



Central Texas College

**Catalogue
1981 - 1983**

LOCATIONS SERVICED BY VARIOUS CENTRAL TEXAS COLLEGE PROGRAMS

UNITED STATES

Alaska

Ft. Greely
Ft. Richardson
Ft. Wainwright

California

Alameda
San Diego

Colorado

Ft. Carson

Georgia

Ft. Stewart
Hunter Army Airfield

Hawaii

Pearl Harbor

Florida

Jacksonville

Illinois

Great Lakes

Kansas

Ft. Riley

Louisiana

Ft. Polk

Missouri

Ft. Leonard Wood

Oklahoma

Ft. Sill

South Carolina

Charleston

Texas

Ft. Hood
Killeen

Virginia

Ft. Lee
Norfolk

Washington

Ft. Lewis

ATLANTIC FLEET

PACIFIC FLEET

CENTRAL AMERICA

Panama

Ft. Clayton
Ft. Davis
Ft. Kobbe

EUROPE

Azores

Lajes Field

England

Alconbury
Bentwaters
Lakenheath
Mildenhall
Upper Heyford
Weathersfield
Welford

Germany

Amberg
Ansbach
Aschaffenburg
Babenhausen
Bad Hersfeld
Bad Kissingen

Germany (cont'd)

Bad Kreuznach
Bamberg
Baumholder
Berlin
Bindlach
Bismark
Bitburg
Bremerhaven
Buedingen
Butzbach
Clausen
Crailsheim
Darmstadt
Dexheim
Einsiedlerhof
Eschborn
Fischbach
Frankfurt
Friedberg
Fulda
Garlstadt
Gelnhausen
Giessen
Goepfingen
Grafenwoehr
Hahn
Hanau
Hannheim
Heidelberg
Heilbronn
Herbornseelbach
Hoechst
Hohenfels
Idar Oberstein
Illesheim
Kaiserslautern
Karlsruhe
Kirchgoens
Kitzingen
Mainz
Mannheim
Miesau
Neubruেকে
Neu Ulm
Nuernberg
Oberursel
Pirmasens
Ramstein
Schweinfurt
Semback
Spangdahlem
Stuttgart
Vilseck
Wertheim
Wiesbaden
Wildflecken
Wuerzburg
Zweibrucken

Greece

Drama
Elefsis
Katsimdh
Kilkis
Koropi
Langada
Nea Makri
Yannitsa

Italy

Arizignano
Bovolone
Camp Darby
Ceggia
Chioggia
Codogno
Conselve
Cordovado
Oderzo
Pluto
Rome
Sciaves
Vicenza
Zelo

Spain

Torreon

Turkey

Cakmakli
Corlu
Erzurum
Izmit
Ordykoy
Sinop

PACIFIC FAR EAST

Guam

Japan

Yokosuka

Korea

Camp Carroll
Camp Casey
Camp Greaves
Camp Henry
Camp Hovey
Camp Howze
Camp Humphreys
Camp Pelham
Camp Red Cloud
Camp Stanley
Yongsan

Phillippines

Botan
San Miguel
Subic Bay

MAJOR CAMPUS ADDRESSES COLLEGE PROGRAMS

CENTRAL CAMPUS

CENTRAL TEXAS COLLEGE

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

ALASKA

Central Texas College-Fort Richardson
Building 658-Kiska Hall
Fort Richardson, Alaska 99505

&

Central Texas College-Fort Greely
Army Education Center-Building 661
APO Seattle 98733

EUROPE

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

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

FORT RILEY

Central Texas College-Fort Riley
P.O. Box 2406
Fort Riley, Kansas 66442

PANAMA

Central Texas College-Panama
PSC Box M
APO Miami 34004

U.S. NAVY - PACE

Central Texas College - PACE (Pacific)
2223 El Cajon Blvd
Suite 302

San Diego, California 92104

SUBIC BAY-PHILLIPINES

Central Texas College - Subic Bay
Box 4 U.S. Naval Station
FPO San Francisco 96651

YOKOSUKA

Central Texas College
FE/Yokosuka
P.O. Box 72
FPO Seattle 98762

CORRESPONDENCE AND INQUIRIES

Correspondence and inquiries should be addressed to the appropriate office, e.g. Admissions, Records, Financial Aid, etc., as listed in the catalogue, 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 catalogue and should bring their catalogues with them to the campus for degree planning and scheduling.

Board of Trustees



Back Row (Standing) left to right: Marvin A. Mickan, Copperas Cove; Dr. Luis M. Morton, Jr., Chancellor, Central Texas College; Dr. W.A. Roach, President, Killeen; Mr. William L. Shine, Killeen.

Front Row (Seated) left to right: Mr. Cleo Bay, Killeen; Mrs. Linus D. Frederick, Secretary, Copperas Cove; Mr. Guinn C. Fergus, Treasurer, Killeen; Mr. J.A. Darossett, Vice President, Copperas Cove.

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"...

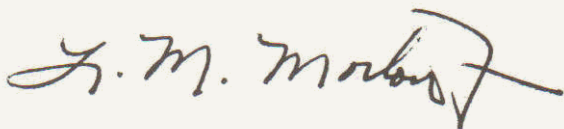
Why has this institution succeeded in such a dramatic fashion? Obviously, the reasons for success have been multiple. The people of this College District have supported this institution. The Board of Trustees, the administration and the faculty have worked in harmony to develop an educational system to serve the total career development needs of the local population, as well as the needs of military and civilian personnel throughout the world. 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



Central Texas College

Ninth

1981-1983

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
American Association of Community and Junior Colleges
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

TABLE OF CONTENTS

	Page
INTRODUCTION	
Board of Trustees	ii
Chancellor's Welcome	iii
Central Texas College	ix
Campus	x
COLLEGE CALENDAR	xi
GENERAL INFORMATION	1
College History/Philosophy	1
Educational Objectives	1
Catalogue	2
Equal Opportunity Policy	2
Program/Course Availability	2
ADMISSIONS AND REGISTRATION	3
Admission Requirements	3
Early Admission	4
International Students	4
Departmental Admission Requirements	5
Registration	6
Tuition & Fees	7
Refunds	8
STUDENT SERVICES	11
Counseling	11
Testing	12
Evaluation	12
Student Activities	14
Student Center	14
Housing	15
Financial Aid	16
COLLEGE POLICIES AND REGULATIONS	19
Academic Policy	19
Academic Standards	23
Regulations Governing Student Activities	24
CERTIFICATE AND DEGREE REQUIREMENTS	27
PROGRAMS OF STUDY	31
Topical Index to Programs of Study	31
Curriculum Plans	34
Course Descriptions	77
CONTINUING EDUCATION	134
VOCATIONAL SKILLS TRAINING CENTER	135
INDEX	
Alphabetical Index	136

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University of Colorado

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B.S., Southwest Texas State University/M.A., Southwest Texas State University

Post Graduate Studies: The University of Texas, Nova University

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M.S., Air Force Institute of Technology/Ohio State University

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B.S., University of Texas/M.S., American Technological University

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B.S. Washington State University/M.S., George Washington University

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P. Anthony Zeiss	Executive Dean of American Technical Institute

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Robert Farrell	Comptroller
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L.O. Owsley	<i>Director of Food Services</i>
Fred Ostertag	Dean of Europe Campus
Harry W. Powers	Director of Plant Maintenance and Operations
Ned Roehrig	Director of Computer Services
Noel H. Schnitz	Dean of Library Services

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William C. Alexander	Coordinator of Placement Services
Larry Barton	<i>Director of Fiscal Management</i>
Ken G. Chapman	Director of International Student Services
Charles Cranford	Purchasing Officer
Robert R. Dunlap	Dean of Instructional Programs
Michael Goeken	Director of Administrative Services, Europe Campus
Neal G. Grimland	<i>Director of Auxiliary Services</i>
Helen K. Henry	Assistant Superintendent for Operations, API
Jerry Herrick	Dean of Continental Campus
E. Jeanene Jasuta	<i>Director of Student Services, Central Campus</i>
Mary H. Klierer	Director of Human Resources
David N. McLane	Registrar
Carol Montgomery	<i>Director of Student Services, Fort Hood Campus</i>
William T. Muentert	Director of CTC Program, Far East-Korea
Mary L. Oppy	Assistant Superintendent for Instruction, API
Harold L. Parsons	Director of Navy Programs (Pacific)
L. Keith Requa	Director of Audio-Visual Services

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T.R. Anderson	Director of MOS Programs
B.W. Beebe	Contracts Administrator
Virginia Cardwell	Assistant to the Dean, Continental Campus
Martha A. Cranford	Assistant Director of Library Services
Camille Duchesne	Skills Center Curriculum Project Coordinator
Wanda L. Edwards	Counselor Central Campus
George Erskine	Director of Student Financial Aid
Kenneth G. Fairfield	Director of Communications, Engineering and Services
Mary Lea Hayhurst	Bookstore Manager
Sylvia G. Hutchison	Business Manager, Far East Campus
Joseph D. Hynes	Coordinator, Technical Proposals
Lillian Kroeger	Assistant Registrar
R. Marie Marteney	Assistant to the Chancellor
David McClure	Director of Testing Services
Yolanda Mendoza	Director of Personnel Services
James Nixon	Assistant to Executive Dean for Military Related Programs (C&OS)
Joseph Palumbo	Assistant to the Director of Plant Maintenance and Operations
Noel T. Smith	Manager, Broadcast Engineering KNCT/KNCT-FM
Robert G. Watts	Manager, Informations Systems

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 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 a leader in providing educational services for the Twentieth Century.

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 educational 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 and American Preparatory Institute*, two fully accredited institutions, provide a "total career educational program" from the elementary grade level through the associate degree level of instruction. Both organizations represent unique educational offerings which contribute to the total effectiveness of services provided through education.

Worldwide Services:

Having initially supported the United States Army locally 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.

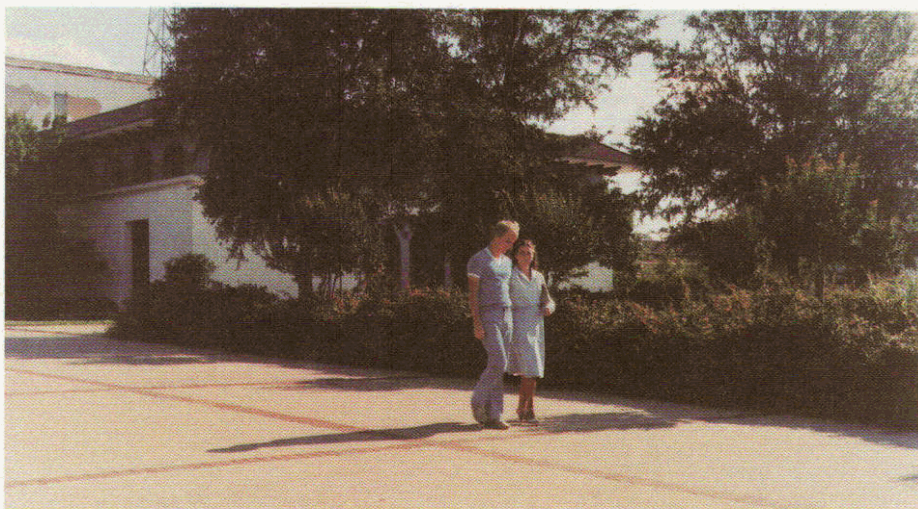
Central Texas College—Continental and Overseas Services—provides the opportunity for higher education to military personnel serving our country in the United States and in foreign lands. Technical-vocational programs are offered by the College at over 175 locations throughout Europe and the Far East, as well as at military bases in the United States and to the United States Navy, Pacific and Atlantic Fleets. For further information concerning College offerings around the world, the Continental and Overseas Catalogue Supplement should be consulted.

Campus Scenes

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.



TENTATIVE 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 final 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.

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1981-1982

JULY

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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

OCT

DATES

AUG 3 - 28
AUG 26 - 27
AUG 26
AUG 31
AUG 31 - SEPT 4
SEPT 7
SEPT 16
OCT 1
NOV 11

FALL 1981

Registration
Faculty Meetings
Dormitory open for occupancy
Classes Begin
Late Registration
Labor Day (no classes)
12th class day
Last day to file for Fall graduation
Veterans Day (No classes)
Final exams - 12 week courses
Thanksgiving Holiday (No classes)
Final Exams - 16 week courses

AUG

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NOV

NOV 18 - 19
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DEC 14 - 19

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DEC

DATES

JAN 4 - 15
JAN 13 - 14
JAN 13
JAN 18
JAN 18 - 22
FEB 1
FEB 2

SPRING 1982

Registration
Faculty Meetings
Dormitory open for occupancy
Classes begin
Late Registration
Last day to file for Spring graduation
12th class day
Spring Vacation (No classes)
Final exams - 12 week courses
Final exams - 16 week courses
Graduation rehearsal
Graduation

JAN

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APR

MAR 15 - 19
APR 14 - 15
MAY 7 - 13
MAY 13
MAY 15

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MAY

MAR

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DATES

MAY 17 - 28
MAY 24
MAY 26
MAY 31
MAY 31 - JUNE 4
JUNE 3
JUNE 9
JUNE 10
JULY 6
JULY 7 - 9
JULY 7
JULY 12
AUG 11

SUMMER 1982

Summer Sessions (SSI and SS2)
plus 11 week session.
Registration (all sessions)
Memorial Day Holiday
Dormitory open for occupancy
Classes begin, SSI and 11 week courses
Late Registration SSI and 11 week courses
4th class day - SSI
8th class day - 11 week session
Last day to file for Summer Graduation
Final exams - 5½ week, SSI Courses
Late registration SS2 courses only
Classes begin, SS2
4th class day - SS2
Final Exams for 5½ week SS2 and 11 week courses

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MAY

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JUNE

TENTATIVE COLLEGE CALENDAR 1982 - 1983

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JAN

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MAY

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OCT

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NOV

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DEC

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APR

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MAY

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JUNE

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DATES

AUG 9 - 27
AUG 25 - 27
AUG 25
AUG 30
AUG 30 - SEPT 3
SEPT 6
SEPT 15
OCT 1
NOV 11
NOV 17 - 18
NOV 25 - 28
DEC 15 - 21

DATES

JAN 3 - 14
JAN 12 - 13
JAN 12
JAN 17
JAN 17 - 21
FEB 1
FEB 1
MAR 14 - 18
APR 13 - 14
MAY 6 - 12
MAY 12
MAY 14

DATES

MAY 16 - 27
MAY 25
MAY 30
MAY 31
MAY 31 - JUNE 3
JUNE 3
JUNE 9
JUNE 10
JULY 4
JULY 5
JULY 6 - 8
JULY 6
JULY 11
AUG 10 - 11

FALL 1982

Registration
Faculty Meetings
Dormitory open for occupancy
Classes begin
Late Registration
Labor Day (no classes)
12th class day
Last day to file for Fall graduation
Veterans Day (no classes)
Final exams - 12 week courses
Thanksgiving Holiday (no classes)
Final exams - 16 week courses

SPRING 1983

Registration
Faculty Meetings
Dormitory open for occupancy
Classes begin
Late Registration
Last day to file for Spring graduation
12th class day
Spring Vacation (no classes)
Final exams - 12 week courses
Final exams - 16 week courses
Graduation rehearsal
Graduation

SUMMER 1983

Summer Sessions (SSI and SS2) plus
11 week session.
Registration, all sessions
Dormitory open for occupancy
Memorial Day Holiday (No classes)
Classes begin SSI and 11 week courses
Late registration, SSI and 11 week courses
4th class day - SSI
8th class day - 11 week session
Last day to file for Summer graduation
Independence Day Holiday (no classes)
Final exams, 5½ week, SSI courses
Late Registration - SS2 courses
Classes begin - SS2 courses
4th class day - SS2
Final exams for 5½ week, SS2,
and 11 week courses

TENTATIVE COLLEGE CALENDAR 1983 - 1984

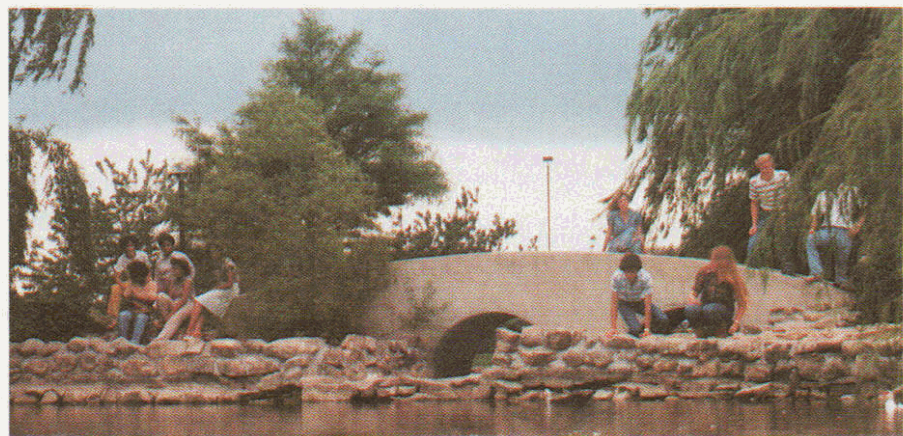
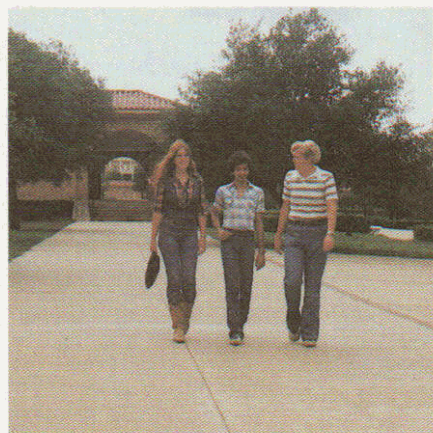
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JULY							OCT							
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SEPT							DEC							
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DATES

AUG 8 - 26
 AUG 24 - 25
 AUG 24
 AUG 29
 AUG 29 - SEPT 2
 SEPT 5
 SEPT 14
 OCT 1
 NOV 11
 NOV 16 - 17
 NOV 24 - 27
 DEC 14 - 20

FALL 1983

Registration
 Faculty Meetings
 Dormitory open for occupancy
 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





Graduation 1980

CENTRAL CAMPUS

1980-81 Faculty

- Harold W. Adams, Instructor (1969)** **Diesel Mechanics**
INDUSTRIAL TECHNOLOGY
Certificate: Detroit Diesel Training Center/Cummins Diesel Training
Additional Study: East Texas State University
- Wynona W. Alexander, Department Manager (1969, 1974)** **Art**
ART
B.A. East Texas State University/M.A. East Texas State University
Ph. D. North Texas State University
Additional Graduate Study: Sam Houston State University
- Jack W. Atkins, Instructor (1980)** **Diesel Mechanics**
INDUSTRIAL TECHNOLOGY
- James B. Baker, Chief Flight Instructor (1970)** **Director of Airport Operations**
CAREER PILOT
Certificate: Commercial & Multi-engine Pilot Ratings/Instructor Ratings
FAA Designated Pilot Examiner & Airman Certification Rep.
Private Pilot Examining Authority
- Henry E. Blake, Department Manager, (1967)** **Criminal Justice**
CRIMINAL JUSTICE
A.A.S. Brooklyn College/B.S. John Jay College of Criminal Justice/
M.A. Baylor University/M.P.A. Nova University/D.P.A. Nova University
Additional Graduate Study: Texas Christian University
- Gayle J. Blum, Associate Instructor (1980)** **Associate Degree Nursing**
NURSING
Diploma: Hillcrest School of Nursing/B.S.N. University of Mary Hardin-Baylor
M.S.N. Texas Women's University
- J. Parker Bogue, Instructor (1973)** **History**
SOCIAL SCIENCE
B.A. University of Maine/M.A. University of Maryland
Ph.D. University of Maryland
- John W. Brewer, Instructor (1978)** **Air Conditioning**
INDUSTRIAL TECHNOLOGY
B.S. American Technological University
Graduate Study American Technological University
- Paula A. Bugay, Instructor (1979, 1980)** **Associate Degree Nursing**
NURSING
Diploma: Akron City Hospital School of Nursing
B.S.N. University of Akron/M.S.N. University of Texas at San Antonio
- Wayne L. Caldwell, Department Manager (1974)** **Offset Printing**
OFFSET PRINTING

- Elizabeth L. Cheatham, Instructor (1974)** **Office Administration**
OFFICE ADMINISTRATION
B.A. Louisiana Tech University/M.B.A. Louisiana Tech University
Additional Graduate Study: North Texas State University/University of Texas at Austin
Tarleton State University
- Norman D. Connelly, Instructor (1980)** **Welding**
INDUSTRIAL TECHNOLOGY
- John Cornelius, Director of Mid-Management Programs (1978, 1980)** **Mid-Management**
BUSINESS MANAGEMENT
B.A. Texas Christian University/M.S. American Technological University
- Jo A. Cranford, Instructor (1978)** **Office Administration**
OFFICE ADMINISTRATION
B.A. Baylor University/M.A. Texas A&I University
- Gary L. Cunningham, Instructor (1981)** **Computer Science**
COMPUTER SCIENCE
B.S. Texas A&I University
- Frances H. Forgione, Instructor (1975)** **Associate Degree Nursing**
NURSING
B.S.N. Niagara University/M.S.N. Texas Women's University
- Adel M. Galanffy, Department Manager (1967, 1973)** **Piano**
MUSIC
M.M. Franz Liszt Music Conservatory
- James D. Gebhardt, Flight Instructor (1978)** **Career Pilot**
CAREER PILOT
A.A.S. Central Texas College/B.A.S. University of Mary-Hardin Baylor
Certificate: Airline Transport Rating/Instructor Ratings
Single & Multi-engine Instrument Ratings
- Fredilyn H. Gee, Associate Instructor (1980)** **Associate Degree Nursing**
NURSING
B.S.N. Texas Women's University/M.Ed. Hardin-Simmons University
- Jane M. Gibson, Instructor (1979)** **Intensive English/Foreign Language**
COMMUNICATIONS
B.A. Abilene Christian University/
M.A.T. Southwest Texas State University
- Donna S. Giebler, Instructor (1976, 1980)** **Office Administration**
OFFICE ADMINISTRATION
B.S. Howard Payne College/M.S. Ed. Howard Payne College
- Audrie E. Hall, Instructor (1976, 1978)** **Electronics**
ELECTRONICS
B.S. Lamar State University/M.B.A. Stephen F. Austin University
- Timothy R. Hall, Department Manager (1969, 1974)** **Mathematics**
MATHEMATICS
B.A. Oklahoma State University/M.S. West Texas State University

- William G. Handorf, Instructor (1969)** **Psychology/Sociology**
 SOCIAL SCIENCE
 A.A. Morton Junior College/B.A. Northwestern University/
 M.A. Northwestern University/Ed.D. American University
 Additional Graduate Study: University of Michigan
- John L. Henderson, Instructor (1970)** **English**
 COMMUNICATIONS
 B.A. West Texas State University/M.A. West Texas State University
- Patrick K. Hidy, Instructor (1976)** **Biology**
 SCIENCE
 A.A.S. Phillips County Community College/
 B.S. East Texas State University/M.S. East Texas State University
- Lewis M. Hilley, Department Manager (1979)** **Physical Education**
 PHYSICAL EDUCATION
 A.B. Baylor University/M.Ed. University of Texas at Austin/
 Ed.D. University of Texas at Austin
 Additional Graduate Study: University of Oklahoma/Philippine Institute
 Washington and Lee University
- Erdeene V. Hyde, Department Manager (1968, 1976)** **English/Reading**
 COMMUNICATIONS
 B.A. Bethany Nazarene College/M.A. East Texas State University
 Additional Graduate Study: Texas Tech University
- Truell W. Hyde, Department Manager (1968)** **History**
 SOCIAL SCIENCE
 B.S. Texas Tech University/M.Ed. Texas Tech University
 Additional Graduate Study: University of Texas at Austin
- Patricia A. Jarczewski, Instructor (1976)** **Associate Degree Nursing**
 NURSING
 B.S.N. University of Mary-Hardin Baylor/
 M.S.N. Texas Women's University
- Kenneth A. Jarvis, Instructor (1980)** **Television**
 TELECOMMUNICATIONS
 B.A. Brigham Young University/M.A. Brigham Young University
- Edward B. Jasuta, Jr., Director (1970, 1980)** **Telecommunications**
 TELECOMMUNICATIONS
 B.A. University of Texas at El Paso/Graduate Study: American Technological
 University
- Jeanette M. Jost, Associate Instructor (1978)** **Associate Degree Nursing**
 NURSING
 Diploma: Scott & White Hospital School of Nursing
 B.S.N. University of Mary Hardin-Baylor/M.S. American Technological University
- Barbara A. Kimes, Instructor (1973)** **Mathematics**
 MATHEMATICS
 B.A. University of Texas at Austin/M.A. University of Texas at Austin
 Ed.D. East Texas State University

- Edward F. King, Instructor (1975)** **Chemistry/Physics**
 SCIENCE
 B.S. Loyola University of the South/B.A. Gregorian University/Ph.D. University of New Orleans
- Marilynn M. Kish, Associate Instructor (1980)** **Biology/Geology**
 SCIENCE
 B.S. Wayne State University/M.S. Wayne State University
- Earl H. Kramer, Instructor (1972)** **Automotive Service & Repair**
 INDUSTRIAL TECHNOLOGY
- Billie J. Laney, Instructor (1970)** **Psychology/Sociology**
 SOCIAL SCIENCE
 B.A. Southern Methodist University/M.A. East Texas State University/
 Ph.D. East Texas State University
- Ray Stanley Laney, Department Manager (1969)** **Business/Management**
 BUSINESS MANAGEMENT
 B.B.A. University of Texas at Austin/
 M.S. East Texas State University/Ph.D. East Texas State University
- Sunny D. Lansdale, Instructor (1975, 1977)** **Speech**
 COMMUNICATIONS
 B.A. University of New Mexico/M.Ed. University of Texas at Austin
 Additional Graduate Study: University of Texas at Austin
- John J. Lister, Instructor (1975)** **Accounting**
 BUSINESS MANAGEMENT
 B.S. University of Colorado/M.S. Florida Institute of Technology
 C.P.A. State of Texas
- Reginald L. Ludwig, Division Director (1970, 1974)** **Automotive Service & Repair**
 INDUSTRIAL TECHNOLOGY
 B.S. American Technological University/M.S. American Technological University
 Additional Graduate Study: East Texas State University
- Ildefonso Luyanda, Associate Instructor (1975)** **Career Pilot**
 CAREER PILOT
 A.A.S. Central Texas College/B.A.S. American Technological University
 Certificate: Commercial & Multi-engine Pilot Ratings/Instructor Ratings
- Gloria L. Lyons, Instructor (1974)** **Associate Degree Nursing**
 NURSING
 B.S.N. Winston Salem University/M.S.N. Texas Women's University
- Marshall L. Maas, Instructor (1972)** **Welding**
 INDUSTRIAL TECHNOLOGY
 B.S. American Technological University/Graduate Study: Tarleton University
- Herbert J. Maglietta, Department Manager (1974)** **Drafting & Design**
 DRAFTING & DESIGN
 B.S. Southwest Texas State University/M.Ed. Southwest Texas State University

- Catherine M. Mason**, *Department Manager* (1976, 1978) **Child Development**
CHILD DEVELOPMENT
B.S. American Technological University/M.S. Texas Women's University
- Linda I. McCann**, *Instructor* (1980) **Vocational Nursing**
NURSING
B.S. Texas Christian University
- Ruth J. McFarland**, *Department Manager* (1979) **Associate Degree Nursing**
NURSING
Diploma: King's Daughters Hospital School of Nursing
B.S.N. University of Texas at Austin/M.S.N. University of Texas at Austin
- Edgar A. Odom**, *Instructor/Director of Police Academy* (1975) **Criminal Justice**
CRIMINAL JUSTICE
A.A. Central Texas College/B.S. American Technological University/
M.C.J. American Technological University
- Gary R. Ragsdale**, *Department Manager* (1971) **Office Administration**
OFFICE ADMINISTRATION
B.S. Abilene Christian University/M.B.A. Abilene Christian University/
Ed.D. Arizona State University
- Mary C. Ragsdale**, *Instructor* (1973) **Office Administration**
OFFICE ADMINISTRATION
B.A. Lamar University/M.A. University of Texas at Austin
- Paula J. Ray**, *Instructor* (1976, 1980) **Biology**
SCIENCE
B.S. Kansas State University/M.S. Kansas State University/
M.S. American Technological University/Additional Graduate Study: University of Wisconsin
- Patricia L. Reid**, *Instructor* (1980) **Vocational Nursing**
NURSING
Diploma: Jameson Memorial Hospital/Additional Study: West Minister College
Central Texas College
- James R. Reynolds**, *Instructor* (1976) **Career Pilot**
CAREER PILOT
A.A.S. Central Texas College/B.A.S. University of Mary Hardin-Baylor
Certificate: FAA Commercial, Instrument & Multi-engine Ratings/Instructor Ratings/ Flight Engineer Ratings
- D. Gail Robinson**, *Department Manager* (1973, 1980) **Computer Science**
COMPUTER SCIENCE
A.A.S. Central Texas College/B.S. American Technological University/
M.S. American Technological University
Additional Graduate Study: East Texas State University
- Theodore C. Robinson, Sr.**, *Instructor* (1971, 1974) **Computer Science**
COMPUTER SCIENCE
B.S. American Technological University/M.S. American Technological University
Additional Graduate Study: East Texas State University/Corpus Christi State University

- Lee Roy Rose, Instructor (1976)** **Automotive Service & Repair**
INDUSTRIAL TECHNOLOGY
- Max L. Rudolph, Instructor (1979)** **Radio**
TELECOMMUNICATIONS
A.A.S. Central Texas College/B.S. American Technological University
Graduate Study: American Technological University
- Gus D. Rummel, Department Manager (1970)** **Computer Maintenance**
ELECTRONICS
B.S. University of Houston/Graduate Study: American Technological University/
East Texas State University/Southwest Texas State University
- Jackie P. Russell, Instructor (1973)** **Computer Science**
COMPUTER SCIENCE
B.S. Tarleton State University/M.S. Florida Institute of Technology
Additional Graduate Study: East Texas State University
- Ralph D. Searle, Department Manager (1968)** **Career Pilot**
CAREER PILOT
B.G.E. University of Omaha/M.S. American Technological University
Certificate: FAA Commercial, Instrument & Multi-Engine Ratings
Instructor Ratings
- Noel M. Smith, Sr., Instructor (1977)** **Drafting & Design**
DRAFTING & DESIGN
B.S. University of Houston/M.S. North Carolina State College
- Ed Spence, Department Manager (1972, 1978)** **Food Service & Hotel/Motel**
HOSPITALITY INDUSTRY
B.S. University of Mary Hardin-Baylor/M.S. American Technological University
- Antonio V. Suarez-Barrio, Instructor/Coordinator (1973)** **Criminal Justice**
CRIMINAL JUSTICE
A.A. Yuba College/B.S. University of Nebraska/
M.S. American Technological University/M.C.J. American Technological University/
M.P.A. Nova University/D.P.A. Nova University
Additional Graduate Study: National Training Center of Polygraph Science Texas A&M
University
Licensed & Certified Polygraphist, State of Texas & Department of Defense
Licensed & Certified Forensic Hypnotist, State of Texas
- Kristi E. Taylor, Laboratory Assistant (1979)** **Associate Degree Nursing**
NURSING
Diploma: St. Vincent School of Nursing/B.S.N. Montana State University
- Ella Teague, Instructor (1968)** **Physical Education**
PHYSICAL EDUCATION
B.S. Sul Ross State University/M.Ed. Sul Ross State University
Additional Graduate Study: University of Texas at Austin/
Texas Tech University
- Marilyn J. Thomas, Associate Instructor (1980)** **Associate Degree Nursing**
NURSING
B.S. Rutgers State University/M.S.N. Kansas State University
- Roy Thompson, Instructor (1976)** **Offset Printing**
OFFSET PRINTING

- Dora Thrash, Instructor (1974)** **Associate Degree Nursing**
 NURSING
 B.S.N. Prairie View/M.S.N. Texas Women's University
- Allan H. Tolbert, Instructor (1969, 1980)** **Mid-Management**
 BUSINESS MANAGEMENT
 B.S. Texas Tech University/M.A. Texas Tech University
 Certificate: Flight Instructor/Instrument Flight Instructor/Ground Instructor
- Navor G. Torres, Jr., Instructor (1975, 1979)** **Photography**
 PHOTOGRAPHY
 A.A.S. Central Texas College/B.S. American Technological University
 Graduate Study: East Texas State University
- Clarence Tresler, Instructor (1970)** **Air Conditioning/Solar Energy**
 INDUSTRIAL TECHNOLOGY
 B.S. University of Houston/Graduate Study: American Technological University
- Charles L. VanBibber, Instructor (1977)** **Criminal Justice**
 CRIMINAL JUSTICE
 A.A. Central Texas College/B.A. American Technological University/
 M.C.J. American Technological University
- Henry R. Wessels, Instructor (1974, 1980)** **Aviation Maintenance Technology**
 CAREER PILOT
 Diploma: Spartan School of Aeronautics/A.A.S. Central Texas College
 B.A.S. University of Mary Hardin-Baylor
 Certificate: Commercial & Multi-engine Pilot Ratings/Instructor Ratings
 Airframe & Powerplant Rating & FAA Designated Maintenance Examiner
 Aircraft Inspection Authorization
- Beverly J. Wickersham, Instructor (1976)** **English**
 COMMUNICATIONS
 B.A. Baylor University/M.A. Sam Houston University
 Additional Graduate Study: Stephen F. Austin University/University of Texas at Austin
- Dennis L. Williams, Instructor (1969)** **English**
 COMMUNICATIONS
 B.A. Texas Christian University/Graduate Study: Sul Ross State University
 Texas Tech University
- Norman R. Williams, Department Manager (1968)** **Biology**
 SCIENCE
 B.S. Texas Tech University/M.S. Texas Tech University
 Additional Graduate Study: East Texas State University/University of Kansas/
 Texas A&M University
- Raiford Williams, Department Manager (1968)** **Agriculture**
 FARM & RANCH MANAGEMENT
 B.S. Sam Houston State University/M.S. Sam Houston State University/
 Ed.D. University of Missouri at Columbia
- Ronald K. Witcher, Instructor (1973, 1976)** **Electronics**
 ELECTRONICS
 Diploma: Draughon's Electronics Institute/A.S. Central Texas College/
 B.S. American Technological University/Graduate Study: Tarleton State University
- Kenneth J. Word, Instructor (1977)** **Mathematics**
 MATHEMATICS
 A.S. Central Texas College/B.S. Southwest Texas State University/
 M.A. Southwest Texas State University

(NOTE: Figures in parentheses indicate date of first appointment on the College staff and date of appointment to present position, respectively.)

GENERAL INFORMATION

HISTORY

To provide increased opportunities in higher education, the voters of the Killeen and Copperas Cove Independent School Districts and the Nolanville Common School District created the Central Texas Union Junior College 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 accomodate diverse educational needs, Central Texas College and its sponsored activity, American Preparatory Institute, provide a variety of educational programs. The Research Institute of Advanced Technology, also a sponsored activity, contributes to program quality and diversity through its efforts.

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 achieve success in life, which is the birthright of every American.*

EDUCATIONAL OBJECTIVES

1. **UNIVERSITY PARALLEL EDUCATION** - The College provides the first two years of study for those students who expect to transfer to a senior college or university to complete a baccalaureate or professional 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 offers comprehensive curricula and individual courses in day, evening and weekend classes to students who are interested in preparing for careers in a variety of business, health, industrial, and technical occupations. Transfer of these curricula to senior colleges and universities offering baccalaureate degrees in technology or applied science is possible for those students seeking advanced study.

4. **CONTINUING EDUCATION SERVICES** - The College provides continuing education for adults, including opportunities for cultural enrichment, special interest courses, lectures and meetings. Continuing education services are provided to individual adults, business, industrial, and military organizations.
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.
7. **SECONDARY EDUCATION** - Through a fully accredited sponsored activity, the American Preparatory Institute, the College provides a career-orientated, adult secondary program leading to a high school diploma.
8. **RESEARCH** - Through a sponsored activity, the Research Institute for Advanced Technology, the College provides computer, and telecommunications services and conducts energy and educational research.

THE CATALOGUE

This catalogue is an official bulletin of Central Texas College containing policies, regulations, procedures, tuition and fees in effect at the time this catalogue 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 catalogue carefully, as they are responsible for observing the regulations contained herein.

Other official bulletins published by the College include the Catalogue 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 Central 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 all personnel, faculty and staff.

PROGRAM/COURSE AVAILABILITY

Programs of study displayed in this catalogue 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 cancellation, 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 may 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 judgment 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 or complete 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.
2. HIGH SCHOOL EQUIVALENCY GRADUATES: Must submit High School General Education Development (GED) scores.
3. COLLEGE TRANSFER STUDENTS: Official transcript must be provided for all college study.
4. 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 the catalogue.

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.

INTERNATIONAL 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 International Student Advisor, who will provide forms and instructions to complete the requirements above.

DEPARTMENTAL ADMISSIONS REQUIREMENTS

NURSING STUDENTS

Students entering the Associate Degree 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 Manager 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 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 catalogue. 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 Central 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 1981-1983

TUITION

Semester Hours	Resident	Non-Resident
1	\$ 30.00	\$ 100.00
2	30.00	125.00
3	40.00	150.00
4	48.00	175.00
5	56.00	180.00
6	62.00	210.00
7	70.00	225.00
8	78.00	250.00
9	82.00	275.00
10	97.00	285.00
11	101.00	295.00
12	105.00	300.00
13	109.00	310.00
14	113.00	320.00
15	117.00	330.00
16	121.00	340.00
17	125.00	350.00
18	129.00	360.00

INDIVIDUALIZED INSTRUCTION

(Tuition in addition to above semester hour tuition)

Aviation Mechanics75.00	Music
Career Pilot	Piano
CAPI 1300 \$1475.00	1 Semester Credit Hour \$ 75.00
CAPI 1304 1420.00	2 Semester Credit Hours 90.00
CAPI 2304 1715.00	3 Semester Credit Hours 100.00
CAPI 2305 2245.00	Other
CAPI 2310 1570.00	1 Semester Credit Hour 50.00
CAPI 2311 2120.00	2 Semester Credit Hours 60.00
CAPI 2306 1250.00	3 Semester Credit Hours 75.00
CAPI 2308 1195.00	
CAPI 2312 1030.00	
CAPI 2313 2290.00	Physical Education
CAPI 2314 5600.00	Bowling 30.00
CAPI 2315 2465.00	Fitness Centers 20.00
CAPI 2309 2780.00	
Criminal Justice	Welding
Firearms 20.00	4 Semester Credit Hours 50.00
	5 Semester Credit Hours 60.00

FEES

LABORATORY FEE (All Laboratory Courses)	\$ 8.00
GED Testing.....	10.00
Graduation.....	15.00
Transcript/Records** (per copy)	2.00
Institutional Challenge Exam.....	30.00
Preregistration Fee	10.00
RETURNED CHECK FEE	10.00

RENT, ROOM & BOARD, AND DEPOSITS

General Property Deposit.....	10.00
Dormitory Property Deposit.....	40.00
College Housing Deposit (without pet).....	100.00
College Housing Deposit (with pet)	200.00
Campus Apartments (monthly rental)	
One-Bedroom Apartment.....	225.00
Two-Bedroom Apartment.....	260.00
Student Resident Hall Room and Board Plan (Per Semester)	
Five-Day Plan.....	783.00
Seven-Day Plan.....	883.00
Weekly Rates (Periods not included in semester plan).....	107.00
Daily Occupancy Rate (without board).....	5.00

*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.

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, 100% of the tuition will be refunded.
2. A refund of 50% of tuition will be made if the withdrawal is filed by the close of the 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 tuition refund schedule listed above.
6. Class day count begins with the first day of instruction (the first calendar day of the term) and includes all weekdays, Monday through Friday, which are not designated college holidays.

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 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 for 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 separate residence from 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 1974 as amended.

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 and the 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

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 Department 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 the 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 International Student Advisor at the Central Campus address listed in front of the catalogue.

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 Central Campus address listed in the front of the catalogue.

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 Education 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 appropriate Department Manager, permission to take challenge examinations for certain courses. An application for challenging a course must be completed and returned to the Testing Office with the appropriate non-refundable fee. The student will then coordinate with the Testing Office or department for 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 minimum of a 2.0 grade point average.

TOEFL (INSTITUTIONAL TESTING PROGRAM) - Test of English as a Foreign Language, administered to all international students except those from English speaking countries.

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. 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 1101 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 accepted transfer and/or non-traditional credit as well as remaining requirements are available from college or Military 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 a minimum of six semester hours of traditional credit, earned at 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 catalogue.

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 with a minimum 2.00 G.P.A. have been completed with Central Texas College, and the courses taken at other institutions satisfy the requirements of the Central Texas College degree program. 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 catalogue.

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 Services 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.

INTRACOLLEGIATE SPORTS

Intracollegiate 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 Intracollegiate Sports Office in the gymnasium.

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 Housing Office 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 \$40.00 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 Housing Office upon request.

CAMPUS 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 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 an outstanding junior college library. 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.

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 Registration 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 (PELL) 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 (SEOG): This grant, authorized by the Higher Education Act Amendments of 1972, is available only to those students who demonstrate financial need. The grants under the program range from \$200 to \$2,000 per academic year. Grant awards and renewals are made on the basis of demonstrated financial need and satisfactory academic progress. To be considered for the SEOG, a student must complete the Family Financial Statement from the needs analysis services of one of the central processing agencies. 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 half-time (6 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 one of the central processing agencies. This form is available in the Office of Student Financial Aid.

GOVERNMENT STUDENT LOAN (GSL): A dependent undergraduate student may borrow up to \$2,500 per academic year with an aggregate loan limit of \$12,500. An independent (self-supporting) undergraduate student may borrow up to \$3,000 per academic year with an aggregate loan limit of \$15,000.

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 needs analysis services of one of the central processing agencies. 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 one of the central processing agencies. 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 4% per annum beginning six 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 one of the central processing agencies.

GUARANTEED 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.

The interest rate is 9% per annum simple interest. The Government will pay the interest charge while the student is enrolled at least half-time. Repayment begins six 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 and Post-Vietnam Era Veterans Educational Assistance Programs.

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, signed 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.

**Note:* Students must advise the Veterans Services Office of courses enrolled in each semester.

Veterans must have all college transfer credits evaluated before the close of their first semester and must furnish an updated degree plan to Veterans Services to be eligible for continued certification.

Veterans desiring to have military or other non-traditional education or having experience applied toward degree requirements are encouraged to do so during their first semester.

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, O.L. 80-213.) Information and application for military Tuition Assistance are available through Military Education Centers.

WAR ORPHANS AND KOREAN VETERANS

Central Texas College is an approved college for those who qualify under these classifications. For further information contact the Veterans Services Office.

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 semesters are considered to be full time students. Students who register for 8 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: No student will be permitted to enroll for six academic courses or for more than 18 semester hours without the approval of the Dean of the College. The maximum load for a six-week session is eight semester hours and the maximum credit that a student can earn during the entire summer session is fourteen semester hours. The College reserves the right to limit the course load carried by any student.

MINIMUM LOAD: No minimum load is required.

NOTE: Students attending college with Financial Aid or Veterans Benefits assistance may be required to meet academic course load standards other than those 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 regularly all classes in which they have enrolled. Students are required to be in classrooms on time.

ABSENCES

Absences, for any reason, negatively affect the learning process, the individual student and the class.

When absence from class is necessary, for any reason, the student has the responsibility to arrange to make up assignments missed during the absence.

Students are required to notify instructors in advance of any absence, to retain the privilege of submitting make-up work without grade penalty.

EXCESSIVE ABSENCES:

Absences from classes, for any reason, must not exceed College standards. In general, students may be administratively withdrawn from any class with the grade of "F" "Non-Attendance", when their unexcused absences reach a total equal to 12.5% of the class hours for the course. Example: Forty-eight (48) contact hour course = 6.0 contact hours.

The following specific rules apply to absences:

1. A class meeting of 50 minutes equals 1 absence.
2. Instructors shall keep a record of class attendance.
3. An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The course will be noted as an "F" "Non-Attendance" on the roll and record book.
4. As a matter of policy, administrative excuses from classes are not provided for any reason. Regardless of the reason for 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.

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 four 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 and fourth digits indicate the generally recommended sequence in which the courses are to be taken.

Beginning with the Fall semester 1981, Central Texas College revised the course numbering system to follow a 4x4 course identification scheme. Course numbers from the 1979-1981 catalogue are shown in parenthesis, following the new course number to assist returning students and institutions accepting transfer credits from Central Texas College in identifying former courses.

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 and class syllabus.

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. Students are responsible for notifying the CTC Records Office of change of address.
- 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
	N-No Credit	
	P-Completed	
	W-Withdrawal	

Grade Notes:

"D":

Students receiving a "D" grade in prerequisite courses are advised not to enroll in succeeding courses until they complete prerequisite coursework with at least a "C" grade.

"F":

Failure may be awarded for lack of academic progress and/or failure to attend. "F" grades may not be removed with "W" or "I" grades. Students who elect to repeat a course for which they have received an "F" must re-register, pay full tuition and fees and repeat the entire course.

"I" - INCOMPLETE:

An incomplete grade may be given in those cases where the student has completed the majority of the course work but, 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 tuition and 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.

"N"- NO CREDIT:

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.

"P" - COMPLETED:

The grade of "P" is reserved for use with designated non-traditional, modular courses and will be awarded to students who have satisfactorily mastered all the modular course requirements. When used with credit granting courses, earned credit hours will be displayed on the transcript. Quality points and grade point calculation are not computed.

"W" - WITHDRAWAL:

Students who officially withdraw will be awarded the grade of "W", provided the student's attendance and academic performance are satisfactory at the time of official withdrawal.

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", "N", and "P" 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 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 90 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.

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. In a repeated course, only the last grade earned is utilized in computing the grade point average.

ACADEMIC STANDARDS

STUDENT RESPONSIBILITY

Students are expected to be aware of their grade point average. The method of 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 course 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 requirements of the local chapter may be 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 attempted 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 completion of 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 who have attempted 8 or more semester hours and who previously failed to maintain a 2.0 cumulative grade point average, or 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 and must also meet VA requirements 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 specified courses as directed 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 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 Services.

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 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.

DUE PROCESS

Further information concerning due process procedures may be found in the CTC 1981-83 Student Handbook.

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 Central Campus address listed in the front of this catalogue. 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. 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. (Also see Grade Notes: "W", page 22.)

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 Refunds, 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 semesters respectively. It is the student's responsibility to make application for the degree. Each degree candidate must earn a minimum of 12 semester hours resident 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 U.S. History.
3. Six semester hours of State & Federal Government.
4. Fourteen semester hours of foreign language or eight semester hours of foreign language and eight semester hours of science.
5. Four semester hours of physical education.
6. Psychology 1101.
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.

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 U.S. History.
3. Six semester hours of State and Federal Government.
4. Four courses of science.
5. Six semester hours of math.
6. Four semester hours of physical education.
7. Psychology 1101.

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.

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. (English language only).
2. Three semester hours of mathematics or science.
3. Three semester hours of U.S. History or U.S. Government.
4. Psychology 1101.
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 varies 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.

CERTIFICATE OF COMPLETION

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

TRANSFERABILITY OF COURSES

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

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 AT CENTRAL TEXAS COLLEGE. HOWEVER, DEVELOPMENTAL STUDIES COURSES ARE COMPUTED IN SEMESTER HOUR CREDIT, AND THE GRADE POINT AVERAGE EARNED WILL BE USED TO MEASURE SATISFACTORY PROGRESS.

WHEN ARE CERTIFICATES & DEGREES AWARDED

Central Texas College awards Certificates and Degrees in December, 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 December, 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 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 Services 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 Services. 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 student(s) with the highest grade point average and who meets all other 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 catalogue 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: ELTE 1302 - Technical Math II requires that ELTE 1301 - Technical Math I be successfully completed prior to registering for ELTE 1302.

Students who cannot schedule prerequisites must obtain prior approval to enroll in these courses from their Department 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.

TOPICAL INDEX TO PROGRAMS OF STUDY

	Curriculum Page	Course Prefix	Course Descriptions Page
AGRICULTURE			
Agriculture	34	(AGRI)	77
Animal Production	36	(FRMG)	100
Farm & Ranch Management	55	(FRMG)	100
Farm & Ranch Production	56	(FRMG)	100
Food Production	57	(FRMG)	100
Horse Management	60	(FRMG)	100
Plant Production	68	(FRMG)	100
AIR CONDITIONING			
Air Conditioning & Refrigeration	35	(AIRC)	77
Solar Energy Systems Specialist	73	(SESY)	129
Solar Energy Systems Technology	73	(SESY)	129
ART			
Art	41	(ART.)	78
Commercial Art	48	(ART.)	78
AUTOMOTIVE			
Automotive Body Repair	42	(ATBR)	80
Automotive Service & Repair	43	(AUTO)	81
Diesel Mechanics	52	(DIEM)	95
Small Gas Engine Repair	71	(SGER)	128
AVIATION			
Aviation Maintenance Technology	43	(AVMT)	82
Career Pilot	46	(CAPI)	86
BUSINESS (Also see Management)			
Business Administration	45	(BUSS)	85
Business Management	45	(MGMT)	111
CHILD DEVELOPMENT	47	(CHDV)	89
COMMUNICATIONS			
English	55	(ENGL)	99
Foreign Language	58		
French	—	(FREN)	107
German	—	(GERM)	108
Spanish	—	(SPAN)	129
Journalism	61	(JOUR)	110
Speech	74	(SPCH)	130
Theater	—	(THEA)	130
COMPUTER SCIENCE			
Computer Operator	50	(COSC)	90
Computer Science	50	(COSC)	90
Electronic Data Processing Clerk	54	(COSC)	90
CRIMINAL JUSTICE	51	(CRIJ)	93
DEVELOPMENTAL STUDIES	—	(DSOO)	95

	Curriculum Page	Course Prefix	Course Descriptions Page
EDUCATION	53		—
ELECTRONICS			
Communications Electronic Technology	49	(ELTE)	97
Computer Maintenance	49	(CMET)	90
Consumer Electronics Servicing	51	(COES) (ELTE)	93,97
ENGINEERING			
Drafting & Design	52	(DRDS)	96
Engineering	54	(ENGR)	99
FIRE PROTECTION TECHNOLOGY	56	(FPRT)	103
FINANCE & BANKING	63	(FIBA)	102
FOOD SERVICE MANAGEMENT	57	(FSMG)	105
HOTEL/MOTEL MANAGEMENT	60	(HMMG)	109
INDUSTRIAL TECHNOLOGY			
Air Conditioning & Refrigeration	35	(AIRC)	77
Automotive Body Repair	42	(ATBR)	80
Automotive Service & Repair	43	(AUTO)	81
Diesel Mechanics	52	(DIEM)	95
Maintenance Technology	61	(MTNT)	110
Small Gas Engine Repair	71	(SGER)	128
Solar Energy Systems Specialist	73	(SESY)	129
Solar Energy Systems Technician	73	(SESY)	129
Welding	76	(WELD)	133
MANAGEMENT			
Applied Management	36-40	(MGMT)	111
Business Management	45	(MGMT)	111
Food Service Management	57	(FSMG)	105
Hotel/Motel Management	60	(HMMG)	109
Mid Management	63	(MDMG)	114
with Finance & Banking Option	63	(FIBA)	102
Office Management	65	(OADM)	118
Real Estate Management	69	(REAE)	125
MATHEMATICS	62	(MATH)	113
MEDICAL			
Medical Technology	62	(BIOL) (CHEM)	44,47
Pre-Med	69	(BIOL) (CHEM)	44,47
MUSIC	64	(MUSI)	114
NURSING			
Associate Degree Nursing	41	(NURI)	117
Vocational Nursing	75	(VNUR)	117
OFFICE OCCUPATIONS			
Administrative Secretary	34	(OADM)	118
General Secretarial	59	(OADM)	118
Office Assistant	65	(OADM)	118
Office Management	65	(OADM)	118

	Curriculum Page	Course Prefix	Course Descriptions Page
PETROLEUM TECHNOLOGY	66	(PETT)	120
PHOTOGRAPHY	67	(PHOT)	122
PHYSICAL EDUCATION	68	(PYED)	123
PRINTING			
Offset Printing	66	(OPRT)	119
REAL ESTATE	69	(REAE)	125
RECREATION			
Recreation	70	(RECR)	127
Recreational Leadership	71	(RECR)	127
SCIENCE			
Biology	44	(BIOL)	84
Chemistry	47	(CHEM)	88
Geology	59	(GEOL)	107
Science	—	(ASTR) (PHYS)	80, 124
SOCIAL SCIENCE			
Social Science	72	(ANTH) (GEOG) (GOVT) (HIST) (PHIL) (PSYC) (SOCI)	78, 107 108, 108 121, 125 128
SOLAR ENERGY			
Solar Energy Systems Specialist	73	(SESY)	129
Solar Energy Systems Technology	73	(SESY)	129
TELECOMMUNICATIONS	74	(TELE)	131
WELDING	76	(WELD)	133

ADMINISTRATIVE SECRETARIAL

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
OADM	1301*	Beginning Shorthand	3	OADM	1302*	Intermediate Shorthand	3
OADM	1303*	Beginning Typewriting	3	OADM	1304*	Intermediate Typewriting	3
OADM	1305	Clerical Practice	3	OADM	1306*	Secretarial Practice	3
OADM	1307	Business Machines & Calculations	3	OADM	1308	Business Correspondence	3
ENGL	1307	Business English	3	MATH	1307	Business Mathematics	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				
			17				16

SECOND YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
OADM	2301*	Advanced Shorthand	3		OADM	2303*	Advanced Transcription	3	
OADM	2302*	Advanced Typewriting	3		OADM	2305	Bookkeeping II	3	
OADM	2304	Bookkeeping I	3		OADM	2307	Office Administration &		
BUSS	2301	Principles of Economics I	3				Procedures	3	
COSC	1301	Data Entry/Keypunch	3		COSC	1300	Computers & Society	3	
			15		ELCT*		Approved Elective	3	
									15
					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	
AGRI	1301	Animal Husbandry	3	ELCT*	Approved Agriculture		
BIOL	1401	General Biology I	4		Elective	3	
ENGL	1301	Composition & Rhetoric I	3	ELCT*	Approved Agriculture		
					Elective	3	
HIST	1301	History of the U.S. to 1877	3	BIOL	1402	General Biology II	4
MATH	1301	Intermediate Algebra	3	ENGL	1302	Composition & Rhetoric II	3
PYED		Physical Education	1	HIST	1302	History of the U.S. from 1877	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			18			17	

AGRICULTURE (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
AGRI 2301 Entomology	3	ELCT* Approved Agriculture Elective	3
CHEM 1401 General Chemistry I	4	CHEM 1402 General Chemistry II	4
GOVT 2301 State & Federal Government I	3	GOVT 2302 State & Federal Government II	3
ENGL 2301 English Literature I	3	ENGL 2302 English Literature II	3
ELCT* Approved Elective	3	ELCT* Approved Elective	3
PYED Physical Education	1	PYED Physical Education	1
	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
AIRC 1400 Air Conditioning & Refrigeration, Theory & Application	4	AIRC 1402 Household Refrigeration	4
AIRC 1401 Basic Electrical Circuits	4	AIRC 1403 Heating Systems	4
WELD 1401 Beginning Gas Welding	4	AIRC 1404 Residential Air Conditioning	4
MGMT 1302 Safety (OSHA)	3	TMTH 1300 Technical Math I	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		16
	17		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
AIRC 2401 Control Theory and Application	4	AIRC 2403 Commercial Air Conditioning Systems	4
AIRC 2402 Commercial Refrigeration Systems	4	AUTO 1405 Automotive Air Conditioning	4
ELCT* Approved Elective	3	ENGL 1309 Communications Skills	3
BUSS 1301 Introduction to Business	3	ELCT* Approved Elective	4
DRDS 1400 Fundamentals of Drafting	4		15
	18	TOTAL HOURS	66

*SESY 1301, SESY 1401, MGMT 1306, MTNT 1401, MTNT 2403, DRDS 1303, or other elective approved by the Department Manager.

ANIMAL PRODUCTION

A One-Year Certificate of Completion

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
FRMG	2307	Livestock Production	3	FRMG	1302	Range Management	3
FRMG	1304	Animal Health	3	AGRI	1303	Poultry Science	3
FRMG	2303	Feeds & Feeding	3	FRMG	2306	Livestock Marketing	3
AGRI	1301	Animal Husbandry	3	FRMG	2401	Food Preservation	4
AGRI	2301	Entomology	3				13
PSYC	1101	College Orientation	1				
			16				
						TOTAL HOURS	29

APPLIED MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
BUSS	1302	Consumer Economics	3	BUSS	2306	Personal Finance	3
ELCT*		Computer Science		MATH	1307	Business Mathematics	3
		Elective	3	OADM	1308	Business Correspondence	3
MGMT	1305	Introduction to Man- agement	3	SPCH	1301	Fundamentals of Speech	3
MGMT	1306	Human Relations	3	ELCT*		Approved Elective	3
ENGL	1307	Business English	3	PYED		Physical Education	1
PYED		Physical Education	1				16
PSYC	1101	College Orientation	1				
			17				

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
BUSS	2303	Principles of Accounting I	3	HIST	2301	International Relations & U.S. Foreign Policy	3
MGMT	2302	Personnel Management	3				
MGMT	2309	Supervision	3	MGMT	2303	Law & Legal Assistance	3
SPCH	2303	Business Speech	3	MGMT	2310	Personnel Counseling	3
ELCT*		Approved Elective	3	ELCT*		Approved Elective	3
PYED		Physical Education	1	ELCT*		Approved Elective	3
			16	PYED		Physical Education	1
							16
						TOTAL HOURS	65

*BUSS 1301, BUSS 2304, MGMT 1301, MGMT 1304, MGMT 1303, MGMT 1307, MGMT 1302, REAE 1301, MGMT 1309, MGMT 2301, MGMT 2312, REAE 2304, MGMT 2304, MGMT 2305, MGMT 2306, REAE 2305, OADM 2307, SOCI 2308, COSC 1300, COSC 1403.

APPLIED MANAGEMENT WITH TECHNICAL OPTIONS

A Two-Year Associate in Applied Science Degree

OPTION I. AUTOMOTIVE TUNE—UP

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MGMT 1302 Safety (OSHA)	3	MGMT 1304 Work Organization	3
MGMT 1305 Introduction to Management	3	MGMT 1306 Human Relations	3
AUTO 1401 Internal Combustion Engine Fundamentals	4	AUTO 1404 Fuel Systems	4
AUTO 1402 Automotive Electrical Systems	4	AUTO 2406 Engine Diagnosis & Emission Control	4
BUSS 1301 Introduction to Business	3	MATH 1307 Business Mathematics	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		18
	19		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MGMT 1307 Insurance	3	MGMT 1309 Income Tax	3
ENGL 1307 Business English	3	MGMT 2305 Business Law I	3
OADM 2304 Bookkeeping I	3	AUTO 2402 Shop Organization & Management	4
SPCH 2303 Business Speech	3	OADM 2305 Bookkeeping II	3
ELCT* Approved Elective	3-4	ELCT* Approved Elective	3-4
PYED Physical Education	1	PYED Physical Education	1
	16-17		17-18
		TOTAL HOURS	70-72

*Approved Electives: BUSS 2301, BUSS 2302, BUSS 2306, ELTE 1301, MATH 1300, MGMT 2300, MGMT 2301, MGMT 2306, MTNT 1401, MTNT 1402, MTNT 1403, MTNT 1404, MTNT 2403, MTNT 2404, OADM 1303, OADM 1304, OADM 1308, OADM 1309, TMTH 1300.

OPTION 2. ELECTRONICS SERVICING

FIRST YEAR

MGMT 1302 Safety (OSHA)	3	MGMT 1304 Work Organization	3
MGMT 1305 Introduction to Management	3	MGMT 1306 Human Relations	3
BUSS 1301 Introduction to Business	3	ELTE 1403 Electronics Circuits	4
PYED Physical Education	1	ELTE 1502 Intermediate Electricity for Electronics	5
ELTE 1501 Basic Electricity for Electronics	5	ENGL 1309 Communications Skills	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
	16		19

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MGMT 1307 Insurance	3	MGMT 1309 Income Tax	3
ELTE 1404 Communications Circuits I	4	MGMT 2305 Business Law I	3
ELTE 1503 Advanced Electricity for Electronics	5	OADM 2305 Bookkeeping II	3
OADM 2304 Bookkeeping I	3	ELCT* Approved Elective	3
SPCH 2303 Business Speech	3	PYED Physical Education	1
PYED Physical Education	1	ELTE 2407 Communications Circuits II	4
	19		17
		TOTAL HOURS	71

*Approved Electives: BUSS 2301, BUSS 2302, BUS 2306, ELTE 1301, MATH 1300, MGMT 2300, MGMT 2301, MGMT 2306, MTNT 1401, MTNT 1402, MTNT 1403, MTNT 1404, MTNT 2403, MTNT 2404, OADM 1303, OADM 1304, OADM 1308, OADM 1309, TMTH 1300.

OPTION 3. FOOD SERVICE OPERATIONS

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 1302	Safety (OSHA)	3	MGMT 1304	Work Organization	3
MGMT 1305	Introduction to Management	3	MGMT 1306	Human Relations	3
HMMG 1300	Food & Beverage Management	3	FSMG 1302	Nutrition	3
FSMG 1401	Food Preparation & Serving	4	FSMG 1303	Sanitation & Safety	3
BUSS 1301	Introduction to Business	3	MATH 1307	Business Mathematics	3
PYED	Physical Education	1	PYED	Physical Education	1
PSYC 1101	College Orientation	1			16
		18			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 1307	Insurance	3	MGMT 1309	Income Tax	3
FSMG 1305	Food Purchasing	3	MGMT 2305	Business Law I	3
ENGL 1307	Business English	3	FSMG 1306	Menu Planning	3
OADM 2304	Bookkeeping I	3	OADM 2305	Bookkeeping II	3
SPCH 2303	Business Speech	3	ELCT*	Approved Elective	3-4
PYED	Physical Education	1	PYED	Physical Education	1
		16			16-17
					66-67
				TOTAL HOURS	

*Approved Electives: BUSS 2301, BUSS 2302, BUSS 2306, ELTE 1301, MATH 1300, MGMT 2300, MGMT 2301, MGMT 2306, MTNT 1401, MTNT 1402, MTNT 1403, MTNT 1404, MTNT 2403, MTNT 2404, OADM 1303, OADM 1304, OADM 1308, OADM 1309, TMTH 1300.

OPTION 4. COMPUTER SCIENCE

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 1305	Introduction to Management	3	MGMT 1304	Work Organization	3
COSC 1405	Introduction to Systems Analysis	4	MGMT 1301	Organization and Management	3
COSC 1403	Introduction to Computer Science and Computer Programming	4	COSC 1407	RPG Programming	4
MATH*	Mathematics Option	3	COSC 1408	Computer Organization and Architecture	4
ENGL 1309	Communications Skills	3	SPCH 1301	Fundamentals of Speech	3
PYED	Physical Education	1	PYED	Physical Education	1
PSYC 1101	College Orientation	1			18
		19			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 2303	Law & Legal Assistance	3	MGMT 2312	Fundamentals of Systems Management	3
MGMT 2302	Personnel Management	3	COSC 1408	Conversational Languages - Basic	4
BUSS 2303	Principles of Accounting I	3	BUSS 2304	Principles of Accounting II	3
COSC 1404	COBOL Programming	4	ELCT*	Approved Elective	3
COSC 2301	Introduction to Computer Center Management	3	ELCT*	Approved Elective	4
		16			17
		38			
				TOTAL HOURS	70

OPTION 4. COMPUTER SCIENCE (cont'd)

*MATH 1301, 1307, or 1308.

**COSC 2302 or COSC 2406.

***Approved Electives: COSC 1304, COSC 1401, MGMT 1306, MGMT 1307, MGMT 1309, MGMT 2301, MGMT 2305, MGMT 2309, BUSS 1302, OADM 2304, OADM 2305.

OPTION 5. HOME ENTERTAINMENT SERVICING FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 1305	Introduction to Management	3	MGMT 1304	Work Organization	3
MGMT 1302	Safety (OSHA)	3	MGMT 1306	Human Relations	3
ELTE 1301	Technical Mathematics	3	CMET 1401	Digital Circuits	4
ELTE 1400	Basic Electricity	4	ELTE 1403	Electronics Circuits I	4
BUSS 1301	Introduction to Business	3	ENGL 1309	Communications Skills	3
PYED	Physical Education	1	PYED	Physical Education	1
PSYC 1101	College Orientation	1			18
		18			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 1307	Insurance	3	MGMT 1309	Income Tax	3
ELTE 2404	Electronics Circuits II	4	MGMT 2305	Business Law I	3
COES 2408	CATV & Audio Systems	4	COES 1409	Television Theory & Servicing	4
OADM 2304	Bookkeeping I	3	OADM 2305	Bookkeeping II	3
SPCH 2303	Business Speech	3	ELCT*	Approved Elective	3-4
PYED	Physical Education	1	PYED	Physical Education	1
		18			17-18
				TOTAL HOURS	71-72

*Approved Electives: BUSS 2301, BUSS 2302, BUSS 2306, ELTE 1301, MATH 1300, MGMT 2300, MGMT 2301, MGMT 2306, MTNT 1401, MTNT 1402, MTNT 1403, MTNT 1404, MTNT 2403, MTNT 2404, OADM 1303, OADM 1304, OADM 1308, OADM 1309, TMTH 1300.

OPTION 6. RESIDENTIAL AIR CONDITIONING SERVICING

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 1302	Safety (OSHA)	3	MGMT 1304	Work Organization	3
MGMT 1305	Introduction to Management	3	MGMT 1306	Human Relations	3
AIRC 1400	Air Conditioning & Refrigeration Theory & Application	4	AIRC 1402	Household Refrigeration Systems	4
AIRC 1401	Basic Electrical Circuits	4	AIRC 1403	Heating Systems	4
BUSS 1301	Introduction to Business	3	MATH 1307	Business Mathematics	3
PYED	Physical Education	1	PYED	Physical Education	1
PSYC 1101	College Orientation	1			18
		19			

OPTION 6. RESIDENTIAL AIR CONDITIONING SERVICING (cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
MGMT 1307	Insurance		3	MGMT 1309	Income Tax		3
ENGL 1307	Business English		3	MGMT 2305	Business Law I		3
OADM 2304	Bookkeeping I		3	AIRC 1404	Residential Air Condi-		
SPCH 2303	Business Speech		3		tioning		4
ELCT*	Approved Elective	3-4		OADM 2305	Bookkeeping II		3
PYED	Physical Education	1		ELCT*	Approved Elective	3-4	
		16-17		PYED	Physical Education	1	
						17-18	
					TOTAL HOURS	70-72	

*Approved Electives: BUSS 2301, BUSS 2302, BUSS 2306, ELTE 1301, MATH 1300, MGMT 2300, MGMT 2301, MGMT 2306, MTNT 1401, MTNT 1402, MTNT 1403, MTNT 1404, MTNT 2403, MTNT 2404, OADM 1304, OADM 1308, OADM 1303, OADM 1309, TMTH 1300.

OPTION 7. SMALL ENGINE SERVICING

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
MGMT 1302	Safety (OSHA)		3	MGMT 1304	Work Organization		3
MGMT 1305	Introduction to Management		3	MGMT 1306	Human Relations		3
SGER 1401	Gas Engine Fundamentals		4	SGER 1403	Shop Practices		4
SGER 1402	Ignition Systems		4	SGER 1404	Carburetion, Fuel & Lubricating Systems		4
BUSS 1301	Introduction to Business		3				
PYED	Physical Education		1	MATH 1307	Business Mathematics		3
PSYC 1101	College Orientation		1	PYED	Physical Education		1
			19				18

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
MGMT	1307	Insurance	3	MGMT	1309	Income Tax	3
SGER	1405	Motorcycle Engine Ser-	4	MGMT	2305	Business Law I	3
		vice		SGER	1406	Lawn Care Equipment	4
ENGL	1307	Business English	3	OADM	2305	Bookkeeping II	3
OADM	2304	Bookkeeping I	3	ELCT*		Approved Elective	4
SPCH	2303	Business Speech	3	PYED		Physical Education	1
PYED		Physical Education	1				18
			17				
						TOTAL HOURS	72

*Approved Electives: BUSS 1301, BUSS 2302, BUSS 2306, ELTE 1301, MATH 1300, MGMT 2300, MGMT 2301, MGMT 2306, MTNT 1401, MTNT 1402, MTNT 1403, MTNT 1404, MTNT 2403, MTNT 2404, OADM 1303, OADM 1304, OADM 1308, OADM 1309, TMTH 1300.

ART

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
LANG		Beginning French, German, or Spanish I	4	LANG		Beginning French, German or Spanish II	4
ART.*		(Two courses)	6	ART.*		(Two courses)	6
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				17
			18				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
ENGL	2301	English Literature I	3	ENGL	2302	English Literature II	3
GOVT	2301	State & Federal Gov-		GOVT	2302	State & Federal Gov-	
		ernment I	3			ernment II	3
ART.*		{Two courses}	6	ART.*		{Two courses}	6
LANG		Intermediate Language or		LANG		Intermediate Language or	
		Science	3-4			Science	3-4
PYED		Physical Education	1	PYED		Physical Education	1
			16-17				16-17
						Total Hours	67-69

*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			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
NURI	1901	Fundamentals of Nurs- ing	9	NURI	1902	Medical-Surgical Nurs- ing I	9
BIOL	1405	Human Anatomy	4	BIOL	1406	Human Physiology	4
PSYC	2301	Introduction to Psy- chology	3	PSYC	2303	Child Growth & Devel- opment	3
PSYC	1101	College Orientation	1				16
			17				

Summer Semester Subject

ENGL 1301	Composition & Rhetoric I	3
SOCI 2301	Introduction to Sociology	3
		6

ASSOCIATE DEGREE NURSING (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
NURI 1903 Maternal & Child Health Nursing	9	NURI 2901 Medical-Surgical Nursing II	9
BIOL 2404 Microbiology	4	NURI 2101 Nursing Trends Seminar	1
ENGL 1302 Composition & Rhetoric II	3		10
	16		
Summer Semester Subject			
NURI 2301 Psychiatric Nursing	3		
ELCT Approved Social Science Elective	3		
	6		
TOTAL HOURS			71

NOTICE: 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
ATBR 1401 Shop Practices	4	ATBR 1404 Frame Repair Alignment	4
ATBR 1402 Body and Frame Construction	4	ATBR 1406 Auto Body Repair	4
		AUTO 2405 Steering & Suspension Systems	4
ATBR 1403 Roughing & Alignment	4	TMTH 1300 Technical Mathematics I	3
ATBR 1405 Auto Body Welding	4	ENGL 1309 Communications Skills	3
PYED Physical Education	1		18
PSYC 1101 College Orientation	1		
	16		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
ATBR 2400 Major Vehicle Damage Repair	4	ATBR 2402 Glass, Electrical & Power Accessory Serv.	4
ATBR 2401 Upholstery & Vinyl Top Repair	4	ATBR 2405 Management & Estimating	4
ATBR 2403 Painting & Refinishing	4	ELCT* Approved Elective	3-4
AUTO 1402 Automotive Electrical Systems	4	MATH 1307 Business Math	3
PYED Physical Education	1		14-15
	17		
TOTAL HOURS			67-68

*AUTO 1405, AUTO 1407, AUTO 2401, WELD 1404, MGMT 1305, BUSS 1301.

AUTOMOTIVE SERVICE & REPAIR

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
AUTO	1400	Shop Practices & Safety	4		AUTO	1403	Internal Combustion		
AUTO	1401	Internal Combustion					Engine Service	4	
		Engine Fundamentals	4		AUTO	1404	Fuel Systems	4	
AUTO	1402	Automotive Electrical			AUTO	1407	Brake Systems	4	
		System	4		ELCT*		Approved Elective	3-4	
TMTH	1300	Technical Mathematics I	3		PYED		Physical Education	1	
PYED		Physical Education	1						16-17
PSYC	1101	College Orientation	1						
			17						

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
AUTO	2405	Steering & Suspension Systems	4	AUTO	2406	Engine Diagnosis & Emission Control	4
AUTO	2401	Standard Transmissions & Differentials	4	AUTO	2403	Automatic Transmissions	4
AUTO	2404	Ignition, Starting & Charging Systems	4	AUTO	1405	Automotive Air Conditioning	4
ELCT*		Approved Elective	3-4	ELCT**		Diesel Elective	4
ENGL	1309	Communications Skills	3				16
			18-19				

TOTAL HOURS 67-69

*WELD 1401, MGMT 1305, or other electives approved by the Department Manager.

**DIEM 1403, DIEM 2401.

AVIATION MAINTENANCE TECHNOLOGY

Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
AVMT	1301	Maintenance Publications-G	3	AVMT	1303	Aircraft Drafting-G	3
AVMT	1302	Weight & Balance-G	3	AVMT	1304	Airframe Materials &	
AVMT	1401	Basic Aircraft Electricity-G	4			Corrosion Control-G	3
ENGL	1309	Communications Skills	3	AVMT	2401	Aircraft Finishes-A	4
PHYS	1403	Survey of Physics	4	AVMT	2501	Sheet Metal Structures-A	5
PYED		Physical Education	1	ELCT		Approved Elective	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			19				19

Summer Semester Subject

First Semester Subject		Credit Hours
AVMT 2403	Airframe Inspection-A	4
AVMT 2404	Aircraft Fuel Systems-A	4
AVMT 2502	Hydraulics & Pneumatics-A	5
		13

AVIATION MAINTENANCE TECHNOLOGY (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
AVMT 2405 Aircraft Instruments Systems-A	4	AVMT 2407 Engine Lubrication & Cooling Systems-P	4
AVMT 2406 Engine Electrical Systems-P	4	AVMT 2504 Powerplant Maintenance Reciprocating Engines-P	5
AVMT 2503 Aircraft Electrical Systems-A	5	AVMT 2507 Powerplant Maintenance Turbine Engines-P	5
AVMT 2505 Engine Fuel Systems	5	AVMT 2506 Aircraft Propellers-P	5
	18		19
		TOTAL HOURS	86

AVMT courses are designated as follows: G-General, A-Airframe, P-Powerplant.

BIOLOGY

A Two-Year Associate in Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
BIOL 1401 General Biology I	4	BIOL 1402 General Biology II	4
CHEM 1401 General Chemistry I	4	CHEM 1402 General Chemistry II	4
HIST 1301 History of the U. S. to 1877	3	HIST 1302 History of the U. S. from 1877	3
ENGL 1301 Composition & Rhetoric I	3	ENGL 1302 Composition & Rhetoric II	3
MATH 1303 Trigonometry	3	MATH 1304 Analytic Geometry	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		18
	19		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
BIOL 2401 Invertebrate Zoology	4	BIOL 2402 Vertebrate Zoology	4
GEOL 1401 Physical Geology	4	GEOL 1402 Historical Geology	4
GOVT 2301 State & Federal Government I	3	GOVT 2302 State & Federal Government II	3
ENGL 2301 English Literature I	3	ENGL 2302 English Literature II	3
PYED Physical Education	1	PYED Physical Education	1
	15		15
		TOTAL HOURS	87

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
SCIE	Biology Chemistry, Physics or Geology	4	SCIE	Biology, Chemistry, Physics or Geology	4
BUSS 2301	Principles of Economics I	3	BUSS 2302	Principles of Economics II	3
ENGL 1301	Composition & Rhetoric I	3	ENGL 1302	Composition & Rhetoric II	3
MATH 1305*	Finite Mathematics I	3	MATH 1306*	Finite Mathematics II	3
PSYC 2301	Introduction to Psychology	3	BUSS 1301	Introduction to Business	3
PYED	Physical Education	1	PYED	Physical Education	1
					17
PSYC 1101	College Orientation	1			
		18			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
HIST 1301	History of the U.S. to 1877	3	BUSS 2304	Principles of Accounting II	3
BUSS 2303	Principles of Accounting I	3	ENGL 2302	English Literature II	3
ENGL 2301	English Literature I	3	GOVT 2302	State & Federal Government II	3
GOVT 2301	State & Federal Government I	3	HIST 1302	History of the U. S. from 1877	3
ELCT	Approved Elective	3	SPCH 1301	Fundamentals of Speech or	
PYED	Physical Education	1	SPCH 2303	Business Speech	3
		16	PYED	Physical Education	1
					16
					67

*Math 2301 (Calculus I) and Math 2302 (Calculus II) may be substituted for Math 1305 and Math 1306 if the student is going to enter such degree programs as actuarial science, business statistics, industrial management, or 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 1304	Work Organization	3	MGMT 2302	Personnel Management	3
MGMT 1305	Introduction to Management	3	MGMT 2309	Supervision	3
MGMT 1306	Human Relations	3	ELCT*	Approved BUSS/MGMT/OADM or other	
BUSS 1301	Introduction to Business	3		elective	3
ELCT	Approved Elective	3	OADM 1309*	Business Machines & Calculations	3
PYED	Physical Education	1		SPCH 1301 or 2303	3
PSYC 1101	College Orientation	1	SPCH	SPCH 1301 or 2303	3
		17	PYED	Physical Education	1
					16

BUSINESS MANAGEMENT (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MGMT 2301 Marketing Principles	3	BUSS 2302 Principles of Economics II	3
BUSS 2301 Principles of Economics I	3	BUSS 2304 Principles of Accounting II or	
BUSS 2303 Principles of Accounting I or		OADM 2305 Bookkeeping II	3
OADM 2304 Bookkeeping I	3	ELCT* Approved BUSS/MGMT/	
ELCT* Approved BUSS/MGMT/		OADM or other elective	3
OADM Elective	3	OADM 2307 Office Administration &	
COSC ELCT	3	Procedures	3
	15	ELCT Approved Elective	3
			15
		TOTAL HOURS	63

*Approved BUSS/MGMT/OADM or other electives must be approved by the Department Manager. Mathematics elective may be substituted for OADM 1309 with approval of the Department Manager.

CAREER PILOT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CAPI 1301 Aircraft Science	3	CAPI 1302 Propulsion Systems	3
CAPI 1303 Air Navigation	3	CAPI 1304 Intermediate Flight	3
CAPI 1300 Basic Flight	3	CAPI 1306 Meteorology	3
ENGL* App'd Communication		CAPI 1305 Advanced Air Navigation	3
Elective	3	ENGL* App'd Communications	
MATH Approved Mathematics		Elective	3
Elective	3	PYED Physical Education	1
PYED Physical Education	1		16
PSYC 1101 College Orientation	1		
	17		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CAPI 2301 Aerodynamics	3	CAPI 2303 Air Transportation	3
CAPI 2304***Advanced Flight	3	CAPI 2307 Aviation Radio Systems	3
CAPI 2300 Commercial Aviation	3	CAPI 2305***Commercial Flight	3
ELCT** Approved Elective	3	ELCT** Approved Elective	3
PHYS 1403 Survey of Physics	4	ELCT** Approved Elective	3
	16		15
		TOTAL HOURS	64

*Approved Communication Electives: Students in a four-year program should take ENGL 1301 the first semester and ENGL 1302 the second semester. Students in the Associate Degree Program may take ENGL 1301, ENGL 1309, ENGL 2309, ENGL 1302 (if qualified), or SPCH 1301.

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

***CAPI 2310 and CAPI 2311 are substitutes for CAPI 2304 and CAPI 2305 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	1401	General Chemistry I	4	CHEM	1402	General Chemistry II	4
MATH	1303*	Trigonometry	3	MATH	1304	Analytic Geometry	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
PYED		Physical Education	1	PSYC	2301	Introduction to Psychology	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			15				17

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
CHEM	2401	Organic Chemistry I	4	CHEM	2402	Organic Chemistry II	4
MATH	2301	Calculus I	3	PHYS	2402	Modern Physics II	4
GOVT	2301	State & Federal Gov- ernment I	3	GOVT	2302	State & Federal Gov- ernment II	3
ENGL	2301	English Literature I	3	ENGL	2302	English Literature II	3
PHYS	2401	Modern Physics I	4	MATH	2302	Calculus II	3
PYED		Physical Education	1	PYED		Physical Education	1
			18				18
				TOTAL HOURS			68

*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	1301	Introduction to Child Development	3	CHDV	1302	Infant and Toddler Care	3
CHDV	1401	Learning Programs	4	CHDV	1304	Developmental Language	3
CHDV	1403	Creative Expression	4	CHDV	1305	Instructional Aids	3
ENGL	1309	Communications Skills	3	PSYC	2303	Child Growth and Development	3
PYED		Physical Education	1	SPCH	1301	Fundamentals of Speech	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			16				16

CHILD DEVELOPMENT (cont'd)

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject		Credit Hours
CHDV 2301	The Exceptional Child		3	CHDV 2302	Parent-Child Relationship	3
CHDV 2601	Learning Theories Seminar and Practicum		6	CHDV 2401	Pre-School Center Management	4
GOVT 2301	State & Federal Government I		3	CHDV 2602	Special Projects	6
SOCI 2301	Introduction to Sociology		3	GOVT 2302	State & Federal Government II	3
ELCT	Approved Elective		3			16
			18			
					TOTAL HOURS	66

*ENGL 1301 may be substituted for ENGL 1309. Approved electives are SOCI 2306, BUSS 1301, MGMT 1305, FSMG 1306, 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 1301	Composition & Rhetoric I		3	ART. 1302	Freehand Drawing II	3
ART. 1301	Freehand Drawing I		3	ART. 1304	Creative Design II	3
ART. 1303	Creative Design I		3	HIST 1302	History of the U.S. from 1877	3
HIST 1301	History of the U.S. to 1877		3	ART. 1309	Printing for Advertising Art	3
ENGR 1301	Engineering Graphics		3	ENGL 1302	Composition & Rhetoric II	3
PYED	Physical Education		1	PYED	Physical Education	1
PSYC 1101	College Orientation		1			16
			17			

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject		Credit Hours
ART. 1305	Figure Drawing I		3	PHOT 1301	Intro. to Photography	3
ART. 2305	Advertising Art I		3	ART. 2306	Advertising Art II	3
ART. 2301	Graphic Media		3	ELCT*	Approved Elective	3
ELCT*	Approved Elective		3	ENGL 2302	English Literature II	3
ENGL 2301	English Literature I		3	GOVT 2302	State & Federal Government II	3
PYED	Physical Education		1	PYED	Physical Education	1
			16			16
					TOTAL HOURS	65

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

COMMUNICATIONS ELECTRONICS TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
ELTE 1301	Technical Mathematics I 3	ELTE 1302	Technical Mathematics II 3
ELTE 1400	Basic Electricity 4	ELTE 1403	Electronics Circuits I 4
CMET 1400	Electronics & Computer Skills 4	ELTE 1404	Communications Circuits I 4
CMET 1401	Digital Circuits 4	ENGR 1301	Engineering Graphics 3
PYED	Physical Education 1	ENGL*	Approved English 3
PSYC 1101	College Orientation 1		
	17		17

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
ELTE 2404	Electronics Circuits II 4	ELTE 2403	Special Intensive Study 4
COES 1409	Television Theory & Servicing 4	ELTE 2407	Communications Circuits II 4
COES 2402	Radio Systems 4	CMET 2401	Microprocessors & Microcomputers 4
ELCT**	Approved Technical Elective 4	ELCT**	Approved Technical Elective 3-4
PYED	Physical Education 1	ENGL*	Approved English 3
	17		19
		TOTAL HOURS	69-70

*ENGL 1301, ENGL 1309, ENGL 2309.

**ELTE 2301, ELTE 2406, ELTE 2409.

The Department Manager may substitute ELTE 1303 for CMET 1400 and ELTE 2402 for CMET 2406.

COMPUTER ELECTRONICS TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CMET 1400	Electronics & Computer Skills 4	CMET 1403	Computer Systems & Operational Programming 4
CMET 1401	Digital Circuits 4	ELTE 1302	Technical Mathematics II 3
ELTE 1301	Technical Mathematics I 3	ELTE 1403	Electronics Circuits I 4
ELTE 1400	Basic Electricity 4	ENGL*	Approved English 3
PYED	Physical Education 1	ELCT***	Approved Elective 3
PSYC 1101	College Orientation 1	PYED	Physical Education 1
	17		18

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
CMET 2402	Computer Circuit Analysis 4	CMET 2401	Microprocessors & Microcomputers 4
ELTE 2404	Electronics Circuits II 4	CMET 2404	Computer System Diagnosis & Maintenance 4
COES 1409	Television Theory & Servicing 4	ELTE 2403	Special Intensive Study 4
ELCT**	Approved Technical Elective 4	ENGL*	Approved English 3
	16	ELCT**	Approved Technical Elective 3
			18

*ENGL 1301, ENGL 1309, ENGL 2309.

ELTE 2406, ELTE 2409, or CMET 2403.

***ENGR 1301, PHYS 1401.

The Department Manager may substitute ELTE 1303 for CMET 1400 and ELTE 2402 for CMET 2406.

TOTAL HOURS

69

COMPUTER OPERATOR

A One-Year Certificate of Completion

First Semester			Credit Hours	Second Semester			Credit Hours
Subject				Subject			
COSC	1401	Introduction to Computer Operations and Library Management	4	COSC	1304	Computer Center Operations	3
COSC	1403	Intro. to Computer Science & Computer Programming	4	COSC**		Programming Elective	4
COSC	1405	Introduction to Systems Analysis	4	COSC	1402	Advanced Operations Lab	4
OADM	2304	Bookkeeping I	3	COSC	1406	Computer Organization and Architecture	4
ENGL	1309	Communications Skills	3	BUSS	1301	Introduction to Business	3
PSYC	1101	College Orientation	1				18
			19				
TOTAL HOURS							37

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

**Electives must be approved by the Department Manager.

COMPUTER SCIENCE

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit Hours	Second Semester			Credit Hours
Subject				Subject			
COSC	1403	Introduction to Computer Science & Computer Programming	4	COSC	1404	COBOL Programming	4
COSC	1405	Introduction to Systems Analysis	4	COSC	1406	Computer Organization & Architecture	4
ENGL	1301	Composition & Rhetoric I	3	ELCT*		Approved Elective	3
MATH**		Mathematics Option	3	ENGL		ENGL 1302, 1309, SPCH 2303, 3 or ENGL 2309	3
PYED		Physical Education	1	MATH**		Mathematics Option	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			16				18

SECOND YEAR

First Semester			Credit Hours	Second Semester			Credit Hours
Subject				Subject			
COSC	2401	Advanced COBOL	4	COSC	2403	Introduction to Operating Systems & Job Control Language	4
COSC	2404	Assembler Language Programming	4	COSC	2402	Systems Analysis	4
ELCT*		Approved Elective	3	ELCT*		Approved Elective	3
BUSS	2303	Principles of Accounting I	3	BUSS	2304	Principles of Accounting II	3
GOVT		GOVT 2301 or 2302	3	ELCT*		Approved Elective	3
			17				17
TOTAL HOURS							68

*Electives must be approved by the Department Manager.

**Math option, any two of the following: MATH 1301, 1308, 1305, 1306.

CONSUMER ELECTRONICS SERVICING

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit Hours	Second Semester				Credit Hours
Subject					Subject				
ELTE	1301	Technical Mathematics I		3	ELTE	1302	Technical Mathematics II		3
ELTE	1400	Basic Electricity		4	ELTE	1403	Electronics Circuits I		4
CMET	1400	Electronics & Computer Skills		4	COES	2408	CATV & Audio Distribution Systems		4
CMET	1401	Digital Circuits		4	BUSS	1301	Introduction to Business		3
PYED		Physical Education		1	ENGL*		Approved English		3
PSYC	1101	College Orientation		1					17
				17					

SECOND YEAR

First Semester				Credit Hours	Second Semester				Credit Hours
Subject					Subject				
COES	1409	Television Theory and Servicing		4	CMET	2401	Microprocessors & Microcomputers		4
COES	2402	Radio Systems		4	ELTE	2403	Special Intensive Study		4
ELTE	2404	Electronics Circuits II		4	COES	2409	Advanced TV Servicing		4
ELCT**		Approved Technical Elective		4	ELCT**		Approved Technical Elective		3
PYED		Physical Education		1	ENGL*		Approved English		3
				17					18
									TOTAL HOURS
									69

*ENGL 1301, ENGL 1309, ENGL 2309.

**ELTE 2406, ELTE 2408, ELTE 2409, CMET 2401.

The Department Manager may substitute ELTE 1303 for CMET 1400 and ELTE 2402 for CMET 2406.

CRIMINAL JUSTICE

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit Hours	Second Semester				Credit Hours
Subject					Subject				
CRIJ	1301	Introduction to Criminal Justice		3	CRIJ	1201	Defensive Tactics		2
CRIJ	1302	Criminal Investigation		3	CRIJ	1307	Police-Community Relations		3
CRIJ	1303	Legal Aspects of Law Enforcement		3	CRIJ	1308	Police Role in Crime & Delinquency		3
CRIJ	1304	Criminal Procedures and Evidence		3	CRIJ	1309	Police Organization & Administration		3
ENGL	1301	Composition and Rhetoric I		3	SOCI	2301	Introduction to Sociology		3
PYED	2108	Physical Conditioning		1	ENGL	1302	Composition and Rhetoric II		3
PSYC	1101	College Orientation		1					17
				17					

SECOND YEAR

First Semester				Credit Hours	Second Semester				Credit Hours
Subject					Subject				
CRIJ	2201	Firearms		2	CRIJ	2308	Patrol Administration		3
CRIJ	2304	Juvenile Procedures		3	SPCH	2303	Business Speech		3
PYED	2302	Safety and First Aid		3	ELCT*		Criminal Justice Elective		3
GOVT	2301	State & Federal Government I or II		3	ELCT		Approved Elective		3
PSYC	2301	Introduction to Psychology		3	ELCT		Approved Elective		3
ELCT*		Criminal Justice Elective		3					15
				17					
									TOTAL HOURS
									66

CRIMINAL JUSTICE (cont'd)

Students receive a certificate of competency upon satisfactory completion of the core curriculum: CRIJ 1301, 1302, 1303, 1304, 1201, 1307, 1308, 1309, 2201, and PYED 2302.

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

Patrol/Traffic Option: CRIJ 1305, CRIJ 2303, CRIJ 2306, CRIJ 2309.

Correctional/Courts Option: CRIJ 1306, CRIJ 2301, CRIJ 2307, CRIJ 2310.

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
AUTO 1400 Shop Practices & Safety	4	DIEM 1403 Fuel & Injector Systems	4
DIEM 1401 Diesel Engine Fundamentals	4	DIEM 1402 Diesel Engine Service	4
ENGL 1309 Communications Skills	3	AUTO 1407 Brake Systems	4
TMTH 1300 Technical Mathematics I	3	DIEM 1404 Standard Transmissions & Differential	4
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		17
	16		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
DIEM 2400 Hydraulics & Steering Systems	4	DIEM 2404 Diesel Automatic Power Trains	4
DIEM 2401 Diesel Engine Auxiliary Systems	4	DIEM 2405 Advanced Diesel Engine Service	4
DIEM 2402 Diesel Starting & Charging Systems	4	MGMT 1306 Human Relations	3
DIEM 2403 Diesel Engine Overhaul	4	ELCT* Approved Elective	4
	16	WELD 1401 Beginning Gas Welding	4
		TOTAL HOURS	68

*WELD 1402, AUTO 1405, AUTO 2406.

DRAFTING & DESIGN

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
ENGR 1301 Engineering Graphics	3	DRDS 1403 Machine Drawing	4
DRDS 1401 Pictorial Drafting	4	ENGR 1302 Descriptive Geometry	3
DRDS 1402 Technical Illustration	4	DRDS 1404 Structural Drafting	4
TMTH 1300 Technical Mathematics I	3	ENGL* Approved English	3
PYED Physical Education	1	TMTH 1301 Technical Mathematics II	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
	16		18

DRAFTING & DESIGN (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
DRDS 2401 Pipe Drafting	4	DRDS 2405 Topographic Drafting	4
DRDS 2402 Architectural Drafting	4	DRDS 2406 Industrial Practice	4
DRDS 2403 Electronic Drafting	4	DRDS 2404 Principles of Design	4
ELCT** Approved Elective	3-4	ELCT** Approved Elective	3-4
ENGL* Approved English	3		15-16
	18-19		
		TOTAL HOURS	67-69

*Approved communication electives: ENGL 1301, 1302, 1307, 1309, or 2309.

**DRDS 1302, DRDS 1400, DRDS 1303, MATH 1301, MATH 1302, MATH 1303, ART. 1301, OPRT 1301, or other elective approved by the Department Manager.

EDUCATION

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
ENGL 1301 Composition & Rhetoric I	3	ENGL 1302 Composition & Rhetoric II	3
HIST 1301 History of the U.S. to 1877	3	HIST 1302 History of the U.S. from 1877	3
SCIE Biology, Chemistry, Physics or Geology	4	SCIE Biology, Chemistry, Physics or Geology	4
LANG Beginning French, German or Spanish I	4	LANG Beginning French, German or Spanish II	4
ELCT Approved Elective	3	SPCH 1301 Fundamentals of Speech	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		18
	19		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
ENGL 2301 English Literature I	3	ENGL 2302 English Literature II	3
GOVT 2301 State & Federal Government I	3	GOVT 2302 State & Federal Government II	3
LANG Intermediate Language or Science	3	LANG Intermediate Language or Science	3
PSYC 2301 Introduction to Psychology	3	PSYC 2302 Personality Adjustment	3
SOCI 2301 Introduction to Sociology	3	SOCI 2302 Contemporary Social Problems	3
PYED Physical Education	1	PYED Physical Education	1
	16		16
		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				Second Semester			
Subject			Credit Hours	Subject			Credit Hours
COSC	1300	Computers & Society	3	COSC	1302	Data Entry/Terminal	3
COSC	1301	Data Entry/Keypunch	3	COSC*		Programming Elective	4
COSC	1401	Introduction to Computer Operations & Library Management	4	OADM	2305	Bookkeeping II	3
				COSC*		COSC Elective	4
OADM	2304	Bookkeeping I	3	ELCT*		Approved Elective	3
ENGL	1309	Communications Skills	3				17
PSYC	1101	College Orientation	1			TOTAL HOURS	34
			17				

*Electives must be approved by Department Manager.

ENGINEERING

A Two-Year Associate in Science Degree

FIRST YEAR

First Semester				Second Semester			
Subject			Credit Hours	Subject			Credit Hours
ENGR	1301	Engineering Graphics	3	ENGR	1302	Descriptive Geometry	3
MATH	1304	Analytic Geometry	3	MATH	2302	Calculus II	3
MATH	2301	Calculus I	3	ENGL	1302	Composition & Rhetoric II	3
ENGL	1301	Composition & Rhetoric I	3	SCIE*		Biology, Chemistry, Physics	
SCIE*		Biology, Chemistry, Physics				or Geology	4
		or Geology	4	PYED		Physical Education	1
PYED		Physical Education	1	ELCT		Approved Elective	3
PSYC	1101	College Orientation	1				17
			18				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
ENGL	2301*	English Literature I	3	ENGL	2302*	English Literature II	3
GOVT	2301	State & Federal Gov- ernment I	3	GOVT	2302	State & Federal Gov- ernment II	3
MATH	2303	Advanced Calculus	3	PHYS	2402	Modern Physics II	4
PHYS	2401	Modern Physics I	4	ELCT		Approved Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
			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			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
MATH	1302	College Algebra I	3	MATH	1303	Trigonometry II	3
LANG*		Beginning French, German I		LANG*		Beginning French, German II	
		or Spanish I	4			or Spanish II	4
SCIE		Biology, Chemistry, Physics		SCIE		Biology, Chemistry, Physics	
		or Geology	4			or Geology	4
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S.	
PYED		Physical Education	1			from 1877	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			19				18

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
ENGL	2301	English Literature I		ENGL	2302	English Literature II	
ENGL	2303	World Literature I		ENGL	2304	World Literature II	
		or				or	
ENGL	2305**	American Literature I	3	ENGL	2306**	American Literature II	3
LANG		Intermediate French or		LANG		Intermediate French II or	
		Spanish I	3			Spanish II	3
SCIE		Biology, Chemistry, Physics		SCIE		Biology, Chemistry, Physics	
		or Geology	4			or Geology	4
GOVT	2301	State & Federal Gov-		GOVT	2302	State & Federal Gov-	
		ernment I	3			ernment II	3
ELCT		Approved Elective	3	ELCT		Approved Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
			17				17
				TOTAL HOURS			71

*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. ENGL 2301-2302, 2303-2304, and 2305-2306 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.

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	1303	Soil Science	3	FRMG	1302	Range Management	3
FRMG	1301	Wildlife Management	3	AGRI	1303	Poultry Science	3
FRMG	1304	Animal Health	3	FRMG	1305	Vegetable Production	3
AGRI	1301	Animal Husbandry	3	AGRI	1302	Agronomy	3
BIOL	1401	General Biology I	4	BIOL	1402	General Biology II	4
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				17
			18				

FARM AND RANCH MANAGEMENT (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
FRMG 2301 Farm Mechanics I	3	FRMG 2302 Farm Mechanics II	3
FRMG 2303 Feeds & Feeding	3	AGRI 2302 Horticulture	3
FRMG 2307 Livestock Production	3	FRMG 2306 Livestock Marketing	3
AGRI 2301 Entomology	3	FRMG 2401 Food Preservation	4
ENGL 1307 Business English	3	MATH 1307 Business Mathematics	3
PYED Physical Education	1	PYED Physical Education	1
	16		17
		TOTAL HOURS	68

FARM AND RANCH PRODUCTION

A Two-Year Certificate of Completion

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
FRMG 1303 Soil Science	3	FRMG 1302 Range Management	3
FRMG 1301* Wildlife Management	3	AGRI 1303 Poultry Science	3
FRMG 1304 Animal Health	3	FRMG 1305 Vegetable Production	3
AGRI 1301 Animal Husbandry	3	AGRI 1302 Agronomy	3
PSYC 1101 College Orientation	1		12
	13		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
FRMG 2301 Farm Mechanics I	3	FRMG 2302 Farm Mechanics II	3
FRMG 2303 Feeds & Feeding	3	AGRI 2302 Horticulture	3
FRMG 2307 Livestock Production	3	FRMG 2306 Livestock Marketing	3
AGRI 2301 Entomology	3	FRMG 2401 Food Preservation	4
	12		13
		TOTAL HOURS	50

*AGRI 2303 may be selected in place of FRMG 1301.

FIRE PROTECTION TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
FPRT 1301 Fundamentals of Fire Protection	3	FPRT 1302 Fire Prevention	3
FPRT 1303 Fire Protection Systems	3	FPRT 1305 Fire Administration II	3
FPRT 1304 Fire Administration I	3	FPRT 1308* Fire Service Chemistry II	3
FPRT 1307* Fire Service Chemistry I	3	MATH 1302 College Algebra	3
ENGL 1307 Business English	3	SPCH 1301 Fundamentals of Speech	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		16
	17		

FIRE PROTECTION TECHNOLOGY (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
FPRT 2301 Industrial Fire Protection I	3	FPRT 2302 Industrial Fire Protection II	3
FPRT 2303 Hazardous Material I	3	FPRT 2306 Fire & Arson Investigation	3
FPRT 2305 Building Codes & Construction	3	FPRT 2404 Fire Fighting Tactics and Strategy	4
ENGL 2309 Technical Writing	3	FPRT** Fire Protection Technology	3
GOVT 2301 State & Federal Government I & II		ELCT Approved Elective	3
GOVT 2302	3		
ELCT Elective	3		
	18		
		TOTAL HOURS	67

*CHEM 1401 & CHEM 1402 may be substituted for FPRT 1307 & FPRT 1308.

**Fire Protection Technology Electives: FPRT 2304, 2308, 2309, 2310, 2311, 2312, 2313.

FOOD PRODUCTION

A One-Year Certificate of Completion

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
FRMG 1303 Soil Science	3	FRMG 1305 Vegetable Production	3
FRMG 1304 Animal Health	3	AGRI 2302 Horticulture	3
FRMG 2303 Feeds & Feeding	3	FRMG 2401 Food Preservation	4
FRMG 2307 Livestock Production	3	AGRI 1302 Agronomy	3
PSYC 1101 College Orientation	1		
	13	TOTAL HOURS	26

FOOD SERVICE MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
FSMG 1401 Food Preparation & Serving	4	MGMT 1304 Work Organization	3
FSMG 1302 Nutrition	3	FSMG 1305 Food Purchasing	3
FSMG 1303 Sanitation & Safety	3	FSMG 1306 Menu Planning	3
ELCT* Approved Elective	3	MATH 1307 Business Mathematics	3
ENGL 1309 Communication Skills	3	ELCT* Approved Elective	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	18		16

FOOD SERVICE MANAGEMENT (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
FSMG 2304 Marketing & Sales Promotion	3	FSMG 2303 Cafeteria Management	3
FSMG 2307 Hospitality Industry Law	3	FSMG 2305 Financial Management	3
FSMG 2405 Management Practice I	4	FSMG 2406 Management Practice II	4
MGMT 2302 Personnel Management	3	ELCT Elective	3
MGMT 2304 Labor Management Relations	3	ELCT* Approved Elective	2-4
	16		15-17
TOTAL HOURS			65-67

*Any FSMG, HMMG, ENGL 1300, ENGL 1301, ENGL 1302, BUSS 2303, BUSS 2304, MGMT 1305, or other 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 1301 Composition & Rhetoric I	3	HIST 1302 History of the U.S. from 1877	3
LANG Beginning French, German or Spanish	4	ENGL 1302 Composition & Rhetoric II	3
MATH* Approved Mathematics Elective	3	LANG Beginning French, German, or Spanish	4
HIST 1301 History of the U.S. to 1877	3	MATH* Approved Mathematics Elective	3
SCIE Biology, Chemistry, Physics or Geology	4	SCIE Biology, Chemistry, Physics or Geology	4
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		18
	19		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
ENGL 2301 English Literature I	3	ENGL 2302 English Literature II	3
LANG/ Intermediate French or		LANG/ Intermediate French or	
ELCT Spanish/Elective	3	ELCT Spanish/Elective	3
GOVT 2301 State & Federal Government I	3	GOVT 2302 State & Federal Government II	3
SCIE Biology, Chemistry, Physics or Geology	4	SCIE Biology, Chemistry, Physics or Geology	4
LANG** Second Language	4	LANG** Second Language	4
PYED Physical Education	1	PYED Physical Education	1
	18		18
TOTAL HOURS			73

*Check senior college catalogue for specific math requirements.

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

GENERAL SECRETARIAL

A One-Year Certificate of Completion

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
OADM 1301* Beginning Shorthand	3	OADM 1302* Intermediate Shorthand	3
OADM 1303* Beginning Typewriting	3	OADM 1304* Intermediate Typewriting	3
OADM 1305 Clerical Practice	3	OADM 1306 Secretarial Practice	3
MATH 1307 Business Mathematics	3	OADM 1308 Business Correspondence	3
ENGL 1307 Business English	3	OADM 1309 Business Machines & Calculations	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	17		16
		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 Subject	Credit Hours	Second Semester Subject	Credit Hours
GEOL 1401 Physical Geology	4	GEOL 1402 Historical Geology	4
MATH 1302 College Algebra	3	MATH 1303 Trigonometry	3
HIST 1301 History of the U.S. to 1877	3	HIST 1302 History of the U.S. from 1877	3
CHEM 1401 General Chemistry	4	CHEM 1402 General Chemistry	4
ENGL 1301 Composition & Rhetoric I	3	ENGL 1302 Composition & Rhetoric II	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		18
	19		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MATH 2301 Calculus I	3	MATH 2302 Calculus II	3
BIOL 2401 Invertebrate Zoology	4	BIOL 2401 Vertebrate Zoology	4
GOVT 2301 State & Federal Government I	3	GOVT 2302 State & Federal Government II	3
MATH 1304 Analytic Geometry	3	PSYC 2301 Introduction to Psychology	3
ENGL 2301 English Literature I	3	ENGL 2302 English Literature II	3
PYED Physical Education	1	PYED Physical Education	1
	17		17
		TOTAL HOURS	71

Students should check the catalogue of the institute 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	1304	Animal Health	3	FRMG	1307	Intermediate Horsemanship	3
FRMG	1306	Elementary Horsemanship	3	AGRI	1302	Agronomy	3
AGRI	1301	Animal Husbandry	3	BIOL	1402	General Biology II	4
BIOL	1401	General Biology I	4	MATH	1307	Business Mathematics	3
ENGL	1307	Business English	3	PYED		Physical Education	1
PYED		Physical Education	1	ELCT*		Approved Elective	3
PSYC	1101	College Orientation	1				17

18

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
FRMG	2307	Livestock Production	3	FRMG	1302	Range Management	3
FRMG	2304	Horse Production	3	FRMG	2302	Farm Mechanics II	3
FRMG	2308	Animal Breeding	3	FRMG	2303	Feeds & Feeding	3
AGRI	2301	Entomology	3	FRMG	2305	Advanced Equitation	3
ELCT*		Approved Elective	3	ELCT*		Approved Elective	3

15

TOTAL HOURS 65

*Electives: AGRI 1303, AGRI 2302, AGRI 2303, FRMG 1301, FRMG 1303, FRMG 1304, FRMG 1305, FRMG 2301, FRMG 2306, FRMG 2401, FRMG 2402, 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
HMMG 1302	Hotel/Motel Organization and Administration	3	HMMG 1300	Food and Beverage Management	3
FSMG 1401	Food Preparation & Serving	4	HMMG 1303	Front Office Procedures	3
ELCT*	Approved Elective	3	HMMG 1304	Hotel/Motel Sales Promotion	3
ENGL 1309	Communications Skills	3	FSMG 1303	Sanitation and Safety	3
MATH 1307	Business Mathematics	3	FSMG 1305	Food Purchasing	3
PYED	Physical Education	1	PYED	Physical Education	1
PSYC 1101	College Orientation	1			16

18

SECOND YEAR

First Semester			Credit	Second Semester		Credit
Subject			Hours	Subject		Hours
ELCT	Elective	3		HMMG 2301	Hotel/Motel Law	3
HMMG 2401	Hotel/Motel Internship I	4		HMMG 2304	Hotel/Motel Financial	
MGMT 2302	Personnel Management	3			Management	3
ELCT*	Approved Elective	3		HMMG 2402	Hotel/Motel Internship II	4
BUSS 2303	Principles of Accounting I	3		FSMG 2303	Cafeteria Management	3
		16		BUSS 2304	Principles of Accounting II	3

16

TOTAL HOURS 66

*Any FSMG, HMMG, ENGL 1300, ENGL 1301, ENGL 1302, MGMT 1305, or other courses approved by the Department Manager.

JOURNALISM

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
JOUR	1401	Communications Media	4	JOUR	1402	News Gathering & Reporting	4
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
SPCH	1301	Fundamentals of Speech	3	PSYC	2301	Introduction to Psychology	3
ELCT*		Approved Elective	3	ELCT*		Approved Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				17
			18				

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ENGL	2301	English Literature I	3	ENGL	2302	English Literature II	3
GOVT	2301	State & Federal Government I	3	GOVT	2302	State & Federal Government II	3
BUSS	2301	Principles of Economics I	3	BUSS	2302	Principles of Economics II	3
SOCI	2301	Introduction to Sociology	3	SOCI	2302	Contemporary Social Problems	3
PYED		Physical Education	1	PYED		Physical Education	1
			13	ELCT*		Approved Elective	3
							16
							TOTAL HOURS
							64

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

MAINTENANCE TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
MTNT	1400	Shop Practice & Safety	4	WELD	1401	Beginning Gas Welding	4
MTNT	1401	Carpentry I	4	MTNT	1402	Electricity	4
AIRC	1400	Air Conditioning & Refrigeration Theory & Application	4	AIRC	1403	Heating Systems	4
TMTH	1300	Technical Mathematics I	3	ENGL	1309	Communications Skills	3
PSYC	1101	College Orientation	1	ELCT*		Approved Elective	3
			16	PYED		Physical Education	1
							19

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
MTNT	2402	Carpentry II	4	MTNT	2401	Masonry	4
MTNT	2403	Plumbing I	4	DRDS	1303	Architectural Blueprint Reading	3
AIRC	1402	Household Refrigeration Systems	4	MTNT	2404	Painting & Refinishing	4
ELCT*		Approved Elective	4	AIRC	1404	Residential Air Conditioning	4
PYED		Physical Education	1	ELCT*		Approved Elective	3
			17				18
							TOTAL HOURS
							70

*AIRC 2403, DRDS 1400, MGMT 1304, MGMT 1305, MGMT 1302, OADM 2304, SESY 1401, WELD 1401.

MATHEMATICS

A Two-Year Associate in Arts or Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MATH 1302 College Algebra	3	MATH 1304 Analytic Geometry	3
MATH 1303 Trigonometry	3	SCIE/* Science or Foreign Language Elective	4
SCIE/ LANG Language Elective	4	ELCT* Approved Elective	3
ENGL 1301 Composition & Rhetoric I	3	ENGL 1302 Composition & Rhetoric II	3
HIST 1301 History of the U.S. to 1877	3	HIST 1302 History of the U.S. from 1877	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		17
	18		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
MATH 2301 Calculus I	3	MATH 2302 Calculus II	3
ENGL 2301 English Literature I	3	ENGL 2302 English Literature II	3
GOVT 2301 State & Federal Government I	3	GOVT 2302 State & Federal Government II	3
SCIE Biology, Chemistry, Physics or Geology	4	SCIE Biology, Chemistry, Physics or Geology	4
ELCT* Approved Elective	3	ELCT* Approved Elective	3
PYED Physical Education	1	PYED Physical Education	1
	17		17
		TOTAL HOURS	69

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 2301 (Calculus I) during the Fall Semester with the permission of the Manager of the Mathematics Department. Students should consult the catalogue of the institution to which they plan to transfer for required or recommended courses.

MEDICAL TECHNOLOGY

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
BIOL 1405 Human Anatomy	4	BIOL 1406 Human Physiology	4
CHEM 1401 General Chemistry I	4	CHEM 1402 General Chemistry II	4
ENGL 1301 Composition & Rhetoric I	3	ENGL 1302 Composition & Rhetoric II	3
HIST 1301 History of the U.S. to 1877	3	HIST 1302 History of the U.S. from 1877	3
MATH 1301 Intermediate Algebra	3	MATH 1303 Trigonometry	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		18
	19		

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
PHYS 1401 College Physics I	4	PSYC 2301 Introduction to Psychology	3
GOVT 2301 State & Federal Government I	3	GOVT 2302 State & Federal Government II	3
BIOL 2404 Microbiology	4	PHYS 1402 College Physics II	4
BIOL 2401 Invertebrate Zoology	4	BIOL 2303 Genetics	3
CHEM 2401 Organic Chemistry I	4	CHEM 2402 Organic Chemistry II	4
	19		17
		TOTAL HOURS	73

MID-MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 1305	Introduction to Management	3	ELCT	Approved Elective	3
MGMT 1306	Human Relations	3	MDMG 1402	Mid-Management Internship II	4
MDMG 1401	Mid-Management Internship I	4	MGMT 2302	Personnel Management	3
BUSS 1301	Introduction to Business	3	MATH 1307	Business Mathematics	3
ENGL	Elective	3	ELCT*	Approved Elective	3
PYED	Physical Education	1	PYED	Physical Education	1
PSYC 1101	College Orientation	1			17
		18			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
MGMT 2309	Supervision	3	MGMT 2301	Marketing Principles	3
MDMG 2401	Mid-Management Internship III	4	MDMG 2402	Mid-Management Internship IV	4
BUSS 2303	Principles of Accounting I	3	BUSS 2304	Principles of Accounting II	3
ELCT	BUSS 2301, 2302, or 2305	3	ELCT	MGMT 2305, or 2306	3
ELCT	SPCH 1301 or 2303	3	ELCT	Approved Elective	3
		16			16
				TOTAL HOURS	67

NOTICE: 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.

*SOCI 2301, PSYC 2301, GOVT 2301, or other elective approved by the Department Manager.

MID-MANAGEMENT

Finance and Banking Option

A Two-Year Associate in Applied Science Degree

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
BUSS 2303	Principles of Accounting I	3	BUSS 2304	Principles of Accounting II	3
ENGL*	Elective	3	FIBA 1302	Money and Banking	3
FIBA 1301	Banking Principles	3	MGMT 1306	Human Relations	3
MGMT 1305	Introduction to Management	3	FIBA 1402	Finance and Banking Internship II	4
FIBA 1401	Finance and Banking Internship I	4	PYED	Physical Education	1
PYED	Physical Education	1	PSYC 2301	Introduction to Psychology	3
PSYC 1101	College Orientation	1			17
		18			

MID-MANAGEMENT (cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
BUSS 2301	Principles of Economics I	3	BUSS 2302	Principles of Economics II	3
MGMT 2302	Personnel Management	3	FIBA 2402	Finance and Banking Internship IV	4
FIBA 2401	Finance and Banking Internship III	4	SPCH 1301 or SPCH 2303		3
ELCT	Banking Elective	3	*ELCT	Approved Elective	3
***ELCT	Approved Elective	3	***ELCT	Approved Elective	3
		16			16
				TOTAL HOURS:	67

**Banking Electives: FIBA 2301, FIBA 2302, FIBA 2303, REAE 2304, FIBA 2304, FIBA 2305, FIBA 2306, and other courses approved by the Department Manager.

***All electives must be 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 1301	Composition & Rhetoric I	3	ENGL 1302	Composition & Rhetoric II	3
HIST 1301	History of the U.S. to 1877	3	HIST 1302	History of the U.S. from 1877	3
MUSI 1205	Ear Training I	2	MUSI 1206	Ear Training II	2
MUSI 1301	Music Fundamentals	3	MUSI 1302	Music Theory	3
MUSI 1107	Choir	1	MUSI 1107	Choir	1
MUSI	Approved Applied Music Elective	1-2	MUSI	Approved Applied Music Elective	1-2
PYED	Physical Education	1	MUSI 1305	Music Appreciation	3
PSYC 1101	College Orientation	1	PYED	Physical Education	1
		15-16			17-18

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
ENGL 2301	English Literature I	3	ENGL 2302	English Literature II	3
GOVT 2301	State & Federal Government I	3	GOVT 2302	State & Federal Government II	3
MUSI 1303	Music Literature I	3	MUSI 1303	Music Literature II	3
MUSI 2401	Intermediate Harmony	4	MUSI 2402	Advanced Harmony	4
MUSI 1107	Choir	1	MUSI 1107	Choir	1
MUSI	Approved Applied Music Elective	2-3	MUSI	Approved Applied Music Elective	2-3
PYED	Physical Education	1	PYED	Physical Education	1
		17-18			17-18
				TOTAL HOURS	66-70

OFFICE ASSISTANT

A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
OADM	1303*	Beginning Typewriting	3	OADM	1304*	Intermediate Typewriting	3
OADM	1305	Clerical Practice	3	OADM	1308	Business Correspondence	3
OADM	2304	Bookkeeping I	3	OADM	1309	Business Machines and	
MATH	1307	Business Mathematics	3			Calculations	3
ENGL	1307	Business English	3	OADM	2305	Bookkeeping II	3
PYED		Physical Education	1	MGMT	1305	Introduction to Management	3
				PYED		Physical Education	1
PSYC	1101	College Orientation	1				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			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
OADM 1303*	Beginning Typewriting		3	OADM 1304*	Intermediate Typewriting		3
OADM 1305	Clerical Practice		3	OADM 1308	Business Correspondence		3
OADM 2304	Bookkeeping I		3	OADM 2305	Bookkeeping II		3
MATH 1307	Business Mathematics		3	OADM 1309	Business Machines &		
ENGL 1307	Business English		3		Calculations		3
PYED	Physical Education		1	MGMT 1305	Introduction to Management		3
PSYC 1101	College Orientation		1	PYED	Physical Education		1
			17				16

SECOND YEAR

First Semester			Credit	Second Semester		Credit
Subject			Hours	Subject		Hours
MGMT 1304	Work Organization	3	MGMT 2302	Personnel Management	3	
MGMT 1306	Human Relations	3	MGMT 2306	Business Law II	3	
MGMT 2305	Business Law I	3	MGMT 2309	Supervision	3	
COSC 1300	Computers and Society	3	OADM 2307	Office Administration &		
SPCH 2303	Business Speech	3		Procedures	3	
		15	ELCT**	Approved Elective	3	
					15	
				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 2301, MGMT 2310, OADM 2308, OADM 2309, 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
OPRT 1301	Introduction to Offset Printing	3	OPRT 1305	Copy Preparation and Layout	3
OPRT 1302	Camera and Darkroom Procedures, Stripping and Platemaking I	3	OPRT 1306	Camera and Darkroom Procedures, Stripping and Platemaking II	3
OPRT 1303	Offset Press Operation I	3	OPRT 1307	Offset Press Operation II	3
OPRT 1304	Bindery Operations, Cost Estimating and Pricing	3	OPRT 1308	Offset Printing Equipment Maintenance	3
OADM 1303	Beginning Typewriting	3	OADM 1309	Business Machines and Calculations	3
PSYC 1101	College Orientation	1			
		16			15
				TOTAL HOURS	31

PETROLEUM TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
PETT 1301	Introduction to Petroleum Technology	3	PETT 1303	Rotary Drilling Fluids	3
PETT 1302	Petroleum Geology	3	PETT 1304	Oil Field Records	3
PETT 1401	Rig & Drilling Equipment	4	PETT 1402	Petroleum Logging & Mapping	4
CHEM 1401	General Chemistry I	4	CHEM 1402	General Chemistry II	4
TMTH 1300	Technical Mathematics I	3	ENGL 1307	Business English	3
PSYC 1101	College Orientation	1			17
		18			

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject		Credit Hours
PETT 2301	Pumping Equipment	3	PETT 2303	Natural Gas Production	3
PETT 2302	Well Completion Methods	3	PETT 2402	Petroleum Refining Methods and Operations	4
PETT 2401	Petroleum Production Methods	4	PETT*	Petroleum Technology Elective	3
ENGL 2309	Technical Writing	3	PETT*	Petroleum Technology Elective	3
MGMT 1302	Safety (OSHA)	3	PETT*	Petroleum Technology Elective	3
		16	MGMT 2309	Supervision	3
					16
				TOTAL HOURS	67

*Petroleum Technology Electives: PETT 2304, PETT 2305, PETT 2306, PETT 2307.

PHOTOGRAPHY

A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
PHOT	1301	Introduction to Photog-		PHOT	1303	Advanced Photography	3
		raphy	3	PHOT	1304	Commercial Photography	3
PHOT	1302	Portrait Photography	3	PHOT	1305	Advanced Print Making	3
TELE	1306	Television Film I	3	TELE	2307	Television Film II/Elec-	
ENGL		Approved Communications				tronic News Gathering	3
		Elective	3	ELCT*		Approved Elective	3
ELCT*		Approved Elective	3				15
PSYC	1101	College Orientation	1				
			16				
TOTAL HOURS							31

*ART. 1309, PHOT 1306, BUSS 1301, SPCH 1309, OPRT 1302, TELE 1303, TELE 2302, TELE 2308, or other electives approved by Department Manager.

PHOTOGRAPHY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
PHOT	1401	Introduction to Photo-		PHOT	1403	Advanced Photography	4
		raphy	4	PHOT	1404	Commercial Photography	4
PHOT	1402	Portrait Photography	4	PHOT	1405	Advanced Printmaking	4
PHOT	1406*	Color Photography I	4	PHOT	1407	Color Photography II	4
ENGL	1309	Communication Skills	3	ELCT†		Approved Elective	3
MATH	1307	Business Mathematics	3	PYED		Physical Education	1
PYED		Physical Education	1				20
PSYC	1101	College Orientation	1				
			20				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
PHOT	2301	Photography Internship I	3	PHOT	2302	Photography Internship II	3
PHOT	2403	Portrait Retouching	4	PHOT	2404	Photographic Production	4
ENGL	2309	Technical Writing	3	BUSS	1301	Introduction to Business	3
JOUR	1401	Communications Media	4	OADM	2304	Bookkeeping I	3
ELCT†		Approved Elective	3	ELCT†		Approved Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
			18				17
TOTAL HOURS							75

*TELE 2301

†TELE 2307

‡ART. 1309, SPCH 1301, OPRT 1302, TELE 1303, TELE 2302, TELE 2308, or other elective approved by the Department Manager.

*TELE 2301 - Television Film I may be substituted for PHOT 1406.

†TELE 2307 - Television Film II/Electronic News Gathering may be substituted for PHOT 1407.

‡Approved Electives: ART. 1300, SPCH 1301, OPRT 1302, TELE 1303, TELE 2302, TELE 2308, 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	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
BIOL	1401	General Biology I	4	BIOL	1402	General Biology II	4
SPCH	1301	Fundamentals of Speech	3	ELCT		Approved Mathematics Elective	3
PYED	1302	Foundations of Health Physical Education	1	PYED	1301	Foundations of Physical Education	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			18	PYED		Physical Education	1
							18

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
PSYC	2301	Introduction to Psychology	3	ENGL	2302	English Literature II	3
ENGL	2301	English Literature I	3	GOVT	2302	State & Federal Gov- ernment II	3
GOVT	2301	State & Federal Gov- ernment I	3	SOCI	2301	Introduction to Sociology	3
PYED	2301	Sports Officiating	3	PYED	2302	Safety & First Aid	3
BIOL	1405	Human Anatomy	4	ELCT		Approved Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
PYED		Physical Education	1	PYED		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 Subject			Credit Hours	Second Semester Subject			Credit Hours
FRMG	1303	Soil Science	3	FRMG	1305	Vegetable Production	3
FRMG	2301	Farm Mechanics I	3	AGRI	2302	Horticulture	3
AGRI	2301	Entomology	3	FRMG	2401	Food Preservation	4
AGRI	2303	Natural Resource Con- servation	3	AGRI	1302	Agronomy	3
			1				13
PSYC	1101	College Orientation	1				
			13			TOTAL HOURS	26

PRE-MED

A Two-Year Associate in Science Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
BIOL	1401	General Biology I	4	BIOL	1402	General Biology II	4
CHEM	1401	General Chemistry I	4	CHEM	1402	General Chemistry II	4
MATH	1302	College Algebra	3	MATH	1303	Trigonometry	3
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				18
			19				

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
BIOL	2401	Invertebrate Zoology	4	BIOL	2402	Vertebrate Zoology	4
CHEM	2401	Organic Chemistry I	4	CHEM	2402	Organic Chemistry II	4
GOVT	2301	State & Federal Government I	3	GOVT	2302	State & Federal Government II	3
ENGL	2301	English Literature I	3	ENGL	2302	English Literature II	3
PYED		Physical Education	1	ELCT		Approved Elective	4
			15	PYED		Physical Education	1
							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	1305	Introduction to Management	3	REAE	1302	Real Estate Marketing	3
MGMT	1306	Human Relations	3	MGMT	2309	Supervision	3
REAE	1301	Real Estate Fundamentals	3	BUSS	2301	Principles of Economics I	3
BUSS	1301	Introduction to Business	3	MATH	1307	Business Mathematics	3
ENGL		ENGL 1300, 1301, or 1307	3	ELCT*		Approved Social Science Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				16
			17				

REAL ESTATE (cont'd)

SECOND YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
REAE	2401	Real Estate Internship I		4	MGMT	2301	Marketing Principles		3
BUSS	2302	Principles of Economics II		3	REAE	2402	Real Estate Internship II		4
BUSS	2303	Principles of Accounting I		3	BUSS	2304	Principles of Accounting II		3
REAE		Approved Real Estate			REAE		Approved Real Estate		
		Elective		3			Elective		3
ELCT*		Approved Elective		3	ELCT*		SPCH 1301 or 2303		3
				16					16
							TOTAL HOURS		65

*All electives must be approved by the Department Manager.

Approved Real Estate electives are: REAE 2302, REAE 2303, REAE 2304, REAE 2305, or other courses approved by the Department Manager.

NOTICE: 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 program, please check with a Mid-Management instructor/co-ordinator.

RECREATION

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester				Second Semester			
Subject			Credit Hours	Subject			Credit Hours
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
BIOL	1401	General Biology I	4	BIOL	1402	General Biology II	4
SPCH	1301	Fundamentals of Speech	3	RECR	1304	Principles of Recreational Leadership	3
RECR	1303	Foundations of Recreation	3	PYED	1301	Foundations of Physical Education	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			18				18

SECOND YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
ENGL	2301	English Literature I		3	ENGL	2302	English Literature II		3
GOVT	2301	State & Federal Gov- ernment I		3	GOVT	2302	State & Federal Gov- ernment II		3
ART.	2311	Handcrafts I		3	SOCI	2301	Introduction to Sociology		3
PSYC	2301	Introduction to Psy- chology		3	PYED	2301	Sports Officiating		3
PYED	2302	Safety & First Aid		3	RECR		Approved Recreation Ac- tivity		3
PYED		Physical Education		1	PYED		Physical Education		1
PYED		Physical Education		1	PYED		Physical Education		1
				17					17
					TOTAL HOURS				70

FIRST YEAR

SECOND YEAR

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

FIRST YEAR

71

SMALL GAS ENGINE REPAIR (cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
Subject			Hours	Subject			Hours
SGER	2401	Advanced Motorcycle Repair	4	SGER	2404	Stationary Power Plant Service	4
SGER	2402	Chain Saw Service	4	SGER	2405	Recreational Vehicle Engine Service	4
SGER	2403	Marine Inboard/Outboard Service	4	SGER	2406	Special Projects	4
MGMT	1302	Safety (OSHA)	3	MGMT	2309	Supervision	3
			15				15
				TOTAL HOURS			67

SOCIAL SCIENCE

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
ENGL	1301	Composition & Rhetoric I		3	ENGL	1302	Composition & Rhetoric II		3
HIST	1301	History of the U.S. to 1877		3	HIST	1302	History of the U.S. from 1877		3
LANG		Beginning French, German, or Spanish I		4	LANG		Beginning French, German, or Spanish II		4
SCIE		Biology, Chemistry, Physics or Geology		4	SCIE		Biology, Chemistry, Physics or Geology		4
MATH	1301	Intermediate Algebra		3	MATH	1303	Trigonometry		3
PYED		Physical Education		1	PYED		Physical Education		1
									18
PSYC	1101	College Orientation		1					
				19					

SECOND YEAR

First Semester				Credit	Second Semester				Credit
Subject				Hours	Subject				Hours
ENGL	2301	English Literature I		3	ENGL	2302	English Literature II		3
GOVT	2301	State & Federal Government I		3	GOVT	2302	State & Federal Government II		3
LANG		Intermediate French or Spanish I		3	LANG		Intermediate French or Spanish II		3
SOCI	SCIE*	Elective		3	SOCI	SCIE*	Elective		3
ELCT		Approved Elective		3	ELCT		Approved Elective		3
PYED		Physical Education		1	PYED		Physical Education		1
				16					16
					TOTAL HOURS				69

*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			Credit Hours	Second Semester			Credit Hours
Subject				Subject			
SESY	1301	Principles of Solar Energy	3	SESY	1401	Solar Heating & Cooling Systems	4
AIRC	1400	Air Conditioning & Refrigeration Theory and Application	4	AIRC	1401	Basic Electrical Systems	4
WELD	1401	Beginning Gas Welding	4	AIRC	1403	Heating Systems	4
DRDS	1400	Fundamentals of Drafting	4	ELTE	1400	Basic Electricity	4
ENGL	1309	Communications Skills	3	TMTH	1300	Technical Mathematics I	3
PSYC	1101	College Orientation	1				19
			19			TOTAL HOURS	38

SOLAR ENERGY SYSTEMS TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit Hours	Second Semester			Credit Hours
Subject				Subject			
SESY	1301	Principles of Solar Energy	3	SESY	1401	Solar Heating Systems	4
AIRC	1400	Air Conditioning and Refrigeration Theory and Application	4	AIRC	1401	Basic Electrical Circuits	4
WELD	1401	Beginning Gas Welding	4	AIRC	1403	Heating Systems	4
DRDS	1400	Fundamentals of Drafting	4	ENGL	1309	Communications Skills	3
PYED		Physical Education	1	TMTH	1300	Technical Mathematics I	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			17				19

SECOND YEAR

First Semester			Credit Hours	Second Semester			Credit Hours
Subject				Subject			
SESY	2401	Solar Systems Design	4	SESY	2401	Solar Energy Special Projects	4
AIRC	1404	Residential Air Conditioning	4	AIRC	2401	Control Theory	4
ELTE	1400	Basic Electricity	4	DRDS	2402*	Architectural Drafting	4
PHYS	1403	Survey of Physics	4	MGMT	2302	Personnel Management	3
ELCT		Approved Elective	3	ELCT		Approved Elective	3
			19				18
						TOTAL HOURS	73

Approved Electives: Any AIRC courses, MGMT 1401, MGMT 2403, or other courses approved by the Department Manager.

*DRDS 1303 may be substituted for DRDS 2402.

SPEECH

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
LANG		Beginning French, German or Spanish I	4	LANG		Beginning French, German or Spanish II	4
SPCH	1301	Fundamentals of Speech	3	SPCH	1303	Oral Interpretation	3
SPCH	1302	Voice & Diction	3	THEA	1303	Basic Theatre Practice	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				17
			18				

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
ENGL	2301	English Literature I	3	ENGL	2302	English Literature II	3
GOVT	2301	State & Federal Government I	3	GOVT	2302	State & Federal Government II	3
LANG		Intermediate French or Spanish Elective	3	LANG		Intermediate French or Spanish Elective	3
SPCH	2301	Persuasive Speaking	3	ELCT*		Approved Speech/Theatre Elective	3
ELCT*		Approved Speech/Theatre Elective	3	THEA	2301	History of the Theatre	3
PYED		Physical Education	1	PYED		Physical Education	1
			16				16

TOTAL HOURS 67

*Theatre majors should substitute THEA 2302 for SPCH 2301 and should elect to take THEA 1301 and 1302.

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	1301	Introduction to Broadcasting	3	TELE	1304	Broadcast Sales	3
TELE	1302	Beginning Radio Production	3	TELE	1307	Broadcast Station Management	3
TELE	1303	Beginning Television Production	3	TELE	1306	Television Film I	3
JOUR	1401	Communications Media	4	ENGL	1302	Composition & Rhetoric II	3
ENGL	1301	Composition & Rhetoric I	3	SPCH	1301	Fundamentals of Speech	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			17				16

TELECOMMUNICATIONS (cont'd)

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
TELE	2305	Broadcast Writing	3	TELE	2302	Advanced Television Production	3
TELE	2307	Television Film II/Elec- tronic News Gathering	3	TELE	2303	Advanced Radio Produc- tion	3
TELE	2301	Technical Aspects of Broadcasting	3	TELE	2306	Telecommunications Seminar	3
TELE	2309	Telecommunications Field Projects I	3	TELE	2308	Telecommunications Practicum	3
ELCT*		Approved Elective	3	ELCT*		Approved Elective	3
PYED		Physical Education	1				15
			16				
TOTAL HOURS							64

*Approved electives: TELE 1305, TELE 2304, TELE 2310, JOUR 1402, or other electives approved by the Department Manager.

VOCATIONAL NURSING

Certificate of Completion

Fall Semester Subject			Credit Hours	Spring Semester Subject			Credit Hours
NURI	1901	Fundamentals of Nursing	9	NURI	1902	Medical-Surgical Nursing I	9
BIOL	1405	Human Anatomy	4	BIOL	1406	Human Physiology	4
PSYC	1101	College Orientation	1	ENGL	1301	Composition & Rhetoric I	3
PSYC	2303	Child Growth & Development	3				16
			17				
Fall Semester Subject			Credit Hours	Spring Semester Subject			Credit Hours
VNUR	1301	Vocational Nursing Practicum	3	NURI	1903	Maternal and Child Health Nursing	9
			3	BIOL	2404	Microbiology	4
							13
TOTAL HOURS							49

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

WELDING

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Second Semester			
Subject			Credit Hours	Subject			Credit Hours
WELD	1401	Beginning Gas Welding	4	WELD	1403	Advanced Arc Welding	4
WELD	1402	Beginning Arc Welding	4	WELD	1404	Beginning GMAW	
DRDS	1400	Fundamentals of Drafting	4			& GTAW (MIG & TIG)	4
TMTH	1300	Technical Mathematics I	3	WELD	1405	Advanced Gas Welding	
PYED		Physical Education	1			& Cutting Processes	4
PSYC	1101	College Orientation	1	ENGL	1309	Communications Skills	3
			17	PYED		Physical Education	1
							16

SECOND YEAR

First Semester				Second Semester			
Subject			Credit Hours	Subject			Credit Hours
WELD	2401	Advanced Arc Welding	4	WELD	2404	Advanced Pipe Welding	4
WELD	2402	Beginning Pipe Welding	4	WELD	2405	Weld Testing &	
WELD	2403	Advanced GMAW				Inspection	4
		& GTAW (MIG & TIG)	4	WELD	2406	Welding Fabrication	
ELCT*		Approved Elective	3-4			& Layout	4
TMTH	1301	Technical Mathematics II	3	ELCT*		Approved Elective	3-4
			18-19				15-16
						TOTAL HOURS	66-68

*AUTO 1400, ENGR 1301, MGMT 1305, MGMT 1302, or other courses approved by the Department Manager.

Accounting

(See Business)

Administrative Secretarial

(See Office Administration)

Agriculture (AGRI)

AGRI 1301 (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.

AGRI 1302 (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.

AGRI 1303 (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.

AGRI 2301 (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.

AGRI 2302 (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.

AGRI 2303 (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 (AIRC)

AIRC 1400 (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.

AIRC 1401 (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.

AIRC 1402 (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: AIRC 1400, AIRC 1401.

AIRC 1403 (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: AIRC 1400, AIRC 1401.

AIRC 1404 (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: AIRC 1400, AIRC 1401.

AIRC 2401 (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: AIRC 1400, AIRC 1401.

AIRC 2402 (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: AIRC 1400, AIRC 1401.

AIRC 2403 (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: AIRC 1400, AIRC 1401.

Animal Production

(See Farm & Ranch Mgmt.)

Applied Management

(See Mgmt.)

Applied Music

(See Music)

Anthropology (ANTH)

ANTH 2301 (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 2302 (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. 1301, 1302 (ART 131, 132) Freehand Drawing (2-4) Credit: 6
I & II

These courses involve a study of the basic drawing skills including both abstraction and expressive drawing in charcoal, pencil, pen, wash, conte, and mixed media.

ART. 1303, 1304 (ART 133, 134) Creative (2-4) Credit: 6
Design I & II

These courses give basic instruction in the elements and principles of design, with emphasis on the study of form and color theory. Design I is a study of design in two dimensions, while Design II is a study of three dimensional design problems.

ART. 1305, 1306 (ART 136, 136A) Figure Drawing (2-4) Credit: 6
I & II

These are life drawing courses which emphasize structure and action of the human figure.

ART. 1307 (ART 138) History & Appreciation (3-0) Credit: 3
of Art I

This course is a survey of the major and minor arts from prehistoric times to the 14th century.

ART. 1308 (ART 139) History & Appreciation of Art II (3-0) Credit: 3

This course is a survey of the major and minor arts from the 14th century to the present.

ART. 1309 (ART 130) Printing for Advertising Art (2-4) Credit: 3

This course covers the fundamentals of various graphic techniques. Instruction is given in the classification of printing methods, composition, copy and art preparation, paper selection, type and letter styles and usage, trademarks, and handlettering.

ART. 2301 (ART 231) Graphic Media (2-4) Credit: 3

This introductory course covers the fundamentals and creative experimentation in etching, serigraphy, and other printmaking media.

ART. 2302 (ART 232) Oil Techniques (2-4) Credit: 3

This course is an introduction to the techniques and materials of oil painting.

ART. 2303 (ART 233) Advanced Oil Painting (2-4) Credit: 3

This course is a continued exploration of the medium with emphasis on individual expression. Prerequisite: 2303.

ART. 2304 (ART 234) Watercolor Painting (2-4) Credit: 3

This course covers various techniques of painting in watercolor. It stresses color and composition in application of the medium.

ART. 2305 (ART 235) Advertising Art I (2-4) Credit: 3

This course is an introduction to the basic processes and techniques of advertising art. The materials and techniques of layout and commercial design are covered.

ART. 2306 (ART 236) Advertising Art II (2-4) Credit: 3

This course is an advanced study of advertising art and production. It continues the principles covered in Advertising Art. Prerequisite: ART 2305.

ART. 2307 (ART 237) Pen & Ink Techniques (2-4) Credit: 3

This drawing course is a study of the potentials of the medium and special attention is given to the study of the illusion of form, texture, and value.

ART. 2308 (ART 135) Color Composition (2-4) Credit: 3

This course covers the theory of color and form involving definite technical procedures in properties of color theory, and its application to painting.

ART. 2309 (ART 239A) Ceramics I (2-4) Credit: 3

This course is an introduction to making pottery by hand and wheel methods. Glazing and decoration techniques are also covered.

ART 2310 (ART 239B) Ceramics II (2-4) Credit: 3

This course is a continuation of techniques of pottery making. Prerequisite: ART. 2309.

ART. 2311 (ART 239C) Handcrafts I (2-4) Credit: 3

This course involves a study of ~~major crafts, including weaving, other fiber arts, ceramics, metal work and paper.~~ *includes jewelry, weaving, rugmaking, dyeing and printmaking* Emphasis will vary from one semester to another.

ART. 2312 (ART 239D) Handcrafts II (2-4) Credit: 3

This course is a continuation of Handcrafts I. Emphasis will vary from semester to semester.

ART. 2313 (ART 239E) Jewelry and Lapidary I (2-4) Credit: 3

This course is an introduction to jewelry making techniques. Direct metal working techniques are stressed. Instruction is given in the basics of cutting, grinding, and polishing gemstones.

ART. 2314 (ART 239F) Jewelry and Lapidary II (2-4) Credit: 3

This course is a continuation of jewelry making techniques. Instruction is given in the lost wax method of metal forming and in creative methods of gemstone finishing. Prerequisite: ART. 2313.

Astronomy (ASTR)

ASTR 1301 (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 1302 (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 (ATBR)

ATBR 1401 (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.

ATBR 1402 (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 diagnose, repair and align collision-damaged parts. Corequisite: ATBR 1401.

ATBR 1403 (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, McPherson Strut, etc. Prerequisite or corequisite: ATBR 1401, ATBR 1402.

ATBR 1404 (AB 144) Frame Repair & Alignment (2-4) Credit: 4

A course designed to provide the student with a working knowledge of the types of body frames, misalignment, alignment straightening, repair and the use of special equipment and measuring devices. Prerequisite: ATBR 1401, ATBR 1402.

ATBR 1405 Auto Body Welding (2-4) Credit: 4

A course designed to provide the student with a working knowledge of gas, arc and spot welding as they relate to auto body repair procedures. Special emphasis will be placed on cutting, bending, shrinking and welding on various types and sizes of metal.

ATBR 1406 Body Panel Repair, Replacement & Finishing (2-4) Credit: 4

This course places heavy emphasis on straightening and fitting panels as required and employs welding, dinging, bumping, peening procedures; the use of body fillers, contour finishing and metal preparation are also included. Prerequisite: ATBR 1405, ATBR 1401, ATBR 1402, ATBR 1403.

ATBR 2400 Major Vehicle Damage Repair (2-4) Credit: 4

This course is a continuation of ATBR 1406 and places emphasis on developing the skills involved in major vehicle damage repairs utilizing the latest techniques and equipment. Prerequisite: All first year courses.

ATBR 2401(AB 241) Upholstery, Vinyl Top and Body Trim Repair (2-4) Credit: 4

This course is designed to provide the student with a knowledge of upholstery, head lining service, the recovering, and repair of vinyl tops, and body trim service. Prerequisite: ATBR 1406.

ATBR 2402 (AB 242) Glass, Electrical & Power Accessory Service (2-4) Credit: 4

A course designed to provide the student with a knowledge of all types of glass and weathersealing devices and service, and various types of power assist and minor electrical repair. Prerequisite: ATBR 1403.

ATBR 2403 Painting & Refinishing (2-4) Credit: 4

A course designed to provide a working knowledge of the sanding, masking, cleaning and preparation of material to be painted, the proper use of the paint gun, pattern settings, spraying techniques and the use of exotic paint materials. The course also includes paint problems such as blistering, wrinkling, bleeding and blushing. Prerequisite: ATBR 1406.

ATBR 2405 (AB 243) Management & Estimating (3-3) Credit: 4

A course designed to provide the student with the experience of body shop management as it pertains to facilities, personnel, cost accounting, purchasing and stocking of supplies. The student will also receive instructions in collision repair estimating and the use of flat-rate and material manuals. This is to be taken the final semester before graduation. Prerequisite: Approval of the Department Manager.

Automotive Service and Repair (AUTO)

AUTO 1400 (AT 140) Shop Practices & 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.

AUTO 1401 (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: AUTO 1400.

AUTO 1402 (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: AUTO 1400.

AUTO 1403 (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.

AUTO 1404 (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.

AUTO 1405 (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.

AUTO 1406 Engine Tune Up (2-4) Credit: 4

This course is designed to provide the beginning student with basic automotive skills involved in performing minor engine tuneups. Emphasis will be placed upon the procedures to diagnose, adjust, and replace electrical, carburetors, and ignition system components.

AUTO 1407 (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.

AUTO 2401 (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.

AUTO 2402 (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.

AUTO 2403 (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: AUTO 2401.

AUTO 2404 (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: AUTO 1400.

AUTO 2405 (AT 148) Steering & 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.

AUTO 2406 (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: AUTO 1400, AUTO 1401, AUTO 1402, AUTO 1403 AUTO 1404.

Aviation Maintenance Technology (AVMT)

AVMT 1301 (AVMT 131) Maintenance Publications - G

(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 1302 (AVMT 132) Weight & Balance - G

(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 1303 (AVMT 133) Aircraft Drafting - G

(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 1304 (AVMT 134) Airframe Materials & Corrosion Control - G

(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 1401 (AVMT 141) Basic Aircraft Electricity - G

(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 2401 (AVMT 241) Aircraft Finishes - A (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 2403 (AVMT 243) Airframe Inspection - A (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 2404 (AVMT 244) Aircraft Fuel Systems - A (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 2405 (AVMT 245) Aircraft Instruments Systems - A (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 2406 (AVMT 246) Engine Electrical Systems - P(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 2407 (AVMT 247, 248) Engine Lubrication and Cooling Systems - P (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. It also covers the theory and practical applications of the repair, inspection, trouble shooting and servicing of cooling and exhaust systems. Prerequisite: Successful completion of the general (G) Aviation Maintenance Technology courses.

AVMT 2501 (AVMT 251) Sheet Metal Structures - A (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 2502 (AVMT 252) Hydraulics & Pneumatics - A(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 2503 (AVMT 253) Aircraft Electrical Systems - A (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 2504 (AVMT 254) Powerplant Maintenance (2-6) Credit: 5
Reciprocating Engines - P

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

AVMT 2505 (AVMT 255) Engine Fuel Systems - P (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 2506 (AVMT 256) Aircraft Propellers - P (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.

AVMT 2507 Powerplant Maintenance - (2-6) Credit: 5
Turbine Engines - P

This course is designed to prepare the student in maintaining, repairing, rigging, overhauling and inspecting turbine engines. Prerequisite: Successful completion of the general (G) Aviation Maintenance Technology courses.

Aviation Technology

(See Career Pilot)

Behavioral Science

(See Psychology)

Biology (BIOL)

BIOL 1401 (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 1402 (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 1405 (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 1406 (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. Prerequisite: BIOL 1405.

BIOL 2301 (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 2303 (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 1401 and 1402 or consent of the instructor.

BIOL 2401 (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 1401 or 1402 or consent of the instructor.

BIOL 2402 (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 1401, 1402, or consent of the instructor.

BIOL 2404 (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.

Business (BUSS)

BUSS 1301 (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.

BUSS 1302 (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 subordinates on economic problems.

BUSS 2301 (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)

BUSS 2302 (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).

BUSS 2303 (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.

BUSS 2304 (BUS 238) Principles of Accounting II (3-0) Credit: 3
Continuation of Principles of Accounting I. Internal control; partnership and corporation accounting for manufacturing concerns; analysis and interpretation of statements. Prerequisite: BUSS 2303.

BUSS 2305 (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: BUSS 2304. 2400

BUSS 2306 (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.

BUSS 2309 (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: BUSS 2304 with a minimum grade of C.

BUSS 2310 (BUS 234) Intermediate Accounting II (3-0) Credit: 3
Continuation of Intermediate Accounting I. 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: BUSS 2309.

Career Pilot (CAPI)

CAPI 1300 (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: CAPI 1303, or concurrent enrollment.

CAPI 1301 (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.

CAPI 1302 (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.

CAPI 1303 (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.

CAPI 1304 (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.

CAPI 1305 (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: CAPI 1303.

CAPI 1306 (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.

CAPI 2300 (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: CAPI 1305.

CAPI 2301 (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.

CAPI 2302 (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.

CAPI 2303 (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.

CAPI 2304 (CP 234) Advanced Flight (9-3.4) Credit: 3

Commercial and instrument flight training. A minimum of 69 hours of instruction is provided, including 20 hours of dual instruction with 4 hours in the simulator, 35 hours of solo, and 14 hours of oral briefings. Prerequisites: CAPI 1304 and CAPI 2300, or concurrent enrollment.

CAPI 2305 (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: CAPI 2304 and CAPI 2307, or concurrent enrollment.

CAPI 2306 (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 briefings. Prerequisite: CAPI 2305 or a Commercial Pilot Certificate.

***CAPI 2307 (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: CAPI 2300.

CAPI 2308 (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.

CAPI 2309 (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.

CAPI 2310 (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 CAPI 2300 or concurrent enrollment.

CAPI 2311 (CP 235B) Commercial Transition Flight II (8-3.1) Credit: 3

A continuation of Commercial Transition Flight I 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: CAPI 2310.

CAPI 2312 (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.

CAPI 2313 (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.

CAPI 2314 (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.

CAPI 2315 (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.

Chemistry (CHEM)

CHEM 1401, 1402 (CHEM 141, 142) (3-4) Credit: 8

General Chemistry I & II

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 1302, or consent of instructor. CHEM 1402 has a prerequisite of CHEM 1401.

CHEM 1404 (CHEM 144) Introduction to (3-3) Credit: 4

General Chemistry

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 2401, 2402 (CHEM 241, 242) (3-4) Credit: 8

Organic Chemistry I & II

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 1401, 1402, or consent of the instructor. CHEM 2402 has a prerequisite of CHEM 2401.

CHEM 2403 (CHEM 243) Quantitative (3-4) Credit: 4

Analysis

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 2404 (CHEM 244) Introductory Organic (3-3) Credit: 4
Chemistry

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 1404.

Child Development (CHDV)

CHDV 1301 (CHDV 131) Introduction to Child

(3-0) Credit: 3

Development

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 1302 (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 1304 (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 1305 (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 1401 (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 1403 (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 2301 (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 conditions 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 1301.

CHDV 2302 (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 2401 (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 2601 (CHDV 261) Learning Theories Seminar (1-15) Credit: 6 & Practicum

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 2602 (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 (CMET)

CMET 1400 (CM 140, ET 135) Electronics & Computer (2-4) Credit: 4 Skills

A study of modern electronic construction techniques, including the use of hand tools and fabrication equipment. The course will also include an introduction to basic computer hardware and programming.

CMET 1401 (CM 141 CM 142) 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.

CMET 1403 (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.

CMET 2401 (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 structure will be studied as well as the use of emulation in the design and repair of a microcomputer system. Prerequisite: CMET 2402.

CMET 2402 (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. Prerequisites: CMET 1401 and CMET 1403.

CMET 2403 (CM 248) Peripherals & 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. Prerequisites: CMET 2402 and ELTE 2404.

CMET 2404 (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: CMET 2402, or equivalent.

Computer Science (COSC)

COSC 1300 (CS 130) Computers & 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 flow-charting and computer program logic is presented to the non-computer science major to write a simple computer program.

COSC 1301 (CS 131) Data Entry/Keypunch (2-3) Credit: 3

Introduction to keypunching is designed to train beginning keypunch operators. *Keypunching, verifying, and program card design* are covered. Drills will develop accuracy and speed. Prerequisite: Typing speed of 30 wpm.

COSC 1302 (CS 132) Data Entry/Terminal (2-3) Credit: 3

A course designed to train terminal data entry operators. Actual on-the-job type data entry will be performed by the student using on-line video display terminals. Accuracy and speed are stressed. Also covered are different types of data entry systems and the design of source documents and screen formats. Prerequisite: Typing speed of 30 wpm.

COSC 1304 (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: COSC 1401. Corequisite: COSC 1406.

COSC 1306 (CS 137) Introduction to BASIC (2-3) Credit: 3

Offers an introduction to the basic concepts and constructs of programming in BASIC for the student interested in using a computer at home or in a small business or as a tool in a subject area such as math or science. Applications will illustrate personal computing techniques.

COSC 1401 (CS 140) Introduction to Computer Operations & Library Management (3-3) Credit: 4

This course includes modern concepts and operation of input and output devices and *equipment currently in use by the Data Processing Industry*. The duties and responsibilities of I/O clerks and the computer librarian are emphasized.

COSC 1402 (CS 141) Advanced Operations Lab (1-15) Credit: 4

This course consists of supervised work in a computer center. The students learn to operate the computer and peripheral equipment. Prerequisite: COSC 1401. Corequisite: COSC 1304 and approval of Department Manager.

COSC 1403 (CS 143) Introduction to Computer Science & 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.

COSC 1404 (CS 138) COBOL Programming (3-3) Credit: 4

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. Prerequisite: COSC 1403.

COSC 1405 (CS 135) Introduction to Systems Analysis (3-3) Credit: 4

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. Prerequisites: COSC 1403 or concurrent enrollment.

COSC 1406 (CS 145) Computer Organization & Architecture (3-3) Credit: 4

A study of hardware and software characteristics of digital computers, designed to give the student an understanding of how the fundamental principles by which computers work affect and govern programming techniques. Topics include data representation, machine instruction types, fetch and execution cycles, interrupt schemes, metaprograms. I/O handling, and assembler concepts. Prerequisite: COSC 1403.

COSC 1407 (CS 138A) RPG Programming (3-3) Credit: 4

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. Prerequisite: COSC 1403.

COSC 1408 (CS 236) Conversational Languages - BASIC (3-3) Credit: 4

Programming and testing sample programs written in a remote terminal-oriented language, such as BASIC, Conversational FORTRAN and APL. Prerequisite: COSC 1403 or consent of Instructor.

COSC 2301 (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. Prerequisites: 12 hours of Computer Science.

COSC 2302 (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.

COSC 2401 (CS 234) Advanced COBOL (3-3) Credit: 4

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: COSC 1404.

COSC 2402 (CS 238) Systems Analysis (3-3) Credit: 4

The methodology, techniques, and tools used in performing indepth 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: COSC 1404, COSC 1405.

COSC 2403 (CS 239A) Introduction to Operating Systems & Job Control Language (3-3) Credit: 4

A study of computer operating system concepts including major software components and their functions. An in-depth coverage of Job Control Language. Use of utilities for data set maintenance and manipulation of system control information. Prerequisites: COSC 2401 and COSC 2404.

COSC 2404 (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: COSC 1403 and COSC 1406.

COSC 2405 (CS 232A) FORTRAN Programming (3-3) Credit: 4

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.

COSC 2406 (CS 232B) Programming for Business Statistics (3-3) Credit: 4

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 1305 and COSC 1403.

COSC 2407 (CS 235) PL/I Programming (3-3) Credit: 4

Business and scientific computer applications are developed using PL/I. Emphasis is placed on advanced programming concepts. Prerequisites: COSC 1403 and COSC 1404.

COSC 2408 (CS 239B) Introduction to Tele-processing (3-3) Credit: 4

An introduction to programming for the teleprocessing environment under CICS. Applications will be written and tested on-line. Prerequisite: COSC 2404.

Consumer Electronics Service (COES)

COES 1409 (TV 149) Television Theory & 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: ELTE 1403.

COES 2301 (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: COES 1409, or equivalent.

COES 2402 (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. Prerequisite: ELTE 1403.

COES 2408 CATV & Audio Distribution Systems (3-3) Credit: 4

A two-part course consisting of a study of commercial P.A. or sound reinforcement systems, and a study of large scale T.V. "cable systems" and small scale antenna distribution systems. This course includes some "on the job" training with commercial companies. Prerequisite: ELTE 1400.

COES 2409 (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: COES 1409.

Criminal Justice (CRIJ)

CRIJ 1201 (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 1301 (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 1302 (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 preservation of evidence.

CRIJ 1303 (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 1304 (CRIJ 134) Criminal Procedures & 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 1305 (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 1306 (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 1307 (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 1308 (CRIJ 138) Police Role in Crime & 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 1309 (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 2201 (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 2301 (CRIJ 231) Probation & 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. Develop in each student a basic understanding of the various methods of corrections so that they can function efficiently in the field.

CRIJ 2303 (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. This course may be repeated for credit.

CRIJ 2304 (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 2306 (CRIJ 236) Traffic Planning and Administration (3-0) Credit: 3

This course consists of the application of traffic problems from the administrative point of view, including engineering, education, and enforcement at the supervisory level.

CRIJ 2307 (CRIJ 237) Penology (Jail Operation & 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 2308 (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, preventive techniques, methods of handling complaints, and the development of contacts.

CRIJ 2309 (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 dissident conditions which might impair role and mission of the dissident command.

CRIJ 2310 (CRIJ 239A) Correctional Control & 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 (DSCO)

DSCO 0300 (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 0300 (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 0300 (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 0301 (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 0302 (DSMA 032) Developmental Mathematics III (1-2) Credit: 3

Developmental mathematics for technical fields, including algebra, integers, mathematical sentences, rational numbers, and polynomials.

DSRE 0300 (DSRE 030) Reading & 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 0301 (DSRE 031) Reading & Comprehension II (1-2) Credit: 3

This course is a continuation of Reading and Comprehension I and places emphasis on further improvement of reading comprehension and rate, word recognition and vocabulary development.

DSSP 0300 (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 0300 (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 0301 (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 0302 (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 1401 Diesel Engine Fundamentals (2-4) Credit: 4

This course is designed to provide the student with a knowledge of the development, basic design, and working principles of the diesel engine. The student will receive work experience in cleaning, disassembly, inspection, and assembly of diesel engine parts. Prerequisite or Corequisite: AUTO 1400.

DIEM 1402 Diesel Engine Service**(2-4) Credit: 4**

This course is designed to provide the student with a working knowledge of valve reconditioning, cylinder head and injector tube service. Prerequisite or Corequisites: AUTO 1400, DIEM 1401.

DIEM 1403 (DIEM 141) Fuel & Injector Systems**(2-4) Credit: 4**

A course designed to provide an understanding of the diesel fuel system. The student will receive instruction and practice in disassembling, cleaning, testing and assembly procedures of various types of injectors and pumps. Prerequisites: AUTO 1400, DIEM 1401.

DIEM 1404 Standard Transmissions & Differentials**(2-4) Credit: 4**

This course will provide the student with a working knowledge in disassembly and repairing of clutches, sliding gear transmissions, transfer gear cases, drive lines and axle assemblies. The theory of torque and gear ratios will be emphasized as it applies to units of the drive train. Prerequisite: AUTO 1400.

DIEM 2400 Hydraulics & Steering Systems**(2-4) Credit: 4**

This course will provide lecture and laboratory experience involving hydraulic motors, pumps and various control valves. The student will disassemble, inspect, assemble and test various hydraulic components. Emphasis will be placed upon basic control systems, pneumatic and hydraulic fluids, and power steering service and repair. Prerequisite: AUTO 1400.

DIEM 2401 (DIEM 241) Diesel Engine Auxiliary Systems**(2-4) Credit: 4**

This course is designed to provide a working knowledge of various auxiliary systems such as turbo chargers, root blowers, cooling, lubricating and air starter systems. The student will test, remove, repair and install components of the auxiliary systems. Prerequisite: AUTO 1400 and DIEM 1401 or AUTO 1401 and AUTO 1403.

DIEM 2402 Diesel Starting & Charging Systems**(2-4) Credit: 4**

This course will provide an understanding of the theory of operation and construction of the starting and charging systems to include starters, relays, switches, alternators, and batteries. Testing, trouble-shooting and repair of the various components will be emphasized. Prerequisite: AUTO 1400.

DIEM 2403 Diesel Engine Overhaul**(2-4) Credit: 4**

This course is designed to provide the student with the knowledge to perform a complete engine overhaul on various types of diesel engines. Crankshaft, camshaft, bearing, seals, cylinder sleeves, and valve reconditioning service will be performed. Prerequisites: AUTO 1400, DIEM 1401, DIEM 1402.

DIEM 2404 Diesel Automatic Power Trains**(2-4) Credit: 4**

This is a theory and laboratory course in torque converters and various automatic transmissions utilized in conjunction with diesel engine application. It will provide a working knowledge of the mechanical and hydraulic operations in the automatic transmission. Emphasis will be placed on how to clean, disassemble, inspect, service and trouble-shoot various automatic transmissions. Prerequisites: AUTO 1400, DIEM 1404.

DIEM 2405 Advanced Diesel Engine Service & Trouble-shooting**(2-4) Credit: 4**

This course is designed for the student to specialize in a chosen diesel engine. All types of service and trouble-shooting will be included with special emphasis on rack adjustment, governor adjustment, and injector timing. Prerequisites: AUTO 1400 and all DIEM courses.

Drafting and Design (DRDS)**DRDS 1302 (DD 130) Blueprint Reading****(2-2) Credit: 3**

The fundamentals of blueprint and sketching as they apply to machine drawing.

DRDS 1303 (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.

DRDS 1400 (DD 131) Fundamentals of Drafting**(2-4) Credit: 4**

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.

- DRDS 1401 (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 1301 or concurrent enrollment.
- DRDS 1402 (DD 142) Technical Illustration (3-3) Credit: 4**
 Introduction to pictorial drawings as used in industrial catalogues, 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 1301, DRDS 1401, or concurrent enrollment.
- DRDS 1403 (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 1301, DRDS 1401 or concurrent enrollment.
- DRDS 1404 (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 1301
- DRDS 2401 (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 1301.
- DRDS 2402 (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 1301.
- DRDS 2403 (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 1301.
- DRDS 2404 (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 1301, DRDS 1401, DRDS 1402.
- DRDS 2405 (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 1301, ENGR 1302, TMTH 1300, TMTH 1301, or permission of the Department Manager.
- DRDS 2406 (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.

Electronic Data Processing

(See Computer Science)

Electronics Technology (ELTE)

- ELTE 1301 (ET 131) Technical Mathematics I (3-0) Credit: 3**
 A study of the basic concepts of math and algebra and the use of the electronic calculator in problem solving.
- ELTE 1302 (ET 132) Technical Mathematics II (3-0) Credit: 3**
 A study in the solution of trigonometric problems through the use of tables, and the electronic calculator. Prerequisite: ELTE 1301.

ELTE 1303 (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.

ELTE 1400 (ET 141, ET 142) Basic Electricity (3-3) Credit: 4

A study of basic electrical circuits involving both resistive and reactive circuits and their solution through the use of Ohm's Law, Kirchoff's Law, Thevenin's, Norton's and the Superposition Theorems as well as the power formula.

ELTE 1401 (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 Laws, and the power formulas in analyzing these networks.

ELTE 1402 (ET 142) Alternative 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: ELTE 1401.

ELTE 1403 Electronics Circuits I (3-3) Credit: 4

A study of the active electronic devices (ie. diodes, transistors, etc.) and their more common circuit applications. This course covers circuit design methods of simple power supplies, amplifiers, relaxation oscillators, and switching circuits. This is a technical course requiring a working knowledge of simple algebra. Prerequisites: ELTE 1301, ELTE 1400.

ELTE 1404 (ET 245) Communications Circuits I (3-3) Credit: 4

A study of those basic circuits used throughout industry today. Prerequisite or Corequisite: ELTE 1403.

ELTE 1501 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. Mathematic topics covered will include decimals, fractions, scientific notation, roots, powers, exponents, Ohm's Law, power formulas and the use of series and parallel circuits.

ELTE 1502 Intermediate Electricity for Electronics (4-3) Credit: 5

A study in the principles of basic 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 equations, powers of ten, percentages and an introduction to trigonometry. Prerequisite: ELTE 1501.

ELTE 1503 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. Prerequisite: ELTE 1502.

ELTE 2301 (ET 234) Broadcast Equipment Maintenance(1-6) Credit: 3

The operation, preventive maintenance procedures, and trouble-shooting 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: ELTE 1404 and the approval of the Departmental Manager.

ELTE 2402 (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: ELTE 2404.

ELTE 2403 (ET 243) Special Intensive Study (3-9) 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 and is in the field of his major. A student obtaining a second or third degree, must repeat the course with the emphasis and project related to the discipline in which the degree is to be awarded. The student must be eligible for graduation at the end of the semester in which this course is taken. Prerequisite: Approval of the Department Manager.

ELTE 2404 Electronic Circuits II (3-3) Credit: 4

A continuation of the study of active circuits. This course covers the design of audio amplifiers, power supply regulation, R.F. amplifiers, sine wave oscillators, relaxation oscillators, mixer circuits, and modular circuits. Prerequisite: ELTE 1403.

ELTE 2406 (ET 246) Integrated Devices (3-3) Credit: 4

An advanced study of the many types of IC's in use today. The course will include digital, linear, and LED type devices. Course will also include application and application design. Prerequisite: ELTE 1403.

ELTE 2407 (ET 247) Communications Circuits II (3-3) Credit: 4

A study of communications circuits necessary for the successful acquisition of the FCC first class license. Prerequisite: ELTE 1404.

ELTE 2408 (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: ELTE 2404.

ELTE 2409 (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. Prerequisite: COES 1409.

Engineering (ENGR)

ENGR 1301 (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 1302 (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 1301.

English (ENGL)

ENGL 1300 (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 1301 (ENGL 131) Composition & 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 1302 (ENGL 132) Composition & 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 1301 or advanced standing.

ENGL 1303, ENGL 1304 (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 1305 (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 1306 (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 1307 (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 1309 (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 2301 (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 1301, 1302.

ENGL 2302 (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 1301, 1302.

ENGL 2303 (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 1301, 1302.

ENGL 2304 (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 1301, 1302.

ENGL 2305 (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 1301, 1302.

ENGL 2306 (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 1301, 1302.

ENGL 2309 (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.

Farm and Ranch Management (FRMG)

FRMG 1301 (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 1302 (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 1303 (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 1304 (FRMG 137) Animal Health (2-3) Credit: 3**
Students will study the basics of internal and external parasites, principal diseases of livestock, identification and control of diseases and pests.
- FRMG 1305 (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 1306 (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 1307 (FRMG 139B) Intermediate Horsemanship (3-2) Credit: 3**
This course is a continuation of Elementary Horsemanship 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 1306 or approval of the Department Manager.
- FRMG 2301 (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 2302 (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 2303 (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 2304 (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: AGRI 1301.
- FRMG 2305 (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 1307 or approval by Department Manager.
- FRMG 2306 (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 2307 (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 2308 (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: AGRI 1301, BIOL 1401, and BIOL 1402.
- FRMG 2401 (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 2402 (FRMG 249) Farm Equipment Maintenance(3-3) Credit: 4 & Repair

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.

Finance and Banking (FIBA)

FIBA 1301 (MGMT 131B) Banking Principles (3-0) Credit: 3

The fundamentals of bank functions presented in a descriptive fashion so that the beginning banker may acquire a broad and operational perspective. It reflects the radical changes in banking policy and practice which have occurred in recent years. Topics covered are banks and the monetary system, negotiable instruments, the relationship of the financial institution to its depositors, types of accounts, the deposit function, the payments function, loans and investments, other services (trust, international and safe deposit), accounting and marketing, external and internal controls, and the public service obligations of banks.

FIBA 1302 (MGMT 132B) Money and Banking (3-0) Credit: 3

The best economic principles most closely related to the subject of money and banking in a context of topics and interest to present and prospective financial institution management. The practical application of the economics of money and banking to the individual financial institution is stressed. Some of the subjects covered include structure of the commercial banking system; the nature and functions of money; banks and the money supply; cash assets and liquidity management; investments, loans, earnings, and capital; the Federal Reserve System and its policies and operations; Treasury Department operations; and the changing international monetary system.

FIBA 1401 (MGMT 140B) Finance & Banking Internship I (1-20) Credit: 4

This course consists of on-the-job financial 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 banking coordinator.

FIBA 1402 (MGMT 141B) Finance & Banking Internship II (1-20) Credit: 4

This course is a continuation of Finance and Banking Internship I. Prerequisite: FIBA 1401.

FIBA 2301 (MGMT 231B) Federal Regulations of Banking (3-0) Credit: 3

Some of the topics covered are agencies regulating financial institutions, bank characters, reports and examinations, federal limitations on financial operations, and the regulation of expansion. Emphasis is on supervision rather than the role of the federal government as it directly influences the operations of financial institutions through fiscal and monetary policy decisions.

FIBA 2302 (MGMT 232C) Bank Management (3-0) Credit: 3

This course presents new trends which have emerged in the philosophy and practice of management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management.

FIBA 2303 (MGMT 233B) Marketing for Bankers (3-0) Credit: 3

This course covers the concepts and philosophies of marketing; marketing information, research, and target; the marketing mix (product strategy, distribution strategy, advertising and sales promotion, personal selling, and pricing strategy); and the methods of marketing planning.

FIBA 2304 (MGMT 234B) Installment Credit (3-0) Credit: 3

Emphasizes the pragmatic "how-to" details of Installment Credit. Topics covered are principles of credit evaluation, open-end credit, marketing financial services, collection policies and procedures, legal aspects, financial statement analysis, direct and indirect installment lending, leasing and other special situations, installment credit department management, insurance and rate structure and yields.

FIBA 2305 (MGMT 235B) Bank Investments (3-0) Credit: 3

Covers the sources and uses of bank funds and the place of investment in the overall scheme of bank operations. Especially important are the relationship of investments to business and the unique functions, advantages, and purpose served by a wide range of securities. Investment terminology is covered in detail.

FIBA 2306 (MGMT 236B) Analyzing Financial Statements (3-0) Credit: 3

This course includes characteristics of financial statements and financial statement analysis. Goals, methods, and tools of analysis; analysis of profit and loss, accounts receivable, inventories and balance sheets; the relationship of balance sheet accounts to sales; and projected statements cash budgets. Prerequisite: BUSS 2303.

FIBA 2401 (MGMT 240B) Finance & Banking Internship III (1-20) Credit: 4

This course is a continuation of Finance and Banking Internship II. Prerequisite FIBA 1402.

FIBA 2402 (MGMT 241B) Finance & Banking Internship IV (1-20) Credit: 4

This course is a continuation of Finance and Banking Internship III. Prerequisite FIBA 2401.

Fire Protection (FPRT)

FPRT 1301(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 1302 (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 1303 (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 1304 (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 1305 (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 1307 (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 1308 (FPRT 138) Fire Service Chemistry II (3-0) Credit: 3

A continuation of FPRT 1307. Prerequisite: FPRT 1307.

FPRT 2301 (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 2302 (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 2301

FPRT 2303 (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 1307.

FPRT 2304 (FPRT 234) Legal Aspects of Fire Protection (3-0) Credit: 3

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

FPRT 2305 (FPRT 235) Building Codes and 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 on 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 2306 (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 firefighters and arson investigators and other related topics.

FPRT 2308 (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

FPRT 2309 (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 2310 Fire Service Communications

(3-0) Credit: 3

The development of fire alarm systems, the various types of systems, installation, operation and testing of the most common systems; receiving, dispatching, and radio communication procedures; F.C.C. regulations, the fire alarm operations office, mutual aid systems, fire station communications and facilities, response and fire ground procedures, emergency operations, code and numbering systems,; required records and reports; technological advances.

FPRT 2311 Advanced Fire Loss Statistical Systems

(3-0) Credit: 3

An in-depth study of computerized systems that may be utilized for storing and retrieval of fire loss statistics, also techniques and procedures for programming various types of records and reports valuable to the fire service. Exploration of the new systems of micro-filming including the modern technology of COM (Computer Output Microfilm) and the systems utilizing microfiche, including reduction of ratios and various type readers. A review of standards for the uniform coding for fire protection as developed by the NFPA in Pamphlet 901 and 901AM.

FPRT 2312 Fire Insurance Fundamentals

(3-0) Credit: 3

The relationships between fire defenses, fire losses, and insurance rates are studied, basic insurance principles, fire loss experience, loss ratios, state regulations of fire insurance key rate system, applying the I.S.O. Grading Schedule and other topics are stressed. Relationship of insurance to modern business; principles of property and casualty insurance contracts; corporate structure of insurance companies.

FPRT 2313 Urban Fire Problem Analysis

(3-0) Credit: 3

Intensive study of the urban fire problem. Problems covered by lack of zoning and other land use laws. Operation research techniques, and systems engineering are utilized as analytic procedures for the technological assessment of public fire protection, including water supply, fire alarm, and fire department traditional assessment methods and urban analysis. Socio-economic and management factors as related to city planning. Environment problems incurred should be studied in depth.

FPRT 2404 (FPRT 244) Fire Fighting Tactics and 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 (FSMG)

FSMG 1302 (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.

FSMG 1303 (RMGT 133) Sanitation & 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.

FSMG 1304 (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.

FSMG 1305 (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.

FSMG 1306 (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.

FSMG 1307 (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.

FSMG 1401 (RMGT 141) Food Preparation & 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.

FSMG 2201 (RMGT 221) Food Service Terminology (2-0) Credit: 2

This course is an introduction to the terminology utilized in the food service industry.

FSMG 2302 (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.

FSMG 2303 (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.

FSMG 2304 (RMGT 234) Marketing & 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.

FSMG 2305 (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. Prerequisite or Corequisite: MATH 1307.

FSMG 2306 (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.

FSMG 2307 (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.

FSMG 2401 (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.

FSMG 2402 (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.

FSMG 2405 (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.

FSMG 2406 (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: FSMG 2405.

Foreign Language

(See French, German, or Spanish)

French (FREN)

FREN 1401 (FR 141) Beginning French I (3-3) Credit: 4

This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

FREN 1402 (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: FREN 1401.

FREN 2301 (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: FREN 1401, 1402, or two years of French in an accredited high school.

FREN 2302 (FR 232) Intermediate French II (3-0) Credit: 3

This course continues the drill on syntax as needed for reading, composition, and conversation. Prerequisite: FREN 2301.

General Secretarial

(See Office Administration)

Geography (GEOG)

GEOG 2301 (GEO 231) Elements of Physical Geography (3-0) Credit: 3

The basic physical elements of geography: Maps, climate, and natural resources.

GEOG 2302 (GEO 232) Cultural & 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 1401 (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 1402 (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 1401 (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 1402 (GERM 142) Beginning German II (3-3) Credit: 4

A continuation of Beginning German I. Prerequisite: GERM 1401 or its equivalent.

Government (GOVT)

GOVT 2301, 2302 (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 2303 (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 1301 (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 1302 (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 1303, 1304 (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 1305, 1306 (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 2301 (HIST 231) International Relations and U.S. Foreign Policy (3-0) Credit: 3

A study of international relationships and problems in world affairs; organization 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 2302 (HIST 239) Studies in American History (3-0) Credit: 3

This course is a survey of the major developments in United States history with special emphasis on the international developments since 1945 in which the American people have played dominant or decisive roles. The influence that Europe and Asia have had on the United States will also be examined. Other countries' foreign policies, the Cold War, the rise of the Third World and the American social and cultural revolution are major topics of instruction in this course. Prerequisite: HIST 1301 and HIST 1302 or consent of instructor.

HIST 2303 (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 2304 (HIST 236) World Religions (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 (HMMG)

HMMG 1300 (HM 130) Food & 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.

HMMG 1302 (HM 132) Hotel/Motel Organization and 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.

HMMG 1303 (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.

HMMG 1304 (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.

HMMG 2301 (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.

HMMG 2302 (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.

HMMG 2304 (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. Prerequisite or Corequisite: MATH 1307.

HMMG 2305 (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.

HMMG 2306 (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.

HMMG 2401 (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.

HMMG 2402 (HM 241) Hotel/Motel Internship II (1-20) Credit: 4

This is a continuation of Hotel/Motel Internship I. Prerequisite: HMMG 2401.

Journalism (JOUR)

JOUR 1401 (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 1402 (JOUR 142) News Gathering & 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.

Law Enforcement

(See Criminal Justice)

Maintenance Technology (MTNT)

MTNT 1400 (MTNT 140) Shop Practice & Safety (3-3) Credit: 4

This course is an introduction to shop safety methods and practices, proper use of hand and power tools, and basic skills involved in the maintenance technology field.

MTNT 1401 (MTNT 141) Carpentry I (2-4) Credit: 4

This course is designed to provide the student with an understanding of Carpentry as a trade. Included are the use of special tools, measuring devices, wood types, building and concrete forms, framing, floor, wall and roof construction. Prerequisite or corequisite: MTNT 1400 or permission of Department Manager.

MTNT 1402 (MTNT 143, 144) Electricity (2-4) Credit: 4

This course is designed to provide the student with a working knowledge of the electrical installation, service and repair procedures for residential and light commercial buildings. Prerequisite or corequisite: MTNT 1400.

MTNT 2401 (MTNT 241, 242) Masonry (2-4) Credit: 4
This course covers the theory and practical applications of setting forms, pouring and finishing concrete slabs, laying of brick, concrete tiles, and ceramic tile. Prerequisite or corequisite: MTNT 1400.

MTNT 2402 (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. Prerequisites: MTNT 1400, MTNT 1401.

MTNT 2403 (MTNT 243, 244) Plumbing (2-4) Credit: 4
This course covers the theory and practical application on plumbing maintenance, service and repair procedures for residential and light commercial buildings. Topics of study include plastic, copper, cast iron, galvanized pipe, cutting and joining. Prerequisite or corequisite: MTNT 1400 or permission of Department Manager.

MTNT 2404 (MTNT 245) Painting & 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, preparation of surfaces, refinishing damaged and proper maintenance of finished surfaces. Prerequisite or corequisite: MTNT 1400.

Management, Business (MGMT)

MGMT 1301 (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 1302 (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 1303 (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 1304 (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 1305 (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 1306 (MGMT 136) Human Relations (3-0) Credit: 3
This fundamental management course examines topics such as morale, motivation, communications, leadership, and change as they relate to managerial decision making.

MGMT 1307 (MGMT 137) Insurance (3-0) Credit: 3
Introduction to theory and practice of insurance, including life, fire, automobile, and personal and business risk.

MGMT 1309 (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 2300 (MGMT 230) Credit & 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 2301 (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 2302 (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 2303 (MGMT 232A) Law & 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 subordinates in the areas of law and legal assistance.

MGMT 2304 (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 2305 (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 2306 (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 2307 (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 2309 (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 2310 (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 2312 (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.

Management, Food Service

(See Food Service)

Management, Hotel-Motel

(See Hotel-Motel)

Mathematics (MATH)

MATH 1300 (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 1301 (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 1300 or equivalent.

MATH 1302 (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 1301 or equivalent.

MATH 1303 (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 1301 or equivalent.

MATH 1304 (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 1303 or equivalent.

MATH 1305 (MATH 135) Finite Mathematics I (3-0) Credit: 3

Symbolic logic, set theory, induction, permutations, combinations, counting methods, probability. Prerequisite: MATH 1301 or equivalent.

MATH 1306 (MATH 136) Finite Mathematics II (3-0) Credit: 3

A continuation of Finite Mathematics I. Introduction to statistics, graphing, vectors, matrices, linear programming, and theory of games. Prerequisite: MATH 1305.

MATH 1307 (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 1308 (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 1309 (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 2301 (MATH 231) Calculus I (3-0) Credit: 3 (Fall)

A first course in differential calculus. Prerequisite: MATH 1304 or concurrent enrollment in MATH 1304 or equivalent.

MATH 2302 (MATH 232) Calculus II (3-0) Credit: 3 (Spring)

A first course in Integral Calculus. Prerequisite: MATH 2301 or equivalent.

MATH 2303 (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 2302 or equivalent.

MATH 2304 (MATH 234) Differential Equations (3-0) Credit: 3
Fourier series, linear differential equations, Laplace transforms, and series solution, all with applications. Prerequisite: MATH 2303.

Mathematics, Developmental

(See Developmental Studies)

Mathematics, Electronics

(See Electronics Technology)

Technical Mathematics (TMTH)

TMTH 1300 (TMTH 130) Technical Mathematics I (3-0) Credit: 3

A course designed to fill the needs of students in industrial and technical programs. Emphasis is placed on the use and application of the arithmetic fundamentals basic to everyday mathematics. The course includes addition, subtraction, multiplication, and division of whole numbers and fractions leading to the use of percentages, denominate numbers and basic plane and solid geometry.

TMTH 1301 (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 1300, or TMTH 1300, or permission of the Department Manager.

Medical Technology

(See Biology, Chemistry)

Mid-Management (MDMG)

MDMG 1401 (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 BUSS 1301, MGMT 1305, and MGMT 1306.

MDMG 1402 (MGMT 141M) Mid-Management Internship II (1-20) Credit: 4

This course is a continuation of Mid-Management Internship I. Prerequisites: MDMG 1401 and current enrollment or credit in MGMT 2302.

MDMG 2401 (MGMT 240M) Mid-Management Internship III (1-20) Credit: 4

This course is a continuation of Mid-Management II. Prerequisites: MDMG 1402 and current enrollment or credit in BUSS 2303 and MGMT 2309.

MDMG 2402 (MGMT 241M) Mid-Management Internship IV (1-20) Credit: 4

This course is a continuation of Mid-Management III. Prerequisites: MDMG 2401 and current enrollment or credit in MGMT 2301 and BUSS 2304.

Music (MUSI)

MUSI 1107 (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.

MUSI 1205 (MU 121E) Ear Training I (1-2) 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 1301.

MUSI 1206 (MU 122E) Ear Training II (1-2) Credit: 2

A continuation of Ear Training I. 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 MUSI 1302.

MUSI 1301 (MU 131) Music Fundamentals (3-1) Credit: 3

An introduction to music through the audio-visual relative solmization 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.

MUSI 1302 (MU 132) Music Theory (3-1) Credit: 3

A continuation of Music Fundamentals 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 1301 or consent of instructor.

MUSI 1303 (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.

MUSI 1304 (MU 134) Music Literature II (3-1) Credit: 3

A continuation of Music Literature I 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.

MUSI 1305 (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.

MUSI 2303 (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. Prerequisites: credit or enrollment in MUSI 2201 and MUSI 1302, or consent of instructor.

MUSI 2401 (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: MUSI 1302.

MUSI 2402 (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: MUSI 2401.

Music, Applied (MUSI)

MUSI 1101 (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 MUSI 1301.

MUSI 1102 (MU 112P) Class Piano II (0-1.5) Credit: 1
 A continuation of Class Piano I. 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: MUSI 1101 or consent of the instructor.

MUSI 1103 (MU 114P) Class Piano IV (0-1.5) Credit: 1
 A continuation of Class Piano III. 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 MUSI 1201. Prerequisite: MUSI 1103 or consent of the instructor; credit or enrollment in MUSI 1302.

MUSI 1104 (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 MUSI 1201.

MUSI 1201 (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: MUSI 1103 or MUSI 1104 or audition, credit or enrollment in MUSI 1302.

MUSI 1202 (MU 122P) Private Piano II (0-1) Credit: 2
 A continuation of Private Piano I. One 45-minute lesson per week. Two hours daily practice required. Prerequisite: MUSI 1201.

MUSI 2201, 2202 (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: MUSI 1202.

MUSI 2301, 2302 (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: MUSI 2202.

Music, Voice (MUSI)

MUSI 1105, 1106 (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 MUSI 1301.

MUSI 1203, 1204 (MU 121V, 122V) Private Voice I & II (0-1.5) Credit: 2

A continuation of the principles of Class Voice I and Class Voice II, 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: MUSI 1106 and/or audition.

MUSI 2203, 2204 (MU 221V, 222V) Private Voice (0-1) Credit: 2
III & IV

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.

Nursing (NURI)

NURI 1901 (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. Instruction is designed to assist the student in developing knowledge in the areas of communication, interpersonal relations, growth and development, health teaching, safety, asepsis technical skills, pharmacology, nutrition, nursing process, nursing history, trends, legal aspects, and self evaluation. An independent unit of study on math is also included. Area health agencies provide opportunity for clinical application of the above areas of study.

NURI 1902 (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: NURI 1901.

NURI 1903 (NU 193) Maternal & 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: NURI 1902.

NURI 2101 (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.

NURI 2301 (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: NURI 1903.

NURI 2901 (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: NURI 2902.

VNUR 1301 (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.

Office Administration (OADM)

OADM 1301 (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.

OADM 1302 (OA 132) Intermediate Shorthand (3-3) Credit: 3

Students will continue shorthand training and reinforcement of theory. Prerequisite: OADM 1301 or equivalent.

OADM 1303 (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.

OADM 1304 (OA 134) Intermediate Typewriting (3-3) Credit: 3

A continuation of OADM 1303. Additional skills in terms 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.

OADM 1305 (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.

OADM 1306 (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.

OADM 1308 (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.

OADM 1309 (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.

OADM 2301 (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: OADM 1302 or equivalent.

OADM 2302 (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.

OADM 2303 (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: OADM 2301.

OADM 2304 (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.

OADM 2305 (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: OADM 2304 or equivalent.

OADM 2307 (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.

OADM 2308 (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.

OADM 2309 (OA 239) Office Administration Internship (1-5) Credit: 3

Students will be provided a combination of occupational related classroom 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 (OPRT)

OPRT 1301 (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.

OPRT 1302 (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.

OPRT 1303 (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.

OPRT 1304 (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.

OPRT 1305 (OP 135) Copy Preparation & 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: OPRT 1301 or OPRT 1302.

OPRT 1306 (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: OPRT 1302

OPRT 1307 (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: OPRT 1303.

OPRT 1308 (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: OPRT 1301 or OPRT 1303.

Petroleum Technology (PETT)

PETT 1301 (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 1302 (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 1303 (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 1304 (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 regulatory agencies.

PETT 1401 (PETT 141) Rig & 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 1402 (PETT 142) Petroleum Logging & 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 2301 (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 2302 (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 2303 (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 2304 (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 2305 (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 2306 (PETT 236) Hydraulics (3-0) Credit: 3**
A study of hydraulics related to drilling, oil pipelines, and artificial lift.
- PETT 2307 (PETT 237) Refinery Operations (3-0) Credit: 3**
A study of theoretical and practical approaches to the operation of refinery.
- PETT 2401 (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 2402 (PETT 242) Petroleum Refining Methods (3-3) Credit: 4 and Operations**

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 2301 (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 2302 (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 2303 (PHIL 233) Logic (3-0) Credit: 3**
Nature and methods of correct reasoning; deductive proof; inductive proof; fallacies; arguments.
- PHIL 2304 (PHIL 237) Old Testament History (3-0) Credit: 3 and Philosophy**
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 2305 (PHIL 238) New Testament History and 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.

Photography (PHOT)

PHOT 1301 (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 1302 (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 1301 or consent of instructor.

PHOT 1303 (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 1301 or consent of instructor.

PHOT 1304 (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. Prerequisites: PHOT 1301 and 1302 or consent of instructor.

PHOT 1305 (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. Prerequisites: PHOT 1301,1302,1303 and 1304 or consent of instructor.

PHOT 1306 (PHOT 136) Print Enhancement (2-4) Credit: 3

The course will improve the student's ability to correct flaws in photographic prints and to mask photographs by removing or adding colors to prints. The understanding and utilization of proper air brushing and other techniques and processes will provide the student with an ability to better display photographic work.

PHOT 1401 (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 1402 (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 1401 or consent of instructor.

PHOT 1403 (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. Principles of filters and lenses and advanced focusing techniques are studied. Prerequisite: PHOT 1401 or consent of instructor.

PHOT 1404 (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 business is set up, what equipment is needed, how clients are found, what prices are charged, and new trends in the field are reviewed. Prerequisites: PHOT 1401 and PHOT 1402, or consent of instructor.

PHOT 1405 (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. Prerequisites: PHOT 1401, PHOT 1402, PHOT 1403, PHOT 1404 or consent of instructor.

PHOT 1406 (PHOT 146) Color Photography I (3-2) Credit: 4

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 1407 (PHOT 147) Color Photography II (3-2) Credit: 4

Positive and negative color film processing, sensitometry, and color printing. Prerequisite: PHOT 1406.

PHOT 2301 (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. Prerequisites: PHOT 1401, PHOT 1402, PHOT 1404 or consent of instructor.

PHOT 2302 (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 2301 or consent of instructor.

PHOT 2403 (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 1402.

PHOT 2404 (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. Prerequisites: PHOT 1401, PHOT 1402, PHOT 1404, PHOT 1406, and PHOT 1407.

Physical Education (PYED)

PYED 1100 (PE 110)	Football and Basketball	(1-2)	Credit: 1
PYED 1101 (PE 111)	Volleyball and Softball	(1-2)	Credit: 1
PYED 1102 (PE 112)	Beginning Badminton	(1-2)	Credit: 1
PYED 1103 (PE 113)	Beginning Bowling	(1-2)	Credit: 1
PYED 1105 (PE 115)	Folk and Square Dancing	(1-2)	Credit: 1
PYED 1106 (PE 116)	Beginning Swimming	(1-2)	Credit: 1
PYED 1107 (PE 117)	Beginning Tennis	(1-2)	Credit: 1
PYED 1108 (PE 118)	Beginning Golf	(1-2)	Credit: 1
PYED 1109 (PE 119)	Basketball and Soccer	(1-2)	Credit: 1

PYED 2100 (PE 210)	Advanced Bowling	(1-2)	Credit: 1
PYED 2101 (PE 211)	Advanced Swimming	(1-2)	Credit: 1
PYED 2102 (PE 212)	Intermediate Tennis	(1-2)	Credit: 1
PYED 2103 (PE 213)	Advanced Golf	(1-2)	Credit: 1
PYED 2104 (PE 214)	Tumbling	(1-2)	Credit: 1
PYED 2105 (PE 215)	Figure Development	(1-2)	Credit: 1
PYED 2106 (PE 216)	Advanced Badminton	(1-2)	Credit: 1
PYED 2107 (PE 217)	Modern Dance	(1-2)	Credit: 1
PYED 2108 (PE 218)	Physical Conditioning	(1-2)	Credit: 1
PYED 2109 (PE 218A)	Aerobics	(1-2)	Credit: 1
PYED 2110 (PE 219)	Intercollegiate Athletics	(1-2)	Credit: 1

PYED 1301 (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.

PYED 1302 (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.

PYED 2301 (PE 231) Sports Officiating (3-0) Credit: 3

Theory and practice in techniques of officiating. Officiating experience.

PYED 2302 (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.

Physics (PHYS)

PHYS 1401 (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 1303 or registration therein.

PHYS 1402 (PHY 142) College Physics II (3-3) Credit: 4

A continuation of College Physics I, fundamentals of classical electricity, magnetism, light, wave-motion, atomic and nuclear physics are covered. Prerequisite: PHYS 1401 or consent of the instructor.

PHYS 1403 (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.

PHYS 2401 (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 2301 or registration therein.

PHYS 2402 (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: PHYS 2401 or equivalent.

Plant Production

(See Farm and Ranch Mgmt.)

Pre-Med

(See Biology, Chemistry)

Psychology (PSYC)

PSYC 1101 (PSYC 111) College Orientation (1-0) Credit: 1

This course is designed to assist the student to recognize and develop aptitudes, interests, and abilities; to make adequate personal and social adjustments to college life; and to become acquainted with Central Texas College policies, services and activities. This course is required of all beginning students taking 12 semester hours or more and of all transfer students with less than 24 hours of earned credit.

PSYC 2301 (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 2302 (PSYC 232) Personality Adjustment (3-0) Credit: 3

A study of psychological concepts and principles related to healthy personality and social adjustment.

PSYC 2303 (PSYC 233) Child Growth & 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 (REAE)

REAE 1301 (MGMT 138R, MGMT 139R) Real Estate Fundamentals (3-0) Credit: 3

This course includes an overview of licensing requirements for a real estate broker and salesman, ethics of practice, *titles to and conveyancing of real estate, legal descriptions, law of agency, deeds, encumbrances and liens, distinctions between personal and real property, contracts, appraisal, finance and regulations, closing procedures, and real estate mathematics.*

REAE 1302 Real Estate Marketing (3-0) Credit: 3

This course includes a study of real estate professionalism and ethics, characteristics of successful salesmen, time management, psychology of marketing, listing procedures, advertising, negotiating and closing, financing, *and the Deceptive Trade Practices-Consumer Protection Act, as amended, and the Business & Commerce Code.*

REAE 2301 (MGMT 230R) Real Estate Brokerage (3-0) Credit: 3

This is an examination of the law of agency; planning and organization; operational policies *and procedures; recruiting, selection, and training of personnel; records and control; real estate firm analysis; expansion criteria; the causes of the success and failure of real estate firms; planning for operations; the management of sales activities; maximizing profits through control; meeting competition; and the search for professionalism. Prerequisite: REAE 1301 or consent of Department Manager.*

REAE 2302 (MGMT 231R) Residential Real Estate Appraisal (3-0) Credit: 3

This course is an explanation of the purposes and functions of appraisal, the social and economic determinants of value, appraisal case studies, cost, market data, income approaches to appraisal, final correlations, and reporting. The course also consists of discussions and case studies involving the nature of neighborhood analysis, land or site analysis and valuation, residential styles and utility, mortgage equity and discounted cash flow, and codes of ethics associated with the appraisal industry. Prerequisites: MATH 1307, REAE 1301 or consent of Department Manager.

REAE 2303 (MGMT 232R) Real Estate Property Management (3-0) Credit: 3

This is an explanation of the role of the property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, the Federal, State, and local Fair Housing Laws, an overview of the real estate market, the rising role of government in real estate, cyclic aspects of real estate, the marketing process in property management, the administrative processes necessary for success; and the operation and management of a property management firm. Prerequisite: REAE 1301 or consent of Department Manager.

REAE 2304 (MGMT 233R) Real Estate Finance (3-0) Credit: 3

This course is an overview of monetary systems, primary and secondary money markets, sources of mortgage loans, Federal Government Procedures, closing costs, alternative financial instruments, loan applications-progress and procedures, equal credit opportunity, the Community Reinvestment Act, and the Texas Housing Agency purpose and operations. This course also includes the history and background of real estate financing, money and interest rates, notes and mortgages, sources of mortgage money, property appraisal, analyzing borrowers, residential loan analysis, loan analysis of income properties, loan analysis of industrial, rural, and development properties, and settlement procedures. Prerequisite: REAE 1301 or consent of Department Manager.

REAE 2305 (MGMT 238R) Real Estate Law (3-0) Credit: 3

This course consists of legal concepts of real estate; land description; real property rights; estates in land; contracts; encumbrances; foreclosures; recording procedures; evidence of title; an explanation as to how ownership is held; fixture and easements; conveyancing; acknowledgments; and constructive notice; mortgages; closing, landlord and tenant relationships; regulation of real estate; and real estate taxation.

REAE 2306 (MGMT 237R) Real Estate Seminar (3-0) Credit: 3

Course to be conducted as a series of twelve four hour lectures presented by commercial practitioners of selected subjects. Typical subjects: Blueprints and Specifications; Residential Construction; Commercial Construction; Grading, Excavation, Drainage, Foundations, Floorplans; Sewage Disposal; Utilities; Government Inspections (MPSs); Title Search.

REAE 2307 Commercial Real Estate Appraisal (3-0) Credit: 3

This is an explanation of the purposes and functions of appraisal; the social and economic determinants value; appraisal case studies; cost; market data; income approaches to appraisal; final correlations; and reporting. The course also consists of discussions and case studies pertaining to building material and equipment; building costs and estimates; accrued depreciation; gross income estimates; analysis of expense; rates in capitalization; straight and annuity capitalization; and reconciliation of value indications. Prerequisites: MATH 1307, REAE 1301 or consent of Department Manager.

REAE 2401 (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.

REAE 2402 (MGMT 241R) Real Estate Internship II (1-20) Credit: 4

This course is a continuation of Real Estate Internship I. Prerequisite: Sophomore standing or consent of Department Manager.

Recreation (RECR)

RECR 1301 (REC 133) Foundations of Recreations (3-0) Credit: 3

Development, structure, purposes, and functions of the professional fields in recreation.

RECR 1302 (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.

RECR 1303 (REC 135) Theory & 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.*

RECR 2301 (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.

RECR 2302 (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.

RECR 2303 (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.

RECR 2304 (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.

RECR 2305 (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.

Science

(See Biology, Chemistry, Geology)

Small Gas Engine Repair (SGER)

SGER 1401 (SGER 141) Gas Engine Fundamentals (2-4) Credit: 4

This course covers the theory and repair practices on two cycle, four cycle, and wankel engines, both air cooled and water cooled.

SGER 1402 (SGER 142) Ignition Systems (2-4) Credit: 4

This course covers the theory and repair practices on the various component parts of the ignition system. Proper testing and service procedures are performed on battery ignition systems, solid state ignitions, capacitor discharge systems, and on magneto systems.

SGER 1403 (SGER 143) Shop Practices (2-4) Credit: 4

The course covers an introduction to shop safety, use of hand and power tools, use of precision measuring instruments, and other special tools used in small engine repairs.

SGER 1404 (SGER 144) Carburetion, Fuel, and Lubrication Systems (2-4) Credit: 4

This course is designed to provide the student with knowledge and skills to rebuild and service different types of carburetors, lubrication systems, exhaust systems, and flame arrestors that are found on the various types of small gas engines.

SGER 1405 (SGER 145) Motorcycle Engine Service (2-4) Credit: 4

This course is designed to provide the student the necessary skills to disassemble and assemble motorcycle power plants, repair and replace drive train components, use special tools particular to motorcycle repairs, and to use applicable parts and service manuals.

SGER 1406 (SGER 146) Lawn Care Equipment Service (2-4) Credit: 4

This course covers the theory and repair practices on all types of power lawn care units including lawn mowers, riding mowers, garden tractors, rotary tillers, and other similar items of equipment.

SGER 2401 (SGER 241) Advanced Motorcycle Repair (2-4) Credit: 4

This course is a continuation of SGER 145 with special emphasis placed on chassis and system repair including front and rear suspension systems, hub and wheel repair, transmissions, and brakes. Prerequisite: SGER 145.

SGER 2402 (SGER 242) Chain Saw Service (2-4) Credit: 4

This course covers the theory and repair practices on all types of modern chain saws and related equipment.

SGER 2403 (SGER 243) Marine Inboard/Outboard Service (2-4) Credit: 4

This course covers the theory and practical lab work including disassembly and assembly of the power head and lower drive unit, analysis of engine malfunctions component inspection, use of special tools, and the use of service and parts manuals that are applicable to marine inboard/outboard engines.

SGER 2404 (SGER 244) Stationary Power Plant Service (2-4) Credit: 4

This course covers the theory and repair practices necessary on stationary power plants, self-contained generating units and related units.

SGER 2405 (SGER 245) Recreational Vehicle Engine Service (2-4) Credit: 4

This course covers the theory and repair practices that are necessary to service snowmobiles, off-the-road vehicles, and other related units.

SGER 2406 (SGER 246) Special Projects (1-8) Credit: 4

The purpose of this course is to allow the student to develop one or more special projects related to small gas engine repair under the supervision of the program instructor. Prerequisite: Sophomore standing and 24 semester hours of Small Gas Engine Repair courses.

Social Science

(See Anthropology, Geography, Government, History, Philosophy, Psychology, Sociology)

Sociology (SOCI)

SOCI 2301 (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.

SOCI 2302 (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.

SOCI 2303 (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.

SOCI 2304 (SOC 234) Social Institutions & 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.

SOCI 2305 (SOC 235) Social Psychology (3-0) Credit: 3

The origin and development of personal behavior in interpersonal situations.

SOCI 2306 (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*.

SOCI 2307 Introduction to Social Work (3-0) Credit: 3

This course covers the development of the philosophy and practice of social work in the United States. Also included is a survey of the various social work occupations and techniques utilized in social work.

SOCI 2308 (SOC 239) Race 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 1301 (SESY 131) Principles of Solar Energy (3-0) Credit: 3

This course is an introduction to the principles of solar energy. Topics of instruction will include the sun-earth relationship; a study of the various types of 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 1401 (SESY 141, 241) Solar Heating and Cooling Systems (3-3) Credit: 4

This course is an introduction to solar heating and cooling systems. Topics of instruction will include an overview of this basic system components of both solar heating and solar cooling systems, and the operation, installation, maintenance, trouble-shooting, and service procedures of solar heating and solar cooling systems. Prerequisites: AIRC 1403 and AIRC 1404.

SESY 2401 Solar Systems Design (3-3) Credit: 4

This course is an introduction to solar systems design. Topics of instruction will include an overview of the basic architectural design of the structures to collect, store and distribute the heat to various parts of the structure by natural means. Prerequisite: SESY 1401.

SESY 2402 (SESY 231) Solar Energy Special Projects (1-5) Credit: 4

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. Prerequisites: SESY 1301, SESY 1401, SESY 2401.

Spanish (SPAN)

SPAN 1401 (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 1402 (SPAN 142) Beginning Spanish II (3-3) Credit: 4

This course is a continuation of Beginning Spanish I, with continued emphasis on conversation. Prerequisite: SPAN 1401.

SPAN 2301 (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 1401, 1402, or two years of Spanish at an accredited high school.

SPAN 2302 (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 2301 or equivalent.

Speech (SPCH)

SPCH 1101, 1102 (SPCH 111, 112) Forensic Practicum I & II (1-2) Credit: 2

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 1301 (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 1302 (SPCH 132) Voice & 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 1303 (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 2301 (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 1301, 2303, or consent of the instructor.

SPCH 2303 (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.

Theatre (THEA)

THEA 1101, 1102 (THET 111, 112) Stagecraft Practicum I & II (0-2) Credit: 2

Practice in all phases of play production. It may be repeated for credit.

THEA 1303 (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.

THEA 1301 (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.

THEA 1302 (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.

THEA 2301 (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.

THEA 2302 (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)

1482 TELE 1301 (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.

1483 TELE 1302 (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.

1483 TELE 1303 (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 1304 (TELE 134) Broadcast Sales (3-0) Credit: 3

This course is designed to give the student a working knowledge of the broadcast time sales. Areas of study include sales call preparation, sales presentations, spot scheduling, client interviews, collections, rate cards and contracts, and sales promotion. Station ratings and their use in broadcast sales will also be studied.

1485 TELE 1305 (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.

1486 TELE 1306 (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 1307 (TELE 137) Broadcast Station Management (3-0) Credit: 3

This course is an in-depth study of management responsibilities within the broadcast industry. Areas of study include personnel management, station budgets, profit and loss statements, network negotiations, and equipment purchases. Also included is a study of the Federal Communications Commission's rules and regulations pertaining to the overall operation of the broadcast station.

TELE 2301 (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.

2486 TELE 2302 (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.

²⁴⁰³
TELE 2303 (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 2304 (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 2305 (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 2306 (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 2307 (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.

²⁴⁰⁵
TELE 2308 (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.

²⁴⁰⁷
TELE 2309 (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 1302 and TELE 1303.

²⁴¹⁰
TELE 2310 (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 2309.

Television Repair

(See Consumer Electronics Servicing)

Theatre

(See Speech)

Vocational Nursing

(See Nursing)

Voice

(See Music)

Welding (WELD)

WELD 1401 (WELD 141) Beginning Gas Welding (2-4) Credit: 4

Instruction will be conducted in oxy-acetylene welding theory and practical application. Course of study will include use and operation of oxy-acetylene cutting equipment. Safety and proper care of oxy-acetylene equipment will be stressed.

WELD 1402 (WELD 142) Beginning Arc Welding (2-4) Credit: 4

Instruction will be conducted in the theory and practical application of Shielded Metal Arc Welding with various types of electrodes in flat and horizontal positions. Course of study to include AWS electrode classification.

WELD 1403 Intermediate Arc Welding (2-4) Credit: 4

Instruction will be given in the practice of making Shielded Metal Arc Welds in all positions. Emphasis will be placed on preparing the student for certification in flat and horizontal positions with various types of electrodes. Prerequisite: WELD 1402.

WELD 1404 Beginning GMAW and GTAW (MIG & TIG) (2-4) Credit: 4

Theory and practice of Gas Metal Arc Welding and Gas Tungsten Arc Welding of mild steel. Course of instruction to include study of shielding gases used in these processes. Prerequisites: WELD 1401 and WELD 1402 or ATBR 1405.

WELD 1405 Advanced Gas Welding and Cutting Processes (2-4) Credit: 4

Instruction will be given on oxy-acetylene welding in all positions and practical application of silver brazing and soft solder. Use of cutting machines will be included in the course of study. Prerequisite: WELD 1401.

WELD 2401 (WELD 151) Advanced Arc Welding (2-4) Credit: 4

Instruction will be given in the practice of taking guided bend test, with and without the use of back-up strips, in all positions. Emphasis will be placed on preparing students for certification in all positions with various types of electrodes. Prerequisite: WELD 1403.

WELD 2402 Beginning Pipe Welding (2-4) Credit: 4

Intensive classroom and practical applications will be given in techniques used in the welding of rolled and fixed position pipe. Prerequisite: WELD 1403.

WELD 2403 Advanced GMAW and GTAW (MIG & TIG) (2-4) Credit: 4

Instruction to be given on Gas Metal Arc Welding, in all positions of mild steel and aluminum. Gas Tungsten Arc Welding course of study to include welding of stainless steel, aluminum and other exotic metals. Prerequisite: WELD 1404.

WELD 2404 Advanced Pipe Welding (2-4) Credit: 4

Classroom instruction to be given on development of layout templates. Practical instruction will place emphasis on preparing the student for certification test on pipe. Prerequisite: WELD 2402.

WELD 2405 (WELD 153) Weld Testing and Inspection (4-2) Credit: 4

Theory and practice of making basic destructive and non-destructive weld test. This will include guided bend, nick break, tensile, hardness, liquid penetrant, magnetic particle, and ultrasonic testing. Prerequisite: WELD 1403.

WELD 2406 (WELD 154) Welding Fabrication and Layout (2-4) Credit: 4

Practical application of steel fabrication and general layout work. Blueprint reading of welding prints with welding symbols will be included. Prerequisites: WELD 2401 and DRDS 1400.

CONTINUING EDUCATION

The purpose of this non-credit program is to meet the continuing education 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.

Additional 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

Microwave Cooking
Gourmet Cooking
Interior Decoration
Intermediate Sewing
Sewing I
Quilting

Central Texas Vocational Skills Training Center

The Vocational Skills Training Center provides realistic and timely job training for out-of-school youths and adults. The vocational programs are based on specific needs identified in the Central Texas industrial community.

The Center operates on an open entry/open exit basis. Any student may enter and leave a program at a time of his/her own choosing, and may proceed through the program at his/her own pace. The training programs are flexible enough to accommodate special needs of the student while still maintaining the integrity of the over-all skills training.

Content of the vocational programs is determined by competencies or skills recommended by Industrial Advisory Committees. These are the skills needed for current employment. Each vocational program is complemented by Life Skills Training. This program of study includes experiences in self-motivation, study skills, daily living skills, and world of work skills.

Programs available at the Center:

Automotive Mechanics:

Detailed instruction for a general service mechanic, including major automotive systems and tune-up procedures.

Auto Body Repair:

Instructional experiences for general automotive body repair, including estimation, repair, and replacement.

Building Maintenance Trades:

Comprehensive training in all aspects of building maintenance and repair.

Diesel Mechanics:

Instructional experiences for the general diesel mechanic, including trouble-shooting and engine repair.

Drafting:

Detailed instruction for basic and mechanical drafting.

Medical Records Clerk:

Instructional experiences for the person handling any type of medical record.

Medical Secretary:

Instruction provided for the person who will fulfill secretarial duties in a hospital, clinic, or medical office.

Office Occupations:

Training experiences for a secretary, including receptionist duties and communication skills.

Print Shop Trades:

Detailed instructional experiences for an offset printer, including designing, setting-up, running, and shutting-down procedures.

Welding:

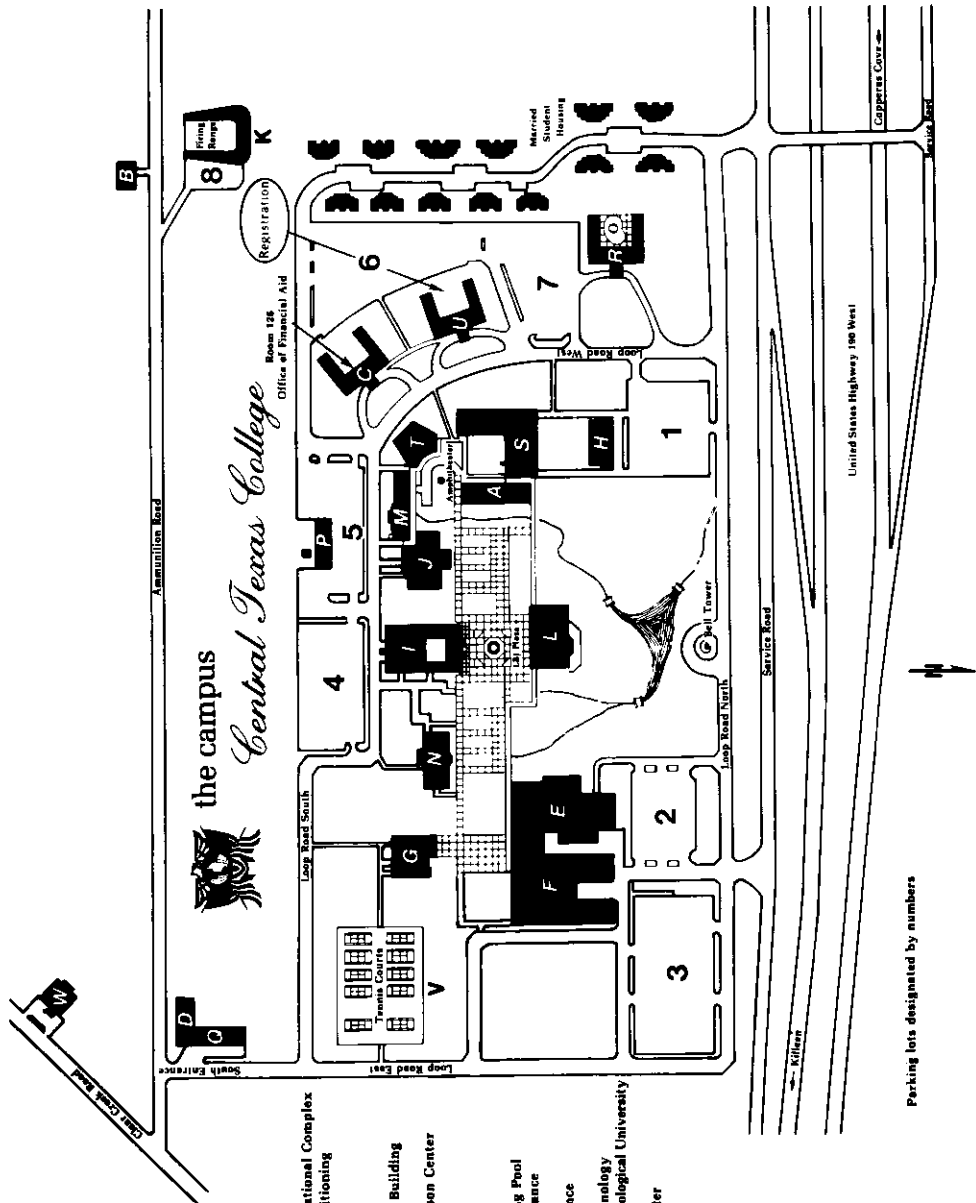
Training experiences required for skill development in shielded metal arc welding in all positions.

For further information, contact the Dean, Central Texas Vocational Skills Training Center.

GENERAL INDEX

	PAGE		PAGE
A		D	
Absences	19	Degree Completion Argeement, SOC	14
Academic Load	19	Degree, How to Apply for	29
Academic Probation	23	Degree Programs	31
Academic Standards	23	Degree Requirements	27
Academic Suspension	24	Degrees Conferred	29
Accreditation	iv, 20	Developmental Studies	28
Adding Classes	6	Disciplinary Action	26
Addresses	i, 24	Discipline, Philosophy	25
Address Change	24	Dropping Classes	26
Administrative Offices	vi	Due Process	26
Admission, Early	4	E	
Admission Requirements	3-5	Early Admission	4
Admission Requirements, Departmental	5	Educational Objectives	1
Advanced Standing Exams	12	Educational Philosophy	1
Advisement, Pre-Registration	6	Electives, Approved	30
Associate in Applied Science Degree	28	Electives, Technical	30
Associate in Arts Degree	27	Entrance Exams	12
Associate in General Studies Degree	28	Equal Opportunity Policy	2
Associate in Science Degree	27	Evaluation	12
Attendance Policy	19	Evaluation of Military Credit	13
Auditing Classes	24	Examination, Credit by	12
B		F	
Behavior, Class	24	Falsification of Records	24
Board of Trustees	ii	Fees	8
Bookstore	15	Field Evaluation	13
C		Financial Aid	16
Career Pilot, Admission Requirements	5	Food Service	15
Catalogue, the	2	Foreign Students, Admission	4
Certificate, How to Apply for	27	Requirements	
Certificates Conferred	27	Freshman, Classification of	20
Challenge Exam, Institutional	12	G	
Change of Address	24	GED Equivalency	12
Change of Grade	23	General Information	1
Changing Registration	6	GI Bill	17
Cheating	25	Grade, Change of	23
Class Behavior	24	Grade, Reporting	21
Class Membership	20	Grade Requirements	23
Classification	20	Grade and Point Average	21
Collusion	25	Grades for Repeated Courses	23
Commencement	29	Graduation	29
Continuing Education Program	134	H	
Correspondence Courses	13	Harrassment	24
Cost of Classes	6	High School Requirements	3
Counseling	11	Historical Background of the College	1
Course Admission	6	Honors	29
Course Descriptions	77	Honor Fraternity	23
Course Numbers	21	Housing	15
Course Offerings	2, 30	How Many Hours Should You Take	19
Course Out of Sequence	21	How to Apply for Certificate/Degree	29
Credit by Examination	12	How to Begin	3
Credit, Non-Traditional and	12		
Traditional			
Credit, Resident	20		
Credit, Transfer	20		

	PAGE		PAGE
		S	
How to Choose Courses	21	Satisfactory Progress, Grade Requirements	23
How to Earn a Certificate	28	Scholastic Honesty	25
How to Obtain CTC Transcripts	26	Semester Credit Hours	30
How to Obtain Financial Aid	16	Servicemen's Opportunity College	13
How to Sign Up for Classes	6	SOC Agreement, Degree Completion	14
How You May Return After Suspension	24	Sports	15
How You Receive Credit by Evaluation	12	Student Activities	14
How You Receive Grades	21	Student Activities, Regulations	24
		Student Center	14
I		Student Discipline	25
If You Don't Make the Grade	23	Student Financial Aid	16
Incomplete, Grade of	22	Student Records	10
Incomplete, Removal of	22	Summons	26
Institutional Challenge Exam	12	Suspension, Academic	24
International Student, Admission	4		
Requirements		T	
International Student, Advisement	11	Table of Contents	v
		Tardiness	19
L		Testing Services	12
Late Registration	6	Test Scores Required for Admission	12
Library	15	Textbooks	15
		Transcripts, How to Obtain CTC	26
M		Transcripts Required for Admission	3
Military Credit	13	Transfer Credit (to CTC)	12
		Transfer Credit (to other Colleges)	20
N		Transient Student Admission	4
Non-Credit Courses	134	Requirements	
Non-Traditional Credit	12	Tuition Charges	7
Nursing, Admission Requirements	5	Tuition Refund	8
		Tuition and Fee Schedules	7
O			
Official Enrollment/Registration	6	V	
Official Evaluation	13	Veterans Benefits	17
Other Costs	8	Visitors in Class	24
		Vocational Skills Training	135
P		W	
Parking	15	What Degrees Are Offered	27
Placement Services	11	What Requirements Must be Met for a	27
Plagiarism	25	Degree	
Prerequisite Courses	30	When are Certificates and Degrees	29
Privacy Act	10	Awarded	
Probation, Academic	23	When is Commencement Held	29
Probation, Disciplinary	25	When to Register	6
		Who to See for Classes	11
R		Withdrawal, Policy	26
Readmission Requirements	4		
Records Access	10		
Refunds	8		
Registration Periods	6		
Registration Requirements	3		
Repeating a Course	22		
Residence Classification	9		
Return to Class After Suspension	24		



the campus
Central Texas College

- A Academic
- B Agriculture
- C American Educational Complex
- D Solar/Air Conditioning
- E Engineering
- F Skill Center
- G Gym
- H Administration Building
- I Student Center
- J Lady Bird Johnson Center
- K Firing Range
- L Library
- M Telecom Media
- N Nursing
- O Dorm Swimming Pool
- P Power/Maintenance
- Q Physical Plant
- R Student Residence
- S Science
- T Advanced Technology
- U American Technological University
- V Tennis Courts
- W Child Care Center

Parking lots designated by numbers

Central Texas College
U.S. Highway 190 West
Killeen, Texas 76541

THIRD CLASS

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U.S. Postage
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Killeen, Texas
Permit No. 81

