	Communications Media	4	ENGL 132	Composition & Rhetoric II	3
ENGL 131	Composition & Rhetoric I	3	SPCH 131	Fundamentals of Speech	3
PSYC 111	Psychology of Personal & Social Development	<u>1</u>	PE	Physical Education	<u>1</u>
		17			16

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
TELE 235	Broadcast Writing	3	TELE 232	Advanced Television Production	3
TELE 237	Television Film II/Elec- tronic News Gathering	3	TELE 233	Advanced Radio Produc- tion	3
TELE 239A	Teaching Aspect of Broadcasting	3	TELE 236	Communications Law	3
TELE 239B	Telecommunications Field Projects I	3	TELE 238	Telecommunications Practicum	3
Elctv*	Approved Elective	<u>3</u>	Elctv*	Approved Elective	<u>3</u>
		15			15

TOTAL HOURS 63

*Approved electives: TELE 239C, TELE 239D, JOUR 142, or other electives approved by the Department Manager.

VOCATIONAL NURSING

Certificate of Completion

Fall Semester Subject			Credit Hours	Spring Semester Subject			Credit Hours
NU	191	Fundamentals of Nursing	9	NU	192	Medical-Surgical Nursing I	9
BIOL	145	Human Anatomy	4	BIOL	146	Human Physiology	4
PSYC	111	Psychology of Personal & Social Development	1	ENGL	131	Composition & Rhetoric I	3
PSYC	233	Child Growth and Development	$\frac{3}{17}$				<u>16</u>

Summer Semester Subject			Credit Hours	Fall Semester Subject			Credit Hours
NU	131	Vocational Nursing Practicum	$\frac{3}{3}$	NU	193	Maternal and Child Health Nursing	9
				BIOL	244	Microbiology	4
							<u>13</u>
TOTAL HOURS							49

CAUTION: This program has special admission requirements. Contact the Director of Nursing for admission requirements and procedures.

WELDING

A One-Year Certificate of Completion

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
WELD	141	Beginning Gas Welding	4	WELD	151	Advanced Arc Welding	5
WELD	142	Beginning Arc Welding	4	WELD	152	Advanced Welding Process (MIG & TIG)	5
DD	131	Fundamentals of Drafting	3	WELD	153	Weld Testing Methods	5
TMTH	130	Technical Mathematics I	3	WELD	154	Welding Fabrication and Layout	5
PSYC	111	Psychology of Personal & Social Development	$\frac{1}{15}$				<u>20</u>
TOTAL HOURS							35

WELDING TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
WELD 141	Beginning Gas Welding		4	WELD 151	Advanced Arc Welding		5
WELD 142	Beginning Arc Welding		4	WELD 152	Advanced Welding Processes (MIG & TIG)		5
DD 134	Architectural Blueprint Reading		3	ENGL 137	Business English		3
TMTH 130	Technical Mathematics I		3	ENGR 131	Engineering Graphics		3
PSYC 111	Psychology of Personal & Social Development		<u>1</u>				<u>16</u>
			15				

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SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
WELD 153	Weld Test Methods		5	WELD 155	Advanced Fabrication Methods		5
WELD 154	Welding Fabrication and Layout		5	WELD 156	Pipe Welding		5
MGMT 137A	Safety (OSHA)		3	WELD 157	Structural Welding		5
ENGL 239	Technical Writing		<u>3</u>	MGMT 239	Supervision		<u>3</u>
			16				18

TOTAL HOURS 65

Accounting
(See Business)
Administrative Secretarial
(See Office Administration)
Agriculture (AG)

AG 131. Animal Husbandry (3-2) Credit: 3

An introductory survey course. Farm animals as a source of food, clothing, and labor. The place of livestock in farming and ranching. The value of heredity and breeding for improvement, importance of judging, pedigrees, and proper nutrition. The place and adaptation of each class of livestock: show ring classification, and market and slaughter classes.

AG 132. Agronomy (3-2) Credit: 3

Classification and distribution of farm crops, their use, production, and identification will be studied with emphasis being placed on those crops important to Texas. New crop improvement, value of rotation, use and need of fertilizer will be determined by soil testing. Meadow and pasture management will be practiced on the College farm. Weeds, plant diseases, and insect enemies will be discussed.

AG 136 Poultry Science (3-2) Credit: 3

A basic course in poultry production involving breed, breeding, selection, feeding, care, and management. Marketing is emphasized because it is a specialized industry.

AG 234 Entomology (3-2) Credit: 3

Chemical control of insects which affect crops and livestock. Control of external and internal parasites affecting animals. Safety factors in dealing with insecticides.

AG 235 Horticulture (3-2) Credit: 3

Growth and structure of fruit, vegetable, and ornamental plants. Effect of environment on plant productions and principles and methods of propagation.

AG 239 Natural Resource Conservation (3-0) Credit: 3

An introduction to the conservation of renewable natural resources. Includes the development for multiple use of water, range, forests, and wildlife.

Air Conditioning and Refrigeration (AC)

AC 140 Air Conditioning & Refrigeration Theory & Application (2-4) Credit: 4

This course deals with the basic physical principles of an air conditioning system. Introduction to heat, heat movement, temperature, pressure, refrigerants, temperature pressure relationship to refrigerants, the refrigeration cycle, the major components of refrigeration system and their relationship to each other. Introduction to the basic electrical devices found in air conditioning systems, i.e., motors, controls, etc. Use of special air conditioning tools and equipment, soldering and welding equipment. The use and care of specialized electrical testing and recording instruments is stressed.

AC 141 Basic Electrical Circuits (2-4) Credit: 4

Instruction in basic electricity and its application. Introduces the student to the various electrical devices, their importance in electrical circuits, including those used in residential wiring. Methods of wire connections for new and repair service, making and testing electrical circuits, and the use of electrical measuring and testing equipment.

AC 142 Household Refrigeration Systems (2-4) Credit: 4

Application of the refrigeration cycle to household refrigeration, including refrigerators, home freezers, and window air conditioning units. Instruction in service procedures for locating and correcting problems in the mechanical and electrical systems of units; trouble shooting, repairing and charging refrigeration equipment. Development of shop skills in the use of special refrigeration tools and equipment. Prerequisites: AC 140, AC 141.

AC 143 Heating Systems (2-4) Credit: 4

The study of types of heating equipment and their application. Service procedures for locating and correcting problems in heating systems. Study of manufacturers information on various heating units and equipment, to enable the student to determine proper installation. Prerequisites: AC 140, AC 141.

AC 144 Residential Air Conditioning (2-4) Credit: 4

Instruction in heat transfer through material, heat loss and heat gain calculations for residential heating and air conditioning systems, equipment selection and location, duct sizing and layout, controls and control circuits installation and service procedures. Prerequisites: AC 140, AC 141.

AC 241 Control Theory and Application (2-4) Credit: 4

Instruction in the operation of control devices, how they can be applied and varied to achieve the designed conditions. Includes interpretation and drawings of schematic and pictorial control circuit diagrams. Prerequisites: AC 140, AC 141.

AC 242 Commercial Refrigeration Systems (2-4) Credit: 4

Types of commercial refrigeration units and systems. Instruction in controls and control circuits in commercial refrigeration. Heat loss and heat gain calculations for commercial applications, equipment selections, locating and piping procedures. Instruction in installation and service procedures for different systems. Prerequisites: AC 140, AC 141.

AC 243 Commercial Air Conditioning Systems (2-4) Credit: 4

A course designed to cover heat transfer, heat loss and heat gain calculations as applied to commercial heating and air conditioning. Psychometrics of conditioned air, duct design and layout, equipment selection and location, shop drawings, controls and control circuits for automatic conditioning of air. Prerequisites: AC 140, AC 141.

Animal Production

(See Farm & Ranch Mgmt.)

Appliance Service and Repair (APPR)

APPR 141 Introduction to Major Appliances (2-4) Credit: 4

This course covers an introduction to the theory and application of the different types of major appliances. Practical shop applications, safety procedures, use of power and hand tools, test instruments, and use of repair manuals are also included.

APPR 142 Resistance Heating Appliances (2-4) Credit: 4

This course covers the theory, repair procedures and trouble shooting techniques on heaters, baking ovens and other types of resistance heating appliances. Prerequisite: APPR 141

APPR 241 Motor Driven Appliances I (2-4) Credit: 4

This course covers the theory and application of home laundry units. Practical experiences include service procedures on the repair of automatic washing machines and both gas and electric clothes dryers. Prerequisite: APPR 141.

APPR 242 Motor Driven Appliances II (2-4) Credit: 4

This course covers the theory of operation of home type automatic dishwashers, garbage disposals, and trash compactors. Practical experiences include service procedures in the repair of these appliances. Prerequisite: APPR 241.

APPR 243 Air Conditioning and Refrigeration I (2-4) Credit: 4

This course covers the basic theory of the refrigerant cycle and the theory of the operation of all home type refrigeration appliances. Practical experiences include service procedures on freezers, refrigerators, ice-making machines, domestic air conditioners and other refrigeration related appliances.

APPR 244 Air Conditioning and Refrigeration II (2-4) Credit: 4

This course covers the basic theory of self-contained and remote controlled condensing units, low and medium temperature walk-in boxes, store fixtures and other commercial refrigeration units. Practical experiences include service procedures in the repair of these appliances. Prerequisite: APPR 243

APPR 245 Microwave Cooking Devices I (2-4) Credit: 4

This course covers the theory of operation of microwave cooking devices. Practical experiences include service procedures in the repair of these appliances. Special consideration is given to safety precautions on these devices.

APPR 246 Microwave Cooking Devices II (2-4) Credit: 4

This course is a continuation of APPR 245-Microwave Cooking Devices I. Prerequisite: APPR 245.

APPR 248 Small Appliance Servicing (2-4) Credit: 4

This course covers the theory of operation of toasters, hair dryers, electric knives and other small repairable appliances. Practical experiences include service procedures in the repair of these appliances.

Applied Management

(See Mgmt.)

Applied Music

(See Music)

Anthropology (ANTH)

ANTH 231 Physical Anthropology (3-0) Credit: 3

Principles of physical anthropology, human evolution, race, heredity, the organic basis of culture, cultural history through the Paleolithic stage.

ANTH 232 Cultural Anthropology (3-0) Credit: 3

Principles of cultural anthropology, cultural history from the Mesolithic stage through civilization, culture, and social organization in preliterate and literate societies, impact of western culture on preliterate societies.

Art (ART)

Art 130 Printing for Advertising Art (2-4) Credit: 3

Fundamentals of various graphic techniques, classification of printing methods, composition, copy and art preparation, paper selection, type and letter styles and usage, trademarks, handlettering.

Art 131,132 Freehand Drawing I & II (2-4) Credit: 6

A study of the basic drawing skills, including both abstraction and expressive drawing in charcoal, pencil, pen, wash, conte crayon, and mixed media.

Art 133, 134 Creative Design I & II (2-4) Credit: 6

Basic instruction in the elements and principles of design, with emphasis on the study of form and color theory.

Art 135 Color Composition (2-4) Credit: 3

Theory of color and form involving definite technical procedures in properties of color theory, and its application to painting.

Art 136 Figure Drawing (2-4) Credit: 3**

A life drawing course emphasizing structure and action of the human figure.

Art 137 Landscape Composition (2-4) Credit: 3**

Introduction to landscape and problems of form, movement, value control, and composition in pencil, charcoal, conte crayon, ink, and washes.

Art 138 History and Appreciation of Art I (3-0) Credit: 3

A survey of the major and minor arts from prehistoric times to the 14th century.

Art 139 History and Appreciation of Art II (3-0) Credit: 3

A survey of the major and minor arts from the 14th century to the present.

Art 231 Graphic Media (2-4) Credit: 3

Creative experimentation with line etching, serigraphy, and other print making media.

Art 232 Oil Techniques (2-4) Credit: 3

Introduction to the techniques of oil painting with emphasis on color and composition.

Art 233 Advanced Oil Painting (2-4) Credit: 3

Continuation of exploring the medium with emphasis on individual expression. Prerequisite: Art 232.

Art 234 Watercolor Painting (2-4) Credit: 3

Painting in watercolor stressing techniques of the medium and composition.

Art 235 Advertising Art I (2-4) Credit: 3

An introduction to the basic processes and techniques of advertising art.

Art 236 Advertising Art II (2-4) Credit: 3

Advanced study of advertising art and production.

Art 237 Pen and Ink Techniques (2-4) Credit: 3

Study of the potentials of the medium with special attention given to study of three dimensional form, texture, and value.

Art 238 Interior Design (2-4) Credit: 3

Home decoration with emphasis on use and recognition of principles of art, design, and color.

Art 239 Interior Decoration (2-1) Credit: 3

A study to provide a working knowledge in well designed floor plans, interiors, and furnishings.

Art 239A Ceramics I (2-4) Credit: 3

An introduction to making pottery by hand and wheel methods.

Art 239B Ceramics II (2-4) Credit: 3

Continuation of techniques of pottery making.

Art 239C Handcrafts I (2-4) Credit: 3

A study of the major crafts, including weaving, other textiles, enamels, metal work, paper and mosaic. Designed for recreational leaders, teachers, workers with therapeutic art, or for anyone wishing to develop a hobby in one of the craft areas. Conducted as a workshop, each student choosing crafts of individual interest. Emphasis will vary from semester to semester.

Art 239D Handcrafts II (2-4) Credit: 3

Continuation of Art 239C.

Art 239E Art Metals and Lapidary I (2-4) Credit: 3

Introduction to metal forming techniques and instruction in basics of cutting, grinding, and polishing gemstones.

Art 239F Art Metals and Lapidary II (2-4) Credit: 3

Continuation of metal work, instructions in the lost wax method of metal forming, and continuing gemstone finishing.

****With the approval of the Art Department Manager, these courses may be repeated for credit.**

ASTRONOMY (ASTR)

ASTR 131 Survey of Astronomy (3-0) Credit: 3

A non-mathematical approach to the solar system. Beginnings of astronomy, motions of celestial bodies, minor members of the solar system, atoms and light are studied. Planetarium and observatory used in laboratory work.

ASTR 132 Descriptive Astronomy (3-0) Credit: 3

A non-mathematical approach to the analysis of star light, stellar characteristic, stellar evolution, the sun, galactic characteristics, cosmology are included. Planetarium and observatory used in laboratory work.

AUTOMOTIVE BODY REPAIR (AB)

AB 141 Shop Practices (3-3) Credit: 4

This course is an introduction to Shop safety methods (OSHA) and practices in the modern body shop, proper use of hand and power tools and precision measuring devices.

AB 142 Body and Frame Construction (2-4) Credit: 4

A course designed to provide an understanding of body frame construction of both conventional and unit bodies. Special emphasis will be placed on repair equipment and procedures to diagnosis, repair and align collision-damaged frames.

AB 143 Roughing and Alignment (2-4) Credit: 4

A course designed to provide an understanding of roughing and shaping procedures on automotive sheet metal necessary to make satisfactory body repairs with special emphasis on alignment of component parts such as hoods, doors, fenders, etc.

AB 144 Frame Straightening (2-4) Credit: 4

A course designed to provide the student with a working knowledge of the types of body frames, misalignment, frame alignment and straightening and the use of special equipment and measuring devices.

AB 145 Body Finishing (2-4) Credit: 4

A course designed to provide an understanding of the use of body fillers, metal preparation, finishing to the original contour and paint preparation.

AB 146 Painting (2-4) Credit: 4

A course designed to provide a working knowledge of the sanding, masking, cleaning of material to be painted, the proper use of the paint gun, pattern settings, spraying techniques and the uses of exotic paint materials. The course also covers paint problems such as blistering, wrinkling, bleeding and blushing.

AB 147 Body Repair (2-4) Credit: 4

A course designed to provide an understanding of body sheet metal repair with emphasis on the use of body materials and replacement of body parts including glass, hardware and trim.

AB 241 Upholstery and Vinyl Top Repair (2-4) Credit: 4

A course designed to provide the student with a knowledge of upholstery and head lining service and the recovering, repair of vinyl and convertible tops.

AB 242 Glass, Electrical & Power Accessory Service (2-4) Credit: 4

A course designed to provide the student with a knowledge in all types of glass and weathersealing devices and service, and various types of power assist repair.

AB 243 Management and Estimating**(3-3) Credit: 4**

A course designed to provide the student with the experiences of body shop management as it pertains to facilities, personnel, cost accounting, purchasing and stocking of supplies. The student will also receive instruction in collision repair estimation and the use of flat rate and material manuals.

Automotive Service and Repair (AT)**AT 140 Shop Practices and Safety****(2-4) Credit: 4**

A course designed to provide the student with basic automotive skills involving shop safety, automotive lifting devices, use of shop and flat rate manuals, measuring devices, fasteners, hand and power tool use, thread repair, soldering, automotive terminology, cleaning methods, and the basic nine systems of the automobile.

AT 141A Internal Combustion Engine Fundamentals (2-4) Credit: 4

This course is designed to provide the student with a knowledge of the internal combustion engine including the types, engine nomenclature, basic minor tune-up, pre-tear down diagnosis and engine removal procedures. Valve train service and valve grinding operations are also included. Prerequisite or corequisite: AT 140.

AT 141B Internal Combustion Engine Service**(2-4) Credit: 4**

This course covers a brief review of combustion engine fundamentals. Work experience in valve train service, engine disassembly, repair and replacement of pistons, rings, crankshafts, camshafts, timing gears and chains, lubrication and cooling system service, and engine rebuilding procedures are included in this course.

AT 142 Automotive Electrical Systems**(2-4) Credit: 4**

This course is designed to provide the student with a working knowledge of basic automotive electricity including Ohm's Law, wiring and wiring service, wiring diagrams, lighting circuits, magnetism, electrical accessory service, and the use of basic electrical test instruments. Prerequisite or corequisite: AT 140.

AT 144 Fuel Systems**(2-4) Credit: 4**

A course designed to provide an understanding of the theory, fundamentals of operation, and construction of the various types of carburetors, fuel pumps, and components of the fuel system, using established procedures, measuring tools, hand tools, and special testing equipment for testing and adjusting overhauled carburetors.

AT 145 Automotive Air Conditioning**(2-4) Credit: 4**

A course designed to provide an understanding of the principles, design, construction, installation, and service procedures involved in automotive air conditioning, with special emphasis on system re-charging and compressor service.

AT 146 Engine Diagnosis and Emission Control**(2-4) Credit: 4**

A course designed to provide an understanding of engine trouble-shooting procedures, utilizing the oscilloscope analyzer and the theory of operation, adjustment, diagnosis, and repair of all types of emission control devices. Prerequisites: AT 140, AT 141A, AT 141B, AT 142, AT 144.

AT 147 Brake Systems**(2-4) Credit: 4**

A course designed to provide an understanding of the nomenclature, theory of operation and service procedures involved in the brake system. The use of the brake drum lathe, shoe grinder, bleeder, and other equipment necessary to effect brake repairs will be taught with emphasis on power brake and dual braking systems.

AT 148 Steering and Suspension Systems**(2-4) Credit: 4**

A course designed to provide the student with an understanding of the function, theory of operation, maintenance, diagnosis, and service procedures involved in the automotive steering and suspension systems, wheels, tires, steering gears, and linkages, wheel alignment factors, diagnosis repair and alignment procedures on live automobiles.

AT 149 Ignition, Starting, and Charging Systems (2-4) Credit: 4

This course covers a review of automotive electrical systems, starting motor operations and service, charging system theory and service, ignition system theory and service including conventional and transistor systems and engine operating principles. Prerequisite or corequisite: AT 140

AT 241A Standard Transmissions and Differentials (2-4) Credit: 4

A course designed to provide an understanding of the function, construction, operation, and maintenance of manual shift transmissions, clutches, drive lines, and differentials.

AT 241B Automatic Transmissions (2-4) Credit: 4

A study of the theory of operation, construction, and maintenance of fluid couplings and various automatic transmissions used in the modern automobile. This course emphasizes diagnostic repair and overhaul techniques applied on live units. Prerequisite: AT 241A.

AT 242 Shop Organization and Management (3-3) Credit: 4

A course designed to provide information and actual experiences in shop management, customer relations, warranty provisions, service salesmanship, organization and lay-out, general business practices and in the use of time, rate, and parts manuals. This course places special emphasis on established business principles and preparations for employment.

Aviation Maintenance Technology (AVMT)

AVMT 131 Maintenance Publications (2-2) Credit: 3

The basis of all maintenance is the proper use and interpretation of technical publications. This course deals with Federal Aviation Administration and manufacturer's publications. The student will be given instruction on the privileges and limitations of a mechanic according to FAR Part 65 and also be given practical work with descriptions of aircraft work performed and the completion of required maintenance forms and records.

AVMT 132 Weight and Balance (2-2) Credit: 3

Since weight and balance of an aircraft are critical areas in maintenance, the student will be instructed on the weighing and computation of weight and balance of an aircraft. This course will also include basic physics principles and basic ground operations and servicing of aircraft to include starting, moving, securing aircraft and other service procedures.

AVMT 133 Aircraft Drafting (2-2) Credit: 3

Since the beginning of any aircraft originates on the drafting board, the technician must be able to use drawings, blueprints, diagrams, charts, and graphs. This course prepares the student to draw sketches and finished drawings of repairs and alterations. In addition, instruction will be given on fabrication and installation of rigid and flexible lines and fittings.

AVMT 134 Airframe Materials & Corrosion Control (2-2) Credit: 3

The course involves the proper use of cleaning and corrosion control materials that are used in aviation. Instruction will include the areas of identifying and selecting appropriate non-destructive testing methods; performing penetrant, chemical etching and magnetic particle inspections; performing basic heat-breaking processes; identifying and selecting aircraft hardware and materials; identifying and selecting cleaning materials; and actually performing aircraft cleaning and corrosion control.

AVMT 141 Basic Aircraft Electricity (2-4) Credit: 4

This course is designed to introduce the student to the theory and practical applications of electricity. Topics of instruction include measuring voltage, current, resistance, continuity, leakage, capacitance, inductance and special applications of aircraft electrical circuits problems.

AVMT 241 Aircraft Finishes (2-4) Credit: 4

This course covers the principles involved in service and repair of wood structures, selecting, testing, inspection, repairing and applying materials from fabric to fiberglass. In addition, painting, doping, applying trim and letters to the airframe of an aircraft are included.

AVMT 243 Airframe Inspection (2-4) Credit: 4

The objective of this course is to prepare the student to perform uniform conformity and airworthiness inspections of both rotary and fixed wing aircraft. This course also covers the alignment check of structures, assembling aircraft, balancing and rigging moveable surfaces, and the jacking of aircraft. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 244 Aircraft Fuel Systems (2-4) Credit: 4

This course covers the theory and practical experiences in inspection, repair, and service of aircraft fuel systems that include fuel dump systems, fluid quantity indicators, and fluid pressure and temperature indicators. Heating, cooling, pressurization systems, and oxygen equipment are also covered. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 245 Aircraft Instruments Systems (2-4) Credit: 4

This course is designed to instruct the student in the repair, inspecting, servicing, and installation of heading, speed, altitude, time, attitude, temperature, pressure and position indicating systems, ice and rain control systems and the maintenance of fire protection systems. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 246 Engine Electrical Systems (2-4) Credit: 4

This course is designed to give instruction in the trouble shooting, repair, installation, and inspection of engine fluid rate of flow meters, temperature, pressure, and RPM indicators, fire detection and extinguishing systems, and the engine electrical systems that include wiring, controls, switches, indicators and protective devices. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 247 Engine Lubrication Systems (2-4) Credit: 4

This course includes the identification and selection of lubricants as well as the repair, inspection, and trouble shooting of the components of the engine lubrication system. Also covered is the overhauling, repair, and inspection of magnetos and ignition harness for both reciprocating and turbine engines. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 248 Engine Cooling Systems (2-4) Credit: 4

This course covers the theory and practical applications of the repair, inspection, trouble shooting, and servicing of the engine cooling and exhaust systems. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 251 Sheet Metal Structures (2-6) Credit: 5

This course covers the theory and practical applications of aircraft sheet metal structures. Instructional topics include sheet metal layout, hand forming, machine forming and bending, and the use of conventional and special rivets and fasteners. Inspection techniques and procedures of bonded structures, plastics, honeycomb structures, laminated sections, doors, and aircraft interior furnishings are covered in the course. Soldering, brazing, gas welding, and arc welding of all materials used in aircraft structures including magnesium, titanium, stainless steel and aluminum are included in this course. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 252 Hydraulics and Pneumatics (2-6) Credit: 5

This course includes the repair, inspection and servicing of hydraulic and pneumatic power systems. Practical experiences include the inspection, servicing, and repair of landing gear retraction systems, shock struts, brakes, wheels, tires, and steering systems. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 253 Aircraft Electrical Systems (2-6) Credit: 5

This course is designed to prepare the student to perform inspection, maintenance, and repair of aircraft electrical systems, including wiring, controls, switches, and indicators both involved with alternating and direct current circuits. Also covered is the inspection and repair of the aircraft position and warning systems. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 254 Powerplant Maintenance (2-8) Credit: 5

This course is designed to prepare the student to maintain, overhaul, repair, and inspect reciprocating engines from small powerplants to large radial designs and turbine engines. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 255 Engine Fuel Systems (2-8) Credit: 5

This course covers the inspection, repair, servicing, and trouble shooting of fuel metering systems, fuel systems components, engine ice and rain control systems, heat exchangers, superchargers, and overhauling carburetors. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 256 Aircraft Propellers (2-8) Credit: 5

Propellers are an integral part of the majority of aircraft, therefore, a great deal of study is devoted to this area. This course covers the repair, inspection, service, and trouble shooting of propeller synchronizing and ice controls, propeller control systems, fixed pitch, constant speed and propeller feathering and governing systems, removal and installation of propellers, balancing propellers and identifying and selecting proper propeller lubricants. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

Aviation Technology

(See Career Pilot)

Behavioral Science

(See Psychology, Education)

Biology (BIOL)

BIOL 141 General Biology I (3-3) Credit: 4

Fundamental principles of living organisms, including chemical and physical properties of life, tissue organization and function, cellular processes, and genetics. Audio tutorial method of instruction.

BIOL 142 General Biology II (3-3) Credit: 4

Fundamental concepts and mechanisms of the organ systems of both plants and animals. Includes ecology, adaptation, natural selection, and classification. Audio tutorial method of instruction.

BIOL 145 Human Anatomy (3-3) Credit: 4

Basic human anatomy designed for nursing and pre-med students. Laboratory includes anatomical models and displays, audio-visual materials, experiments, and taped instructional materials.

BIOL 146 Human Physiology (3-3) Credit: 4

Fundamental study of the chemical interrelationships of human systems. Digestion, respiration, excretion, muscular activities, reproduction, and metabolism are included. Basic physiological instruments and techniques are included in the lab.

BIOL 231 Field Biology (2-3) Credit: 3

A course designed to introduce the student to the concepts and techniques of field ecology and field problems as applied to living communities. The laboratory will include instrumentation, measurements, and analysis of populations.

BIOL 233 Genetics (3-0) Credit: 3

The study of the physical basis of inheritance and the laws of heredity and variations. Genetic problems are emphasized. Human genetic dysfunctions and modern research in genetic control is discussed. Prerequisites: BIOL 141 and 142 or consent of the instructor.

BIOL 241 Invertebrate Zoology (3-3) Credit: 4

Classification, anatomy, physiology, and ecology of the invertebrates. Dissection and identification of structures are included in the laboratory. Field trips for the collection of invertebrates are required at minimal student expense. Prerequisite: Biol 141 or 142 or consent of the instructor.

BIOL 242 Vertebrate Zoology**(3-3) Credit: 4**

Structure, development, physiology, and natural history of the vertebrate animals; emphasis will be placed on North American forms; field trips are required at minimal student expense. Prerequisite: BIOL 141, 142, or consent of the instructor.

BIOL 244 Microbiology**(3-3) Credit: 4**

Fundamental principles of microbiology; includes study of morphology, physiology, and classification of microbes and their relations to soil, food, water, disease, and immunology. Designed for nursing and pre-med students.

Brasses and Woodwinds

(See Music)

Business (BUS)**BUS 131 Introduction to Business****(3-0) Credit: 3**

Provides overall picture of business operations; includes analysis of specialized fields within business organizations; identifies role of business in modern society.

BUS 132 Consumer Economics**(3-0) Credit: 3**

A study of consumer goods and services as related to the home and family, problems and pitfalls associated therewith. This includes a study of family purchasing, advertising, commodity information, sales approaches from a consumer viewpoint and includes sources of advice and counseling. A course to permit the supervisor to better advise his subordinates on economic problems.

BUS 231 Principles of Economics I**(3-0) Credit: 3**

Introduction to economic analysis; price-level changes; the creation of money; the Federal Reserve System and monetary policy; the national accounts; the consumption function; taxation; fiscal policy, public debts; the theory of economic growth and population problems. (Macroeconomics)

BUS 232 Principles of Economics II**(3-0) Credit: 3**

Determination of relative prices; consumer demand analysis; the competitive firm; agricultural policy; the monopolistic firm; imperfect competition; business organization and government regulation; determinants of demand; the economic view of taxation and public expenditure; regional economics; international trade and finance; foreign economic policy. (Microeconomics).

BUS 233 Intermediate Accounting I**(3-0) Credit: 3**

A detailed study of financial accounting with emphasis on financial statements, current assets, current liabilities, property, plant, and equipment, present value concepts, short-term investments, and intangible assets. Prerequisite: BUS 238 with a minimum grade of C.

BUS 234 Intermediate Accounting II**(3-0) Credit: 3**

Continuation of Business 233. Long-term liabilities; corporate capital; accounting for leases and pensions; analysis of financial statements; sources and uses of funds; long term investments; and price-level impact on financial statements. Prerequisite: BUS 233.

BUS 235 Introduction to Managerial Accounting**(3-0) Credit: 3**

A study of the methods by which accounting data are used by management in planning, coordinating, and controlling the operations of a business. Measurement of financial position; analysis of financial statements; cost accumulation and analysis; budgeting; product costing; and quantitative decision techniques. Prerequisite: BUS 238.

BUS 236 Personal Finance**(3-0) Credit: 3**

Personal and family accounts budgets, budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting, home ownership, wills, trust plans.

BUS 237 Principles of Accounting I (3-0) Credit: 3

Analysis and recording of business transactions; use of journal and ledgers; accounting statements; payroll records and payroll taxes; introduction to partnership accounting; special journals and ledgers; voucher system.

BUS 238 Principles of Accounting II (3-0) Credit: 3

Continuation of Principles of Accounting 237. Internal control; partnership and corporation accounting for manufacturing concerns; analysis and interpretation of statements. Prerequisite: BUS 237.

Career Pilot (CP)

CP 130 Basic Flight (.8-2.8) Credit: 3

Flight training for completion of the Private Pilot Certificate. A minimum of 57 hours of instruction is provided, including 25 hours of dual flight, of which two hours will be in the simulator, 20 hours of solo flight and 12 hours of oral instruction and briefings. The instruction in the course more than meets the requirements for a Private Pilot Certificate. Prerequisite: CP 133, or concurrent enrollment.

CP 131 Aircraft Science (3-0) Credit: 3

This course serves as an introduction to the study of several basic sciences in the aeronautical field, as applied to their theoretical and practical use in aircraft construction and design.

CP 132 Propulsion Systems (3-0) Credit: 3

Aircraft engine theory and principles of operation of various types of aircraft reciprocating engines. Consideration is also given to thermal, mechanical and volumetric efficiencies, superchargers, engine accessories, controls and instrumentation.

CP 133 Air Navigation (3-0) Credit: 3

The principles of flight, basics of air traffic control, weather facts, navigational procedures and airplane operation as are pertinent for the Private Pilot. Upon successful completion of this course, the student has sufficient knowledge to pass the FAA written examination for the Private Pilot Certificate.

CP 134 Intermediate Flight (.8-3.1) Credit: 3

First phase of Commercial Pilot training. A minimum of 63 hours of instruction is provided, including 15 hours of dual, of which 2 hours will be in the simulator. Thirty-five hours of solo flight and thirteen hours of oral instruction and briefings.

CP 135 Advanced Air Navigation (3-0) Credit: 3

The Federal Aviation Regulations covering the privileges, limitations and operations of a commercial pilot. Basic Aerodynamics and the principles of flight which apply to airplanes. Inspection and certification requirements will be covered and operating limitations, high altitude operations, physiological considerations, weight and balance computations, significance of the use of airplane performance speeds, cruise control, the Airman's Information Manual will be emphasized. Prerequisite: CP 133.

CP 230 Commercial Aviation (3-0) Credit: 3

This course covers air traffic control procedures pertaining to Commercial Pilot, aviation weather and advanced navigational procedures. Advanced flight maneuvers, low altitude enroute charts, approach plates, and Airman's Information Manual. Also, airplane performance factors on a high performance aircraft with retractable gear and flaps and constant speed propeller. Prerequisite: CP 135.

CP 231 Aerodynamics (3-0) Credit: 3

This course covers the physical properties of air, airflow, standard atmosphere, forces on solids moving through air, lift, drag, planeform, air foil selection, and performance factors.

CP 231A Turbine Engines**(3-0) Credit: 3**

Gas Turbine (or Jet) Engines have had a tremendous growth and refinement in the aircraft industry. Aircraft Jet Engine theory is presented, as well as the simplified mathematical relationship which is an integral part of any study dealing with Jet Engine theory. Fuel metering is a critical factor in correct engine operation and encompasses an in-depth study. Related systems and performance factors are included.

CP 232 Meteorology**(3-0) Credit: 3**

Aviation meteorological phenomena affecting aircraft flight, interpretation of the basic concepts of temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing and fog. Analysis and use of weather data for flight planning and safe flying.

CP 233 Air Transportation**(3-0) Credit: 3**

The development and present status of air transportation, federal legislation, characteristics and classification of air carrier; the organization and functions of the FAA and the Civil Aeronautics Board are reviewed.

CP 234 Advanced Flight**(9-3.4) Credit: 3**

Commercial and instrument flight training. A minimum of 69 hours of instruction is provided, included 20 hours of dual instruction with 4 hours in the simulator, 35 hours of solo, and 14 hours of oral briefings. Prerequisites: CP 134 and CP 230, or concurrent enrollment.

CP 235 Commercial Flight**(8-3.1) Credit: 3**

Commercial and instrument flight training to prepare the student for the FAA Commercial Pilot Certificate with Instrument Rating. A minimum of 63 hours of instruction is provided, including 30 hours of dual flight, of which 5 hours will be in the simulator. Twenty hours of solo flight and thirteen hours of oral instruction and briefings. Prerequisites: CP 234 and CP 237, or concurrent enrollment.

CP 235A Commercial Transition Flight I**(8-3.1) Credit: 3**

This is the first half of two courses to transition Commercial Rotorcraft Helicopter Pilots to Commercial Airplane Single Engine Land Rated Pilots. The course covers 63 hours of instruction which includes 20 hours of dual flight with one hour in the simulator, 30 hours of solo flight, and 13 hours of oral instruction and briefings. Prerequisites: FAA Commercial Rotorcraft Helicopter Rating, Class II FAA Medical and CP 230 or concurrent enrollment.

CP 235B Commercial Transition Flight II**(8-3.1) Credit: 3**

A continuation of CP 235A to complete the requirements for a Commercial Single Engine Land Aircraft Rating. The course consists of 63 hours of instruction, which includes 30 hours of dual flight, of which 5 will be in the simulator and 5 hours in a complex aircraft; 20 hours of solo flight with 5 hours in a complex aircraft, and 13 hours of oral instruction and briefings. Prerequisite: CP 235A.

CP 236 Multi-Engine Flight**(8-.8) Credit: 3**

This course of flight training leads to the FAA Multi-Engine Pilot Rating. This course is designed to give the advanced pilot a greater depth of aircraft experience. A minimum of 24 hours of instruction is provided, including 12 hours of dual flight, and 12 hours of oral instruction and briefing. Prerequisite: CP 235 or a Commercial Pilot Certificate.

CP 237 Aviation Radio System**(3-0) Credit: 3**

Basic radio fundamentals as used by the pilot. A description and practical use of various radio aids to safe aerial navigation, including Very High Frequency Omni Direction Range. (VOR), Instrument Landing System (ILS), Direction Finding (DF), and others. Charts and approach plates as adapted to the radio navigation, including the use of the Flight Information Manual and ATC procedures. Prerequisite: CP 230.

CP 238 Instructor Rating**(2.5-1.6) Credit: 3**

This flight course prepares the experienced pilot for the FAA Certified Flight Instructor Certificate for airplane. Includes 25 hours of dual flight and 40 hours of oral instruction and briefings. Prerequisite: Commercial Pilot Certificate.

CP 238A Instrument Flight Instructor (1.4-1.4) Credit: 3

A program of advanced flight training to prepare the experienced Instrument Pilot to pass the FAA requirements for the Instrument Flight Instructor Certificate for airplane. A minimum of 44 hours of instruction is provided, including 20 hours of dual flight and two hours of FAA check flight and 22 hours of oral instruction and briefings. Prerequisite: Certified Flight Instructor Certificate and Instrument Rating.

CP 238B Multi-Engine Flight Instructor (1.4-1.4) Credit: 3

This course is designed to prepare an applicant for the FAA Multi-Engine Flight Instructor Flight Test. A minimum of 40 hours of instruction is provided, including 20 hours of dual flight instruction, two hours for the FAA check flight and 22 hours of oral instruction and briefings. Prerequisites: FAA Multi-Engine Rating and FAA Flight Instructor Single—Engine Land Rating.

CP 238C Commercial Helicopter Rating (.9-3.2) Credit: 3

Additional Category Commercial Helicopter Rating Course. A minimum of 66 hours of instruction is provided, including 30 hours of dual instruction, 20 hours solo, and 15 hours oral instruction and briefings; and one hour for the FAA check flight. Prerequisite: FAA Commercial Pilot Rating Single-Engine Land.

CP 238D Helicopter Instructor Rating (2.5-1.6) Credit: 3

This course prepares a pilot that is helicopter rated for the FAA Certified Flight Instructor Certificate for helicopter. This course includes 40 hours of ground training and 25 hours of instructor training, which involves 20 hours of dual flight in a helicopter, and 5 hours of practice ground instruction by the student. Prerequisite: Commercial Pilot Certificate with a helicopter category rating.

CP 239 Airline Transport Pilot (1.7-1.7) Credit: 3

The Airline Transport Pilot Rating is the most comprehensive rating issued by the Federal Aviation Administration. Flight and ground training to qualify for the instruction is provided, which includes 25 hours of dual flight, two flight hours for the FAA Check Flight, and 27 hours of oral instruction and briefings. Prerequisites: First Class FAA Medical Certificate; Age 23; 1,500 hours of approved flight time; and Instrument Rating.

Chemistry (CHEM)

CHEM 141, 142 General Chemistry I & II (3-4) Credit: 8

A thorough study of the modern concepts and fundamental principles of chemistry. Quantitative experiments are stressed during the first semester of laboratory and the qualitative analysis of the common cations and anions and an introduction to quantitative analysis is studied in the second semester laboratory. The course is designed for science majors and minors. The course includes three hours lecture, one hour recitation, and three hours of laboratory per week. Prerequisite: Two years of high school algebra and MATH 132, or consent of instructor.

CHEM 144 Introduction to General Chemistry (3-3) Credit: 4

The course covers the fundamentals of general and descriptive chemistry with applications from modern living, medicine, agriculture, etc. This course is designed for the non-science-major, the agriculture major, the home economics major, the nursing major, and any student needing a laboratory science credit.

CHEM 241, 242 Organic Chemistry I & II (3-4) Credit: 8

This course provides a thorough foundation in organic chemistry. A mechanistic approach is utilized in an integrated study of aliphatic and aromatic compounds. Extensive use is made of mechanisms and chemical bonding descriptions. Absorption spectra and mass spectra of organic compounds are studied. The course is designed for science majors and minors. Prerequisite: CHEM 141, 142, or consent of the instructor.

CHEM 243 Quantitative Analysis (3-4) Credit: 4

This is the study of the theory and practice of chemical analysis. The study of errors is introduced. Simple instrumental methods of analysis are introduced. The course is intended for science majors and minors and medical technology majors. The course includes two hours of lecture, one hour of recitation, and four hours of laboratory per week.

CHEM 244 Introductory Organic Chemistry (3-3) Credit: 4

A study of organic chemistry for students of agriculture, allied health sciences, and home economics. Basic principles, nomenclature, principal reactions and methods of synthesis and the major classes of carbon compounds and their biological applications are included. Sequel course for CHEM 144.

Child Development (CHDV)

CHDV 131 Introduction to Child Development (3-0) Credit: 3

This course covers the history, philosophy, and ethics of child care, types of child care, facilities, laws and standards that are applicable to child care centers. Emphasis is placed on the responsibilities and duties of the child care worker. Experiences are gained in how to provide for the child's health needs and how to make the child care center a safe place for children.

CHDV 132 Infant and Toddler Care (2-2) Credit: 3

This course emphasizes the skills required to care for children from birth to three years of age. It shows how the relationship of the primary caregiver to the child influences the physical, emotional, social, and cognitive development of the child. It will also include a study of the infant during the neonatal period and birth, infant stimulation, and the years of the turbulent toddler.

CHDV 134 Developmental Language (2-2) Credit: 3

The objective of this course is to provide the student the knowledge and skills to develop the language ability of young children. Practical experiences are gained in teaching language activities in a child care center. Emphasis is placed on developing special materials and techniques for bilingual and multi-cultural children.

CHDV 135 Instructional Aids (2-2) Credit: 3

This course is designed to instruct child care personnel and teacher's aids in the proper operation of various types of audiovisual equipment and the handling of associated materials. Students will also become familiar with resources for free materials and how to construct simple training aids such as bulletin boards, mobiles, picture mounting and laminating.

CHDV 141 Learning Programs (2-4) Credit: 4

This course covers methods of planning, working with young children for opportunities in the child's active participation, experimentation and problem solving using materials to provide the greatest scope of experience and learning.

CHDV 143 Creative Expression (2-4) Credit: 4

Creative activities, both structured and unstructured, in arts, crafts, music, dance, literature, storytelling, dramatic play and recreational play, are covered in this course. Practical experiences are gained by working with the young in a child care center.

CHDV 231 The Exceptional Child (2-2) Credit: 3

This course is designed to provide a basic knowledge of the child with behavioral problems. The special problems of mental retardation and conditons such as autism are included. Practical experiences at a child care center will cover etiology, diagnosis, characteristics and *the daily and long-term management of the exceptional child. Prerequisite: CHDV 131.*

CHDV 232 Parent-Child Relationships (2-2) Credit: 3

This course is a study in parent-child experiences and responsibilities and how they affect child behavior and development. Emphasis placed on experiences to stimulate a positive identification for family and self-concept, through thinking and reasoning skills and a positive attitude toward behavior management at each age and stage of development. Included is a study of the abused and neglected child.

CHDV 241 Pre-School Center Management (2-4) Credit: 4

This course covers the theoretical and practical aspects of managing a pre-school center. The main emphasis is placed on developing a management system for a pre-school center that would include budgeting, record keeping, nutrition, health, safety, referral services and personnel practices, including employer/employee relations. Prerequisite: Sophomore standing in the Child Development program.

CHDV 261 Learning Theories Seminar & Practicum (1-15) Credit: 6

This course includes on-the-job experiences with opportunities for direct involvement in an approved program activity for the child development major. In addition to the practicum, seminar time is spent with community resource persons. Prerequisite: Sophomore standing in the Child Development program.

CHDV 262 Special Projects (1-15) Credit: 6

This course is designed to allow the advanced Child Development student the opportunity to undertake a project that involves working with pre-school age children. The area of specialization would be selected and performed under the supervision of the instructor. Prerequisite: Sophomore standing in the Child Development program.

Communications

{See English}

Computer Maintenance (CM)

CM 140 Introduction to Computers and Computing (3-3) Credit: 4

An introductory course to familiarize the student with the terminology, hardware, and basic programming skills necessary for advancement in the computer field. The student will become proficient in programming to the point that he can write programs to solve problems given in other electronic courses.

CM 141 Digital Circuits (3-3) Credit: 4

A review of the basic gates and gating networks used in digital circuits, and an intensive study of Boolean Algebra, as well as the theory and operation of flip-flop, registers, and counter circuits. The course also covers numbering systems, arithmetical circuitry, and elements of control circuits.

CM 142 Core and Memory Circuits (3-3) Credit: 4

A study of the selection of memory devices, principles of storage, timing controls, operation, analysis of memory problems, troubleshooting and repair. Prerequisite: CM 141, or equivalent.

**CM 143 Computer Systems & Operational
 Programming (3-3) Credit: 4**

The study of the theory of the operation of several computer systems, to include instructions, an introduction to their logic diagrams, and circuit schematic, programming as a troubleshooting tool, and operational characteristics.

CM 246 Microprocessors and Microcomputers (3-3) Credit: 4

A study of modern day microcomputer techniques includes eight and sixteen bit machines. Both the S-100 and 6800 bus instructor will be studied as well as the use of immolation in the design and repair of a microcomputer system.

CM 247 Computer Circuit Analysis (3-3) Credit: 4

A comprehensive study of the clock and pulse generation circuit, wave-shaping circuits, trigger and control circuits, and synchronization and counting circuits, as well as other circuits used in modern-day computer.

CM 248 Peripherals and Interfacing (3-3) Credit: 4

The study of selected machine and peripheral interface techniques, to include mag tape and disk, paper tape, CTR, and printer. *Prerequisite:* CM 143

CM 249 Computer System: Diagnosis & Maintenance (3-3) Credit: 4

The operation, preventive maintenance procedures, and troubleshooting of modern-day computer equipment, to include the study of advanced diagnostic programming, including the finding, documenting, and repairing of computer malfunctions. The course gives the student the much-needed practical experience that can only be gained in a live computer atmosphere. *Prerequisite:* CM 247, or equivalent.

Computer Operator (CS)

Computer Science (CS)

CS 130 Computers and Society (3-0) Credit: 3

A non-technical survey course, intended for non-computer science majors, which studies the role that computers play in our society. The purpose is to give a basic, general, and accurate picture of what computers are, do and can do, and to lay to rest myths and mystiques concerning computers. The effects the computers have had and are having on society are studied and used to project what effect they may have in the future. An introduction to data representation, slow-charting and computer program logic is presented to the non-computer science major to write a simple computer program.

CS 130A Introduction to Computer Concepts (3-0) Credit: 3

An overview of applications of computers. The course describes major computer system components; stresses the process of information system development, strength and limitations of the application of computer technology, and the relationship between the user of computer and information systems with the technical specialist.

CS 131 Beginning Key punching (1-3) Credit: 3

Elements of keypunch operation. Designed to give the typist beginning skills in keypunch operation. Recommended for all beginning keypunch operators. Drills and exercises to develop punching accuracy and speed. *Prerequisite:* Typing speed of 30 wpm.

CS 132 Advanced Data Entry (1-3) Credit: 3

Advanced keypunch and verifier operation; program card design and preparation direct data entry techniques; drills to develop maximum efficiency and speed; some on-the-job training is required for the completion of the course. *Prerequisite:* CS 131

CS 133 Computer Library Management (2-3) Credit: 3

Concepts of data processing library management. Introduces card, tape, and disk library management. Some on-the-job training is required for completion of the course.

CS 134 Computer Center Operations (3-0) Credit: 3

This course covers operational theories, concepts, and terminology that is necessary for an understanding of how software and hardware interface together to provide a total system. Modern computer center workflow and throughput are emphasized in the course. *Prerequisite:* CS 140 or concurrent enrollment in CS 139.

CS 135 Introduction to Systems Analysis (3-2) Credit: 3

Introduction to problems from business and science using logical and mathematical techniques particularly suited to characteristics of the digital computer. Problems involve qualification of descriptive data, manipulation of these data, and expression of analysis in descriptive terms. Includes documentation and flow-charting methods. *Prerequisite:* CS 143 or concurrent enrollment.

CS 136 Introduction to Computer Operations (3-2) Credit: 3

Basic card handling procedures and machine applications with job execution at local and remote job entry stations. Includes concepts for operation of unit record and computer card systems.

CS 138 COBOL Programming (3-2) Credit: 3

This course is designed to provide the student with skills and fundamentals in solving business data processing problems using Full American National Standard COBOL. The student becomes effective in COBOL programming techniques involving sequential files. Table searching, control breaks, and a coverage of Indexed Sequential file handling are presented.

CS 138A RPG Programming (2-3) Credit: 3

Report Program Generator, a problem oriented language involving fixed program logic, file description, input, calculation, output of practical business oriented problems on card, tape, and disk systems.

CS 139 Computer Organization (3-0) Credit: 3

This course is designed to give the student an understanding of how the fundamental principles by which computers work and how these principles affect and govern programming techniques. Emphasis is placed on the IBM System 360/370 because of its prominence in the marketplace. Prerequisite: CS 143.

CS 140 Introduction to Computer Operations and Library Management (3-3) Credit: 4

This course includes modern concepts and operation of input and output devices and PCM equipment currently in use by the Data Processing Industry. The duties and responsibilities of I/O control clerks and the computer librarian are emphasized.

CS 141 Advanced Operations Lab (1-15) Credit: 4

This course consists of supervised work in the college computer center. The students learn to operate the computer and the peripheral equipment. Prerequisite: CS 140. Corequisite: CS 134 and approval of Department Manager.

CS 143 Introduction to Computer Science and Computer Programming (3-3) Credit: 4

This course is intended to be the first course for Computer Science majors and no prior knowledge of computers or programming is assumed. The program language, FORTRAN, and flow-charting are introduced at the beginning of the course so that the student will have a better idea of what a computer does before investigating how it functions.

Approximately half of the lectures and nearly all of the laboratories are devoted to programming and flow-charting. Programming assignments will run concurrently with other fundamental topics such as historical development of computers, typical present-day hardware and software and computer applications.

CS 231 Introduction to Computer Center Management (3-0) Credit: 3

Planning, organizing, and controlling data processing installations. Managerial aspects in the introduction and use of computer systems and management concepts. Prerequisite: 12 hours of Computer Science.

CS 232A FORTRAN Programming (3-2) Credit: 3

This course is designed for the computer science major to augment his algorithmic and programming talents, and to offer the non-computer science major a thorough coverage of the FORTRAN language to employ as a tool to solve business or scientific problems. Emphasis is placed on multi-dimensional arrays, use of functions and subprograms, searching and sorting techniques, and direct access processing. Prerequisite: 6 hours of mathematics.

CS 232B Programming for Business Statistics (3-2) Credit: 3

Relevance of data processing in business; impact of computer systems on decision making, heuristic and algorithmic computing techniques using FORTRAN or BASIC to include computation of means and standard deviations, simple regression, contingency tables, and curve plottings. Prerequisites: Math 135 and CS 143.

CS 234 Advanced COBOL (3-2) Credit: 3

This course is designed to offer the student of COBOL programming an in-depth study of the theory, programming techniques, and needed programming efficiencies that will be required of the prospective COBOL programmer. A thorough coverage is given to file design and the special features of ANS COBOL language. Emphasis is placed on multi-dimensional table handling, searching and sorting techniques, and Indexed Sequential and Random file manipulation. Prerequisite: CS 138.

CS 235 PL/1 Programming (3-2) Credit: 3

Business and scientific computer applications are developed using PL/1. Emphasis is placed on advanced programming concepts. Prerequisites: CS 143, CS 138.

CS 236 Conversational Languages (3-2) Credit: 3

Programming and testing sample programs written in a remote terminal-oriented language, such as BASIC, Conversational FORTRAN and APL. Prerequisite: CS 143 or consent of Instructor.

CS 237 Field Projects (1-5) Credit: 3

Practical application of course work in systems analysis and commercial or scientific programming, depending upon student's degree options. Prerequisite: Consent of instructor.

CS 238 Systems Analysis (3-2) Credit: 3

The methodology, techniques, and tools used in performing in-depth analysis of information systems destined for computer implementation are described in their relationships within the overall study. The use and requirements associated with decision tables, study plans, testing plans, and documentation are emphasized. Prerequisites: CS 135, CS 138.

CS 239A Introduction to Operating Systems and Job Control Language (2-2) Credit: 3

A study of computer operating system concepts, including program libraries, program intercommunication, and the structure and transportation of data sets. A Job Control Language (JCL) is taught in addition to the use of standard Utility Programs. Prerequisites: CS 234 and CS 243.

CS 239B Introduction to Teleprocessing Systems (3-2) Credit: 3

Requirements and fundamentals of a teleprocessing system's design and programming; transmission capabilities and control; program protection and relocation; features and applications of transmission devices. Prerequisite: CS 243.

CS 243 Assembler Language Programming (3-3) Credit: 4

Assembler language programming for the current college system. Programming and debugging of business oriented problems, with emphasis on the standard and decimal instruction set and the sequential access method. Prerequisites: CS 139 and CS 143.

CS 244 MIS and Information Storage and Retrieval (3-2) Credit: 4

A study of file organizations and search strategy techniques. It will include the study of design, construction and use of MIS systems with an in-depth look at the advantages and disadvantages of such systems.

CS 245 Data and Information Structures (3-2) Credit: 4

Basic concepts of data. Linear lists, strings, arrays, and orthogonal lists. Representation of trees and graphs. Storage systems and structures, and storage allocation and collection. Multi-linked structures. Symbol tables and searching techniques. Sorting (ordering) techniques. Formal specification of data structures, data structures in programming languages and generalized data management systems.

Consumer Electronics Service (TV)

TV 141 Home Music System (3-3) Credit: 4

A study in the specifications, theory of operation, and the interrelationships of those components used in the modern home music system, including Stereo and Quad receivers and amps; turntables; tape decks, including reel to reel, eight-track, and cassette formats; equalization networks, and mixing systems.

TV 145 Electronic Communications Fundamentals (3-3) Credit: 4

Course covers those basic electrical and electronic fundamentals and circuits used in modern applications, such as communications, sound, and test equipment.

TV 149 Television Theory and Servicing (3-3) Credit: 4

A study of electron tube and semiconductor circuits peculiar to television receivers, and practical methods for troubleshooting and servicing. Prerequisite: TV 145, or equivalent.

TV 235 TV Shop Practices (1-6) Credit: 3

An in-depth study of basic procedures used in the modern TV shop. Includes record keeping, stocking and ordering procedures, shop management, and advanced techniques of TV repair. Prerequisite: TV 149, or equivalent.

TV 241 Music System Servicing (3-3) Credit: 4

A study in the analysis, diagnosis, and correction of a wide range of problems that appear in modern electronic music systems. Prerequisite: TV 242.

TV 242 Radio Systems (3-3) Credit: 4

An in-depth study of the circuitry, both discrete and integrated, used in today's AM and FM tuner amps, including both two and four channel multiplexing. Prerequisites: TV, 141, TV 145.

TV 243 Tape Recorders and Turntables (3-3) Credit: 4

A study of both the mechanics (including gears, pulleys, belts, and drive mechanisms), and electric circuits (for amplification, biasing, and equalization), in tape recorders and turntables. Prerequisites: TV 141, TV 145.

TV 245 Electronic Trouble-Shooting (3-3) Credit: 4

A study of those trouble-shooting techniques that apply to certain categories of electronic equipment. This course may be taken twice for credit with the approval of the program director, provided a different category of equipment is covered. Prerequisite: ET 242

TV 246 Sound Systems (3-3) Credit: 4

A fundamental course covering the components, specifications, and installation techniques of sound reinforcement, public address, paging, and sound distribution systems.

TV 247 Closed Circuit TV (3-3) Credit: 4

The principles of closed circuit television systems and components, including the theory and servicing techniques as applied to cameras, monitors, and coupling networks. Prerequisite: TV 149.

TV 248 CATV and MATV Systems (3-3) Credit: 4

Course covers fundamentals of design and servicing of TV antenna and head end systems and the distribution of TV signals in small or large "cable" systems.

TV 249 Advanced Television Servicing (2-4) Credit: 4

The operation and service of the more complicated television receiver circuits are covered in this course. Special attention is given to the use of techniques and equipment for the most economical solutions to difficult problems. Includes an introduction to transistorized and color television. Prerequisite: TV 149.

Criminal Justice (CRIJ)

CRIJ 121 Defensive Tactics (1-2) Credit: 2

This course is designed to provide the student with *defensive and protective philosophies* to better protect the public and criminal justice personnel against illegal force. Techniques of self-defense, safe arrest procedures, citizen contact, and proper prisoner transportation techniques, along with humane methods of handling disturbed persons, will be presented. The legal and humane use of limited force will be stressed at all times. These techniques are learned skills and are indispensable to the professional officer and the potential police student.

CRIJ 131 Introduction to Criminal Justice (3-0) Credit: 3

History, development, and philosophy of law enforcement and criminal justice in a *democratic society*. *Introduction and career orientation to the multifaceted agencies involved* in the administration of criminal justice.

CRIJ 132 Criminal Investigation (3-0) Credit: 3

Introduction to the fundamentals of criminal investigation, including theory and history, conduct at crime scenes, collection and reservation of evidence.

CRIJ 133 Legal Aspects of Law Enforcement (3-0) Credit: 3

History and philosophy of modern criminal law, including the structure, definition and application of statutes and leading case law, the elements of crimes and penalties; general *provisions of the Penal Code*.

CRIJ 134 Criminal Procedures and Evidence (3-0) Credit: 3

Introduction to the rules governing the admissibility of evidence and types of evidence; criminal procedures in various courts, review of the *Model Code of Criminal Procedure*, including laws of arrest, search and seizure, and leading case law on each topic.

CRIJ 135 Traffic Law (3-0) Credit: 3

This course is designed to cover all laws pertaining to the control and enforcement of traffic. The officer is taught the use of spot maps and charts, the techniques of enforcement, and the maintenance of good public relations. An analysis of the *Model Motor Vehicle Code* is given.

CRIJ 136 Survey of Corrections (3-0) Credit: 3

A general course describing the history and evaluation of the corrections process. Covers all aspects of institutional and community based *corrections*.

CRIJ 137 Police-Community Relations (3-0) Credit: 3

The role of the individual officer in achieving and maintaining positive public response; intergroup relations and public information.

CRIJ 138 Police Role in Crime and Delinquency (3-0) Credit: 3

Study of deviate behavior and current *criminological theories*, with *emphasis on police applications*; crime prevention and the phenomena of crime as it relates to juveniles.

CRIJ 139 Police Organization and Administration (3-0) Credit: 3

Principles of organization and management as applied to law enforcement agencies; introduction to concepts of organizational behavior.

CRIJ 221 Firearms (1-2) Credit: 2

This course is designed to introduce the student to the skills and techniques of firearms used in the protection of the public and criminal justice personnel. Students will fire various weapons under *precision and police combat conditions*. The importance of safe weapons handling and the danger of not adopting a mature attitude towards firearms will be stressed at all times. The intelligent, legal, and moral use of the police firearms will be emphasized at all stages of teaching and firing. General state laws affecting the use of firearms as a means of fatal force will be discussed.

CRIJ 231 Probation and Parole (3-0) Credit: 3

Course will provide the student with some understanding of the evolution of criminal corrections and explore with the student the many avenues which the corrections field branches into. To develop in each student a basic understanding of the various methods of corrections so that they can function efficiently in the field.

CRIJ 233 Criminal Justice Seminar (3-0) Credit: 3

A problems course dealing with current criminal justice trends, issues, and literature. Prerequisite: Approval of Department Manager.

CRIJ 234 Juvenile Procedures (3-0) Credit: 3

The organization, functions and jurisdiction of juvenile agencies; the processing and detention of juveniles, case disposition; juvenile statutes and court procedures.

CRIJ 236 Traffic Planning and Administration (3-0) Credit: 3

This course consists of the application of traffic problems from the administration point of view, including engineering, education, and enforcement at the supervisory level.

CRIJ 237 Penology (Jail Operation and Management) (3-0) Credit: 3

A survey of the basic concepts of penal and correctional rationale as employed by criminal justice administrators. An overview of the operation and management principles of the institutional setting will be examined in depth.

CRIJ 238 Patrol Administration (3-0) Credit: 3

Discussion of the administration of surveys, special problems arising while the officer is on patrol, improvement in patrol methods, observation of persons and things, preventative techniques, methods of handling complaints, and the development of contacts.

CRIJ 239 Provost Marshal Operations (3-0) Credit: 3

The principles of organization and administration as applied to the operational system of a military Provost Marshal's office as well as that of the Inspector General's. Practical training in conduct of briefings, management, and attendant qualities of leadership, and some cases of dissent conditions which might impair role and mission of the dissent command.

CRIJ 239A Correctional Control and Administration (3-0) Credit: 3

The course prepares the student to perform supervisory functions related to control of prisoners and contraband; segregation and accountability of prisoners; procedures required at a correctional facility; emergency measures, prisoner privileges; and the records and reports of the detention center.

Dance

(See Physical Education)

Developmental Studies (DS)

DSCO 030 Developmental Communications (1-2) Credit: 3

A course offered in a laboratory setting to improve reading comprehension and rate and word recognition. Specific areas of study include syllabication, phonetic analysis, context clues, word elements, sequence, setting, main ideas, drawing conclusions, and making inferences.

DSED 030 College Study Skills (1-2) Credit: 3

Designed for improvement of study systems. Emphasis is placed on high level study skills and the improvement of time management, effective listening and notetaking, marking tests, learning through media, concentration, retention of information, and taking examinations.

DSMA 030 Developmental Mathematics I (1-2) Credit: 3

An introductory course including instruction in mathematical operations with rational numbers, the application of measurement systems to geometric problems, and an introduction to basic probability and statistics.

DSMA 031 Developmental Mathematics II (1-2) Credit: 3

A mathematical approach to consumer-oriented and family living problems, including budgeting, balancing a checkbook, calculating wages and payroll deductions, and completing Federal income tax forms.

DSMA 032 Developmental Mathematics III (1-2) Credit: 3

Developmental mathematics for technical fields, including algebra, integers, mathematical sentences, rational numbers, and polynomials.

DSRE 030 Reading and Comprehension I (1-2) Credit: 3

A course offered in a laboratory setting, using varied instruction techniques, designed to help students improve their proficiency in reading comprehension and rate, word recognition and vocabulary development.

DSRE 031 Reading and Comprehension II (1-2) Credit: 3

This course is a continuation of DSRE 030 and places emphasis on further improvement of reading comprehension and rate, word recognition and vocabulary development.

DSSP 030 Developmental Speech (1-2) Credit: 3

An introductory course emphasizing structure and different techniques of presentation, as well as principles and methods of discussion. Designed to identify deficiencies and strengths, and to develop and improve interpersonal skills and the student's ability to communicate through effective speech.

DSWR 030 Developmental Writing I (1-2) Credit: 3

A course offered in a laboratory setting, using varied instructional techniques, designed to identify deficiencies and improve basic writing skills necessary for the student who intends to pursue college-level academic work.

DSWR 031 Developmental Writing II (1-2) Credit: 3

A course in a laboratory setting to develop the ability to locate specific types of material, interpret and summarize information, analyze data and draw conclusions, and to prepare and present the findings in written form.

DSWR 032 Developmental Writing III (1-2) Credit: 3

A course designed to extend reading, research, and writing skills. Emphasis is placed on reference materials relating to consumers, including deceptive trade practices, terms used in written contracts, and a wide variety of consumer oriented literature.

Diesel Mechanics (DIEM)

DIEM 141 Fuel Injection Systems (2-4) Credit: 4

A course of study designed to provide the student with an understanding of the theory of operation of the fuel injection system. The course of study includes the functions and applications of various injectors, nozzles, pumps, filters, and distribution systems. Prerequisites: AT 140, AT 141A, AT 141B, AT 142A, and AT 144.

DIEM 241 Diesel Engine Auxiliary Systems (2-4) Credit: 4

A course study designed to provide the student with an understanding of the theory of operation, construction, design, classification, and application peculiar to diesel engines. The course of study includes two and four cycle diesel engine functions, systems and components, heat, combustion, lubrication, fuels, intake and exhaust systems, supercharging, scavenging and cooling systems. Prerequisite: DIEM 141.

DIEM 242 Diesel Engine Service and Repair (2-4) Credit: 4

This course covers service techniques and a complete overhaul procedure of a diesel engine. Trouble-shooting, repairing, operating the engine, and performing test procedures is emphasized in this course. Prerequisite: DIEM 241

Drafting and Design (DD)

DD 130 Blueprint Reading (2-2) Credit: 3

The fundamentals of blueprint and sketching as they apply to machine drawing.

DD 131 Fundamentals of Drafting (2-4) Credit: 3

An overview of drafting to include shape and size description, lettering, dimensioning, pictorial drawings, copy reproduction, and the use of equipment essential to the field of drafting.

DD 134 Architectural Blueprint Reading (2-2) Credit: 3

The fundamentals of blueprint reading for the construction trades. This course includes familiarization with standard terms, sizes, estimations and commercial practices.

DD 141 Pictorial Drafting (3-3) Credit: 4

A course mainly concerned with pictorials. Includes the theory of oblique and isometric drawings. Also covered are one and two point perspectives of shade and shadow application. Prerequisite: ENGR 131 or concurrent enrollment.

DD 142 Technical Illustration (3-3) Credit: 4

Introduction to pictorial drawings as used in industrial catalogs, assembly sheets, newspaper publications, and promotional literature. Work to be done in various media to include pencil, ink, transfer tapes, and air brush. Prerequisites: ENGR 131, DD 141, or concurrent enrollment.

DD 143 Machine Drawing (2-4) Credit: 4

Drawings and manufacturing processes; Training in producing various kinds of advanced drawings; commercial practices and economics; the use of standard parts, sizes, symbols, and abbreviations. Prerequisites: ENGR 131, DD 141 or concurrent enrollment.

DD 144 Structural Drafting (2-4) Credit: 4

A study of the A.I.S.C. specifications and standards; structural theory and data; designing and detailing structural members and connections. Design and development of details and specifications for light industrial structures to include structural steel, pipe, and reinforced concrete rods. Prerequisite: ENGR 131

DD 241 Pipe Drafting (2-4) Credit: 4

Design and detailing of pipe systems making use of standard practices and symbols; includes single line, double line, plan profile and isometric drawings of pipe systems. Prerequisite: ENGR 131.

DD 242 Architectural Drafting (2-4) Credit: 4

A study of the preparation of architectural plans; elevations, sections, site plans, various building details, room finish, door and window schedules, and structural drawings. Prerequisite: ENGR 131.

DD 243 Electronic Drafting (2-4) Credit: 4

A study of layout and preparation of finished electronic and electrical drawings, stressing modern representation used for pictorial drawing, wiring and connection diagrams, printed circuits, control circuits, and schematic diagrams. Some review of lettering and mechanical drawing principles. Prerequisite: ENGR 131.

DD 245 Topographic Drafting (3-3) Credit: 4

This is an introductory course in map drafting, utilizing surveyors field notes as a basis for calculating bearings and closures and drawing plats, contours and profiles. This course also includes a unit on surveying which consists of actual field problems of transient tape-stadia surveying. Prerequisites: ENGR 131, ENGR 132, TMTH 130, TMTH 131, or permission of the Department Manager.

DD 246 Industrial Practice (2-4) Credit: 4

This course is designed to give specialized practice to the student in his major field of interest. The student will complete actual jobs for area industries to gain realistic experience in his chosen career. Note: Must be taken during the last semester of the sophomore year.

DD 248 Principles of Design (3-3) Credit: 4

Theory and practice of design as related to engineering and technology. Analysis in the areas of architecture, machine design, structural design, and product development. Prerequisites: ENGR 131, DD 141, DD 142.

Economics

(See Business)

Education (EDUC)

EDUC 136 Seminar for Teachers Aides (3-0) Credit: 3

This course is designed to help prepare teachers aides to handle the various types of reading, mathematics, disciplinary, and audio visual media situations they face in day-to-day school activities.

EDUC 221 Mechanics and Teaching in Penmanship (2-0) Credit: 2

In this course, a brief study is made of the objectives and procedures of teaching writing in the elementary grades. It is designed for the improvement of handwriting and the techniques of teaching both manuscript and cursive writing.

EDUC 231 Introduction to Education (3-0) Credit: 3

A survey course in the social foundations of American education.

EDUC 232 Educational Psychology (3-0) Credit: 3

Emphasis is given to the study and application of those aspects of psychology which influences the effectiveness of the teaching and learning process.

EDUC 233, 234 Art Education I & II (3-3) Credit: 6

Designed to develop in the student a respect for free, creative child art and to present to him methods that have succeeded in evoking that type of art.

EDUC 235 Introduction to Speech & Hearing Therapy (3-0) Credit: 3

Description, investigation of causes, basic principles of treatment and prognosis of the more frequently encountered communication disorders. Required observation of various disorders in speech clinic.

EDUC 236, 237 Speech Correction I & II (3-0) Credit: 6

An introduction to the study of speech correction. A survey of the defects of speech, with particular emphasis on articulation defects and voice problems. Consideration of fundamental diagnostic and therapeutic principles in the school and clinic. One hour per week clinical observation required. A technical and professional course in the causes, nature, symptoms, and rehabilitation of disordered speech. Review of current theories and recent experimental work.

**EDUC 238, 239 Teaching Music
at the Elementary Level I & II**

(3-0) Credit: 6

Recruiting students for the elementary school instrumental and vocal programs; preliminary organization judging the ability of the student to benefit by the instrumental program and choosing the instrument most suitable to the student; instrumental class problems, methods and materials; rhythmic development of the child; introduction to notation and sight reading.

Electronic Data Processing

(See Computer Science)

Electronics Technology (ET)

ET 131 Technical Math I

(3-0) Credit: 3

A study of the basic concepts of math and algebra and the use of the slide rule and the electronic calculator in their manipulation.

ET 132 Technical Math II

(3-0) Credit: 3

A study in the solution of trigonometric problems through the use of tables, slide rule, and the electronic calculator. Prerequisite: ET 131, or equivalent.

ET 135 Assembly Methods

(1-5) Credit: 3

A study of modern assembly methods and practices used in industry, including the design, layout, and construction of electronic apparatus.

ET 141 Direct Current Circuits

(3-3) Credit: 4

A study of the elementary principles of electronics, including DC circuits as related to series and parallel resistive, capacitive, and inductive networks, and the use of Ohm's Law, Kirchoff's Law, and the power formulas in analyzing these networks.

ET 142 Alternating Current Circuits

(3-3) Credit: 4

A study of single and polyphase AC circuits and the use of Kirchoff's Laws as well as Thevenin's, Norton's, and Superposition Theorems in analyzing these circuits. Prerequisite: ET 141, or equivalent.

ET 143 Introduction to Electron Devices

(3-3) Credit: 4

An introduction to vacuum tubes, transistors and other semiconductors, their composition, characteristics, theory of operation and circuit applications. Prerequisite or corequisite: ET 142

ET 144 Basic Test Equipment

(3-3) Credit: 4

The use, theory of operation, and repair of the basic electronic test equipment ranging from the VOM through the Dual Beam Oscilloscope. Prerequisite or corequisite: ET 141

ET 151 Basic Electricity for Electronics

(4-3) Credit: 5

A study of the elementary principles of electricity including voltage, current, resistance, power, magnetism, their relationships and interactions. Mathematics topics covered will include decimals, fractions, scientific notation, roots, powers, exponents, Ohm's law, power formulas and the laws of series and parallel circuits.

ET 152 Intermediate Electricity for Electronics

(4-3) Credit: 5

A study in principles of electricity as related to complex series, parallel, and series-parallel circuits. The use of Kirchoff's Law and Thevenin and Norton's theorems in their analysis. The course will include an introduction to inductance, inductive reactance, capacitance, capacitive reactance as applied to simple series and parallel circuits. Those principles of math to be covered include algebra for complex electronic circuits, simultaneous equation, powers of ten, percentages and an introduction to trigonometry.

ET 153 Advanced Electricity for Electronics (4-3) Credit: 5

A study of AC circuits containing inductive and capacitive reactance combined with resistance for single and polyphase sources and the application of laws and theorems for solving these complex circuits. Math topics covered in this course include trigonometry, efficiencies, impedance matching, inductive and capacitive reactance, Pythagorean theorem, resonant circuits, power factors, logarithmic and mathematical tables.

ET 234 Broadcast Equipment Maintenance (1-6) Credit: 3

The operation, preventive maintenance procedures, and troubleshooting of modern day radio and television broadcast equipment. The course gives the student that much-needed practical experience that can only be gained in a live station atmosphere. Prerequisite: ET 245 or equivalent.

ET 242 Advanced Test Equipment (3-3) Credit: 4

The use and calibration of Test Equipment used in servicing complex electronic hardware. Observation of waveforms of electronic apparatus. Prerequisite: ET 144 or equivalent.

ET 243 Special Intensive Study (1-9) Credit: 4

An intensive study in the design, theory of operation, and construction techniques used in a field which holds special interest to the student. Prerequisite: Approval of the Department Manager, prior to registration.

ET 244 Solid State Devices (3-3) Credit: 4

The study of the solid state devices used throughout industry, their characteristics and relations to circuits in both low and high frequency applications. Prerequisite: ET 143 or equivalent.

ET 245 Communications Circuits I (3-3) Credit: 4

A study of those basic circuits used throughout industry today. Prerequisite: ET 143 or equivalent.

ET 246 Integrated Devices (3-3) Credit: 4

A basic study of the many types of IC's in use today. The course will include digital, linear, and LED type devices. Prerequisite: ET 143

ET 247 Communications Circuits II (3-3) Credit: 4

A study of communications circuits necessary for the successful acquisition of an FCC first-class license. Prerequisite: ET 245 or equivalent.

ET 248 Industrial Electronic Control Circuits (3-3) Credit: 4

A study of special purpose electronic control circuits and systems as applied by industry today. This course will include theory and operation, maintenance, diagnostic troubleshooting, and repair of these special purpose circuits. Prerequisite: ET 142, 143 or equivalent.

ET 249 Electronic Systems Troubleshooting (3-3) Credit: 4

This course includes theoretical and practical laboratory assignments in the study of techniques used in signal tracing and logical circuit diagnosis of different types of analog electronic systems.

Emergency Medical Technician (EMT)

EMT 141 Emergency Medical Technician (2-4) Credit: 4

The objective of this course is to provide emergency medical theory and skills training to enable the student to function as an emergency medical technician and to be eligible to take the examination and become a *Registered Emergency Medical Technician-Ambulance Technician*.

Engineering (ENGR)

ENGR 131 Engineering Graphics (2-4) Credit: 3

Freehand and instrument drawing, dimensioning, fastening, pictorial methods, charts and graphs, projections drawings, geometry of graphical construction. Required for beginning engineering students.

ENGR 132 Descriptive Geometry (2-4) Credit: 3

Involves point, line and plane relationships, auxiliary views, intersections, and flat pattern development. Emphasis is placed on practical solutions to realistic engineering problems relating to aerospace, mining, and geology. Prerequisite: ENGR 131.

English (ENGL)

ENGL 130 English Fundamentals (3-0) Credit: 3

A study of basic composition skills with emphasis on sentence structure, paragraph structure, and grammar. Not intended for non-English speaking students.

ENGL 130R Basic English I (2-1) Credit: 3

A review of English fundamentals emphasizing the development of reading techniques by improving reading comprehension and rate, word recognition, and vocabulary development. Instruction is also given in phonics and spelling.

ENGL 131R Basic English II (2-1) Credit: 3

A continuation of Basic English I. A continued review of English fundamentals with the emphasis on the further development of reading techniques by improving reading comprehension and rate, word recognition, and vocabulary development.

ENGL 131 Composition and Rhetoric I (3-0) Credit: 3

Composition of short papers, with emphasis on sentence structure, paragraph development, and paper organization. Analysis of expository prose.

ENGL 132 Composition and Rhetoric II (3-0) Credit: 3

An introduction to literature; the short story, poetry, drama, and the novel. Composition of short papers with emphasis on interpretation and analysis of literary selections, optional research paper. Prerequisite: ENGL 131 or advanced standing.

ENGL 133, 134 English for Foreign Students I & II (3-2) Credit: 6

Speaking and writing for students whose native language is not English. Intended to aid foreign students in attaining greater facility in the use of the English language.

ENGL 137 Business English (3-0) Credit: 3

Fundamentals of grammar, punctuation, and sentence structure as employed in written business communications. A review of word study, sentence analysis; punctuation; paragraphing. Required for all students majoring in Office Administration.

ENGL 139 Communications Skills (3-0) Credit: 3

This course includes topics of instruction in grammatical construction; spelling; punctuation; writing effective business letters; preparation of technical reports; business forms and blanks; speaking to groups, business meetings; personal interviews; telephone conversations; and social speech situations.

ENGL 231 English Literature I (3-0) Credit: 3

A survey of English literature from Beowulf through the eighteenth century. The study includes selections of poetry, prose, and drama. Prerequisites: ENGL 131, 132.

ENGL 232 English Literature II (3-0) Credit: 3

A survey of English literature beginning with the Romantic period and including masterpieces of Victorian and contemporary writers. The study includes selections of poetry, prose, and drama. Prerequisites: ENGL 131, 132.

ENGL 233 World Literature I (3-0) Credit: 3

A study of masterpieces of Western World Literature from Homer through the eighteenth century. Prerequisites: ENGL 131, 132.

ENGL 234 World Literature II (3-0) Credit: 3

A study of the masterpieces of Western World Literature from the eighteenth century to the present. Prerequisites: ENGL 131, 132.

ENGL 237 American Literature I (3-0) Credit: 3

Survey from the beginning to 1860. This course treats briefly of colonial writers and writings to center attention on major literary figures of the first half of the nineteenth century. Both narrative and expository prose are studied, along with poetry and drama. Prerequisites: ENGL 131, 132.

ENGL 238 American Literature II (3-0) Credit: 3

Survey from 1860 to the present. Considers the major literary movements in poetry, prose, and drama. Prerequisites: ENGL 131, 132.

ENGL 239 Technical Writing (3-0) Credit: 3

This course is designed to provide an opportunity to apply the principles of exposition to the preparation of formal written and oral technical reports. Various types of reports that utilize modern style and format are covered in this course.

Environmental Control (EC)

EC 131 Water and Waste Water Technology (3-0) Credit: 3

A study of method of disease transmission, hygienic excreta disposal, municipal and industrial waste water collection and treatment, characteristics of water, water treatment, protection of ground water insect and rodent control, solid waste collection and disposal, milk and food sanitation, swimming pool sanitation, and industrial hygiene.

EC 132 Aquatic Biology (2-3) Credit: 3

A study of fresh water as an environment, its physical and chemical characteristics; and characteristics of plant and animal communities which inhabit it. The morphology, life history, and taxonomy of fresh water aquatic organisms. (Field trips required.)

EC 133 Solid Waste Management (3-0) Credit: 3

Types of solid waste, physical and chemical method of handling solid waste, possibilities of re-cycling (re-using) solid waste material, possibilities for by-products from solid waste.

EC 221 Pollution Abatement Seminar I (2-0) Credit: 2

Particular problems involving pollution and control in our environment are to be presented and discussed by students in oral reviews. The "how, why, and what-to-do" aspects of pollution are to be stressed.

EC 222 Pollution Abatement Seminar II (2-0) Credit: 2

A continuation of EC 221.

EC 231 Air Pollution (2-3) Credit: 3

Sources of air pollution - industrial, municipal, automotive; physical and chemical nature of air pollutants. Laboratory techniques for detecting air pollutants. Control and treatment of air pollution.

EC 232 Industrial Waste Control (2-3) Credit: 3

Company policies, organizational problems, legal responsibilities in waste control, investigations into possible regional pollution, and preventive tactics that could be employed.

EC 233 Instrumentation (2-3) Credit: 3

An elementary study of hydraulic, pneumatic, mechanical, electronic control systems and components. It includes a basic description, analysis, and explanation of instrumental controls for a waste water plant. Typical performance characteristics, accuracy, and application of instruments are studied.

EC 234 Water Quality Control (2-3) Credit: 3

A study of basic principles of water purification, including aeration, sedimentation, rapid sand filtration, chlorination, treatment chemicals, taste and odor control, bacteriological control, mineral control, design criteria, maintenance programs, and operational problems. New processes and recent developments are studied. Criteria rules, regulations, forms, and records associated with the field are considered.

EC 243 Water and Waste Water Chemistry (3-3) Credit: 4

Theory and laboratory techniques for all control tests of water purification and analysis, including color, turbidity, pH, hardness, coagulation, chlorides, fluorides, iron, manganese, bactericides, nitrates, and organic compounds which may be present in water. Qualitative and quantitative analysis are to be stressed in this area.

Farm and Ranch Management (FRMG)

FRMG 133 Wildlife Management (3-0) Credit: 3

An introduction to the wildlife and fishery resources of the United States, with special reference to Texas. The importance of plants and animals in our economic cultural life. An account of what has happened to North American wildlife, with considerations of specific plans and methods for its rehabilitation, maintenance, and increase.

FRMG 134 Range Management (3-2) Credit: 3

Range management for the southwestern part of the United States. Physical features affecting range conditions, problems in range management, administration and management of range lands, identification of major grasses and legumes.

FRMG 135 Soil Science (3-2) Credit: 3

A basic course in soils in which principles of the physical, chemical and biological properties of the soil are covered. Soil fertility and testing are emphasized.

FRMG 137 Animal Health (3-2) Credit: 3

Students will study the basics of internal and external parasites, principal diseases of livestock, identification and control of diseases and pests.

FRMG 138 Vegetable Production (2-3) Credit: 3

Principles and practices in producing vegetable crops, including organic gardening, soil management, composting, starting, transplanting and growing plants, insect control, fertilizing, and harvesting. Laboratory consists of application of the above practices.

FRMG 139A Elementary Horsemanship (3-2) Credit: 3

This course includes theoretical and laboratory instruction in the proper grooming, saddling, bridling, and mounting of the horse. Proper body posture and hand position of the rider is also covered. Additional topics of instruction include the anatomy of the horse and riding in western saddles.

FRMG 139B Intermediate Horsemanship (3-2) Credit: 3

This course is a continuation of FRMG 139A and includes the development of the balanced seat, hands and posture at the natural gaits of the western stock horse. Additional topics of instruction include the use of caveletti, jumping, methods of transportation and care of horses while in transit. Prerequisite: FRMG 139A or approval of the Department Manager.

FRMG 231 Farm Mechanics I (2-3) Credit: 3

Basic farm skills in tool conditions, sketching, carpentry, concrete, farm surveying, and small engine repair

FRMG 232 Farm Mechanics II (2-3) Credit: 3

A second course in farm shop skills for the agriculture student. Construction, repair and maintenance of farm machinery; covers metal work, including arc welding, oxy-acetylene welding, cutting, and soldering.

FRMG 233 Feeds and Feeding (3-0) Credit: 3

Chemical compositions of feeds, nutrients, requirements of farm animals, utilization of feeds, formulating and balancing rations.

FRMG 236 Livestock Marketing (3-2) Credit: 3

Areas of livestock production and consumption, problems of producers and consumers, study of the agencies concerned with processing and distribution of meat and by-products, slaughtering of livestock, future marketing. Use of farm and ranch records and accounts.

FRMG 237 Livestock Production (3-2) Credit: 3

The principles involved in and the practical application of breeding, feeding, care, and management of cattle, swine, sheep, poultry, and rabbits. Fitting animals for livestock shows will also be included.

FRMG 239A Horse Production (3-2) Credit: 3

This course includes theoretical and laboratory instruction in the history, evolution, breeding, and functions of the horse. Basic principles of equine nutrition, reproduction, inheritance, disease and parasite prevention and control, skeletal and muscular form, and function of the horse are also covered. Additional topics of instruction include the proper care and handling of horses for work and for pleasure. Prerequisite: AG 131.

FRMG 239B Advanced Equitation (3-2) Credit: 3

This course includes theoretical and laboratory instruction in stock seat equitation, western riding techniques, the judged arena and time events in horsemanship. Prerequisite: FRMG 139B or approval by Department Manager.

FRMG 239C Animal Breeding (3-2) Credit: 3

This course includes theoretical and laboratory instruction in principles of genetics, kinds of mating, horse selection, hybrid vigor, pedigree, artificial insemination, and pregnancy testing. Prerequisites: AG 131, BIOL 141, and BIOL 142.

FRMG 248 Food Preservation (3-3) Credit: 4

The principles and practices involved in the processing and preservation of fruits, vegetables, and other food products. Units to be included are field selection, processing, freezing, canning, curing, and storing.

FRMG 249 Farm Equipment Maintenance and Repair (3-3) Credit: 4

This course covers the theory and practical laboratory experiences in the proper maintenance, repair and operation of farm and ranch equipment. Emphasis is placed on preventive maintenance, use of manufacturers' repair manuals, troubleshooting, and diagnostic testing of defective equipment, and a comprehensive study of various equipment repair methods and techniques.

Fire Protection (FPRT)

FPRT 131 Fundamentals of Fire Protection (3-0) Credit: 3

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 pay plans; employee organizations; a discussion of current related problems and review of expanding future fire protection problems.

FPRT 132 Fire Prevention (3-0) Credit: 3

The objectives and views of inspection, 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 systematic 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 organizations. Engineering as a solution to fire hazards.

FPRT 133 Fire Protection Systems (3-0) Credit: 3

Study of the required standard for water supply; special hazards protection systems; automatic sprinklers and special extinguishing systems; automatic signaling and detection systems; rating organizations and underwriting agencies.

FPRT 134 Fire Administration I (3-0) Credit: 3

An in-depth study of the 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.

FPRT 135 Fire Administration II (3-0) Credit: 3

Study to include insurance rates and rating, 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.

FPRT 137 Fire Service Chemistry I (3-0) Credit: 3

An introductory study to inorganic and organic chemistry, with emphasis on the metric systems, the periodic chart, water, oxygen, hydrogen, carbon, hydrocarbons, carbohydrates, and polymers.

FPRT 138 Fire Service Chemistry II (3-0) Credit: 3

A continuation of FPRT 137. Prerequisite: FPRT 137.

FPRT 231 Industrial Fire Protection I (3-0) Credit: 3

Specific concerns and safeguards related to business and industrial organization. A study of industrial fire brigade organization and development, plant lay-out, 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.

FPRT 232 Industrial Fire Protection II (3-0) Credit: 3

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 and other special organizations, an in-depth study of specific industrial processes, equipment, facilities and work practices to understand the potential hazards and techniques to detect and control such hazards. Field trips to selected plants and demonstrations of new techniques equipment and innovations. Prerequisite: FPRT 231

FPRT 233 Hazardous Material I (3-0) Credit: 3

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 situations and most favorable methods of handling fire fighting and control. Prerequisite: FPRT 137.

FPRT 235 Building Codes & Construction (3-0) Credit: 3

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

FPRT 236 Fire and Arson Investigation (3-0) Credit: 3

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

FPRT 238 Hazardous Material II (3-0) Credit: 3

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 radio-active 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. Prerequisite: FPRT 233, 137.

FPRT 239 Fire Safety Education (3-0) Credit: 3

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.

FPRT 244 Fire Fighting Tactics & Strategy (3-0) Credit: 3

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. Prerequisite: Completion of, or registration therein of all other required fire courses.

Food Production

(See Farm and Ranch Management)

Food Service Management (RMGT)

RMGT 132 Nutrition (3-0) Credit: 3

A study of dietary needs; the role of proteins, fats, carbohydrates, minerals, and vitamins; factors to be considered in proper selection and preparation of foods for maximum nutritional value.

RMGT 133 Sanitation and Safety (3-0) Credit: 3

This course includes a study of personal cleanliness; sanitary practices in food preparation; cause, investigation and control of illness caused by food contamination; food storage and refrigeration; sanitation of dishes, equipment, and kitchens; cleansing materials, garbage and refuse disposal; safety precautions and accident prevention. Upon completion of this course, the student will have sufficient knowledge to pass the National Institute for the Food Service Industry (N.I.F.I.) sanitation examination.

RMGT 134 Work Organization (2-2) Credit: 3

This course is designed to provide a general introduction and orientation to principles of job analysis, performance evaluation, job evaluation and salary administration, and how these affect the work situation. Work measurement and work standard techniques are studied, as well as flow processes and work distribution methods, quantity and quality control planning, and the current impact of governmental guidelines upon such procedures.

RMGT 135 Food Purchasing (3-0) Credit: 3

Applied theory of food and beverage purchasing; factors affecting selections, standards, quality, and prices; techniques of receiving, storing, and issuing supplies, foods, and materials; applied theory of cost control, pricing and portions.

RMGT 136 Menu Planning (3-0) Credit: 3

Basic factors of planning menus; variety and nutrition in menu planning; techniques of preparing attractive menus and maintaining budgetary controls; types of menus for various public and private institutions.

RMGT 137 Meat Science (3-0) Credit: 3

An introductory course in raising, slaughtering, and packing meats, fish, and poultry, accompanied by an intensive study of wholesale and retail cuts of beef, veal, pork, and lamb. Emphasis is placed on the knowledge of grades, bone structure, muscle configuration, and appropriate cooking methods of hotel and restaurant meat cuts.

RMGT 141 Food Preparation and Serving (3-3) Credit: 4

An introduction to techniques of food preparation. Includes preparation of vegetables, pastries, oven dishes, soups, salads, meats, fish, and poultry. Techniques include experimental cookery, food marketing and preservation, serving and table service.

RMGT 221 Food Service Terminology (2-0) Credit: 2

This course is an introduction to the terminology utilized in the food service industry.

RMGT 232 Restaurant Merchandising (2-3) Credit: 3

Sales promotion; interior decor; types and uniformity of service; food and beverage display; menu and room styling.

RMGT 233 Cafeteria Management (3-0) Credit: 3

This course points out the specific differences between an industrial cafeteria and a conventional restaurant and explains how to cope with the unusual problems of industrial and institutional feeding.

RMGT 234 Marketing and Sales Promotion (3-0) Credit: 3

A course designed to develop an understanding of what must be done in order to bring the wheels of production and consumption in the United States into mesh. The business activities that direct the flow of goods and services from the producer to the ultimate consumer are analyzed. Coordination of personal selling, advertising, produce design, market research, and customer relations/services are the individual ingredients of sales promotion, and each is examined in detail. Advertising is studied as the force that creates prospects of countless products, converts these prospects into customers, and keeps customers returning and buying.

RMGT 235 Financial Management (3-0) Credit: 3

Methods and application of financial management within the combined food service facility. Primary emphasis upon sales accountability and internal controls utilized within bar, food, dining room, and hotel operation area. Secondary emphasis on budgeting and forecasting with application of effective labor/sales ratios.

RMGT 236 Layout and Design (3-0) Credit: 3

Fundamentals of equipment layout for optimum production and operational efficiency. This course will include procedures to design and decorate remodeling projects.

RMGT 237 Hospitality Industry Law (3-0) Credit: 3

A study of the nature and scope of business law with emphasis on the hospitality industry. Licensing, civil rights, owner responsibility for safety and property loss of guests, rights of the owner, and history of contemporary hospitality law will be discussed.

RMGT 241 Classical Food Preparation (3-3) Credit: 4

This course emphasizes the fine points of culinary skills and theory. Concentration on the preparation of menus. Responsibility of the Chef and Sous-Chef.

RMGT 242 Exhibition Work (3-3) Credit: 4

Taught in conjunction with Classical Food Preparation. This course is designed to assist the student in professional employment. The essence of exhibitions, buffets, centerpieces, and the role of the Executive Chef will be emphasized. This course will include an exhibition planned and prepared by the student.

RMGT 245 Management Practice I (1-20) Credit: 4

This course consists of on-the-job management training that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student is employed in an approved work station in the food service industry under the supervision of a college coordinator. Prerequisite: Sophomore standing and consent of the Department Manager.

RMGT 246 Management Practice II (1-20) Credit: 4

This course consists of on-the-job management training that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student is employed in an approved work station in the food service industry under the supervision of a college coordinator. Prerequisite: RMGT 245.

Foreign Language

(See French, German, or Spanish)

French (FR)

FR 141 Beginning French I (3-3) Credit: 4

This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

FR 142 Beginning French II (3-3) Credit: 4

Elementary grammar is completed. Pronunciation, drill, and conversation based on reading are continued. Stress is given to everyday conversational phrases. Prerequisite: FR 141.

FR 231 Intermediate French I (3-0) Credit: 3

This course includes grammar review, composition, and reading of French masterpieces, with conversation based on material read. Prerequisite: FR 141, 142, or two years of French in an accredited high school.

FR 232 Intermediate French II (3-0) Credit: 3

This course continues the drill on syntax as needed for reading, composition, and conversation. Prerequisite: FR 231.

General Secretarial

(See Office Administration)

Geography (GEO)

GEO 231 Elements of Physical Geography (3-0) Credit: 3

The basic physical elements of geography: Maps, climate, and natural resources.

GEO 232 Cultural and Regional Geography (3-0) Credit: 3

A survey of the climate regions of Earth and the manner in which man adapts to his particular environment. A comparison of the various cultures ranging from hunting and gathering societies to the modern industrial world.

Geology (GEOL)

GEOL 141 Physical Geology

(3-3) Credit: 4

An introductory course in the nature and properties of the materials which make up the earth. Topics included are processes of glaciation, volcanism, weathering, and erosion. Modern theories such as plate tectonic are also studied. Field work, including the study of local rocks and minerals, is an integral part of the course.

GEOL 142 Historical Geology

(3-3) Credit: 4

The course involves a study of the record of life forms that developed throughout geological time. It also covers the development of the earth from its cosmic beginning to current land forms. Principles of stratigraphy, paleontology, geologic time, plate tectonics, and hypotheses of earth origin are studied in the course. Field work, including the study of local fossil fauna, is an integral part of the course.

German (GERM)

GERM 141 Beginning German I

(3-3) Credit: 4

For those who have had no previous work in German. The essential grammar expression. Three laboratory hours per week are required for the memorization and presentation of German dialogues by the students.

GERM 142 Beginning German II

(3-3) Credit: 4

A continuation of German 141. Prerequisite: GERM 141 or its equivalent.

Government (GOVT)

GOVT 231, 232 State & Federal Government I & II

(3-0) Credit: 6

Fulfills the legislative requirements for six hours of American Government. A functional study of the American constitutional and governmental system, federal, state, and local. Special attention to Texas. The origins and development of the American governmental system; federal-state and interstate relations; lesser units of government; the individual as a citizen, person, and voter; political parties. Legislative, executive, and judicial functions in federal and state governments; financing governmental activities; foreign relations and national defense; governmental services and functions.

GOVT 239 Introduction to Political Science

(3-0) Credit: 3

This course is designed to introduce the student to the general area of political science and to provide knowledge and understanding of political fundamentals, public law, political dynamics, public policy, theory and organization of the modern state, and international relations.

History (HIST)

HIST 131 History of the United States to 1877

(3-0) Credit: 3

English colonization; the Revolution; adoption of the Constitution; growth of nationalism; cotton and the slavery problem; war for southern independence. Reconstruction.

HIST 132 History of the United States from 1877

(3-0) Credit: 3

New social and industrial problems; rise of the progressive movement; United States emergence as a world power; World War I; reaction and the New Deal; World War II; contemporary America.

HIST 133, 134 History of Western Civilization I & II (3-0) Credit: 6

A survey of the development of European civilization. Major topics include the Graeco-Roman heritage, the barbarian migrations, the growth and development of the Church, the rise of capitalism, medieval society, and the origin of nationalism in Europe. The Age of Reason and the French Revolution, the Napoleonic Wars, the growth of nationalism and democracy in the 19th century, the causes and consequences of the two World Wars and the rise of dictatorship.

HIST 135, 136 History of England I & II (3-0) Credit: 6

Survey of the development of English society and government, reviewing such topics as Roman Britain; the Anglo-Saxon conquest and institutions; Norman origins, decline of feudalism and rise of nationalism; the evolution of English Common Law, the development of Parliament; struggles between Church and state, crown, and nobles, nobles and commoners; King versus Parliament; the growing power of the Prime Minister; the Industrial Revolution; rise of world power; critical later years.

HIST 231 International Relations and U.S. Foreign Policy (3-0) Credit: 3

A study of international relationships and problems in world affairs; organizational and processes used to arrive at foreign policy decisions of the United States; the elements of international communist ideologies; and the evolution of American foreign policy since 1945.

HIST 235 History of Religion (3-0) Credit: 3

A study of the origin, progress, and development of the Christian religion. Attention will be given to the development of beliefs and *the rise of denominations*.

HIST 236 World Religion (3-0) Credit: 3

A survey course dealing with the origins, tenets, and development of the major world religions. Deductive method used to understand religion as a phenomenon in man's life. Discussion of Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam.

Horse Management

(See Farm and Ranch Management)

Hotel-Motel Management (HM)

HM 130 Food and Beverage Management (3-0) Credit: 3

This is an introductory course in food and beverage operation, with an introduction to purchasing, receiving, storage, preparation and service.

HM 132 Hotel/Motel Organization & Administration (3-0) Credit: 3

This course includes management and organization of hotel industry, communications, accounting, personnel relations and administration, management of guests. Planning for today and tomorrow.

HM 133 Front Office Procedures (3-0) Credit: 3

This course includes hotel organization and services, front office salesmanship, cashiering, front office posting, accounting for guest charges, procedures and form for accounting controls.

HM 134 Hotel/Motel Sales Promotion (3-0) Credit: 3

This course includes sales planning, media advertising to include outdoor, radio, and TV; mail advertising, personal sales; telephone selling; individual and group room business; food and beverage sales and sales incentive.

HM 231 Hotel/Motel Law (3-0) Credit: 3

This course includes a study of the consequences resulting from a lack of foresight on the part of management, understanding of the attitudes of courts toward innkeepers involved in litigations, and an awareness of the responsibilities law imposes upon the innkeeper.

HM 232 Supervisory Housekeeping (3-0) Credit: 3

This course includes organization of a housekeeping department of a hotel, job schedules, job breakdown, floor care, stain removal, fire inspection, purchasing records, equipment records, linen inventory and care, carpeting and care, and basic interior design.

HM 234 Hotel/Motel Financial Management (3-0) Credit: 3

This course includes accounting of business for creditors, owners, and government; control of payroll and other operational expenses; and profit making management.

HM 235 Hotel/Motel Maintenance (3-0) Credit: 3

This course includes a study of the organization, terms and concepts common to building maintenance. Maintenance functions to be studied include heating, plumbing, electrical, refrigeration and air conditioning, communications and signal system, kitchen equipment, fire prevention and protection, and elevator systems.

HM 236 Recreational Services (3-0) Credit: 3

This course includes the study of the needs of guest recreation and entertainment, space available for these activities, cost of operation and maintenance, layout and design and direct and indirect benefits.

HM 240 Hotel/Motel Internship I (1-20) Credit: 4

This course consists of on-the-job hotel/motel training that utilizes the principles, skills and knowledge gained in the theoretical setting of the classroom. The student is employed at an approved work station under the supervision of the college hotel/motel intern coordinator. Student must have Department Manager's permission to enroll.

HM 241 Hotel/Motel Internship II (1-20) Credit: 4

This is a continuation of HM 240. Prerequisite: HM 240.

Humanities (HUMA)

HUMA 131 Introduction to the Humanities (3-0) Credit: 3

This course is an interdisciplinary assessment of cultural, political, philosophical and aesthetic factors critical to the formulation of those values that have contributed to the historical development of the individual and of society.

Journalism (JOUR)

JOUR 141 Communications Media (3-3) Credit: 4

This course is designed to give the student an understanding and respect for the mass media of the modern world. It includes a survey of all the mass communicative media, their purposes, and methods of operation.

JOUR 142 News Gathering and Reporting (3-3) Credit: 4

Designed to acquaint the student with fundamental news gathering and writing techniques for the print medium. It includes instruction and practice in interviewing, writing, and discussion of news sources and values.

Juvenile Corrections

(See Government, History, Psychology, Sociology)

Law Enforcement

(See Criminal Justice)

Machine Tools (MT)

MT 143 Machine Shop Practice

(2-4) Credit: 4

Theory and practice in basic metal working, hand and machine tool operation and maintenance. Includes related instruction in blueprint reading and precision measurement.

Maintenance Technology (MTNT)

MTNT 141 Carpentry I

(2-4) Credit: 4

This course covers the theory and practical application of the use of basic hand and power tools, safety; an overview of residential and light commercial building construction, including foundations, exterior and interior walls, and roof framing.

MTNT 142 Carpentry II

(2-4) Credit: 4

This course is a continuation of MTNT 141, with additional emphasis placed on cabinetry, exterior and interior trim and finish work, including door and hardware installation. Prerequisite: MTNT 141 or consent of Department Manager.

MTNT 143 Electricity I

(2-4) Credit: 4

This course covers the theory and practical applications of basic electricity, including Ohm's Law, AC/DC circuits, control devices, motor starters, transformers, and rectifiers.

MTNT 144 Electricity II

(2-4) Credit: 4

This course is a continuation of MTNT 143, with special emphasis on electrical maintenance, service and repair procedures for residential and light commercial buildings. Topics of study include wiring with romex cables, exterior and interior lighting systems, and motor installation. Prerequisite: MTNT 143 or consent of Department Manager.

MTNT 241 Masonry I

(2-4) Credit: 4

This course covers the theory and practical applications of laying common brick, concrete tile, and instruction in applying ceramic tile.

MTNT 242 Masonry II

(2-4) Credit: 4

This course is a continuation of MTNT 241, with additional emphasis placed on setting forms and the pouring and finishing of concrete slabs. Prerequisite: MTNT 241 or consent of Department Manager.

MTNT 243 Plumbing I

(2-4) Credit: 4

This course covers the theory and practical application of the use of basic hand and power tools used in plumbing; safety; the cutting, threading and joining of different types of pipe.

MTNT 244 Plumbing II

(2-4) Credit: 4

This course is a continuation of MTNT 243, with special emphasis on plumbing maintenance, service, and repair procedures for residential and light commercial buildings. Prerequisite: MTNT 243 or consent of Department Manager.

MTNT 245 Painting and Refinishing

(2-4) Credit: 4

This course covers the theory and practical application of painting and refinishing residential and light commercial buildings. Topics of study include various types of paint, the preparation of surfaces to be painted, use of hand and power tools, refinishing damaged furniture surfaces, and the proper maintenance of finished surfaces.

Management, Business (MGMT)

MGMT 130A Organization and Management (3-0) Credit: 3

Organizational structure can have considerable impact on the manner in which an organization functions. The student studies the complex variables over which managers can exercise control to determine proper structure. While surveying management topics such as planning, decision making, organizing, staffing and controlling, this course deals, in specific terms, with how the organization must be structured to fit its environment and operation.

MGMT 134 Work Organization (2-2) Credit: 3

This course is designed to provide a general introduction and orientation to principles of job analysis, performance evaluation, job evaluation and salary administration, and how these affect the work situation. Work measurement and work standard techniques are studied, as well as flow processes and work distribution methods, quantity and quality control planning and the current impact of governmental guidelines upon such procedures.

MGMT 134A Fundamentals of Industrial Management (3-0) Credit: 3

Application of the systems approach to the unification of all areas from human factors to environmental factors are covered, along with the manner and methods through which work can be simplified, yet made more meaningful and satisfying.

MGMT 135 Introduction to Management (3-0) Credit: 3

This course is designed to give the student a knowledge and understanding of management theories and functions which are essential to the person planning a career in business or industry.

MGMT 136 Human Relations (3-0) Credit: 3

A study of "Human Relations" as an emerging scientific discipline of study in which basic concepts and principles concerning man at work are emphasized. It is structured to explain the "ways" and wherefores of the behavior of industrial man.

MGMT 137 Insurance (3-0) Credit: 3

Introduction to theory and practice of insurance, including life, fire, automobile, and personal and business risk.

MGMT 137A Safety (OSHA) (3-0) Credit: 3

A study of safety as it relates to the military, industrial, and business communities. Special emphasis will be given the requirements of the Occupational Safety and Health Act as it affects management and employees.

MGMT 138R Real Estate Fundamentals I (3-0) Credit: 3

This course includes a study of the economic and social impact of real estate, contracts, property rights, various real estate instruments such as deeds, deeds of trust, mortgages, leases and liens; insurance and investment factors.

MGMT 139 Income Tax (3-0) Credit: 3

Income tax legislation; present income tax law and regulations; treasury decisions, court decisions, and departmental rulings; income tax problems and returns.

MGMT 139R Real Estate Fundamentals II (3-0) Credit: 3

This course includes a study on sources of funds; influences of the Federal Reserve System; secondary mortgage market; agency operation and functions; title search, examination, registration and closing procedures; residential and income property valuation; urban land development; and city, state, and federal land planning regulations.

MGMT 140M Mid-Management Internship I (1-20) Credit: 4

This course consists of on-the-job management training that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student is employed at an approved work station under the supervision of the college mid-management coordinator. Prerequisites: Credit or current enrollment in BUS 131, MGMT 135, and MGMT 136.

MGMT 141M Mid-Management Internship II (1-20) Credit: 4

This course is a continuation of MGMT 140M. Prerequisites: MGMT 140M and current enrollment or credit in MGMT 232 and MGMT 138R.

MGMT 230 Credit and Collections (3-1) Credit: 3

The elements of merchantile and consumer credit; organization of a credit department; sources of credit information; collection tolls and procedures.

MGMT 230R Real Estate Brokerage (3-0) Credit: 3

Techniques and skills required to effectively operate a broker's office in today's economy, including organization of brokerage operations; personnel selecting, training, and retention; sales, marketing, and advertising policy formulation, and general functions of the modern brokerage office. Prerequisite: MGMT 138R or consent of Department Manager

MGMT 231 Marketing Principles (3-0) Credit: 3

The study of Marketing as an exchange relationship in public and private organizational concerns. Includes an orientation of the different prevailing thoughts in marketing today, including the historical, economic, consumer, and systems approaches. Market research and market segmentation strategies are examined, as well as current government agency regulation concerning marketing practices.

MGMT 321R Real Estate Appraisal (3-0) Credit: 3

This course includes an analysis and valuation of real estate as needed by buyer, sellers, lenders, and investors. Emphasis is placed on cost income and market data approaches to appraisal. Case methods are used to demonstrate appraisal principals and practices.

MGMT 232 Personnel Management (3-0) Credit: 3

The dynamic role of management as it relates to personnel, with emphasis on the management aspects important to the line executive or supervisor. Personnel functions and procedures are viewed in the light of management objectives while personnel management is treated as an active and dynamic process which is motivated by basic human drives.

MGMT 232A Law and Legal Assistance (3-0) Credit: 3

Nature and scope of the law, court systems, law of contracts, principal and agent as relates to the military. Explanation of bailments, carriers, mortgages, securities, negotiable instruments, banks and banking, wills and estates. The procedures of obtaining and acquiring legal assistance for both military and civilian cases in or out of the continental limits of the United States of America are addressed. Emphasis is given on the knowledge required by the supervisor to counsel his subordinates in the areas of law and legal assistance.

MGMT 232B Fundamentals of Systems Management (3-0) Credit: 3

Introduction to the "systems" concept of management and integration of this concept with the more traditional "principles" approach. This course combines theory and application of systems management and focuses on systems as they exist in many fields such as education, law enforcement, military, industry, and a variety of nonprofit organizations.

MGMT 232R Real Property Management (3-0) Credit: 3

Introduction to the property management field, including professional organizations, management responsibilities, lease negotiations, insurance and tax aspects, advertising and public relations. Prerequisite: MGMT 138R or consent of Department Manager.

MGMT 233R Real Estate Finance (3-0) Credit: 3

This course includes the study of federal and state practices in mortgages and real estate finance, also includes a survey of savings and loan associations, commercial banks, life insurance companies, and mortgage bankers. Prerequisite: MGMT 138R or consent of Department Manager.

MGMT 234 Labor-Management Relations (3-0) Credit: 3

Labor relations aspects of personnel management are emphasized; selection and placement, discipline and morale, promotions, lay-offs, job evaluation, incentive systems, profit sharing, and the influence of collective bargaining and legislation on personnel policies. Methods used by organized labor and employers in industrial conflicts.

MGMT 235 Business Law I (3-0) Credit: 3

Nature and scope of law; court system; law of contracts; principal and agent; business organizations, including partnerships and corporation; Texas community property laws.

MGMT 236 Business Law II (3-0) Credit: 3

Additional studies in law of business, dealing with bailments, carriers, mortgages, suretyships, negotiable instruments, banks and banking, wills and estates, sales, bankruptcy.

MGMT 237 Life Insurance (3-0) Credit: 3

Principles of life insurance, business and personal use in insurance; classification and analysis of policies; reserve and policy values; organization and administration of life insurance companies.

MGMT 238R Real Estate Law (3-0) Credit: 3

Contains a study of sources of real estate law, legal estates and ownership, deeds, contracts, law of agency and brokerage, escrow agreements, closing of sales, title assurance methods, mortgages, liens, leases, homesteads, wills, administration of estates, zoning and building ordinances, property taxation, and other matters of law which pertain to real estate transactions.

MGMT 239 Supervision (3-0) Credit: 3

A course designed to provide an understanding of: planning work leadership, decision making, work problem solving, human behavior and personnel relations.

MGMT 239A Personnel Counseling (3-0) Credit: 3

Systematic study of major theories of personnel counseling with supervised experience in role-playing utilizing these approaches.

MGMT 240M Mid-Management Internship III (1-20) Credit: 4

This course is a continuation of MGMT 141M. Prerequisites: MGMT 141M and current enrollment or credit in BUS 237 and MGMT 239.

MGMT 240R Real Estate Internship I (1-20) Credit: 4

This course consists of on-the-job training in the real estate profession that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student works at an approved work station under the supervision of a college coordinator. Prerequisite: Sophomore standing or consent of the Department Manager.

MGMT 241M Mid-Management Internship IV (1-20) Credit: 4

This course is a continuation of MGMT 240M. Prerequisite: MGMT 240M and current enrollment or credit in MGMT 231 and BUS 238.

MGMT 241R Real Estate Internship II (1-20) Credit: 4

This course is a continuation of MGMT 240R. Prerequisite: Sophomore standing or consent of Department Manager.

Management, Food Service

(See Food Service)

Management, Hotel-Motel

(See Hotel-Motel)

Mathematics (MATH)

MATH 130 Introductory Algebra (3-0) Credit: 3

Designed for students desiring a review of fundamental algebraic operations. This course may not be used as a part of the requirements for a major in mathematics. Topics considered include operations with signed numbers, exponents, operations with polynomials, factoring, operations on rational expressions, solving linear equations.

MATH 131 Intermediate Algebra (3-0) Credit: 3

Includes a brief review of fundamental algebraic operations, linear equations, systems of linear equations, determinants, quadratic functions, inequalities, exponential functions, logarithmic functions. Prerequisite: MATH 130 or equivalent.

MATH 132 College Algebra (3-0) Credit: 3

Includes consideration of quadratic functions, systems of quadratic equations, quadratic inequalities, matrices, binomial theorem, exponential functions, sequences, progressions, series, and applications. Prerequisite: MATH 131 or equivalent.

MATH 133 Trigonometry (3-0) Credit: 3

Wrapping function, circular functions, trigonometric functions, use of tables, identities, applications to right triangles and oblique triangles, inverse functions, trigonometric equations, logarithms. Prerequisite: MATH 131 or equivalent.

MATH 134 Analytic Geometry (3-0) Credit: 3

An algebraic treatment of straight lines, circles, parabolas, hyperbolas, ellipses. Transformation of coordinates, curve sketching, polar coordinates. Prerequisite: MATH 133 or equivalent.

MATH 135 Finite Mathematics I (3-0) Credit: 3

Symbolic logic, set theory, induction, permutations, combinations, counting methods, probability. Prerequisite: MATH 131 or equivalent.

MATH 136 Finite Mathematics II (3-0) Credit: 3

A continuation of MATH 135. Introduction to statistics, graphing, vectors, matrices, linear programming, and theory of games. Prerequisite: MATH 135.

MATH 137 Business Math (3-0) Credit: 3

Introduction to the arithmetic processes in business, including interest, mortgages, taxes, insurance, payroll, inventory deductions, discounts, depreciation, annuities.

MATH 138 Elementary Statistics (3-0) Credit: 3

Collection and tabulation of data, bar charts, graphs, sampling, averages, dispersion, correlation, index number, normal curve, probability, inferential statistics, applications.

MATH 139 Modern Math (3-0) Credit: 3

An introduction to topics taught in the modern elementary curriculum - modern algebra, geometry, sets, number systems, relations, functions, equivalence, congruence.

MATH 231 Calculus I (3-0) Credit: 3 (Fall)

A first course in differential calculus. Prerequisite: MATH 134 or concurrent enrollment in MATH 134 or equivalent.

MATH 232 Calculus II (3-0) Credit: 3 (Spring)

A first course in Integral Calculus. Prerequisite: MATH 231 or equivalent.

MATH 233 Advanced Calculus (3-0) Credit: 3

A further study of limits, functions, sequences, series, elementary differential equations, partial derivatives, multiple integrals, surface integrals. Prerequisite: MATH 232 or equivalent.

MATH 234 Differential Equations**(3-0) Credit: 3**

Fourier series, linear differential equations, Laplace transforms, and series solution, all with applications. Prerequisite: MATH 233.

Mathematics, Developmental

(See Developmental Studies)

Mathematics, Electronics

(See Electronics Technology)

Mathematics, Technical**TMTH 130 Technical Mathematics I****(3-0) Credit: 3**

A course designed to fill the needs of students in industrial and technical programs. To perform calculations and measurements and to solve mathematical problems for the shop, construction site, design and drafting rooms. It covers arithmetic fundamentals, development of "number sense", basic algebra, and geometry.

TMTH 131 Technical Mathematics II**(3-0) Credit: 3**

This course is a continuation of Technical Mathematics I, and includes a study of algebra, trigonometric functions, graphs of trigonometric functions, solution of triangles, and plane and solid geometry. Prerequisites: MATH 130, TMTH 130, or permission of the Department Manager.

Medical Technology

(See Biology, Chemistry)

Music (MU)**MU 111C Choir****(1-2) Credit: 1**

This course is recommended to all students who enter music courses, but it is open to all college students. Preparation for on-campus and public performances.

MU 121E Ear Training I**(1-1) Credit: 2**

This course is designed to help the student develop the aural skills pertinent to proficiency in music theory. It includes the study and proper identification of melodic patterns, intervals, chords and triads, and exercises in melodic and harmonic dictation. Prerequisite: credit or enrollment in MU 131.

MU 122E Ear Training II**(1-1) Credit: 2**

A continuation of MU 121E. Sight singing, intervals, triads and seventh chords, asymmetric and mixed meters. Exercises in melodic and harmonic dictation. Prerequisite: MU 121E and credit or enrollment in MU 132.

MU 130 Music Appreciation**(3-0) Credit: 3**

This course is designed for the music student as well as for the general college student. It emphasizes intelligent, directed listening to music with attention focused on the materials, the forms, and the periods and styles of music. Course work will also cover the relation of music to other areas of cultural development.

MU 131 Music Fundamentals**(3-1) Credit: 3**

An introduction to music through the audio-visual relative solimization method. Study of the pentatonic, modal, and diatonic scales, key signatures, intervals, triads, cadences, introduction to four-part writing. Ear training, sight singing, melodic dictation in simple and compound meters. Cadences and canons on the keyboard.

MU 132 Music Theory (3-1) Credit: 3

A continuation of Music 131 with an introduction to the harmonic materials of the 18th and 19th centuries. Harmonic progressions with root and inverted triads, the dominant seventh chord, secondary dominances, sequences. Analysis of short works. Ear training, sight singing, dictation. Relative solmization method employed throughout. Cadences, canons, sequences on the keyboard. *Prerequisite: MU 131 or consent of instructor.*

MU 133 Music Literature I (3-1) Credit: 3

A survey of the development of music from the end of the Ancient World to the present time, with an in-depth study of the music from the 15th century through the 19th century. Principal forms, periods and composers and the literature of each of the historical periods.

MU 134 Music Literature II (3-1) Credit: 3

A continuation of Music 133 with an in-depth study of music in the periods of the late 19th and 20th centuries; the concurrent symphonic and concert literature of today; voice, choral, and instrumental organizations.

MU 241 Intermediate Harmony (3-2) Credit: 4

A study of the harmonic materials of the 18th and 19th centuries through analysis and Figured Bass exercises. Dominant and secondary seventh chords, secondary dominants, the diminished seventh chord, altered chords, nonharmonic tones. Melody harmonizations, dictation. Sequences with seventh chords on the keyboard. *Prerequisite: MU 132.*

MU 242 Advanced Harmony (3-2) Credit: 4

The study of harmony as an organizing element of the large-scale musical structure. Diatonic, chromatic and enharmonic modulations. Melody harmonizations, analysis of larger works, harmonic dictation. Modulations to related and distant keys on the keyboard. *Prerequisite: MU 241.*

MU 230P Piano Pedagogy (2-1) Credit: 3

Open to music majors only. The study of piano teaching methods from the beginning through the intermediate grades. The development of technique, memory, style, and musicianship. The planning of a balanced repertoire, review and evaluation of piano literature. Laboratory includes supervised practice teaching. *Prerequisite: credit or enrollment in MU 221P and MU 132, or consent of instructor.*

Music, Applied (MU)

MU 111P Class Piano I (0-1.5) Credit: 1

Introduction to the keyboard, the study of Mikrokosmos Vol. I by Bartok, easy selections from the classic, romantic, and contemporary piano literatures. Memory work is emphasized throughout. Scales up to 4 key signatures. One hour daily practice required. *Prerequisite: credit or enrollment in MU 131.*

MU 112P Class Piano II (0-1.5) Credit: 1

A continuation of MU 111P. Technique scale and arpeggios to 4 key signatures, selected Czerny studies. Literature: Little Dances by Bach, a classic Sonatina, selections from the romantic and contemporary piano literature. Memory work is emphasized throughout. One hour daily practice required. *Prerequisite: MU 111P or consent of the instructor.*

MU 113P Class Piano III (0-1.5) Credit: 1

For students with a considerable keyboard skill. All scales and arpeggios on 4 octaves, Czerny studies. Literature: short preludes and two-part inventions by Bach, a classic Sonatina or Sonata, romantic and modern compositions. *Memory work is emphasized throughout.* One hour minimum daily practice required. This course is a preparation for private piano and may be repeated until the student is ready to meet the entrance requirements for MU 121P.

MU 114P Class Piano IV (0-1.5) Credit: 1

A continuation of MU 113P. All scales on 4 octaves in thirds, sixths, and the octave. Major, minor, dominant and diminished seventh, arpeggios. Literature: short preludes and two-part inventions by Bach, a classic Sonatina or Sonata, romantic and modern compositions. Memory work is emphasized. One hour minimum daily practice is required. This course is a preparation for private piano and may be repeated until the student is ready to meet the entrance requirements for MU 121P. Prerequisite: MU 113P or consent of the instructor; credit or enrollment in MU 132.

MU 121P Private Piano I (0-1) Credit: 2

Private Piano. Technique: Czerny's *School of Velocity* and scales and arpeggios. Repertoire: two and three part inventions by Bach, Sonatas of Scarlatti, a complete classic Sonata, works by composers from the 19th and 20th centuries. All work is to be memorized. One 45-minute lesson per week. Two hours daily practice required. Prerequisite: MU 113P or 114P or audition, credit or enrollment in MU 132.

MU 122P Private Piano II (0-1) Credit: 2

A continuation of MU 121P. One 45-minute lesson per week. Two hours daily practice required. Prerequisite: MU 121P.

MU 221P, 222P Private Piano III & IV (0-1) Credit: 2

Technique includes all scales and arpeggios on 4 octaves and Clementi's *Gradus ad Parnassum*. Repertoire: WTC Preludes and Fugues by Bach, a Sonata by Haydn, Mozart, or Beethoven; etudes and preludes by Chopin; impressionistic and modern compositions; one movement of a standard Concerto. Student is required to memorize all material. One 45-minute private lesson per week. Two hours daily practice required. Prerequisite: MU 122P.

MU 231P, 232P Advanced Private Piano I & II (0-1) Credit: 3

Scales in all keys in double thirds. Repertoire: Partitas, Suites, Prelude, and Fugues by Bach. A Beethoven Sonata, works of Chopin, Liszt, Brahms, Debussy, Schumann. One complete standard Concerto. Student is requested to memorize all the material. One hour private lesson per week. Three hours of daily practice required. Prerequisite: MU 222P.

Music, Organ (MU)

MU 121O, 122O Organ I & II (0-1) Credit: 2

Beginning students work with the Gleason method of organ playing to develop correct manual and pedal techniques. The literature includes works of Bach, Franck, and early Baroque composers. One 45-minute private lesson per week. Prerequisite: two years of piano study.

MU 221O, 222O Organ III & IV (0-1) Credit: 2

A continuation of MU 122O. Development of manual and pedal technique, the study of the representative works of the masters of the Organ. One 45-minute private lesson per week. Prerequisite: MU 122O.

Music, Voice (MU)

MU 111V, 112V Class Voice I & II (0-1.5) Credit: 1

These courses are concerned with the most basic principles of singing; correct breathing, posture, and the proper use of the vocal anatomy; i.e., palate, larynx, and tongue. The literature is quite simple and undemanding. Prerequisite: credit or enrollment in MU 131.

MU 121V, 122V Private Voice I & II (0-1.5) Credit: 2

A continuation of the principles of MU 111V and MU 112V, with greater depth and concentration. Students learn to improve breath control, diction, and tone quality. The literature includes songs in English, Italian, and for more advanced students, German and French. Prerequisite: MU 112 and/or audition.

MU 221V, 222V Private Voice III & IV (0-1) Credit: 2

A continuation of MU 121V and 122V. More difficult songs from the classic and romantic literature, oratorio and operatic arias, modern French songs, 20th century American songs. One 45-minute private lesson per week. Prerequisite: MU 122V.

Music, Woodwinds and Brasses (MU)

MU 111B Brass Instruments (0-1) Credit: 1

This course meets the needs of students who desire elective private instruction on all brass instruments.

MU 111W Woodwind Instruments (0-1) Credit: 1

This course meets the needs of students who desire elective private instruction on all woodwind instruments.

MU 113B Brass Ensemble (0-1) Credit: 1

This course is designed to meet the needs of brass students who wish to explore brass ensemble music from Baroque to modern compositional style and technique.

MU 113S Stage Band (0-1) Credit: 1

Open to any instrumentalist by audition. An exploration in modern jazz techniques and compositional styles.

MU 113W Woodwind Ensemble (0-1) Credit: 1

This course is designed to meet the needs of woodwind students who wish to explore woodwind ensemble music from classical to modern compositional style and techniques.

Nursing (NU)

NU 131 Vocational Nursing Practicum (3.5-27.5) Credit: 3

This course aids the Vocational nursing student to further develop knowledge and skills in the care of patients with medical and surgical conditions. It is intended to prepare the student for employment through concentrated clinical experience in multiple patient care, complex nursing skills, functional administration of medications, care in emergencies, and severe emotional disturbances. Also emphasized are nursing trends, legal aspects and beginning leadership skills.

NU 191 Fundamentals of Nursing (5-12) Credit: 9

This course provides an overview of the health care field and the role of the nurse as a member of the health care team. Experiences are designed to assist the student in developing skills in the areas of interpersonal relations, communication, observation, health teaching, and the *physical care of mildly ill patients*. Units on normal nutrition and calculation of solutions and drug dosage are included. Area health agencies provide opportunity for clinical observation and practice.

NU 192 Medical-Surgical Nursing I (4-15) Credit: 9

This course is a development of knowledge, skills, and attitudes necessary for planning, implementing, and evaluating the nursing care of adult patients with medical and surgical problems. Includes study of disease processes involving all body systems, diet therapy, pharmacology, prevention, rehabilitation, and mental health concepts. Prerequisite: NU 191.

NU 193 Maternal and Child Health Nursing (4-15) Credit: 9

The mother, child, and family are considered as a community unit in this course. Experience in the nursing care of the mother during pregnancy, delivery and post-partum periods, and the infant during the neonatal period are included, as well as selected experiences with the well child. Emphasis is placed on the different needs of children with illness due to the influence of developmental stages and pathological conditions. Family planning, health teaching and family problems of daily living are also discussed. Prerequisite: NU 192.

NU 213 Nursing Trends Seminar (1-0) Credit: 1

This course is designed to ease the transition from student to graduate status through exploration of patterns of patient care, areas of employment, legal and professional responsibilities, current issues and trends. The seminar method is used throughout. Prerequisite: Sophomore standing.

NU 234 Psychiatric Nursing (2.7-16) Credit: 3

This experience will center on the prevention and treatment of psychiatric conditions, including special therapies and the roles of the nurse in caring for the emotionally ill persons. Students are guided in the techniques of interpersonal and intergroup relationships in giving nursing care. Aspects of mental health are studied in various settings. This course is offered in a six week summer session only. Prerequisite: NU 193.

NU 292 Medical-Surgical Nursing II (4-15) Credit: 9

This course aids the student in developing skills in caring for patients with more complicated medical-surgical nursing problems. The patient and significant other persons are considered in the planning and administering of nursing care in the hospital and following discharge. This includes planning for discharge and continuing care in the home or in other agencies. Experiences in team nursing will provide the student with the opportunity to function as a team member and to develop beginning skills of team leading. Lectures, seminars, audio-visual aids, and nursing conferences will be utilized in addition to clinical practice. Prerequisite: NU 192.

Office Administration (OA)

OA 131 Beginning Shorthand (3-3) Credit: 3

An introduction to shorthand. Students will receive initial training in shorthand emphasizing reading, writing, theory principles, brief forms and related activities.

OA 132 Intermediate Shorthand (3-3) Credit: 3

Students will continue shorthand training and reinforcement of theory. Prerequisite: OA 131 or equivalent.

OA 133 Beginning Typewriting (3-3) Credit: 3

A beginning course in touch typewriting for the mastery of machine parts and the keyboard. Special emphasis of speed development, including an introduction to letter writing, tabulating, and preparing manuscripts.

OA 134 Intermediate Typewriting (3-3) Credit: 3

A continuation of OA 133. Additional skills in term of accuracy and speed will be evidenced by students. Composition and typing of business letters, tabulations and manuscripts of more demanding content will be instructed.

OA 135 Clerical Practice (2-1) Credit: 3

Procedures of filing and finding operations employed in business offices, standard filing systems. Training in the operation of spirit duplicators, mimeograph, and dry copy machines. Training in proficiency in handling the mail, telephone techniques, and handling receptionist duties. Considerable emphasis and training in integrating these activities into an office environment will be instructed.

OA 136 Secretarial Practice (3-1) Credit: 3

This course is designed for the student who wishes to prepare for a career as an executive secretary. More advanced mailable letters, typing from transcribing machines, organization of meetings and conferences, travel arrangements, information sources, and human relations skills are studied. Students are trained in word processing procedures. Students are introduced to various "needs" theories such as Abraham Maslow's hierarchy of needs. Students are guided into the solution of office problems due to personality problems. Group work, group dynamics, and student evaluations are utilized extensively in this course.

OA 138 Business Correspondence (3-0) Credit: 3

A course designed to teach effective business writing and to give practice in composing all types of business letters and reports. Typing ability and sound background in English are strongly recommended.

OA 139 Business Machines and Calculations (3-3) Credit: 3

Technique familiarization in the operation of the most commonly used office machines. Computations; calculations, speed drills; percentages, discounts and net values, chain discounts; business forms.

OA 231 Advanced Shorthand (3-3) Credit: 3

Students will improve their ability to take dictation and transcribe mailable copy. Theory principles; brief form derivatives; vocabulary development; speed building; mailable transcription; and office style dictation will be emphasized. Prerequisite: OA 132 or equivalent.

OA 232 Advanced Typewriting (3-3) Credit: 3

This course includes advanced work in such specialized production as tabulation, inter-office correspondence, manuscripts, telegrams, stencil cutting and mimeograph operation, legal forms, medical forms, special inter-office forms, and additional work on the arrangement of business letters with special features.

OA 233 Advanced Transcription (3-3) Credit: 3

Students will continue skill building in shorthand with concentration on transcribing into mailable copy from office-style dictation. Special emphasis will be given to the inter-relatedness of specialized office activities and terminologies as they relate to an administrative secretarial position. Prerequisite: OA 231.

OA 234 Bookkeeping I (3-3) Credit: 3

Elementary principles of bookkeeping, journalization; posting, statements, special journals; subsidiary ledgers. Special emphasis is placed on personal, family and small business accounting systems.

OA 235 Bookkeeping II (3-3) Credit: 3

Analysis and recording of business transactions; use of the journal and ledgers; trial balance and work sheets; adjusting and closing entries; accounting statements; payroll records and payroll taxes; introduction to partnership accounting; special journals and ledgers; business papers and business procedures relating to accounting voucher system. Prerequisite: OA 234 or equivalent.

OA 237 Office Administration and Procedures (3-0) Credit: 3

This course includes topics of instruction in office procedures, work simplification, selection and training of office workers, supervision, office etiquette and ethics, and an analysis of the responsibilities of the manager, secretary, clerk, and other office workers. The student is given an opportunity to relate knowledge, information and skills acquired in previous academic courses. Special emphasis is placed on the relationship of the various systems that affect the modern office. Prerequisite: Sophomore standing or consent of the instructor.

OA 238 Office Occupations Internship (1-5) Credit: 3

The student will be provided a combination of occupationally related classroom instruction and on-the-job training in cooperation with offices within the Office Administration Department and other campus offices. Actual work training will be available in the following areas: typewriting, filing, duplication, use of telephone, preparation of correspondence, voice transcription machine, record-keeping, proofreading, etc.

OA 239 Office Administration Internship (1-5) Credit: 3

Students will be provided a combination of occupational related classwork instruction and on-the-job training in cooperation with Office Administration offices and other campus offices. Students will demonstrate advanced competencies with work experiences in the following areas: taking dictation, typewriting, letter composing, telephone procedures, filing, work scheduling, financial calculating, duplicating, transcribing from dictation equipment, etc.

Office Assistant
(See Office Administration)

Offset Printing (OP)

OP 131 Introduction to Offset Printing (2-4) Credit: 3

This course offers the student an introduction to offset printing with a general survey of various printing processes and their uses in industry. The history of printing, the techniques involved in the production and distribution of printing materials, the kinds of printing industries, and printing terminology are included. It provides an introduction to all equipment and how each piece of equipment relates to the total plant operation.

**OP 132 Camera & Darkroom Procedures
 Stripping & Platemaking I (2-4) Credit: 3**

Basic camera operations and darkroom procedures including percentage size calculations, simple line shots, and film processing by the tray method. Basic techniques in the precise layout of simple line negative, halftones, and combinations. Selection of proper plates for specific jobs and the exposing and developing of plates.

OP 133 Offset Press Operation I. (2-4) Credit: 3

Basic theory and techniques in the operation of the small (duplicator) offset press, including the "offset principle", feeding of all types of stock, image position, sheet delivery, and the maintaining of correct image density.

**OP 134 Bindery Operations,
 Cost Estimating & Pricing. (2-4) Credit: 3**

Theory and operation of the paper cutter, paper drill, stitcher, collator and paper folder and basic binding techniques. The course includes actual print shop production-type activities utilizing this equipment. The course also contains a study of the basic characteristics of paper and ink, and the processes involved in the manufacture. Procedures for estimating the expenses of and determining the amount of customer charges for printing jobs are also taught.

OP 135 Copy Preparation and Layout. (2-4) Credit: 3

A study of various methods of producing body and display type is conducted. Students are taught the operations for producing both body and display type and procedures for basic copy layout and pasteups. Prerequisite: OP 131 or OP 132.

**OP 136 Camera & Darkroom Procedures,
 Stripping & Platemaking II. (2-4) Credit: 3**

Advanced theory and techniques of line copy reproduction, with emphasis on halftone reproductions, including duotone color and multi-color stripping and plate processing of line copy. Prerequisite: OP 132

OP 137 Offset Press Operation II. (2-4) Credit: 3

Advanced offset press operation including printing of large solids, duotone and multi-color line copy. Students will train on more advanced equipment and improve the skills acquired in the previous offset press operation course. Prerequisite: OP 133.

OP 138 Offset Printing Equipment Maintenance. (2-4) Credit: 3

A thorough study of the adjustments, preventative maintenance and simple repair of darkroom, composing room, press room, and bindery equipment. Prerequisite: OP 131 or OP 133.

Organ
(See Music)

Petroleum Technology (PETT)

PETT 131 Introduction to Petroleum Technology (3-0) Credit: 3

General study of the industry, including history of the industry chemistry of petroleum, its occurrence in nature and its importance in the world economy, leasing and royalty exploration, drilling and production methods, conservation, transportation and refining, economics of the oil industry.

PETT 132 Petroleum Geology (3-0) Credit: 3

A rapid survey course covering the principles of petroleum geology. Topics covered are geographic and stratigraphic distribution, types of structures, properties of petroleum, origin of petroleum, methods of migration, and petroleum discovery methods. Different fields are studied to determine the characteristics of fields as based on different types of traps.

PETT 133 Rotary Drilling Fluids (3-0) Credit: 3

Testing methods, determining drilling fluid characteristics, drilling fluid problems, use of special drilling fluids, laboratory exercises consisting of practice in altering the properties of fresh water and special drilling fluids for drilling through troublesome zones with the rotary system.

PETT 134 Oil Field Records (3-0) Credit: 3

A study of records kept by oil companies and reports made within companies and to the regulation agencies.

PETT 141 Rig and Drilling Equipment (3-3) Credit: 4

Technical information covering the care and use of drilling equipment, hoists, power units, derricks, pumps, and derrick equipment. Trips to examine different types of drilling equipment in actual operation in the field. Also trips to service companies to study their drilling tools.

PETT 142 Petroleum Logging and Mapping (3-3) Credit: 4

A study of theories of electrical, micro-electrical radiation, optical chemical, and mechanical well logging methods and application of these theories, field examples and problems.

PETT 231 Pumping Equipment (3-0) Credit: 3

A theoretical study of the motors, engines, compressors, and pumps used in the movement of petroleum products; including a survey of the different types of equipment available for specific conditions and loads.

PETT 232 Well Completion Methods (3-0) Credit: 3

Included in this course are basic types of completion methods, such as open hole, liner and screen, perforated casing. Permanent type completions and multiple completions are studied. Remedial measures including recompletion, shutting off bottom hole water, reducing high gas oil ratios, sand control, fracturing, and redrilling are studied.

PETT 233 Natural Gas Production (3-0) Credit: 3

A survey course in the handling of natural gas. from discovery to use; with emphasis on efficient transportation and the use of proper equipment for distribution. Gas regulations, control and measuring devices will be studied.

PETT 234 Petroleum Transportation (3-0) Credit: 3

A study of the methods and practices of transporting crude and refined petroleum products by pipeline, tanker and by land.

PETT 235 Petroleum Pollution Control (3-0) Credit: 3

A study of the various contaminants of air, water, and soil and their effect on ecology. The types of contaminants released by the petroleum industry and petroleum products to the air and water, and methods used to minimize them will be studied. A survey of the various pollutants, their effects on materials, and their control.

PETT 236 Hydraulics (3-0) Credit: 3

A study of hydraulics related to drilling, oil pipelines, and artificial lift.

PETT 237 Refinery Operations (3-0) Credit: 3

A study of theoretical and practical approaches to the operation of refinery.

PETT 241 Petroleum Production Methods (3-3) Credit: 4

Various elements of crude oil production are studied, including subsurface pumps, gaslifting, emulsion treating, separation of oil and water, separation of oil and gas. Instrumentation of leases is discussed, including flow-meters, automatic lease operation, and automatic custody transfer; also a study of oil field corrosion problems, and secondary recovery methods.

PETT 242 Petroleum Refining Methods & Operations (3-3) Credit: 4

The chemical structure of the hydrocarbon is studied in this course. A survey of modern refining methods of gasoline, petrochemicals and other related chemicals is included.

Philosophy (PHIL)

PHIL 231 Introduction to Philosophy (3-0) Credit: 3

A general introduction to critical and reflective thinking as applied to the basic problems of existence and the meaning of human life and institutions; study of methods and types of evidence utilized by authority, intuition, revelation, reason and scientific methods, and a study of the nature of philosophy, including its relation to religion, science, and art.

PHIL 232 Introduction to Ethics (3-0) Credit: 3

Study of basic principles of the normal life, with critical examination of traditional and current theories of the nature of goodness, happiness, duty, and freedom.

PHIL 233 Logic (3-0) Credit: 3

Nature and methods of correct reasoning; deductive proof; inductive proof; fallacies; arguments.

PHIL 237 Old Testament History & Philosophy (3-0) Credit: 3

A general survey of the Old Testament as to origin, literature, and history with special study of the institutions, religions, and national life of the Hebrew people.

PHIL 238 New Testament History & Philosophy (3-0) Credit: 3

The course will consist of a survey of all the New Testament Literature. The Synoptic Gospels, the Johanne Corpus, Acts, the Pauline Letters, and the General Epistles. Particular attention will be given to the methods and results of contemporary critical research in the New Testament studies. Thus, both primary sources (New Testament documents) and secondary literature on the New Testament will be used.

Physics (PHY)

PHY 140 Survey of Physics (3-3) Credit: 4

A survey of the fundamental principles of physics designed to acquaint students with the basic concepts of physics, contemporary physics, and modern thinking.

PHY 141 College Physics I (3-3) Credit: 4

Fundamentals of classical mechanics, heat, and sound are discussed. This course is primarily for students who plan to major in medicine, dentistry, veterinary medicine, pharmacy, and for all other students needing a two semester course in physics. The course includes three hours of lecture, one hour of recitation, and two hours of laboratory per week. Prerequisite: MATH 133 or registration therein.

PHY 142 College Physics II (3-3) Credit: 4

A continuation of PHY 141, fundamentals of classical electricity, magnetism, light, wave-motion, atomic and nuclear physics are covered. Prerequisite: PHY 141, or consent of the instructor.

PHY 241 Modern Physics I (3-3) Credit: 4

Mechanics and heat for science majors and minors, and engineering majors. Vector algebra and calculus are used. The course includes three hours of lecture, one hour of recitation, and two hours of laboratory per week. Prerequisite: MATH 231 or registration therein.

PHY 242 Modern Physics II (3-3) Credit: 4

Electricity, magnetism, wave-motion and light, an introduction to modern physics for science majors and minors, and engineering majors. Vector algebra and calculus are used. The course includes three hours of lecture, one hour of recitation, and two hours of laboratory per week. Prerequisite: PHY 241 or equivalent.

Photography (PHOT)

PHOT 131* Introduction to Photography (2-4) Credit: 3

The course emphasizes the handling of small cameras, film exposure, processing, contact printing, and basic enlarging. Flash and existing light photography is studied with news features, action photography, and storytelling photographs. Printing and composing photographs for publications is included.

PHOT 132* Portrait Photography (2-4) Credit: 3

A study is made of fundamental lighting, camera techniques, posing, composition, processing, and printing as applied to portraiture. Experience in retouching negatives and prints, mounting and making storytelling pictures for fashion and advertising is provided. Prerequisite: PHOT 131 or consent of instructor.

PHOT 133* Advanced Photography (2-4) Credit: 3

The course includes elements of composition and film exposure development for specific gamma, studied sensitometry, advanced photographic printing, characteristics of printing papers, processing for contrast, print balance, and toning are included. Principles of filters and lenses and advanced focusing techniques are studied. Prerequisite: PHOT 131 or consent of instructor.

PHOT 134* Commercial Photography (2-4) Credit: 3

A study is made of the fundamental differences between commercial and advertising photography. Although both are studied, emphasis will be on the commercial level such as *products, houses, factories, weddings, and party photography*. Emphasis on what a commercial photographer does, how he sets up a business, what equipment he needs, how he finds clients, what prices to charge, and new trends in the field are reviewed. Prerequisite: PHOT 131 and 132 or consent of instructor.

PHOT 135* Advanced Print Making (2-4) Credit: 3

This course includes special instruction and laboratory work in advanced print making, mounting, display, toning and tinting, and special procedures in graphic techniques in print making with higher contrast materials. Preparation of a black and white portfolio is included. Prerequisite: PHOT 131, 132, 133 and 134 or consent of instructor.

Note: *PHOT courses offered as part of the certificate program.

PHOT 141 Introduction to Photography (3-2) Credit: 4

This course emphasizes the handling of small cameras, film exposure, processing, contact printing and basic enlarging. Flash and existing light photography is studied with new features, action photography, and story-telling photographs. Printing and composing photographs for publications included.

PHOT 142 Portrait Photography (3-2) Credit: 4

A study is made of fundamental lighting, camera techniques, posing, composition, processing, and printing as applied to portraiture. Experience in retouching negatives and prints, mounting and making story-telling pictures for fashion and advertising is provided. Prerequisite: PHOT 141 or consent of instructor.

PHOT 143 Advanced Photography (3-2) Credit: 4

This course includes elements of composition and film exposure development for specific gamma studied sensitometry, advanced photographic printing characteristics of printing papers, processing for contrast, print balance, and toning are included. Principles of filters and lenses and advanced focusing techniques are studied. Prerequisite: PHOT 141 or consent of instructor.

PHOT 144 Commercial Photography (3-2) Credit: 4

A study is made of the fundamental differences between commercial and advertising photography. Although both are studied, emphasis will be on the commercial level such as products, houses, factories, weddings and party photography. Emphasis on what a commercial photographer does, how he sets up a business, what equipment he needs, how he finds clients, what prices to charge, and new trends in the field are revised. Prerequisite: PHOT 141 and PHOT 142, or consent of instructor.

PHOT 145 Advanced Printmaking (3-2) Credit: 4

This course includes special instruction and laboratory work in advanced printmaking, mounting, display, toning and tinting and special procedures in graphic techniques in printmaking with higher contrast materials. Preparation of a black and white portfolio is included. Prerequisite: PHOT 141, PHOT 142, PHOT 143, PHOT 144 or consent of instructor.

PHOT 146 Color Photography I (3-2) Credit: 4

This course of study of primary and secondary colors of light, color temperature, color compensations in film exposure, the making of color slides for visual education, theory of color negative systems and demonstrations of Type-C printing.

PHOT 147 Color Photography II (3-2) Credit: 4

Positive and negative color film processing, sensitometry, and color printing. Prerequisite: PHOT 146.

PHOT 231 Photography Internship I (1-5) Credit: 3

Supervised off-campus laboratory and work experience in photography or closely allied fields. Students usually work as laboratory technicians, cameramen, and salespersons. Prerequisite: PHOT 141, PHOT 142, PHOT 144 or consent of instructor.

PHOT 232 Photography Internship II (1-5) Credit: 3

Supervised off-campus laboratory and work experience in photography or closely allied fields. Students usually work as laboratory technicians, cameramen, and salespersons. Prerequisite: PHOT 231 or consent of instructor.

PHOT 243 Portrait Retouching (3-2) Credit: 4

Portrait negatives retouched by the use of leads, dye and etching with special attention to the study of facial structure and demonstrations in printing and retouching negatives. Some color techniques included. Prerequisite: PHOT 142.

PHOT 244 Photographic Production (3-2) Credit: 4

The student prepares a portfolio of photographs for the mass media, business, education, government, industry and science for presentation to staff members and to prospective employers. Individualized projects. Prerequisite: PHOT 141, PHOT 142, PHOT 144, PHOT 146, and PHOT 147.

Physical Education (PE)

PE 110	Football and Basketball	(0-2) Credit: 1
PE 111	Volleyball and Softball	(0-2) Credit: 1
PE 112	Beginning Badminton	(1-2) Credit: 1
PE 113	Beginning Bowling	(0-2) Credit: 1
PE 114	Equitation	(0-2) Credit: 1
PE 115	Folk and Square Dancing	(0-2) Credit: 1
PE 116	Beginning Swimming	(0-2) Credit: 1
PE 117	Beginning Tennis	(0-2) Credit: 1
PE 118	Beginning Golf	(0-2) Credit: 1
PE 119	Basketball and Soccer	(0-2) Credit: 1
PE 210	Advanced Bowling	(0-2) Credit: 1
PE 211	Advanced Swimming	(0-2) Credit: 1
PE 212	Intermediate Tennis	(0-2) Credit: 1
PE 213	Advanced Golf	(0-2) Credit: 1
PE 214	Tumbling	(0-2) Credit: 1
PE 215	Figure Development	(0-2) Credit: 1
PE 216	Advanced Badminton	(0-2) Credit: 1
PE 217	Modern Dance	(0-2) Credit: 1
PE 218	Physical Conditioning	(0-2) Credit: 1
PE 218A	Aerobics	(0-2) Credit: 1
PE 219	Varsity Athletics	(0-2) Credit: 1

PE 131 Foundations of Physical Education (3-0) Credit: 3

A course which introduces the student to the fields of health, physical education, and recreation. Emphasis on the scope and organization of professional activities, opportunities and qualifications of the professional physical educator.

PE 132 Foundations of Health (3-0) Credit: 3

A fundamental course in principles and problems of healthful living. Emphasis on current information and thought to be applied to individual daily lives.

PE 231 Sports Officiating (3-0) Credit: 3

Theory and practice in techniques of officiating. Officiating experience.

PE 235 Safety and First Aid (3-0) Credit: 3

Health knowledge and practice with regard to individual and group welfare; personal hygiene; community health problems; communicable disease control and health organizations. Instruction in American National Red Cross first aid methods for emergency treatments of injuries and sudden illness.

Plant Production

(See Farm and Ranch Mgmt.)

Pre-Med

(See Biology, Chemistry)

Psychology (PSYC)

PSYC 111 Psychology of Personal and Social Development (1-0) Credit: 1

Designed to orient the student to college life, and to help him understand his personal problems, such as separation from family, study habits, use of time, vocational changes.

PSYC 231 Introduction to Psychology (3-0) Credit: 3

Basic principles of human experience and behavior involving biological, environmental, and sociological studies. An overview course including an introduction to the major studies of psychology. Recommended for students of sophomore standing.

PSYC 232 Personality Adjustment (3-0) Credit: 3

A study of psychological concepts and principles related to healthy personality and social adjustment.

PSYC 233 Child Growth and Development (3-0) Credit: 3

The purpose of this course is to develop an understanding of children and to engender a real interest in them. Consideration is given to the human organism as it develops physically, mentally, emotionally, and socially; problems of adjustment.

Real Estate

(See Management)

Recreation (REC)

REC 133 Foundations of Recreations (3-0) Credit: 3

Development, structure, purposes, and functions of the professional fields in recreation.

REC 134 Principles of Recreational Leadership (3-0) Credit: 3

Development of skills and leadership ability in various program areas of recreation. Observation of programs sponsored by city recreation, boys clubs, and armed forces.

REC 135 Theory and Practice of Teaching Sports (3-0) Credit: 3

Designed to teach the student evaluation procedures, rules, and improvement of skills. Emphasis is on methods and materials.

REC 233 Camp Counseling (3-0) Credit: 3

Understanding the child in camp setting, techniques of cabin counseling, general aspects of programming, campcraft, nature study, and social and physical recreation appropriate to camp programs.

REC 235 Program Planning for Recreation (3-0) Credit: 3

Designed to teach the student procedures, techniques, and methods in planning, developing, and implementation of a recreation program.

REC 237 Theory & Practice of Teaching Aquatics (3-0) Credit: 3

Basic skills, professions, and safety techniques in swimming and water safety. Emphasis on methods and materials.

REC 238 Outdoor Recreational Sport (3-0) Credit: 3

A course designed to equip the student with the knowledge, skills, and appreciation of the outdoor recreational sports, games, and activities needed to organize and administer a varied program of recreation.

REC 239 Field Work in Recreation (3-0) Credit: 3

Working in an assigned recreation program under supervision. Course includes observations, participation, and supervised leadership.

(See Biology, Chemistry, Geology)

SGER 141 Gas Engine Fundamentals (2-4) Credit: 4**SGER 142 Ignition Systems (2-4) Credit: 4****SGER 143 Shop Practices (2-4) Credit: 4****SGER 144 Carburetion, Fuel, & Lubrication Systems (2-4) Credit: 4****SGER 145 Motorcycle Engine Service (2-4) Credit: 4****SGER 146 Lawn Care Equipment Service (2-4) Credit: 4**

SGER 241 Advanced Motorcycle Repair (2-4) Credit: 4

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Social Science

(See Anthropology, Geography, Government,
History, Philosophy, Psychology, Sociology)

Sociology (SOC)

SOC 231 Introduction to Sociology (3-0) Credit: 3

The study of human society; human behavior and personality as a product of group life; community organization; social change and current social problems.

SOC 232 Contemporary Social Problems (3-0) Credit: 3

Identification and analysis of contemporary social problems, development of criteria for evaluating problems for social betterment.

SOC 233 Criminology (3-0) Credit: 3

Causes and manifestations of delinquency; case studies of criminals and their social milieu; the offender and agencies of his adjustment; analysis and evaluation of penal methods.

SOC 234 Social Institutions and Processes (3-0) Credit: 3

Sociological concepts and principles that are basic to an understanding of the complexity of modern society. Students, through firsthand observation and course materials, are familiarized with social institutions, class structures, and social processes which produce social organization and disorganization. Major social institutions are viewed from the standpoint of social structure and social processes, and their future roles in society's operation and influence upon the individual and groups.

SOC 235 Social Psychology (3-0) Credit: 3

The origin and development of personal behavior in interpersonal situations.

SOC 236 Marriage and the Family (3-0) Credit: 3

A study of problems in courtship, marriage, and family living as they relate to the social structure of American society.

SOC 237 Introduction to Sociological Research (3-0) Credit: 3

Collecting, analyzing, and interpreting sociological data. Specification of theories as researchable propositions and procedures for verification.

SOC 238 Juvenile Justice System (3-0) Credit: 3

The juvenile justice system; history, philosophy, and evaluation of the juvenile court, juvenile court practices and procedures; neglect, dependency and delinquency, jurisdiction of the court; the role of the police officer, the correctional officer and the social welfare worker in the juvenile justice system.

SOC 238A Sociology of Delinquency (3-0) Credit: 3

Social forces that promote juvenile lawlessness will receive major focus. Comparative characteristics of urban and rural delinquents will be studied, along with the impact that social institutions and community attitudes have on aggravating and mitigating delinquent behavior.

SOC 239 Race or Minority Relations (3-0) Credit: 3

An in-depth multicultural approach to the study of racial and minority groups with group discussion on how to improve communication and understanding. The patterns of adjustment and interactions of ethnic and racial groups as revealed by sociological analysis.

Solar Energy (SESY)

SESY 131 Principles of Solar Energy (3-0) Credit: 3

This course is an introduction to the principles of solar energy. Topics of instruction include the sun-earth relationship; a study of the various types of solar energy systems for heating, cooling, and power generation; the economics of solar systems; and the current national, state, and local legal regulations pertaining to solar energy.

SESY 141 Solar Heating Systems (3-3) Credit: 4

This course is an introduction to solar heating systems. Topics of instruction will include an overview of this basic components of the various systems and the operation, installation, maintenance, trouble-shooting, and service procedures of solar heating systems. Prerequisite or corequisite: AC 143.

SESY 231 Solar Energy Special Projects (1-5) Credit: 3

This course covers practical experience on a special project(s) involving an application of solar energy heating and/or cooling systems. Under the supervision of the instructor, the student selects a project that includes the design, fabrication, installation, calibration, operation and maintenance of a solar system. Solar energy systems standards, local building code requirements and cost analysis are also included. Prerequisite: SESY 131, SESY 141, SESY 241.

SESY 241 Solar Cooling Systems (3-3) Credit: 4

This course is an introduction to solar cooling systems. Topics of instruction will include an overview of the basic components of the various systems and the operation, installation, maintenance, trouble-shooting, and service procedures of solar cooling systems. Prerequisite: SESY 141 and corequisite AC 144.

Spanish (SPAN)

SPAN 141 Beginning Spanish I (3-3) Credit: 4

This course consists chiefly of the study of Spanish grammar and development of vocabulary. Conversation in Spanish is stressed.

SPAN 142 Beginning Spanish II (3-3) Credit: 4

This course is a continuation of SPAN 141, with continued emphasis on conversation. Prerequisite: SPAN 141.

SPAN 231 Intermediate Spanish I (3-0) Credit: 3

A review grammar text is used. Continued emphasis is placed on conversation, correct pronunciation, and correct writing. Readings from various Spanish-American authors are studied. Prerequisite: SPAN 141, 142, or two years of Spanish at an accredited high school.

SPAN 232 Intermediate Spanish II (3-0) Credit: 3

This course continues the readings from Spanish-American authors. Grammar, composition, and conversation are emphasized. Prerequisite: SPAN 231 or equivalent.

Speech (SPCH)

SPCH 111, 112 Forensic Practicum I & II (1-2) Credit: 1

Practice of all types of speaking, reading, debating, and discussing skills. It is designed to prepare the student for contest work and may be repeated for credit.

SPCH 131 Fundamentals of Speech (3-0) Credit: 3

Instruction is given in speech preparation and delivery with emphasis on communication through audience analysis, gesturing, and vocal variety. Students will have opportunity for practice in the researching, outlining, and presentation of speeches.

SPCH 132 Voice and Diction (3-0) Credit: 3

To develop and establish good vocal habits through a study of the principles and practices of the techniques involved in excellence of voice and diction. Drill work and materials for practice are selected to suit individual needs.

SPCH 133 Oral Interpretation (3-0) Credit: 3

Study and practice in the principles of the oral reading of literature. Attention is paid to analyzing good literature and to recreating the logical and emotional content for an audience. Group oral interpretation is also studied.

SPCH 231 Persuasive Speaking (3-0) Credit: 3

A course of study which emphasizes knowledge of audience and individual responses to the speaker-supplied stimuli, emotional and logical reasoning. Practice in all types of persuasive speaking is an essential part of the course. Prerequisites: SPCH 131, 233, or consent of the instructor.

SPCH 233 Business Speech (3-0) Credit: 3

Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he might encounter in his career. It is planned for agriculture, business, and home economics majors. Emphasis is on structure and techniques of presentation.

THET 111, 112 Stagecraft Practicum I & II (0-2) Credit: 1

Practice in all phases of play production. It may be repeated for credit.

THET 132 Basic Theatre Practice (3-3) Credit: 3

A practical course in the elements of theatre production. Includes discussion of the hierarchy of the production staff, of the duties of each assigned position, and of the planning necessary to produce a play.

THET 133 Acting I (3-3) Credit: 3

A basic course in the creation of characters which focuses on stage movement, use of voice, use of gestures, and concentration. The student will present solo, duet, and group scenes.

THET 134 Acting II (3-3) Credit: 3

A detailed study of varying theories of acting and their practice. Attention will also be paid to acting styles and accents. The student will perform in various period scenes.

THET 231 History of the Theatre (3-0) Credit: 3

A study of the progressive growth of the theatre through examination of the playwrights, designers, and actors in each period. The course will cover the period from the early Greeks through 1900.

THET 232 Stagecraft (2-4) Credit: 3

Scene design and stage lighting. A study of lighting, equipment and methods, and a study of basic set design and structure, and a study of makeup for youth, old age, and character.

Telecommunications (TELE)

TELE 131 Introduction to Broadcasting (3-3) Credit: 3

This is a survey course tracing the history of broadcasting from 1884 to the present. Besides history, the course will present information on comparative systems of broadcasting and on the basic operational procedures of radio and television stations. Preparation for the FCC Radio-Telephone Operator's Third Class Permit is included in this course of study.

TELE 132 Beginning Radio Production (3-3) Credit: 3

In this course the fundamental techniques and practices of production and programming are emphasized with a great deal of practical experience in the KNCT-FM studios. Production of various types of programs including interviews, documentaries, and basic news will be studied. Each student will be trained to competently operate a radio control board, turntables, and tape recorders.

TELE 133 Beginning Television Production (3-3) Credit: 3

This course is designed to give the student the fundamental skills of camera operation, microphone techniques, basic set design, basic graphics, and lighting. In addition, each student will produce and direct his own commercials. A basic study of the operations of a television station will be covered.

TELE 134 Station Sales/Management (3-0) Credit: 3

This course is designed to give the student a working knowledge of the broadcast industry; how individual radio and television stations program, sell spots and time, set up management responsibilities, negotiate scheduling with network, and advertising. It also covers the legal and ethical aspects of broadcasting through a use of the FCC Rules and Regulations. Audience measurement and what it means will also be studied.

TELE 135 Radio-Television Announcing (3-3) Credit: 3

This course covers the duties and responsibilities of the announcer, such as operation of the audio console, announcing commercial copy, announcing station breaks, newscasting interviewing, etc. Special emphasis is given in the areas of voice and diction and pronunciation. Practical experience will be offered through the use of the KNCT-FM, KNCT-TV facilities.

TELE 136 Television Film I (3-3) Credit: 3

This course is designed to introduce the student to the fundamentals of cinematography and its applications in the television industry. Basic filming techniques will be covered, and each student will learn to shoot 16 mm motion picture cameras, edit, story board, and process film. Laboratory exercises will provide for the shooting of at least 200 feet of film per student.

TELE 232 Advanced Television Production (3-3) Credit: 3

This course offers advanced training in television production. Included will be experience as cameraman, floor director, talent, lighting, director, technical director, producer, graphics, film director, video tape operator, and audio engineer. Practical experience in weekly television program production will be available through the use of station KNCT-TV. In addition, a critical look will be given to television programming techniques, types of station structure, and innovative technological breakthroughs.

TELE 233 Advanced Radio Production (3-3) Credit: 3

The major emphasis in this course is advanced training in the production of radio commercials, promotion announcements, documentaries, newscasting, and interviewing. An in-depth study of the programming formulas and different types of radio broadcasting is presented. Each student will be responsible for weekly programming to be aired over radio station KNCT-FM.

TELE 234 Broadcast Operations (3-3) Credit: 3

This course is designed to provide the student of broadcasting with specific areas of study in promotion, graphics, traffic, continuity, and programming for both radio and television. The laboratory for this course will be the study of and implementation of an assessment of audience needs survey.

TELE 235 Broadcast Writing (3-3) Credit: 3

This course covers the stylistic writing techniques as needed for commercial copy, promotional copy, news editing, radio-television show formats, and individualistic creative writing for drama or documentaries. Practical experience will be available through stations KNCT-FM and KNCT-TV.

TELE 236 Communications Law (3-0) Credit: 3

This course is an in-depth study of the Federal Communications Commissions Rules and Regulations, treaties, and laws pertaining to the overall operation of the broadcast station; a survey of copyright laws, libel and slander laws, contracts and other legal responsibilities associated with broadcasting.

**TELE 237 Television Film II/Electronic
News Gathering (3-3) Credit: 3**

Advanced film production, color processing, and editing are covered during the first half of the semester. Electronic news gathering techniques with mini-cameras are covered the second half of the semester. Much emphasis is given to news photography and on-the-job training. Students are given weekly assignments for KNCT newscasts.

TELE 238 Telecommunications Practicum (1-6) Credit: 3

The purpose of this course is to give each student an opportunity to receive practical experience in a specialized area of study. A student may choose his individual study practicum from any of the following broadcast-related areas: Graphic arts, set design, photography, cinematography, broadcast journalism, radio production, television production, broadcast promotion, traffic and continuity.

TELE 239A Technical Aspects of Broadcasting (3-0) Credit: 3

This course will help the student develop a broad technical vocabulary and a basic understanding of the technical aspects of Telecommunications. Emphasis is placed on the study of operating fundamentals and the technical limitations of telecommunications systems. Broadcast technical standards and their rationale are a major part of the course. Limited emergency maintenance techniques for production personnel are also taught.

TELE 239B Telecommunications Field Projects I (1-5) Credit: 3

The field projects will constitute an on-the-job training experience for all the students. The laboratory portion will place the student in responsible production positions for on-air broadcast activities on KNCT-TV and/or KNCT-FM. Each student will produce and direct at least three major TV or radio programs on a regularly scheduled basis. In conjunction with this practical training, the student will compile a daily log of his work experience for in-class discussion and criticism. Prerequisite: TELE 132 and TELE 133.

TELE 239C Telecommunications Seminar (3-0) Credit: 3

This seminar is designed to allow the student of broadcasting to take an in-depth look at the industry he will soon serve. Individual investigation will be conducted on the current trends in broadcasting, major issues facing the broadcaster, and the importance of broadcasting in today's society. Considerable discussion on such issues as freedom of the press and the future of broadcasting will take place. This course will give the student an up-to-date and realistic perspective of his chosen industry.

TELE 239D Telecommunications Field Projects II (1-5) Credit: 3

A continuation of Telecommunications 239B, this course consists of on-the-job training as a production member of KNCT-TV or KNCT-FM for on-air operations. Prerequisite: TELE 239B.

Television Repair

(See Consumer Electronics Servicing)

Theater

(See Speech)

Vocational Nursing

(See Nursing)

Voice

(See Music)

Welding (WELD)

WELD 141 Beginning Gas Welding (2-4) Credit: 4

Intensive classroom instruction will be conducted in oxy-acetylene welding. Fusion type welds will be made using many materials and under a variety of positions and conditions. Instruction will include use and operation of oxy-acetylene cutting torch.

WELD 142 Beginning Arc Welding (2-4) Credit: 4

Intensive classroom instruction will be conducted in electric arc welding. Welds will be made in all positions with various types of electrodes. Students will gain a basic understanding of metal properties and characteristics.

WELD 151 Advanced Arc Welding (2-6) Credit: 5

Theory and practice of shielded metal arc welding on tests required by industry. Emphasis will be placed on preparing the student for certification tests. Prerequisite: WELD 142.

WELD 152 Advanced Welding Processes (2-6) Credit: 5
(MIG & TIG)

Theory and practice of MIG and TIG welding. Course to include study of shielding gases used in these processes.

WELD 153 Weld Testing Methods (2-6) Credit: 5

Theory and practice of making basic destructive and non-destructive weld test. This will include guided bend, nick break, liquid penetrant, and magnetic particle testing. Prerequisite: WELD 142.

WELD 154 Welding Fabrication and Lay-Out (2-6) Credit: 5

Practical application of steel fabrication and general lay-out work. Blueprints with welding symbols will be used on all projects. Prerequisite: WELD 142 and DD 131.

WELD 155 Advanced Fabrication Methods (2-6) Credit: 5

The advanced welding student selects and develops comprehensive welding fabrication project under the direction of the supervising instructor. Special Emphasis is placed on the utilization of special metals, including stainless steel, carbon steel, aluminum and the newer space-age exotic metals. Prerequisite: WELD 154.

WELD 156 Pipe Welding (2-6) Credit: 5

This course covers the theory and practice of the arc welding of pipe in roll-out and in *horizontal positions*. Different sizes, schedules and materials of pipe are used in the course. Special emphasis is placed on preparing for pipe welding certification examinations. Prerequisite: WELD 151 and WELD 152.

WELD 157 Structural Welding (2-6) Credit: 5

This covers the theory and practice of arc welding on the various structural steel shapes used in the construction and steel fabrication industry. Special emphasis is placed on preparing for the various welding certification examinations. Prerequisite: WELD 151.

CONTINUING EDUCATION

The purpose of this non-credit program is to meet the continuing educational requirements of the community. To achieve this purpose, organized programs of instruction are provided in response to expressed needs. Generally, classes provide training for the individual; however, special interest groups can also be accommodated within the scope and philosophy of the program.

Classes are geared to the changing needs of the area and changing requirements of businesses, industries, and the desires of local citizens. There are not limits to the number or variety of courses. Classes are often offered in the vocational business field as well as practical arts. Area employees and businessmen are periodically consulted for recommendations as to types of courses needed. In addition, the appreciation of, and participation in practical arts and vocational interests is encouraged. These courses are an important segment of the Continuing Education Program.

Any information may be obtained by contacting the Director of the Evening College.

Typical courses are listed below:

Agriculture/Horticulture

Landscaping
Horse Care and Management
Vegetable Gardening
Houseplants

Arts & Hobbies

Guitar I
Guitar II
Macrame
Crewel Embroidery
Needlepoint

Athletics and Recreational

Jazz Dancing
Advanced Square Dancing
Ballroom Dancing
Belly Dancing
Hunter Safety
Intermediate Sailing
Ladies Self Defense
Sailing
Scientific Fishing
Slimnastics
Square Dancing
Techniques of Horseback Riding
Ladies Firearms

Science

Medical Terminology
Solar Energy

Business

Local Recording Agents
Federal Service Entrance Exam
Fundamentals of Tax Preparation
How to Prepare for ACT, SAT, &
College Boards
Securities Investments
Wills, Trusts, and Probate

Communications

Conversational German
Conversational Spanish I
Conversational Spanish II
Interpersonal Communications

Educational

Driver Education (Adults & Under 18)
Defensive Driving
Dog Obedience Training
Small Engine Repair
Automotive Orientation
You, Your Child, and Drugs
Federal Aviation Regulations

Homemaking

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Gourmet Cooking
Interior Decoration
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