

# CENTRAL TEXAS COLLEGE

*A Great Place  
to Start!*



**CONTINENTAL & INTERNATIONAL  
1993 - 1995 CATALOG**

# LOCATIONS SERVED BY VARIOUS CENTRAL TEXAS COLLEGE CONTINENTAL & INTERNATIONAL CAMPUSES

## CENTRAL CAMPUS

Fort Hood  
Killeen

## CONTINENTAL CAMPUSES/ AIR FORCE PROGRAMS

### ALASKA

Fort Greely  
Fort Richardson  
Fort Wainwright

### CALIFORNIA

Camp Pendleton

### DISTRICT OF COLUMBIA

Bolling AFB  
Walter Reed AMC

### GEORGIA

Fort Stewart  
Hunter Army Airfield

### KANSAS

Fort Riley

### KENTUCKY

Fort Knox

### LOUISIANA

Fort Polk

### MARYLAND

Fort Meade

### MISSOURI

Fort Leonard Wood

### NEW MEXICO

Holloman AFB

### NORTH CAROLINA

Fort Bragg  
Pope AFB

### VIRGINIA

Fort Lee

### WASHINGTON

Fort Lewis

### HONDURAS

Soto Cano Air Base

### PANAMA

Fort Clayton  
Fort Davis  
Fort Kobbe

### NAVY CAMPUS

### CALIFORNIA

Alameda  
Lemoore NAS  
San Diego

### CONNECTICUT

New London

### FLORIDA

Jacksonville  
Mayport

### HAWAII

Pearl Harbor

### ILLINOIS

Great Lakes

## PENNSYLVANIA

Philadelphia

## RHODE ISLAND

Newport

## SOUTH CAROLINA

Charleston

## TENNESSEE

Millington

## VIRGINIA

Norfolk

## WASHINGTON

Bangor  
Bremerton  
Whidbey Island

## BERMUDA

## CUBA

Guantanamo Bay

## ICELAND

Keflavik

## ITALY

Sigonella

## PUERTO RICO

Fort Buchanan  
Roosevelt Roads  
Sabana Seca

## SPAIN

Rota

## EUROPE CAMPUS

### AZORES

Lajes

### BELGIUM

NATO

SHAPE

### EGYPT

Sinai-North Camp  
Sinai-South Camp

### GERMANY

Ansbach  
Augsburg  
Babenhausen  
Bad Aibling  
Bad Hersfeld  
Bad Kreuznach  
Bamberg  
Baumholder  
Berlin  
Bitburg  
Buedingen  
Crailsheim  
Darmstadt  
Dexheim  
Frankfurt  
Friedberg  
Fulda  
Geilenkirchen  
Giessen  
Grafenwoehr  
Hanau  
Heidelberg

Hohnfels

Illesheim

Kaiserslautern

Karlsruhe

Kirchgoers

Kitzingen

Landstuhl

Mannheim

Miessau

Neubrucke

Nuernberg

Primasens

Ramstein

Rhein Main

Schweinfurt

Sembach

Spangdahlem

Stuttgart

Vilseck

Vogelweh

Wackerheim

Wiesbaden

Wildflecken

Worms

Wuerzburg

## ICELAND

Keflavik

## HOLLAND

Afcent  
Soesterberg

## ITALY

Aviano  
Camp Darby  
Naples  
San Vito  
Sigonella  
Vicenza

## SCOTLAND

Edzell

## SPAIN

Rota

## TURKEY

Edzell  
Incirlik

## UNITED KINGDOM

Alconburg  
Chicksands  
Croughton  
Lakenheath  
London  
Mildenhall  
Upper Heyford

## PACIFIC FAR

## EAST CAMPUS

## GUAM

Anderson AFB  
NAS  
NAVCAMS  
NAVSTA

## INDIAN OCEAN

Diego Garcia, BIOT

## JAPAN

Akizuki  
Atsugi NAS  
Camp Zama  
Iwakuni MCAS  
Misawa Air Base  
Sasebo NB  
Yokosuka NB  
Yokota Air Base

## JOHNSTON ISLAND

## KOREA

Camp Bonifas  
Camp Carroll  
Camp Casey  
Camp Castle  
Camp Colburn  
Camp Edwards  
Camp Essayons  
Camp Greaves  
Camp Henry  
Camp Hovey  
Camp Howze  
Camp Humphreys  
Camp Jackson  
Camp Kyle  
Camp La Guardia  
Camp Liberty Bell  
Camp Long  
Camp Page  
Camp Pelham  
Camp Red Cloud  
Camp Sears  
Camp Stanley  
Camp Stanton  
Camp Walker  
Kwang-Ju Air Station  
K2 Air Base  
K16 AAF  
Kunsan Air Base  
Osan Air Base  
Pusan  
Yongsan Main Post  
Yongsan S. Post

## OKINAWA

Camp Butler  
Camp Courtney  
Camp Foster  
Camp Hansen  
Camp Kinser  
Camp Lester  
Camp McTureous  
Camp Schwab  
Camp Shields  
Futenma  
Kadena Air Base  
Torii Station



## **MAJOR CAMPUS ADDRESSES COLLEGE PROGRAMS**

**CENTRAL CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-7161  
1-800-792-3348

**FORT HOOD CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
Dean, Fort Hood and  
Service Area Campuses  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-1328

**SERVICE AREA CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
Dean, Fort Hood and  
Service Area Campuses  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-1206

**CONTINENTAL CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
Office of the Dean  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-1222/1368

**NAVY CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
Office of the Dean  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-1356

**EUROPE CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
Office of the Dean  
Alte Argonner Kaserne, Bldg. 451  
Unit #20233  
APO AE 09165  
(Civilian) 06181-95060  
(Military) 322-8871  
(Civilian) Telefax 06181-950650

**NAVY ATLANTIC CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
1301 East Little Creek Road, Suite 2  
Norfolk, VA 23518  
1-804-587-8873

**NAVY PACIFIC CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
4250 Pacific Highway, Suite 128  
San Diego, CA 92110  
1-619-226-6626

**PACIFIC FAR EAST CAMPUS**  
**CENTRAL TEXAS COLLEGE**  
Office of the Dean  
Office of Student Services  
Office of Operations/Support Services  
Office of Educational Programs  
Camp Market - Building P-1770  
Office of Payroll/Personnel  
Campus Library  
Camp Market - Building P-1530  
Unit #15559  
APO AP 96283-0618  
(Civilian) 82-32-523-5110  
(Civilian) Telefax 82-32-523-8554  
(Military) 722-3814/3833 Dean, Support  
Ed Programs  
(Military) 722-3815 Student Services

## **CORRESPONDENCE AND INQUIRIES**

Correspondence and inquiries should be addressed to the appropriate office, e.g., Admissions, Records, Financial Aid, etc., as listed in the catalog, at the location where the student currently attends. Records and transcript service for students currently enrolled in Pacific Far East or Europe will be provided by the appropriate Pacific Far East or Europe Campus. Students attending Continental, Air Force and Navy campus sites in locations other than Pacific Far East or Europe may request records and transcript services through the Central Campus Office.

---

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

---

# Central Texas College

## *Central Texas College District* **Continental and International Services**

Tenth

1993-1995

### **GENERAL CATALOG**

Central Texas College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees and certificates of completion.

Approved by  
Texas Higher Education Coordinating Board  
Texas Education Agency

Listed in  
Report of Credit given by  
American Association of Collegiate  
Registrars and Admissions Officers

and  
Accredited Institutions of Postsecondary Education  
American Council On Education

and  
Directory of Postsecondary Institutions, Volume 1  
U.S. Department of Education

Member of  
American Association of College Admissions Counselors  
American Association of Collegiate Registrars and Admissions Officers  
American Association of Community and Junior Colleges  
Association of Texas Colleges and Universities  
Broadcast Education Association  
National Association of Veteran Program Administrators  
National Association of Student Financial Aid Administrators  
Servicemembers Opportunity College  
Southern Association of Collegiate Registrars and Admissions Officers  
Texas Association of Broadcast Educators  
Texas Public Community/Junior College Association  
Texas Association of Collegiate Registrars and Admission Officers  
Texas Association of Collegiate Veterans Program Officers  
Texas Association of Student Financial Aid Administrators

# TABLE OF CONTENTS

	<b>Page</b>
<b>Introduction</b>	
Major Campus Addresses .....	i
Directory .....	vi
<b>FACULTY</b> .....	ix
<b>STATEMENT OF PURPOSE</b> .....	1
College History and Philosophy .....	1
Educational Objectives .....	1
Educational Philosophy .....	2
<b>GENERAL INFORMATION</b> .....	2
Continental and International Programs .....	2
Catalog .....	2
Program and Course Availability .....	2
Equal Opportunity Policy .....	3
Statement on Harrassment and Discrimination .....	3
Schedule of Fees .....	3
Textbook Costs .....	3
<b>ADMISSIONS AND REGISTRATION</b> .....	4
How To Begin .....	4
General Admission Information .....	4
Admission Requirements .....	4
All Students .....	4
International Students .....	4
Ability To Benefit .....	4
Records Required .....	5
Transcripts and Test Scores .....	5
Transient Students .....	5
Early Admission .....	5
Aviation Science Students .....	6
Uniform Application of Standards .....	6
When to Register for Class .....	6
Term Calendar .....	6
Registration .....	7
Tuition & Fees .....	7
Refunds .....	8
Student Financial Aid .....	8
Records Access .....	10
<b>COLLEGE POLICIES AND REGULATIONS</b> .....	10
Recommended Course Load .....	10
Attendance Policy .....	10
Resident Credit .....	11
Credit Transfers .....	12
How to Choose Courses (Common Course Numbers) .....	12
Grade Reporting .....	12
Academic Standards .....	14
Grade Requirements .....	15
Regulations Governing Student Activities .....	16
Drug and Alcohol Abuse .....	17
Student Dicipline .....	18
Request For Transcripts .....	18

	<b>Page</b>
<b>CERTIFICATE AND DEGREE REQUIREMENTS</b> .....	<b>20</b>
Degrees Conferred .....	20
Certificates Conferred .....	23
Graduation .....	24
Evaluation of Previous Education .....	25
SOCAD/SOCNAV Degree Completion Agreement .....	27
Programs of Study .....	28
<b>CONTINUING EDUCATION</b> .....	<b>30</b>
<b>TWO-YEAR ASSOCIATE IN ARTS DEGREE PROGRAMS</b>	
Art .....	36
Business Administration .....	40
Education .....	48
English .....	51
Foreign Language .....	53
Mathematics .....	59
Social Science .....	63
Speech .....	64
<b>TWO-YEAR ASSOCIATE IN SCIENCE DEGREE PROGRAMS</b>	
Biology .....	39
Chemistry .....	41
Engineering .....	50
Geology .....	55
Kinesiology .....	56
Mathematics .....	59
<b>TWO-YEAR ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAMS</b>	
Accounting Technology .....	32
Administrative Secretarial .....	32
Air Conditioning & Refrigeration .....	33
Applied Management .....	34
Applied Management with Technical Options:	
— Computer Science .....	34
— Microcomputer Technology .....	35
Automotive Body Repair .....	36
Automotive Service and Repair .....	37
Aviation Maintenance Technology .....	38
Aviation Science .....	39
Business Management .....	41
Communications Electronics Technology .....	42
Computer Electronics Technology .....	43
Computer Science Business Programmer/Analyst .....	43
Computer Science Information Technology Option .....	44
Consumer Electronics Technology .....	45
Criminal Justice .....	45
Diesel Mechanics .....	46
Drafting & Design .....	47
Early Childhood Professions .....	48
Emergency Medical Technician-Level II .....	49
Finance and Banking .....	51
Fire Protection Technology .....	52
Food Service Management .....	53
Hotel-Motel Management .....	55
Law Enforcement .....	57

<b>TWO-YEAR ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAMS (cont.)</b>	<b>Page</b>
Legal Assistant .....	57
Maintenance Technology .....	58
Microcomputer Technology Information Management .....	59
Microcomputer Technology Programmer/Analyst .....	60
Office Management .....	61
Photography .....	62
Real Estate .....	62
Small Gas Engine Repair .....	63
Television/Radio Broadcasting .....	65
Training Management Systems .....	65
Welding .....	66
Word Processing Specialist .....	67
<b>TWO-YEAR ASSOCIATE IN GENERAL STUDIES DEGREE PROGRAMS</b>	
General Studies Degree .....	54
<b>ONE-YEAR CERTIFICATE OF COMPLETION</b>	
Offset Printing .....	61
<b>CERTIFICATE OF COMPLETION</b>	
Emergency Medical Technician .....	49
<b>CERTIFICATE AND DEGREE PROGRAMS</b> .....	20
<b>PROGRAMS OF STUDY</b> .....	28
<b>CURRICULUM PLANS</b> .....	32
<b>COURSE DESCRIPTIONS</b> .....	68
<b>INDEX</b> .....	148

# DIRECTORY

## CENTRAL TEXAS COLLEGE

### Board Of Trustees

Riley J. Simpson  
Copperas Cove, Texas  
*President*

Guinn C. Fergus  
Harker Heights, Texas  
*Secretary*

Mari M. Meyer  
Harker Heights, Texas

Charles B. Baggett  
Copperas Cove, Texas

Mary H. Klierwer  
Killeen, Texas  
*Vice President*

Margaret A. Bay  
Harker Heights, Texas  
*Treasurer*

Don R. Armstrong  
Killeen, Texas

### Executive Officers

**James R. Anderson, Chancellor**  
B.B.A., Michigan State University  
M.B.A. Florida State University  
Ph.D., Florida State University

**Robert C. Farrell, Deputy Chancellor for Fiscal Services**  
B.S., Tarleton State University  
Certified Public Accountant

**Alvin Ornstein, Deputy Chancellor for Administration**  
B.S., University of Omaha  
M.S., Air Force Institute of Technology  
Ohio State University

**E.H. Shemwell, Deputy Chancellor for Continental and International Campuses**  
B.S., Washington State University  
M.S., George Washington University

**Ben H. Wickersham, Deputy Chancellor for Texas Campuses**  
A.A., Kilgore College  
B.S., East Texas State University  
M.S., East Texas State University  
Additional Graduate Study:  
Texas A & M University  
University of Texas at Austin



# **DIRECTORY** **CENTRAL TEXAS COLLEGE**

## **Campus Deans**

Lois A. Anderson	Dean, Continental Campus
Don L. Martin	Dean, Pacific Far East Campus
Fred J. Ostertag	Dean, Europe Campus
John E. Pierson	Dean, NAS Millington, Tennessee
Jim M. Yeonopolus	Assistant Deputy Chancellor, C&I Campuses/Dean Navy Campus

## **Staff**

Ashley I. Abramson	Director of Test/Eval-Ashore Coordination, Navy Pacific
Milton W. Alexander	Associate Dean/ATC Maint-NAS Millington, Tennessee
John F. Baumgardner	Administrative Services Officer, Navy Atlantic
Marcial P. Bautista	Student Services Officer, Navy Pacific
Nancy Bergstrom	Site Director, Camp Pendleton, California
Fred Borneman	Director, Educational Support Services & Regional Director, Central Germany
Vernon R. Bowen	Administrative Officer, NAS Millington, Tennessee
Violeta C. Briody	Site Coordinator, Norfolk, Virginia (Navy Atlantic)
Anne Marie Brown	Site Director, Bolling Air Force Base, Washington D.C.
Karen Carter	Site Coordinator/Instructor, Japan (Navy Pacific)
Arturo Chavez	Site Director, Holloman Air Force Base
James W. Corrigan	Site Director, Fort Lee, Virginia
Colvin Davis	Area Director, Pope AFB/Fort Bragg, North Carolina
Lisa Downs	Supervisor of Evaluations & Admissions, Europe Campus
Dorothy Dye	Site Director, Fort Meade, Maryland
Henry J. Gartland	Site Coordinator, Mayport, Florida (Navy Atlantic)
Pamela Gosla	Site Coordinator, Pearl Harbor, Hawaii (Navy Pacific)
Barbara Grice	Regional Director, Berlin, United Kingdom and S.W. Asia
Eldon Jacobs	Program Coordinator, MOS Training, Europe Campus
Jason Kelly	Business Manager, Europe Campus
Neal Kepler	Regional Director, Okinawa, Pacific Far East Campus
Judy D. Kroshus	Site Coordinator/Instructor, Fallon, Nevada (Navy Pacific)
Elizabeth A. Lane	Site Coordinator, Newport, Rhode Island (Navy Atlantic)
Clara Maher	Director, Human Resources, Europe Campus
Peter M. Maloney	Associate Dean, Navy Atlantic Programs
Mary E. Maranell	Site Coordinator, Groton, Connecticut (Navy Atlantic)
Anthony Martin	Manager, Support/Auxiliary Services, Pacific Far East Campus
Gilbert S. Mezz	Associate Dean, Educational Programs, Pacific Far East Campus
Charles S. Miller	Director/Basic-NAS Millington, Tennessee
Oliver Miller	Site Director, Fort Buchanan, Puerto Rico
Rachel Mokolke	Program Coordinator, College Programs, Europe Campus
Edmond R. Murphy	Associate Dean/Avionics-NAS Millington, Tennessee
James O'Brien	Assistant to the Dean, Continental Campus
Teodoro Orendain	Business Manager, Pacific Far East Campus

## Staff (cont.)

Daniel G. Page	College Program Coordinator, Navy Atlantic
Marguerite C. Park	Manager, Payroll/Personnel, Pacific Far East Campus
Irene W. Preiss	Site Coordinator/Instructor, Bremerton, Washington (Navy Pacific)
Margaret Pylant	Site Director, Fort Richardson, Alaska
Rebekah Rasnick	Site Director, Fort Stewart, Georgia
Sherry G. Ratliff	Site Director, Panama
Bernard A. Ray	Site Coordinator, Charleston, South Carolina (Navy Atlantic)
Manfred G. Resch	Regional Director, Republic of Korea (North), Pacific Far East Campus
Fred D. Reynolds	Site Director, Roosevelt Roads, Puerto Rico
Daniel B. Rice	Regional Director, Mediterranean (Italy, Spain and Turkey)
Glenn H. Ripper	Regional Coordinator, Republic of Korea (South), Pacific Far East Campus
Douglas M. Rose	Site Coordinator, Alameda, California (Navy Pacific)
Daniel Sadowitz	Director, Library Services, Pacific Far East Campus
Herman Shusterman	Regional Director, Mainland Japan, Pacific Far East Campus
Joseph A. Smith	Director, Military Related Training & Regional Director, Eastern Germany
Charles E. Spurlock	Site Coordinator, Mayport, Florida (Navy Atlantic)
Lynn A. Stivison	Administrative Services Officer, Navy Pacific
Ron D. Stone	Site Director, Fort Leonard Wood, Missouri
Robert B. Taylor	Program Coordinator, Navy Atlantic
William E. Taylor	Director, Air Force Programs & Regional Director, Western Germany, the Benelux Countries, and Lajes
Michael F. Tedesco	Director, College Programs & Regional Director, Northern Germany
Neil Teske	Site Director, Fort Polk, Louisiana
Ulla Torres	Site Director, Fort Lewis, Washington
Derrol Trippett	Site Director, Fort Riley, Kansas
David Waitkoss	Student Services Officer, Navy Atlantic
Joan M. Waldrop	Site Director, Fort Knox, Kentucky
Johnelle L. Welsh	Associate Dean, Student Services, Pacific Far East Campus
Leo F. Welsh	Associate Dean, Operations & Support, Pacific Far East Campus
Robert R. White	Site Coordinator, Naples, Italy (Navy Atlantic)
Dale H. Wilson	Associate Dean, Administrative & Logistical Services, Europe Campus
Denise Winters	Site Director, Fort Wainwright
Kenneth P. Woodward	Associate Dean, Navy Pacific Programs
Carole Young	Director, Student Services, Europe Campus
Rex Young	Site Director, Fort Greely, Alaska

## System Student Support Staff — Central Campus

Betty Broadhurst	Director, Evaluation Services
Bob Criswell	Dean, Student Services
Lillian Kroeger	System Registrar
Noel H. Schnitz	Dean, Library Services
Annabelle L. Smith	Director, Offices of Student Aid

# CONTINENTAL & INTERNATIONAL CAMPUSES

## 1993-95 Faculty

### Continental Campus

**Marv Abrams, Faculty**

GOVERNMENT

B.A., San Diego State University

M.A., San Diego State University

**Garland U. Achenbach, Faculty (1985)**

MANAGEMENT

B.B.A., Toledo University

M.S., Central Michigan University

**Siamak Araghi, Faculty (1987)**

BUSINESS MANAGEMENT

B.S., Institute of Advance Accounting

M.B.A., Marshall University

Ph.D., Newport University

**Gwendolyn Bailey, Faculty**

ENGLISH

M.A., University of Patricia Crockett

M.A., Lincoln University

**Stephen Beattie, Faculty**

MAINTENANCE TECHNOLOGY

A.A.S., Central Texas College

B.A., Columbia College

M.S.E., Drury College

**William Begg, Faculty (1991)**

CRIMINAL JUSTICE

B.S., Fordham College

M.A., Webster University

**Mark Bergman, Faculty**

CRIMINAL JUSTICE

A.A.S., Central Texas College

B.S., Fayetteville State University

M.B.A., Webster University

**Dwight Brace, Faculty**

AUTOMOTIVE REPAIR

A.A.S., Pikes Peak Community College

A.S.E., Master Tech/Auto

**Ray T. Bradley, Faculty (1992)**

PHILOSOPHY

B.A., Texas A & M University

M.A.R., Liberty University

**Paul W. Collins, Faculty**

SOCIOLOGY/PSYCHOLOGY

B.S., Northern Michigan University

M.A., Northern Michigan University

**Charles Constantin, Faculty**

HISTORY

B.A., Yale

M.A., Yale

Ph.D., University of California, Berkley

**Michael Cox, Faculty**

PSYCHOLOGY

B.S., Eastern New Mexico University

M.A., New Mexico Highlands Univ.

Ed.S.(Masters), Eastern New Mexico University

Ph.D., United States International University

**Michael H. Curlee, Faculty (1980)**

LAW ENFORCEMENT

A.S., Midlands Technical College

B.A., Coker College

**Vicki Davis, Faculty (1989)**

COMMUNICATIONS

A.B., Randolph-Macon Women's College

M.A., Virginia State University

Post Graduate Studies, Virginia State University

**Michael S. Dresden, Faculty (1986)**

AUTOMOTIVE/MAINTENANCE

A.A., Central Texas College

**James A. Dula, Faculty (1989)**

COMMUNICATIONS (English/Speech)

B.A., Upper Iowa University

M.A., University of Oklahoma

## Continental Campus (cont.)

**Hope P. Eisel, Faculty**

ENGLISH

B.A., North Georgia College

M.S., Michigan State University

**Edward H. Eisner, Jr., Faculty (1986)**

MANAGEMENT

B.A., Saint Leo College

**Mel Ellinger, Faculty**

WELDING

A.A.S., Central Texas College

Certified AWS

**Frank Elliott, Faculty**

SMALL GAS ENGINE

A.A.S., Central Texas College

**Moirá Fescina, Faculty (1990)**

MATHEMATICS/BUSINESS MANAGEMENT

B.A., Lady Cliff College

M.B.A., Campbell University

**Sharon G. Fischer, Faculty**

HISTORY

B.S., University of North Dakota

M.S., Troy State University

**Linda A. Flynn, Faculty (1992)**

SOCIAL SCIENCE (Psychology)

B.A., Russell Sage College

M.A., University of New York

**Douglas E. Freed, Faculty (1987)**

BUSINESS MANAGEMENT

A.A.S., Central Texas College

B.S., Urbana University

M.S.A., Central Michigan University

Doctoral Work in progress, Nova University

**Dennis Geisler, Faculty**

SOCIAL SCIENCE (History)

B.S., Missouri State

M.S., Missouri State

M.A., Missouri State

**Robert G. Geisler, Faculty (1990)**

AUTOMOTIVE

A.A., Central Texas College

**Richard Gilbert, Faculty**

ENGLISH

M.A., Trinity University

M.S., Long Island University

**Beth E. Gillmer-Jones, Faculty (1989)**

LAW ENFORCEMENT

B.S., Dr. Martin Luther College

**James J. Grimm, Faculty (1983)**

MANAGEMENT

B.S., University of Connecticut

M.S., University of Southern California

M.S., Kansas State University

**Sam C. Grizzle, Faculty (1991)**

SOCIAL SCIENCE (Government)

B.S., Troy State University

M.S., Troy State University

**Michael L. Gross, Chief, VoTech (1985)**

AUTOMOTIVE

B.S., Fort Hays State University

**Kenneth P. Grosselin, C.P.A., Faculty (1992)**

BUSINESS MANAGEMENT (Accounting)

B.S., West Virginia University

B.O.M., University of La Verne

**Samuel Gunther, Faculty**

MANAGEMENT/COMPUTER SCIENCE/

OFFICE ADMINISTRATION

M.A., Webster University

**Lynn J. Hancsak, Faculty (1989)**

SCIENCE (Earth Science)

B.S., University of Akron

M.S., University of Toledo

**Javier Hernandez, Faculty**

SPANISH

B.A., San Diego State University

M.A., San Diego State University

**Henry H. Horton, Faculty (1989)**

LAW ENFORCEMENT

B.S., Eastern Tennessee State University

M.S., George Washington University

## Continental Campus (cont.)

**John Iskson, Faculty**

BUSINESS

B.A., National University

M.B.A., National University

**Dennis Jana, Faculty**

HISTORY

B.A., De Paul University

M.A., University of San Diego

**Michael Jones, Faculty**

PSYCHOLOGY

B.A., McKend College

M.S., Bangor University

**Devin C. Kellykly, Faculty**

GOVERNMENT

B.S. University of Kentucky

M.S. Troy State University

**Gary L. King, Faculty**

MATHEMATICS

B.S., West Texas State University

M.S., West Texas State University

**David A. Lamb, Faculty**

FINE ARTS

B.S., New Mexico State University

**Robert Lemon, Faculty**

MANAGEMENT

M.A., Webster University

**Steven Lerner, Faculty**

COMPUTER SCIENCE

B.A., National University

**Kimberly A. Lovalenko, Faculty**

SOCIOLOGY

B.S., Walla Walla College

M.S., Walla Walla College

**Harold D. Macumber, Faculty (1987)**

PSYCHOLOGY/SOCIOLOGY/

MANAGEMENT

B.A., Henderson State College

M.A., Webster University

**Farrell D. Maichel, Faculty (1985)**

BUSINESS MANAGEMENT

B.S., Kansas State University

M.S.B.A., University of Northern Colorado

**Susan McCormick, Faculty**

ENGLISH

B.A., Long Beach State College

M.A., California State College, Long Beach

**Richard A. McKinley, Faculty (1985)**

FOOD SERVICE MANAGEMENT

A.A.S., Central Texas College

B.A., Saint Leo College

M.Ed., Virginia State University

Certificate of Advanced Study, Virginia University

**Leonard Meyer, Faculty**

MATHEMATICS/COMPUTER SCIENCE

B.S., University of Missouri

M.S., University of Missouri

Ed.D., University of Missouri

**Steven B. Michael, Faculty (1987)**

SOCIAL SCIENCE (History)

B.A., Mount Vernon Nazarene College

M.A., Ohio State University

Ph.D., Ohio State University

**Peggy A. Miles, Faculty (1987)**

CHILD DEVELOPMENT

B.A., Western Michigan University

M.A., Western Michigan University

**Walter Molyneaux, Faculty**

AUTOMOTIVE TECHNOLOGY

B.S., Southern Illinois University

A.S.E. Certification, Master Mechanic

**Robert E. Mullin, Faculty (1985)**

ENGLISH

A.A., Kansas City Junior College

B.S.E., Emporia State Teachers College

M.A., Emporia State Teachers College

**Angela Neel, Faculty (1991)**

COMPUTER SCIENCE

B.S., Mississippi State University

M.A., Webster University

## Continental Campus (cont.)

**Jorge A. T. Neves, Faculty** (1990)

COMPUTER SCIENCE

B.S., Park College

M.S., University of Maryland

**Charles L. Perry, Faculty** (1987)

BUSINESS MANAGEMENT

B.A., Mercer University

M.A., Georgia College

**David P. Phalen, Faculty** (1991)

ENGLISH

B.A., Iowa State

M.A., University of Mississippi

**James A. Phelps, Faculty** (1987)

MATHEMATICS

B.A., North Dakota State University

M.S., Auburn University of Montgomery

M.B.A., Creighton University

**D.J. Reck, Faculty**

AUTOMOTIVE

A.A.S., Central Texas College

A.S.E., Master Tech/AUTO

**Willie J. Rowell, Faculty** (1987)

LAW ENFORCEMENT

B.S., Chaminade College of Honolulu

**Joseph Sawaya, Faculty**

MATHEMATICS

A.A., St. Bernard College

B.A., University of Southern California

M.S.C., University of Southern California

Ph.D., United States International University

**Ronald N. Semarge, Faculty** (1985)

MANAGEMENT/MICROCOMPUTER

A.A., New Mexico State University

B.A., Park College

**Samuel R. Shumaker, Faculty** (1987)

COMMUNICATIONS (English)

B.A., Duke University

M.A., Vanderbilt University

**Ira Singer, Faculty**

GOVERNMENT/HISTORY

M.A., Ohio State University

**George E. Smith, Faculty** (1988)

AIR CONDITIONING

A.A., El Paso Community College

**James Speed, Faculty** (1990)

ENGLISH

B.S., Jackson State University

M.A., Jackson State University

**Kristen Stonebreaker, Faculty**

SPEECH

B.A., San Diego State University

M.A., San Diego State University

Ph.D., University of San Diego

**William M. Storey, Faculty** (1990)

COMMUNICATIONS (English)

B.A., McMurry College

M.A., American University

**Clifford E. White, Faculty** (1989)

LAW ENFORCEMENT

B.S., Wichita State University

**Rex E. Young Jr., Faculty**

B.S., Wayland Baptist University

M.S., University of La Verne

**Robert Young, Faculty**

ENGLISH

B.A., University of Oklahoma

M.A., Central State University, OK

Ph.D., Idaho State University

**Helen D. Walls, Faculty** (1989)

COMMUNICATIONS (Speech)

B.A., Howard University

M.A., Howard University

Ed.D., George Washington University

**Clifford E. White, Faculty** (1989)

LAW ENFORCEMENT

B.S., Wichita State University

**Nathaniel E. Wilson, Faculty** (1986)

BUSINESS MANAGEMENT

B.A., University of Alaska

M.A., Central Michigan University

**Craig A. Woodfolk, Faculty** (1988)

MATHEMATICS

B.S., SUNY-Brockport

M.A., SUNY-Brockport



## Europe Campus

**William Anderson, Faculty (1983)**

AUTOMOTIVE

A.A.S., Central Texas College

**Alexis Aronowitz, Faculty (1986)**

LAW ENFORCEMENT

B.A., Loyola University

M.A., State University of New York

**Leo Bonner, Faculty (1990)**

CHILD DEVELOPMENT

B.A., Texas Southern University

M.S., University of Wisconsin

Ph.D., University of Wisconsin

**D'Andrea Chatman, Faculty (1992)**

LAW ENFORCEMENT

B.A., University of Southern Mississippi

J.D., Southern University

**Judy Couture, Faculty (1992)**

FOOD SERVICE MANAGEMENT

B.S., Iowa State

M.S., Boston University

M.A., Marymount University

**Paul Clay, Faculty (1992)**

LAW ENFORCEMENT

A.S., Lima Tech.

B.S., Bowling Green State University

M.F.S., George Washington University

**Juan Cruz, Faculty (1990)**

LAW ENFORCEMENT

B.A., University of Puerto Rico

J.D., Inter American University of Puerto Rico

**Larry Dart, Faculty (1985)**

AUTOMOTIVE

A.A.S., Central Texas College

**Kenneth Dick, Faculty (1991)**

LAW ENFORCEMENT

A.A., University of Maryland

B.A., University of Maryland

**Denise Distefano, Faculty (1992)**

LAW ENFORCEMENT

B.A., American University

J.D., American University

**Ken Foss, Faculty (1990)**

LAW ENFORCEMENT

A.S., San Francisco City College

B.S., University of California

M.P.A., Golden Gate University

**James Goodwin, Faculty (1991)**

EMERGENCY MEDICAL TECHNOLOGY

B.S., University of the State of New York

**Jack Grainger, Faculty (1988)**

FOOD SERVICE MANAGEMENT

B.A., St. Martins College

**Rosalind Hairstond, Faculty (1989)**

LAW ENFORCEMENT

B.S., Troy State University

M.S., Troy State University

**Gerry Hammer, Faculty (1988)**

LAW ENFORCEMENT

B.A., Chapman College

**Dawn Harvey (1990)**

CHILD DEVELOPMENT

B.S., University of Texas

**Michael Herman, Faculty (1992)**

LAW ENFORCEMENT

B.A., Columbia College

**Ronald Kitkowski, Faculty (1992)**

AUTOMOTIVE

A.A.S., Austin Peay State University

**Dave Kramer, Faculty (1992)**

FOOD SERVICE MANAGEMENT

A.S., Central Texas College

**Lee Landers, Faculty (1991)**

CHILD DEVELOPMENT

B.S., Miami University

M.Ed., Penn. State University

**Stanley Langley, Faculty (1983)**

AUTOMOTIVE

A.A.S., Central Texas College

**Nathaniel Laws, Faculty (1977)**

AUTOMOTIVE

A.A.S., Central Texas College

## Europe Campus (cont.)

**Al Lopez, Faculty** (1987)

LAW ENFORCEMENT

A.A.S., Central Texas College

B.S., Cameron University

**Gregory Manion, Faculty** (1990)

MILITARY SCIENCE

B.A., Stockton State College

M.S., Embry-Riddle University

M.S., Stockton State College

**Norman Martinez, Faculty** (1988)

CHILD DEVELOPMENT

B.A., University of Texas

M.Ed., Boston University

**Alan Noah, Faculty** (1989)

LAW ENFORCEMENT

A.A., City College of San Diego

B.A., Chapman College

M.A., Chapman College

Ph.D. United States International University

**Daniel Pool, Faculty** (1991)

LAW ENFORCEMENT

A.A., Wenatchee Valley College

B.A., Eastern Washington University

M.A., Pacific Lutheran University

**Leslie Pozanek, Faculty** (1990)

LAW ENFORCEMENT

B.A., University of Maryland

M.P.A., University of Baltimore

**John Pretti, Faculty** (1991)

LAW ENFORCEMENT

B.S., University of Nebraska

**Jeanette Renner** (1990)

CHILD DEVELOPMENT

B.A., Bethel College

**Guy Rhoads, Faculty** (1990)

AUTOMOTIVE

A.A.S., Central Texas College

**Dean Russel, Faculty** (1992)

AUTOMOTIVE

A.A.S., Central Texas College

**Jon Sallot, Faculty** (1991)

LAW ENFORCEMENT

A.A., Los Angeles Community College

B.A., Columbia College

**Mike Schuller, Faculty** (1992)

FOOD SERVICE MANAGEMENT

B.S., Seattle University

**Glenn Shaver, Faculty** (1991)

AUTOMOTIVE

A.A.S., Northern Virginia Community College

**Joe Stevens, Faculty** (1987)

LAW ENFORCEMENT

B.S., Savannah State College

**Bena Stickles, Faculty** (1992)

CHILD DEVELOPMENT

B.S., Abilene Christian University

M.Ed., Sul Ross State

**Dave Sweeney, Faculty** (1992)

FOOD SERVICE MANAGEMENT

A.A., City Colleges of Chicago

B.S., University of Maryland

M.Ed., Boston University

**David Thomas, Faculty** (1992)

LAW ENFORCEMENT

A.A.S., Pikes Peak Community College

B.S., Chapman College

**Vincent Walker, Faculty** (1992)

LAW ENFORCEMENT

A.A.S., Central Texas College

B.S., American Technological University

**Mark Wentling, Faculty** (1991)

ELECTRONICS

A.S., Griffin College

**Carl Wilk, Faculty** (1993)

ELECTRONICS

B.S., Pittsburgh State University

M.S., Pittsburgh State University

**Sandy Wu, Faculty** (1992)

EMERGENCY MEDICAL TECHNOLOGY

B.S., University of Southern California

M.S., University of California

M.D., Creighton University

**Christopher Zweifel, Faculty** (1987)

AUTOMOTIVE

A.A.S., Central Texas College

## Navy Campus

**George W. Abney, Faculty (1989)**

ENGLISH

M.A., Northern Arizona University

**Walter C. Benson, Jr., Faculty (1989)**

BUSINESS/MANAGEMENT

B.S., Appalachian State University

M.A., Appalachian State University

**Brian E. Birdnow, Faculty (1990)**

HISTORY

B.A., St. Louis University

M.A., St. Louis University

**David W. Bishop, Faculty (1992)**

COMPUTER SCIENCE/MATHEMATICS

B.S., Emporia State University

M.S., Kansas State University

**Richard T. Bohan, Faculty (1991)**

GOVERNMENT/HISTORY/MANAGEMENT

M.A., Indiana University

Ph.D., University of Florida

**Patricia M. Boyle, Faculty (1990)**

HISTORY

B.A., Ramapo College of New Jersey

M.A., Montclair State College

**Harry W. Brantly, Faculty (1990)**

PSYCHOLOGY/SOCIOLOGY/CRIMINAL JUSTICE

M.A., Rollins College

M.S., Criminal Justice; Rollins College

**Charles Brockmann, Faculty (1989)**

ENGLISH/FRENCH

B.A., University of North Carolina

M.A., University of North Carolina

**John Bruce, Faculty (1990)**

BUSINESS/MANAGEMENT

B.A., Grayson College

M.B.A., Southeastern Oklahoma University

**Augustus A. Bruno, Faculty (1984)**

MICROCOMPUTER TECHNOLOGY/

COMPUTER SCIENCE/WORD PROCESSING

A.A., College of the Sequoias

B.A., Inter American University of Puerto Rico

M.B.A., New Hampshire College

**Gilbert E. Bullock, Faculty (1990)**

GEOLOGY/PSYCHOLOGY

B.A., University of Wyoming

M.Ed., University of Wyoming

**James E. Bush, Faculty (1987)**

BUSINESS/MANAGEMENT

M.B.A., University of South Carolina

**William J. Capps, Faculty (1987)**

LAW ENFORCEMENT/MANAGEMENT

PSYCHOLOGY

A.S., San Diego City College

B.S., Laverne College

M.A., Laverne College

M.S., Laverne College

**James D. Car, Faculty (1992)**

SOCIOLOGY

B.S., Arizona State College

M.A., San Francisco State College

**Richard W. Condon, Faculty (1988)**

HISTORY

A.A., Suomi College

M.A., University of Nebraska

Ph.D., University of Minnesota

**Ervin Cooper, Faculty (1990)**

MANAGEMENT

B.A., University of Missouri

M.A., San Diego State University

**Catherine Fitzmaurice, Faculty (1991)**

ENGLISH

B.A., University of California

M.A., University of California

**Frank R. Fitzpatrick, Faculty (1989)**

BUSINESS/MANAGEMENT

B.S., Roosevelt University

M.S., University of Wisconsin

**Joseph A. Frangie, Faculty (1989)**

GOVERNMENT/SPANISH/LAW

ENFORCEMENT/CRIMINAL JUSTICE

B.A., New York University

LL.B., LaSalle Extension University

J.D., Inter American University of Puerto Rico

## Navy Campus (cont.)

**Thomas E. Franklin, Faculty (1988)**  
HISTORY  
M.S., Northeast Louisiana University

**Bernard L. Freese, Faculty (1987)**  
COMPUTER SCIENCE/BUSINESS/  
MANAGEMENT/MATHEMATICS  
M.S., University of North Dakota  
M.B.A., University of South Dakota

**Charles S. Fulcher, Faculty (1989)**  
SCIENCE  
B.S., Virginia Polytech Institute  
M.Ed., University of North Carolina

**David R. Gauss, Faculty (1991)**  
SOCIOLOGY  
B.S., Arizona State University  
M.A., San Diego State University

**Caroline L. Geer, Faculty (1992)**  
ENGLISH  
A.B.D., University of Texas at Dallas  
B.A., Michigan State University  
M.A., North Texas State University

**Thomas D. Greenhaw, Faculty (1989)**  
HISTORY  
B.A., Defiance College  
M.A., Stetson University  
Ph.D., Auburn University

**Michael Gregg, Faculty (1988)**  
MATH  
B.S., Michigan State University  
M.A., University of Michigan

**James A. Harrison, Faculty (1987)**  
ENGLISH  
M.A., San Jose State University

**Lawrence S. Hartsfield, Faculty (1990)**  
BUSINESS/MANAGEMENT/ACCOUNTING  
B.S., Accounting; Stetson University  
M.B.A., University of North Florida

**Michael Hill, Faculty (1987)**  
ENGLISH  
B.A., Southern Oregon College  
M.A., University of Arizona, Tucson

**David M. Hughes, Faculty (1988)**  
HISTORY  
B.A., High Point College  
M.S., Southern Connecticut State University  
M.Ed., North Carolina Agricultural & Technical  
State University

**Homer Hungerford, Faculty (1991)**  
MANAGEMENT/BUSINESS/MATHEMATICS  
M.S., Indiana State University  
M.B.A., Golden Gate University

**Philip Hutchinson, Faculty (1990)**  
BUSINESS/LAW ENFORCEMENT/  
MANAGEMENT/REAL ESTATE  
B.A., Chapman College  
M.S., Chapman College

**Jesse F. Hurley, Faculty (1989)**  
PSYCHOLOGY/SOCIOLOGY  
B.A., University of Chicago  
M.A., University of Chicago

**Jose G. Irizarry-Jiminez, Faculty (1991)**  
HISTORY  
B.A., University of Puerto Rico  
M.Ed., Inter American University of Puerto Rico

**Richard G. Jamieson, Faculty (1992)**  
GOVERNMENT  
B.A., Oregon State University  
M.A., U.S. International University

**Jimmie H. Johnson, Faculty (1989)**  
PSYCHOLOGY  
B.A., San Jose State College  
M.S., San Jose State College

**Addison M. Johnston, Faculty (1992)**  
PSYCHOLOGY  
B.A., Clemson University  
M.S., Auburn University  
Ph.D., Texas Tech University

**James Jones, Faculty (1990)**  
BUSINESS/MANAGEMENT  
B.A., Indiana University  
M.B.A., San Francisco State University

## Navy Campus (cont.)

**Jerry Jones, Faculty (1991)**  
 BIOLOGY/COMPUTER SCIENCE/  
 GEOLOGY/MATHEMATICS  
 B.S., St. Louis University  
 M.A., University of Utah  
 Ph.D., University of Utah

**Norman S. Katz, Faculty (1989)**  
 MATHEMATICS  
 B.A., University of Rochester  
 M.A., Brandeis University

**Kirk B. Kerle, Faculty (1991)**  
 LAW ENFORCEMENT/HISTORY  
 M.A., Pittsburgh State University  
 J.D., Washburn University

**John B. Ketcham, Faculty (1989)**  
 ENGLISH  
 M.A., Chico State College

**Sam L. King, Faculty (1987)**  
 COMPUTER SCIENCE/MANAGEMENT  
 B.B.A., Mercer University  
 E.Ds., West Georgia College  
 M.Ed., West Georgia College

**Alfred E. Klucke, Faculty (1990)**  
 BUSINESS/MANAGEMENT/REAL ESTATE  
 B.A., New England College  
 B.S., New England College  
 M.B.A., Golden Gate College

**Donald Landauer, Faculty (1990)**  
 BUSINESS/MANAGEMENT  
 B.S., University of California, Berkeley  
 M.B.A., University of California, Los Angeles

**James V. Lee, Faculty (1989)**  
 ENGLISH  
 B.A., Abilene Christian College  
 C.L.U., American College  
 M.Ed., Southwest Texas State University

**Dale A. Long, Faculty (1987)**  
 GEOLOGY/PSYCHOLOGY/SOCIOLOGY  
 M.A., Portland State University

**Ruth E. Lopez, Faculty (1992)**  
 MICROCOMPUTER TECHNOLOGY/  
 COMPUTER SCIENCE  
 A.A.S., Kinsborough Community College  
 B.B.S., Bernard Baruch  
 M.A., New York University

**Stephen Luche, Faculty (1990)**  
 BUSINESS/GOVERNMENT/HISTORY/  
 MANAGEMENT  
 B.B.A., Longwood College  
 M.A., Old Dominion University

**Linda K. Mahoney, Faculty (1991)**  
 MATHEMATICS  
 M.Ed., University of Maryland

**Michael R. Mason, Faculty (1992)**  
 LAW ENFORCEMENT/CRIMINAL JUSTICE  
 A.A.S., Northern Virginia Commonwealth College  
 B.S., Lamar University  
 M.S.A., Central Michigan University

**Robert D. Mazur, Faculty (1989)**  
 MATHEMATICS  
 B.A., University of Florida, Gainesville  
 M.A.T., University of Florida, Gainesville

**Robert J. McCarter, Faculty (1988)**  
 BUSINESS/MANAGEMENT/ACCOUNTING  
 B.S., Florida State University  
 M.B.A., Rollins College

**Richard F. McLaughlin, Faculty (1990)**  
 PHILOSOPHY/PSYCHOLOGY  
 B.A., St. Alphonsus College  
 M.Ed., Mount St. Alphonsus Seminary

**Billie E. Mobley, Faculty (1987)**  
 BUSINESS/MANAGEMENT/COMPUTER  
 SCIENCE/MICROCOMPUTER TECH.  
 A.B.M., Tidewater Community College  
 M.B.A., Old Dominion University

**George D. Murdoch, Faculty (1987)**  
 ENGLISH/PSYCHOLOGY/SPEECH  
 M.Ed., Boston University  
 M.A. University of Michigan

## Navy Campus (cont.)

**Jon Ocepek, Faculty (1991)**  
BUSINESS/LAW ENFORCEMENT  
B.S., University of Dayton  
M.A., University of San Diego  
J.D., University of San Diego

**Luis F. Olivieri, Faculty (1991)**  
HISTORY  
B.A., University of Puerto Rico  
M.A., Florida State University

**Nicholas C. Polos, Faculty (1989)**  
HISTORY  
B.A., Pomona College  
M.A., Harvard University  
Ph.D., University of California, Berkeley

**Ralph Keith Puckett, Faculty (1991)**  
MATHEMATICS  
A.S., Wayne Community College  
B.S., North Carolina State University  
M.S., University of South Carolina

**Reagan Ragsdale, Faculty (1987)**  
ENGLISH  
B.A., Samford University  
M.A., Samford University

**Michael J. Reedy, Faculty (1990)**  
MATHEMATICS  
B.A., State University of New York at Potsdam  
M.A., University Center at Binghamton, N.Y.

**George A. Renn, Faculty (1987)**  
ENGLISH  
M.A., Old Dominion University

**Richard L. Rider, Faculty (1988)**  
ENGLISH/SPEECH  
A.B., University of Nebraska  
M.F.A., Yale University  
Ph.D., University of Illinois

**Ismael Rodriguez, Faculty (1991)**  
LAW ENFORCEMENT/MANAGEMENT  
B.S., Wichita State University  
M.A., Webster University

**James G. Rose, Faculty (1992)**  
MATHEMATICS/PHYSICS  
B.A., Augustana College  
M.S., University of Louisville

**Paul M. Ryan, Faculty (1987)**  
BUSINESS/MANAGEMENT/REAL ESTATE  
HISTORY  
B.A., Seattle University  
M.B.A., National University

**James E. Schlieper, Faculty (1989)**  
BUSINESS/MANAGEMENT/MATHEMATICS  
B.S., California State University, Hayward  
M.B.A., California State University, Hayward

**Gordon E. Shockley, Sr., Faculty (1988)**  
REAL ESTATE/BUSINESS/MANAGEMENT  
B.S., St. Joseph's College  
M.A., East Carolina University

**Laura Lee Smith, Faculty (1990)**  
ENGLISH  
B.S., Grand Canyon University  
M.S.T., Arizona State University

**Rosalie Stafford, Faculty (1990)**  
ENGLISH  
B.A., Western Kentucky University  
M.A., University of California, Santa Cruz

**Marilyn S. Stalzer, Faculty (1991)**  
BIOLOGY  
B.A., St. Xavier College  
M.A., University of Puerto Rico

**Nicholas S. Staresinic, Faculty (1989)**  
MATHEMATICS/SCIENCE  
B.S., University of Pittsburgh  
Ph.D., Massachusetts Institute of Technology

**Joseph J. Surdyk, Faculty (1990)**  
GEOGRAPHY  
B.A., Southern Illinois University  
M.S., Southern Illinois University

**Samuel S. Taylor, Faculty (1985)**  
MANAGEMENT/REAL ESTATE/LAW  
ENFORCEMENT/HISTORY/GOVERNMENT  
A.A., University of Maryland  
B.A., Coastal Carolina College  
J.D., University of South Carolina

**Paul L. Trittschuh, Faculty (1991)**  
MATHEMATICS  
M.Ed., Wright State University



## Navy Campus (cont.)

**Arthur K. Van Tassel, Faculty** (1989)

ENGLISH

B.A., San Diego State University

M.A., University of Texas, El Paso

**Roger L. Vernon, Faculty** (1991)

HISTORY

B.E., Chicago Teacher's College

M.A., Northwestern University

Ph.D., Loyola University of Chicago

**Margaret C. Ward, Faculty** (1991)

ENGLISH

B.A., Wellesley College

Ph.D., Harvard University

**John B. Westbury, Faculty** (1987)

MATHEMATICS

B.S., University of South Carolina

M.Ed., University of Georgia

**Desmond White, Faculty** (1987)

BUSINESS/MANAGEMENT

B.A., University of Texas, Austin

M.B.A., University of Houston

**Leslie Whitman, Faculty** (1989)

BUSINESS

B.A., University of South Florida

M.B.A., National University, San Diego

**Curt Willits, Faculty** (1989)

ENGLISH/HISTORY

B.A., Florida State University

M.A., Florida State University

Ph.D., Florida State University

**Jeff L. Wilson, Faculty** (1990)

GOVERNMENT/HISTORY

B.A., University of Texas at Arlington

M.A., University of Texas at Arlington

**Donald Wylie, Faculty** (1991)

BUSINESS/MANAGEMENT

B.A., University of Michigan

M.A., University of Michigan

Ph.D., San Diego State University

## Pacific Far East Campus

**John Attanasio, Faculty** (1977)

FINE ARTS

B.S., University of the State of New York

**Keith A. Barkley, Faculty** (1992)

LAW ENFORCEMENT

A.G.S., Central Texas College

A.A., Community College of the Air Force

B.S., University of Maryland

**Dorwood E. Bedford, Faculty** (1992)

LAW ENFORCEMENT

A.S., Saint Leo College

B.A., Oakland Community College

**Peter J. Behl, Faculty** (1992)

MICROCOMPUTER TECHNOLOGY

A.A., Anne Arundel Community College

**James A. Bitting, Faculty** (1980)

AUTOMOTIVE MAINTENANCE

A.G.S., Central Texas College

**Sandra M. Boettcher, Faculty** (1992)

CHILD DEVELOPMENT

B.S., Dr. Martin Luther College

**Steven J. Borman, Faculty** (1991)

GOVERNMENT

A.A., Suffolk County Community College

B.A., Stony Brook

M.A., University of California-Davis

**George H. Bragg, III, Faculty** (1993)

MANAGEMENT/MICROCOMPUTER  
TECHNOLOGY

B.S. University of New Hampshire

**Deborah Braxton, Faculty** (1992)

CHILD DEVELOPMENT

B.A., Howard University

**Kenny Burrow, Faculty** (1991)

DATA PROCESSING

B.S., Southern Illinois University

M.S., University of Arkansas

## Pacific Far East Campus (cont.)

**Mark L. Cash, Faculty** (1992)  
**AVIATION MAINTENANCE**  
 A.A., Abraham Baldwin Agri. College  
 A&P License, Alabama Aviation & Tech Col.

**Soon Joung Chung, Faculty** (1989)  
**FINE ARTS**  
 B.A., Hong-Ik University  
 M.F.A., University of North Texas

**William Cochrane, Faculty** (1992)  
**CRIMINAL JUSTICE**  
 A.A., Northern Virginia Community College  
 B.A.A., Florida Atlantic University

**Damian Colden, Faculty** (1991)  
**DATA PROCESSING**  
 B.S., Virginia Military Institute  
 M.S., University of Rhode Island

**Raymond N. Collier, Faculty** (1992)  
**LAW ENFORCEMENT**  
 B.G.S., Chaminade University

**Robert J. Collins, Faculty** (1991)  
**COMPUTER SCIENCE**  
 A.G.S., Central Texas College

**Craigory Crank, Faculty** (1990)  
**DATA PROCESSING**  
 B.S., University of Kentucky  
 M.S., Johns Hopkins University

**Mary Crisostomo, Faculty** (1993)  
**EDUCATION**  
 B.A., University of Guam  
 M.A. Ed., University of Guam

**Cary Dugan, Faculty** (1990)  
**DATA PROCESSING**  
 A.S., Regents College

**Cheryl M.B. Engelka, Faculty** (1991)  
**ART**  
 B.A., University of Texas at San Antonio

**Charles H. Etheridge, Faculty** (1992)  
**MANAGEMENT/LAW ENFORCEMENT**  
 B.S., University of Maryland

**Lurette Filberth, Faculty** (1991)  
**CHILD DEVELOPMENT**  
 A.A., Rend Lake College  
 B.S., Murray State University

**David Ford, Faculty** (1992)  
**CRIMINAL JUSTICE**  
 B.A., Wake Forest University  
 J.D., University of North Carolina

**Robert Furse, Faculty** (1992)  
**MANAGEMENT**  
 B.A., University of Maryland

**Ronald W. Gates, Faculty** (1992)  
**AUTOMOTIVE**  
 A.G.S., Central Texas College

**Fred Gorter, Faculty** (1991)  
**CRIMINAL JUSTICE**  
 B.A., Troy State University  
 M.P.A., Golden Gate University

**Norman H. Graves, Faculty** (1990)  
**FOOD SERVICE MANAGEMENT/HOTEL  
 MOTEL MANAGEMENT**  
 A.S., Central Texas College

**Phillip W. Gray, Faculty** (1990)  
**BUSINESS/MANAGEMENT**  
 B.A., University of Missouri  
 M.P.A., Penn. Mil. College (Widener College)

**Kristine D. Griffith, Faculty** (1993)  
**LEGAL ASSISTANT**  
 B.A., University of Nebraska  
 J.D., University of Nebraska

**Thomas L. Guadagno, Faculty** (1990)  
**LAW ENFORCEMENT**  
 A.A., University of the State of New York

**Gerald Haddock, Faculty** (1991)  
**MANAGEMENT**  
 B.S., Golden Gate University  
 M.B.A., Golden Gate University

**Kathleen K. Hamilton, Faculty** (1992)  
**LEGAL ASSISTANT**  
 B.S., University of Scranton  
 J.D., Widener University

## Pacific Far East Campus (cont.)

**Robert Hanovich, Faculty** (1992)  
MANAGEMENT  
B.S., University of South Carolina  
M.A., Webster University

**Duane Harden, Faculty** (1989)  
DATA PROCESSING  
A.S., Grossmont College  
B.S., San Diego State University

**Willie I. Harris, Faculty** (1992)  
FOOD SERVICE MANAGEMENT  
A.A.S., Central Texas College

**Andrea B. Heiss, Faculty** (1992)  
ENGLISH  
B.A., Illinois College  
M.A., Purdue University  
Ph.D., University of Iowa

**Linda Higgins, Faculty** (1991)  
ENGLISH  
B.A., Southern Illinois University  
M.A., University of Arizona

**Theresa H. Hooper, Faculty** (1992)  
LEGAL ASSISTANT  
B.S., Northeast Missouri State University  
J.D., University of Missouri

**Michelle Jackson, Faculty** (1992)  
CRIMINAL JUSTICE  
B.A., Appalachian State University  
M.A., University of Florida

**A. James Jordanowski, Faculty** (1992)  
LEGAL ASSISTANT  
A.A., Community College of the Air Force

**Myrna Juado, Faculty** (1992)  
CHILD DEVELOPMENT  
A.A., Leeward College  
B.S., University of Hawaii

**Forest Kay, Faculty** (1988)  
CRIMINAL JUSTICE/GOVERNMENT  
B.S., University of Tampa  
M.Ed., University of Tampa  
D.P.A., Nova University

**Russell W. Krogh, Faculty** (1991)  
LAW ENFORCEMENT/MANAGEMENT  
A.G.S., Central Texas College

**Kenneth E. Kuehn, Faculty** (1991)  
MICROCOMPUTER TECHNOLOGY  
A.A.S., Community College of the Air Force  
B.S., Community College of the Air Force

**Jeffrey LaRocque, Faculty** (1992)  
DATA PROCESSING  
B.A., University of Maryland

**Deborah L. Lee, Faculty** (1992)  
ART, MUSIC  
B.A., Boston University  
M.A., Texas Women's University

**Paul E. Lentz, Faculty** (1991)  
COMPUTER SCIENCE  
B.A., Bethel College

**Sandra S. Lentz, Faculty** (1991)  
HOTEL - MOTEL MANAGEMENT  
B.A., Sweet Briar College

**Benny Luck, Faculty** (1992)  
TECHNICAL EDUCATION  
B.S., Virginia State University  
M.S., Troy State University

**Thane Lundberg, Faculty** (1991)  
INDUSTRIAL EDUCATION  
B.S., San Diego State University

**David Lyon, Faculty** (1991)  
FINE ARTS  
B.F.A., University of California  
M.F.A., University of Tennessee

**John Machol, Faculty** (1992)  
BIOLOGY  
A.A., College of the Mainland  
B.S., Texas A & M University  
M.S., George Mason University

**Jose R. Martinez, Faculty** (1990)  
MICROCOMPUTER TECHNOLOGY  
A.S., Community College of the Air Force  
A.A.S., Central Texas College  
B.S., University of Maryland

## Pacific Far East Campus (cont.)

**Daniel McCrae, Faculty** (1992)

MICROCOMPUTER TECHNOLOGY

B.A., University of Maryland

**James E. Misch, Faculty** (1992)

LAW ENFORCEMENT/MANAGEMENT

B.A., St. Mary's College

**Gerald Morriss, Faculty** (1987)

ENGLISH

B.A., University of Texas

M.A., University of Texas

**Kenneth J. Musat, Faculty** (1992)

MANAGEMENT/COMPUTER SCIENCE

A.A.S., Northern Virginia Community College

B.A., Wittenberg University

**Robert Nelson, Faculty** (1990)

DATA PROCESSING

B.S., University of Illinois

M.S., University of West Florida

**Horst Odparlik, Faculty** (1990)

MANAGEMENT

A.A.S., Vernon Regional Junior College

B.S., Wayland Baptist University

M.A., Troy State University

**Donald W. Pennington, Faculty** (1992)

LAW ENFORCEMENT

A.S., City Colleges of Chicago

**Bogdan D. Pizczak, Faculty** (1992)

MICROCOMPUTER TECHNOLOGY

A.A., National University

B.S., Chapman University

**Vonita Porch, Faculty** (1992)

DATA PROCESSING

B.S., University of Maryland

**Jeffrey E. Radford, Faculty** (1983)

LAW ENFORCEMENT

A.S., Central Texas College

B.S., University of New York

**Geraldine B. Rhodes, Faculty** (1992)

FINE ARTS

EDM., Columbia University, Teachers College

**John J. Roland, Faculty** (1993)

MICROCOMPUTER TECHNOLOGY

B.S., Tiffin University

**Armando Sanchez, Faculty** (1990)

MANAGEMENT

B.A., University of Maryland

M.P.A., University of Oklahoma

D.B.A., Western Colorado University

**David Sanders, Faculty** (1991)

LEGAL ASSISTANT

BMU, Brigham Young University

J.D., Brigham Young University

**William C. Sanders, Faculty** (1992)

FIRE PROTECTION TECHNOLOGY

A.S., Community College of the Air Force

**Garth L. Sanderson, Faculty** (1988)

GOVERNMENT/MANAGEMENT

B.S., University of Maryland

**Linda N. Setzer, Faculty** (1992)

LEGAL ASSISTANT

B.S., Florida State University

J.D., Cumberland School of Law

**D. Jacques Smith, Faculty** (1992)

CRIMINAL JUSTICE

B.A., Loyola University

J.D., Louisiana State University

**Michael W. Swanson, Faculty** (1987)

MICROCOMPUTER TECHNOLOGY

A.A.S., Central Texas College

**Lynn F. Sztuka, Faculty**

SPEECH

B.A., Louisiana State University

M.A., University of Delaware

**Richard E. Thomas, Faculty** (1987)

OFFICE ADMINISTRATION

B.A., Chapman College

M.B.A., Chapman College

**Constance Tracey, Faculty** (1992)

CHILD DEVELOPMENT

B.A., University of Florida

M.Ed., University of Florida

## Pacific Far East Campus (cont.)

**Dennis Vandervort, Faculty (1992)**

CRIMINAL JUSTICE

B.A., University of Arizona

J.D., University of Arizona

LL.M., George Washington University

**Peter E. Vieira, Faculty (1979)**

COMPUTER SCIENCE

A.A., Los Angeles Metropolitan College

**Richard L. Vitale, Faculty (1988)**

MANAGEMENT

B.A., College of Emporia

**Steven Vojtecky, Faculty (1992)**

CRIMINAL JUSTICE

B.A., History; University of Utah

B.A., Political Science; University of Utah

M.P.A., University of Utah

**Robert G. Wahl, Faculty (1989)**

MANAGEMENT

A.A., Northern Virginia Community College

B.A., Georgia State University

M.S.Ed., University of Southern California

M.A., National University

**Barbara A. Walker, Faculty (1990)**

OFFICE ADMINISTRATION

A.S., Central Texas College

**Thomas S. Wootton, Faculty (1991)**

LAW ENFORCEMENT

B.S., South West Texas State University

**Thomas M. Wright, Faculty (1991)**

BUSINESS

B.A., American University

M.S.B.A., Boston University

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

# **STATEMENT OF PURPOSE**

## **COLLEGE 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 million bond issue to construct and equip the campus followed in October, 1965. In January, 1966, Central Texas College opened its first offices in Killeen. In June of that same year, ground breaking ceremonies were held, and the first classes met in September 1967. 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.

From the beginning in 1967, Central Texas College has provided a wide variety of educational programs to meet the specific needs of its military neighbors at Fort Hood, Texas. Today the College serves the armed services across the nation and overseas. This commitment to provide extended educational opportunities carries the same thrust of dedication which has always been characteristic of Central Texas College. Academic and technical-vocational programs are offered by the College at over 200 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 Fleet.

Central Texas College initiated correspondence with the Commission on Colleges of the Southern Association of Colleges and Schools in 1966, received Candidate Status in 1967, was awarded initial accreditation in 1969, was reaffirmed in 1973 and again in 1984.

## **EDUCATIONAL OBJECTIVES**

As a community college, Central Texas College seeks to attract and serve a widely diverse student population, ages 18-22 years old, as well as older adult learners with disparate educational goals. These goals include earning credit toward baccalaureate degrees through university-parallel courses, enhancing employability and promotability through occupational education and technology programs, improving the quality of life through continuing education courses, and improving basic literacy skills through developmental and remedial courses. Thus, Central Texas College must, of necessity, offer courses, programs, and services designed to facilitate students' attaining these educational goals while acquiring the skills, attitudes, and knowledge essential for them to become productive and contributing members of society.

The Central Texas College community is an aggregate of the types of individuals served and the conditions under which they are served, regardless of the geographic location. Central Texas College is a public, two year, open admissions, coeducational college that provides educational services to the central Texas area to include Fort Hood and a 12 county service area.

Central Texas College also provides worldwide educational programs and related services to business, industry, the U.S. military services, and to the employees of governmental agencies and their dependents.

Central Texas College provides the following:

- Traditional university parallel courses;
- One-year and two-year occupational education and technology programs;
- General education courses;
- Developmental studies;
- Non-credit continuing education courses, as well as service programs on cultural, civic, and other topics of community interest;
- Counseling and guidance services to assist students in defining goals, identifying abilities, and selecting appropriate courses. Placement services are provided to assist students in locating full-time and part-time jobs while they are attending college and to assist students in securing employment after graduation.



# **EDUCATIONAL PHILOSOPHY**

The College seeks to provide a supportive and challenging environment in which the students can improve their basic intellectual skills, discover and develop their special aptitudes and insights, and equip themselves for a fulfilling life and responsible citizenship in a world characterized by change.

Central Texas College believes that education is an individual, evolutionary, and never ending process; that in a democracy, the well being of the individual, as well as the whole of society, depends upon the sound moral and educational development of its people; that education should accommodate each student's instructional needs, level of functioning, and learning style; and that educational programs should be student-centered, should reflect changing technology, incorporate a variety of delivery methods and be evaluated, revised and improved continuously. Further, Central Texas College recognizes that it must continually adapt to accommodate (1) increases in the body of knowledge, (2) changes in technology and the economy, and (3) the growing diversity among students. The institution also recognizes that the quality of education must be judged by its value to the students and the community.

Central Texas College is dedicated to providing high quality educational programs and services; to effectively managing its resources; to meeting the changing educational needs of the local, national and international community it serves; and to supporting cultural activities and assisting in economic development in the Central Texas area.

## **GENERAL INFORMATION**

### **CONTINENTAL AND INTERNATIONAL PROGRAMS**

Central Texas College serves military personnel throughout the world. The main office is located on the Central Texas College campus at Killeen, Texas. Programs of study vary with each location and not all programs are available at each location. This catalog provides information concerning the policies, procedures and programs applicable to branches and extensions operated outside the state of Texas. Individuals interested in programs which are not locally available should consult with the local Education Services Officer (ESO), Navy Campus Representative (NCR), Educational Specialist, or Central Texas College representative.

### **THE CATALOG**

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

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

### **PROGRAM AND COURSE AVAILABILITY**

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

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

# EQUAL OPPORTUNITY POLICY

Central Texas College is committed to its policy on equal educational opportunity and administration of its educational programs, activities, and employment without regard to color, race, religion, national origin, disability, age, or sex as required by Title VI and Title VII of the Civil Rights Act of 1964, as amended, Title IX of the Education Amendments of 1972, the Rehabilitation Act of 1974, the Vietnam Era Veteran's Assistance Act of 1974, the Americans with Disabilities Act of 1990, and Executive Orders 11246, as amended, and 11375.

Central Texas College has established programs to ensure that a lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs.

Existing administrative procedures of the college are used to handle student grievances. When a student believes a condition or employee of the college is unfair or discriminatory, the student can appeal to the administrator in charge of that area. If you need assistance pursuing a grievance matter, contact an official or the campus Dean at your college site.

## STATEMENT ON HARASSMENT AND DISCRIMINATION

Central Texas College is committed to providing an educational and work climate that is conducive to the personal and professional development of each individual. Faculty, staff and students should be aware that discrimination and harassment based on the age, ethnic background, family status, gender, handicap, national origin, race, religion, sexual orientation or veteran status of individuals or any other subgroup stereotyping or grouping within the College community are unacceptable. To fulfill its multiple missions as an institution of higher learning, Central Texas College encourages a climate that values and nurtures collegiality, diversity, pluralism and the uniqueness of the individual within our state, nation and world. The College also strives to protect the rights and privileges and to enhance the self-esteem of all its members.

Individuals who believe they have experienced harassment or discrimination are encouraged to contact the appropriate offices within their respective units.

## SCHEDULE OF FEES— ALL CONTINENTAL AND INTERNATIONAL CAMPUSES

**Institutional Challenge Examination Fee**—A fee of \$50.00 for each challenge examination should accompany the Application of Examination.

**Degree Fee**—A fee of \$25.00 is payable at the time a student applies for a degree or certificate of completion.

**Certificate Fee**—A fee of \$10.00 is payable at the time a student applies for a 15 or 30 semester hour certificate.

**Transcript Fee**—The first transcript is issued free of charge. Subsequent transcripts are \$3.00 each.

**Returned Check Charge**—A charge of \$16.00 is made for checks which have been returned for insufficient funds..

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

## TEXTBOOK COSTS

Costs are based on publishers' prices plus transportation costs and may vary from term to term. Prices are available from the Central Texas College representative. Textbook costs are not refundable unless the class is canceled by the College and the book is returned unused and unmarked to the appropriate Central Texas College representative.

# ADMISSIONS AND REGISTRATION

## HOW TO BEGIN

Students wishing to attend Central Texas College should visit the local Education Center or Naval Campus office to consult with the ESO or NCR about educational goals. Education Centers and Naval Campus offices provide diagnostic, aptitude, and placement testing to assist students in selecting programs of study and educational goals. Once the student has identified and chosen an appropriate degree and program of study, the admission and registration process may begin.

## GENERAL ADMISSION INFORMATION

Requests for application materials or questions concerning admission should be addressed to the Central Texas College personnel at each location.

Central Texas College is an open-door comprehensive community college. An open-door admission policy is maintained to ensure that all persons who may benefit from post-secondary education have the opportunity to enroll. New students will be admitted to the College providing all admission requirements are met. Admission to the College does not guarantee admission to specific programs and courses.

## 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 program, but who are prepared to undertake post high school studies, may be admitted after providing official test scores from a list of approved tests authorized by the Department of Education. The list may be obtained from a College representative. **NOTE:** An adult, for purposes of admission, is defined as an individual 18 years of age or older.

## INTERNATIONAL STUDENTS

Local and Third Country National students must provide an official certificate of minimum score of 450 on the Test of English as a Foreign Language in order to be considered for admission to degree-credit courses. Those individuals scoring 450-499 will be eligible for college-level coursework if they successfully pass applicable sections of the college placement exam. Students scoring 375 and above are eligible for admission to developmental studies courses.

**OVERSEAS ADMISSIONS—SPECIAL NOTE:** Personnel not sponsored in the overseas command by the U.S. Armed Forces are not normally permitted to attend Central Texas College classes. Applicants may attend classes if local policy permits, but must receive approval from the local ESO or NCR for necessary military and governmental approval prior to being permitted to file application for admission. Active duty personnel will have priority when enrolling for all classes.

## ABILITY TO BENEFIT

Individuals who have not previously earned a high school diploma or GED are not eligible to enroll in college level course work until they have taken and successfully passed a Department of Education independently administered examination. Examination must have been taken within the past year.

Non-graduates seeking further information should contact their Central Texas College representative.

## FORMS REQUIRED

In addition to the above criteria, students must complete an Application for Admission form prior to being considered for unconditional admission.

# RECORDS REQUIRED

## Transcripts and Test Scores

Degree or certificate seeking students must ensure that all records of previous education are on file with the Records Office in order to fulfill admission requirements of Central Texas College.

1. **HIGH SCHOOL GRADUATES:** Degree or certificate seekers who have not previously completed 12 semester hours of course work from a regionally accredited college or university must submit high school transcripts.
2. **HIGH SCHOOL EQUIVALENCE GRADUATES:** Who have not previously completed 12 semester hours of course work from a regionally accredited college or university must submit High School General Education Development (GED) scores.
3. **COLLEGE TRANSFER STUDENTS:** Seeking certificates or degrees from Central Texas College must provide official transcripts for all regionally accredited college study before official degree plans are provided.
4. **INDIVIDUAL ADMISSIONS STUDENTS** (except transient students): Must provide official transcripts for all college study from accredited colleges or universities they previously attended. Non-high school/GED graduates must provide Department of Education approved test scores taken within the past year.

**NOTE:** Students are responsible for requesting all official records 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 catalog. Transcripts must bear original seal or mark and signature of the registrar to be acceptable. If transcripts of previous education are issued to Central Texas College in a student's former name, without a social security number, Central Texas College cannot be responsible for properly identifying the document. Admission requirements have not been met until records required are on file with the appropriate campus records office. Under the provisions of the Family Education and Privacy Act, CTC will not release copies of transcripts received from other institutions.

## Transient Students

Students not seeking a degree or certificate from Central Texas College are not required to provide previous education records unless required for Financial Aid or Veteran Affairs Services. Records will be required if student later elects to seek a diploma, certificate or evaluation and award of credit.

## Early Admissions

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

1. An Early Admission Form with the signatures of high school principal or counselor and parent or legal guardian must be submitted.
2. Student must provide an official high school transcript showing classification as a senior.
3. 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 to take one (1) course per term.

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

## Aviation Science Students

All Aviation Science 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 appropriate college official at the time of pre-registration advisement for admission to this department.

## UNIFORM APPLICATION OF STANDARDS

The standards of College policy relative to the academic status of the student and all matters relating to the student are uniform at all locations served by Central Texas College. The subsequent sections of the catalog provide information required and unique to Continental & International campuses.

## WHEN TO REGISTER FOR CLASS

### Registration Periods

Central Texas College conducts an academic year beginning and ending in August. It is based on terms and varies considerably in different locations to meet military schedules. Course lengths are four, six, eight, ten, and twelve weeks. Varying course lengths or the special needs of the community may alter the generally established registration period at any given site. The Education Center publicizes registration periods, term dates, and course offerings. Students should consult their local schedules for times and dates of registration and classes.

## TERM CALENDAR

### 1993-1994

Term 1	August 15, 1993	thru	October 16, 1993
Term 2	October 17, 1993	thru	December 18, 1993
Term 3	December 19, 1993	thru	March 5, 1994
Term 4	March 6, 1994	thru	May 7, 1994
Term 5	May 8, 1994	thru	August 13, 1994

### 1994-1995

Term 1	August 14, 1994	thru	October 15, 1994
Term 2	October 16, 1994	thru	December 24, 1994
Term 3	December 25, 1994	thru	March 11, 1995
Term 4	March 12, 1995	thru	May 13, 1995
Term 5	May 14, 1995	thru	August 12, 1995

### 1995-1996

Term 1	August 13, 1995	thru	October 14, 1995
Term 2	October 15, 1995	thru	December 23, 1995
Term 3	December 24, 1995	thru	March 9, 1996
Term 4	March 10, 1996	thru	May 11, 1996
Term 5	May 12, 1996	thru	August 10, 1996

### 1996-1997

Term 1	August 11, 1996	thru	October 19, 1996
Term 2	October 20, 1996	thru	December 21, 1996
Term 3	December 22, 1996	thru	March 8, 1997
Term 4	March 9, 1997	thru	May 10, 1997
Term 5	May 11, 1997	thru	August 9, 1997

## WHOM TO SEE FOR CLASSES

Central Texas College normally assigns a representative to each Education Center or College office where a program is conducted. Information on registration, term dates, evaluations, programs offered and related questions should be directed to the local Central Texas College representative at the Education Center, Navy Campus office or to the local Central Texas College office.

## REGISTRATION REQUIREMENTS

Official registration with Central Texas College is required before any student may begin coursework. The following must be completed before the student will be officially registered:

1. Application for Admission/Class Registration (each registration)
2. Payment of fees and tuition.

**NOTE:** Step 2 may include providing completed military Tuition Assistance forms or completed Veterans Administration forms if this method of financial assistance is chosen to pay for coursework.

All forms necessary for registration are available from the Central Texas College representative at each location.

## LATE REGISTRATION

Late registration is permitted for a limited time after class begins. Individuals should consult local schedules for exact dates. Students who complete registration after classes begin are not excused from meeting attendance or academic requirements and must arrange with the instructor to make up missed classes. No students will be permitted to register after the scheduled late registration ends.

## CHANGING REGISTRATION

### **Adding or Dropping Classes**

Students wishing to register for additional courses, or change course enrollments after registering, must have the amendments made on the registration card. Such changes must be completed and initialed by the student before the announced end of the registration period.

## COURSE ADMISSION

### **To Be Officially Registered**

Student 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.

## COST OF CLASSES

### **Tuition and Fees**

Tuition for classes at Central Texas College locations outside the Central Campus in Texas vary with the Government contract through which the institution operates. Therefore, both tuition and fees must be adjusted, based on Government contracts and local conditions, during the period this catalog is in effect.

Costs of classes to students will vary with the level of support being provided by the sponsoring agency at each campus or site.

Current tuition, fees and costs of classes can be obtained from the Education Officer, Navy Campus Representative, and the Central Texas College representative.



# PAYMENT

## Method of Payment

Checks or money orders should be made payable to Central Texas College. Central Texas College requires payment of tuition and applicable fees prior to attendance at the first class meeting.

## Refunds

The effective date of the withdrawal is the date the withdrawal form is date stamped at the appropriate Education Center or Navy Campus Office and signed by the ESO or designated representative. In all cases, the instructor must sign the withdrawal form, either before or after the effective withdrawal date.

Refunds will be computed from the effective date and will be made according to the following schedule:

100%	Withdrawal before the first class meeting.
75%	Withdrawal if not more than 1/8 of the total class meetings have elapsed.
25%	Withdrawal if more than 1/8 but not more than 1/4 of the total class meetings have elapsed.
0%	Withdrawal if more than 1/4 of the total class meetings have elapsed.

Refunds will be processed by the Director of Administrative Services after receipt of certification by the Student Services Office that the Application for Withdrawal or the Application for Refund form has been properly completed and processed.

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

## STUDENT FINANCIAL AID

Information and application forms for Military Tuition Assistance and VA benefits are available at Military Education Centers and Navy Campus offices. The two forms of student financial assistance are not part of the same program. Students interested in using such aid should be aware of the liabilities incurred.

## TYPES OF AID

### PELL Grant

The PELL Grant is authorized by the Higher Education Act Amendments of 1972 to assist students in pursuing their first undergraduate degree. The intent of the PELL grant is to provide a foundation of financial assistance to supplement the cost of postsecondary education. The amount of the PELL award is based on the actual cost of the students education while attending Central Texas College. Applications are available at the Military Education Center or Navy Camps office. Brochures describing various financial aid and VA programs are available to all students at Education Centers and Navy Campus offices.

### Federal Stafford Loans

An undergraduate student may borrow up to \$2,625 per academic year with an aggregate loan limit of \$17,250. These are loans obtained by the student from a lending agency outside the college such as a bank, savings and loan association, credit union, etc., which are insured by the Federal Government. The interest rate is 8% 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 leaving school.

Interested students should obtain detailed information and application forms directly from lending institutions or the appropriate college official.

Loans must be repaid. Students who are awarded Stafford Loans (GSL) or Perkins Loans (NDSL), must attend a pre-loan counseling session. This session provides additional information about the loan programs such as monthly repayments, deferments, grace period and cancellations. The applicant will be

advised of the disbursement procedures during the counseling session. Students receiving loans must advise the Office of Student Aid when leaving the college. Each student must have an exit interview regarding their rights, responsibilities, and loan payment scheduling.

## **Veteran Benefits**

Most Central Texas College programs are approved for those who wish to attend and receive benefits under the Veterans Readjustment Benefits Act of 1966, the Veterans Educational Assistance Act of 1984, Chapter 106-Reserve Education Bill, Chapter 30, VA Educational Bill of 1986 and dependents qualified for VA educational benefits, Chapter 35.

## **Military Tuition Assistance**

Many military personnel, whether or not eligible to participate under the Veterans Readjustment Benefits Act, may wish to attend Central Texas college under the Tuition Assistance Program.

Active duty military students approved under this program will have a portion of tuition cost paid by the government but will be responsible for paying the remaining amount as well as all fees and book costs.

Each recipient should make sure that he or she is informed of all conditions on the Tuition Assistance agreement. Information about such conditions may be obtained at the Military Education Center or Navy Campus office.

The Air Force, Army, Marines and Navy have Tuition Assistance programs. Students attending classes at Central Texas College should complete their appropriate service form and deliver it to the appropriate Education Center or Navy Campus office. The signature of the student's unit commander (or authorized representative) and the approving signature of the appropriate Education Center or Navy Campus representative are required.

## **Department of Defense Civilians**

The applicant is responsible for securing Tuition Assistance from the employer. Forms and procedures for requesting Tuition Assistance vary with each branch or service. Please consult the local ESO, NCR or Civilian Personnel Office.

One copy of the approved Tuition Assistance form must be provided to the College at the time of registration.

## **Satisfactory Progress**

Central Texas College students who are receiving financial aid are required to make adequate progress toward a degree objective in order to remain eligible to receive financial aid.

The following Satisfactory Progress standards are applicable to all students who receive financial aid at Central Texas College.

- a. The maximum time frame for the completion of a degree program is the equivalent of six 12-week or 16-week semesters of full-time enrollment. This time frame includes the entire attendance history of a student regardless of whether financial aid was or was not received.
- b. The time frame for students enrolled full-time (enrolled in six or more credit hours) shall be no more than twelve 8-week terms of full-time enrollment to complete a degree program.
- c. Half-time students (enrolled in three to five credit hours) shall have twenty-four 8-week terms of half-time enrollment to complete a degree program.

Satisfactory progress can be met with any combination of full-time or part-time enrollment. Students may refer to their degree plan, college catalog or see a college representative for further details regarding their specific academic program.

# RECORDS ACCESS

## STUDENT RECORDS

In compliance with the Family Educational Rights and Privacy Act of 1974, information classified as "directory information" may be disclosed to the general public without prior written consent from a student unless the Central Texas College Records Office is notified in writing, by the student, prior to the 6th class day of each term. This statement of non-disclosure will be retained for one year after submission.

Access to any other records by persons other than the student will be limited to those persons specified in the statute. Records will be maintained of persons granted such access.

Students may inspect and review their educational records upon written request to the appropriate records custodian. For more information contact the Central Texas College representative.

Release of additional information pertaining to the student record must be authorized in writing by the student.

## COLLEGE POLICIES AND REGULATIONS

### RECOMMENDED COURSE LOAD

#### Academic Load

Students are responsible for determining the academic load they can master during each term. Typical course loads, based on eight-week schedules, are as follows:

Half (1/2) time .....	3 semester hours
Three quarter (3/4) time .....	5 semester hours
Full (1/1) time .....	6 semester hours

#### NOTES: (Academic Load)

- For schedules other than eight weeks, consult with the Central Texas College representative
- Final determination of academic load for purposes of VA benefits payments is the prerogative of the Department of Veteran Affairs, not the institution. Questions about VA payments must be sent by the student directly to the VA Office serving the student's campus.

Working students and students who may have difficulty with college level courses are encouraged to consult with Central Texas College personnel or the Education Center or Navy Campus counselors for advice on the number of hours that should be taken.

## 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 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" when their unexcused absences reach a total equal to 12.5% of the class hours for the course. Example: Students attending a 48-hour class during an 8-week period normally meet 180 minutes each session for 16 sessions. Those students accumulating two (2) unexcused absences are subject to Administrative Withdrawal since the total unexcused absences equal 12.5% of class hours for the course. Students attending 96-hour classes are subject to administrative withdrawal after they have accumulated 12 hours of unexcused absences.

The following specific rules apply to absences:

- A class meeting of 50 minutes equals 1 absence.
- Beginning the first scheduled day of class meeting, instructors are required to keep attendance records.
- An administrative withdrawal may be initiated when the student fails to meet college attendance requirements. The course will be noted as an "FN" on the roll and record book, with a final grade of "F" on the transcript.
- As a matter of policy, excused absences are not provided for any reason by College employees other than instructors. Regardless of the reason for the absence, students are responsible for completing all coursework 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 officially enrolled 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 of college level credit recorded on your permanent record.

**SOPHOMORE**—with thirty-one semester hours or more of college level credit recorded on your permanent record.

## RESIDENT CREDIT

### All Campuses

A student may earn an associate degree entirely through study at campuses outside the State of Texas or in combination with courses at the Texas Campuses. At least 15 semester hours or 25% of degree requirements 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 Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees and certificates of completion. Credits earned at Central Texas College are transferable to other institutions in accordance with policies of the receiving institutions. 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 66 semester hours of transfer credit from junior colleges. Students who plan to transfer should not take more than this number of hours unless they have written permission from the chosen senior college.

# HOW TO CHOOSE COURSES

## Common Course Numbers

Central Texas College has adopted the Texas Common Course Numbering Systems (TCCNS).

The courses with common numbers in this catalog have the course prefix and course number underlined. Converting to the common course numbering system required changing many course numbers. The old course numbers are in brackets following the course title as shown below:

**HIST 2311**      Survey of Western Civilization I      [**HIST 1303**]      (3.0) Credit: 3

# WHAT TO DO ABOUT COURSE PREREQUISITES

## Courses Out Of Sequence

Student who, for scheduling reasons, find it desirable to take an advanced course prior to completing the prerequisite must secure, in writing, approval from the appropriate College representative prior to registering for the course. Failure to obtain approval could result in loss of credit toward the degree. The final responsibility for taking advanced courses without completing the required prerequisite rests with the student.

# 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:

1. Grade Reports are provided by faculty members at the end of each course. This method of reporting grades permits students to judge their performance at the end of each course.
2. Transcripts are provided by the Records Office and are the official report of completed courses, grades, and credit awarded by the College.

## Grades and Point Average

The grading system at Central Texas College is as follows:

Grades		Grade Points
A	— Superior	4
B	— Above Average	3
C	— Average	2
D	— Passing, but Unsatisfactory	1
F	— Failure	0
I	— Incomplete	0
N	— No Credit	0
P	— Completed	0
W	— Withdrawal	0
XN	— Non Attendance	0
FN	— Non-attendance	0

## Grade Designations

### **“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. A “D” grade will not be acceptable toward graduation for any course in the major in the Associate in Arts, Science, or Applied Science degree programs.

### **“F”**

Failure may be awarded for lack of academic progress 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 a student has completed the majority of the coursework, but because of personal illness, death in the immediate family, or military orders, 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 absences 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.

### **“N”—No Credit**

The grade of “N” is reserved for use with developmental and designated non-traditional, modular courses and will be awarded to students who have made satisfactory progress, but lack the successful 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 developmental and designated non-traditional, modular courses and will be awarded to students who have satisfactorily mastered all the 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.

### **“X”—Non-Attendance**

The grade of “X” is reserved for use with developmental and designated non-traditional, modular courses and will be awarded to students who have failed to make satisfactory progress due to failure to attend.

### **“W”—Withdrawal**

Students who officially withdraw will be awarded the grade of “W,” provided attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a withdrawal application with the college before they may be considered for withdrawal.

## **Grade Point Averaging**

A student’s grade point average is calculated by dividing the total grade points by the total attempted semester hours. Grades of “W,” “N,” “P,” and “X” are not included in these calculations. Grades from developmental courses are not calculated.

## **Grades and Financial Aid**

Students attending college with Military Tuition Assistance, Financial Aid, or VA benefits should be familiar with the requirements and possible obligations incurred, particularly upon receiving a grade of “F,” “I,” “W,” “N,” or “X.”

## **Change Of Grades**

Students who feel that there has been a computational error in grading must immediately contact the instructor of the course in question. Students must bring this matter to the attention of the instructor involved no later than 90 days after the end of the course in order for a grade change to 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, although both grades remain on the transcript. Through repeating a course, only the last grade earned is utilized in computing the grade point average. Other colleges may compute the GPA in a manner different from Central Texas College. Honors designation at graduation considers all grades, including repeated courses. A student who repeats a course should notify the Records Office for recomputation of cumulative 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. 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.

# GRADE REQUIREMENTS

## Minimum For Satisfactory Progress

**GRADUATION**—requires an overall grade point average (GPA) of 2.0, to include a minimum 2.0 GPA with Central Texas College. Associate degrees in Arts, Science, or Applied Science require a “C” for each course in the major. Graduation GPA includes all Central Texas College grades and grades in transfer courses accepted toward the degree.

**SATISFACTORY PROGRESS**—Students at Central Texas College must achieve a 2.0 cumulative GPA to maintain satisfactory progress toward graduation.

## IF YOU DON'T MAKE THE GRADE

**ADVISING:** Students who fail to maintain a 2.0 cumulative GPA during their initial 7 semester course hours will be required to participate in an academic advising session prior to re-enrollment.

**PROBATION** will be imposed after the first seven semester hours attempted when the student fails to maintain a 2.0 cumulative grade point average. Students who fail to achieve a 1.0 grade point average during any term will be placed on probation if their cumulative grade point average is 2.0 or higher. Probation will be imposed during the next term in which the student registers. Students on probation cannot register for classes until the requirements listed below are completed for Return to Class After Probation.

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 the requirements listed below are completed for Return to Class After Suspension.

**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 for students who fail to achieve a 1.0 grade point average during the term when the resulting cumulative grade point average is below 2.0. Suspended students may register for classes upon completion of the requirements listed below for Return to Class After Suspension.

---

**Students who use financial aid or VA benefits and who are suspended will be reported to the Financial Aid Office or the Veterans Administration and must also meet financial aid or VA requirements prior to reinstatement of financial aid or VA benefits.**

---

## HOW YOU MAY RETURN

### Return to Class After Probation

Students on probation must sign a probation agreement and receive re-entry advisement.

### Return To Class After Suspension

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

1. Receive advisement and be recommended, in writing, by the ESO or NCR for return to classes.
2. Complete a re-entry petition agreement and send it with the ESO or NCR recommendation to the Central Texas College Director.

Students who have been suspended once may be re-admitted under PETITION and must meet academic standards required while on petition re-entry status.

**RE-ENTRY PETITIONS WILL BE PROVIDED TO EACH STUDENT AT THE TIME OF SUSPENSION NOTIFICATION.**



# CLASSROOM VISITORS

## Visitors In Class

Permission to visit a class may be granted by the Campus Dean. 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 the 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

All correspondence from Central Texas College to the student will be to the address provided on the Application for Admission. Any address changes must be made in writing to the C&I Records Office. Students are responsible for all communication mailed to the last address on file. Student Academic File will be maintained in Europe or the Pacific Far East for 5 years after the last attendance unless an address change is sent to the appropriate Campus Records Office.

### Name Changes

Individuals must provide their legal name on their Application for Admission as it is the name that will appear on their official student record. To change a legal name to a new legal name, the student must submit a copy of the signed court order showing the authorized new legal name. To change a last name after marriage, the student must present a copy of the marriage certificate. A female student who wishes to discontinue the use of her married name and resume the use of her maiden name or a different name, must present a divorce decree or signed court order showing restoration of the maiden name or other name. Name change documents and affidavits must be submitted to the C&I Records Office.

### 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 or expulsion from the College.

### Scholastic Honesty

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

1. *Plagiarism*—The taking of passages from the writing 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.

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

## Textbooks

Students are expected to buy the textbooks designated for each course. Textbooks may be purchased from the Central Texas College representative during the registration period. This period is normally two weeks prior to class starting date and during the first week of classes. After the registration period, students may obtain textbooks by contacting a Central Texas College representative or by sending a check or money order in the amount of the cost of the textbook plus ten percent for handling and shipping to: Central Texas College, Attn: Book Department. Addresses for the Book Department serving your area are available from Central Texas College personnel.

## DRUG AND ALCOHOL ABUSE

Students are admitted to Central Texas College for the purpose of educational, social, and personal enhancement. As students, they have rights and privileges, as prescribed by State and Federal Constitutions, statutes, and policies of the Board of Trustees of the College District. With these rights and privileges, students also have certain duties and responsibilities essential for creating an environment where all students can learn how to live productive, fulfilling lives. Substance and alcohol abuse disrupts this environment and threatens not only the lives and well being of students, faculty and staff but also the potential for education, social, and personal enhancement. It is, therefore, important for all members of the college community to take responsibility for preventing substance and alcohol abuse.

In recognition of the problems associated with substance and alcohol abuse, Central Texas College has developed a college-wide drug policy. The policy addresses not only disciplinary sanctions associated with substance and alcohol abuse but also education, prevention, intervention, and treatment activities necessary to help eliminate problems that substance and alcohol abuse poses to the college community.

Central Texas College is committed to providing comprehensive drug education and prevention programs as well as early intervention and referral services. In support of this commitment, Central Texas College has established the Substance Abuse Resource Center in the Student Services Building on Central Campus to provide information and assistance to the college community. Through this program, Central Texas College will provide educational support programs which will assist in activities to prevent alcohol and substance abuse. Information relating to drug and alcohol abuse at Central Texas College locations outside of Texas will be provided at individual campus sites.

To ensure compliance with applicable institutional, state and federal guidelines relating to the illegal use of illicit drugs and the abuse of alcohol, Central Texas College annually distributes an information flyer to all employees and students which addresses:

- Standards of conduct
- Legal sanctions
- Health risks
- Counseling options
- Disciplinary action

Those individuals seeking further information should contact the Substance Abuse Resource Center or the Central Texas College site representative.

## ALCOHOL AND ILLEGAL SUBSTANCES

Students are not to use intoxicating beverages, narcotics or non-prescription drugs in a Central Texas College classroom or while attending any school-sponsored activity. Any student in a Central Texas College classroom or administrative office or at a school-sponsored function who is under the influence of or in possession of any of these items will be subject to disciplinary dismissal from the College. Anyone found in possession of, using or distributing illegal drugs or aiding those involved in such activities will be subject to immediate expulsion from the College.

## **CLASS BEHAVIOR**

Generally, students attending Central Texas College are in class for intense personal and professional reasons. To facilitate instruction and learning, students are expected to maintain a mature, earnest and interested attitude in the classroom. The College will not tolerate student behavior which disrupts the class or which attempts to discredit the instructor, the course material or other students. Students who seek to disrupt classes or discredit the course or other students will be asked to cease such disruptions. If the student fails to do so, the student will be dropped from the class with a grade of "F."

## **HARASSMENT**

Harassment, whether verbal or by action, by any student enrolled at Central Texas College of any member of the student body, faculty, administration or any other Central Texas College employee will be considered a serious breach of discipline and shall be treated accordingly.

Any action, whether in the classroom or laboratory, at the administrative offices or at a school approved activity, subjecting a person to humiliation, indignity, discomfort, or that interferes with any process in which the College is engaged, may be considered harassment.

## **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.

For those few students who fail to understand and accept their role in an educational institution, the College has prescribed 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 requested from Central Texas College personnel.

### **Disciplinary Action**

Disciplinary action may be an oral or written reprimand, disciplinary probation, suspension or expulsion from the College.

Students on disciplinary probation may receive no honors from Central Texas College. The probation status is permanent unless the student has earned the privilege of being released from disciplinary probation.

## **HOW TO OBTAIN TRANSCRIPTS**

### **Transcript Ordering**

A student's records are considered confidential in nature. Convenient forms for ordering 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 \$3.00 for all other transcripts must accompany the written request signed by

the student. Transfer credits from other colleges are not listed on the Central Texas College transcript. Students should request transcripts directly from other colleges attended if the information is needed.

Request for transcripts will be honored as soon as possible in the order of receipt. During peak periods, such as graduation, end of term and registration, additional time will be needed to process the request. Telephone requests will not be honored. It is not acceptable practice to send or receive facsimile (FAX) transcripts.

Requests for transcripts should be addressed to the Overseas Campus Student Services Office for students attending Europe or Pacific Far East Campuses. Students attending all other sites should request their transcript directly from the Transcript Department, Killeen, TX. Addresses are listed in the front of the catalog. Transcript requests should include full name, social security number, date of birth, last month, year, and location of attendance, as well as the complete address to which the transcript is to be sent. Transcripts addressed to students will be stamped "Issued to Student". Transcripts addressed to official addresses will be official transcripts.

Students departing Central Texas College locations in Europe or the Pacific Far East must notify the administrative office of their departure to ensure their records are transferred to the Systems Office at Killeen, Texas. Student academic files and transcripts will be maintained in Europe or the Pacific Far East for 5 years after last attendance unless otherwise notified of departure.

Records and transcript services will be provided through the Systems Registrar for all files transferred to the Systems Office from Europe and the Pacific Far East and all other sites. Evaluations and graduation applications will be processed through the Dean of Student Services Office.

The Registrar will deny a student's transcript request if the student has an outstanding obligation to the College. The obligation may be due to a library fine, parking ticket, bad check, non-repayment of Financial Aid or failure to comply with admissions requirements.

Students on financial hold will not be eligible for evaluation services or graduation consideration.

**NOTE:** Records of students attending campuses outside of Texas are maintained at those campus offices until the branch campus is informed by the student in writing that the student has moved. Academic records are then transferred to the Killeen, Texas, Central Campus office.

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

## **Official 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 or an Application for Refund with the instructor. Additionally students must file with the Education Services Officer or Navy Campus Representative. Applications for Withdrawal or an Application for Refund will not be accepted after the close of business on the last working day before the last week of class. Also see previous sections entitled "W"—*Withdrawal* and *Refunds*.

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 Services office. Military Tuition Assistance students are referred to the Military Education Center or Navy Campus office. Students who are administratively withdrawn from classes without officially withdrawing will receive an "F" grade and are ineligible for refunds.

A student may not withdraw from a class for which the instructor has previously issued the student a grade of "F" for non-attendance.

Emergency withdrawal will be considered when documentary evidence is presented. Also see *Refunds*.

# **CERTIFICATE AND 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 degrees upon students who have successfully completed all the minimum and specific requirements for graduation. The minimum requirements for each degree are listed below. To earn a degree, students must also complete the specific degree requirements in the curriculum plan for their major field of study as shown in the programs of study. Except for the Associate in General Studies Degree, students may not use the minimum requirements listed below to "tailor" their own degrees. It is the student's responsibility to apply for the degree. Each degree candidate must earn a minimum of 25% of course work in traditional study at Central Texas College. No designation of a program discipline will be written on the face of any Central Texas College degree or certificate. Students on financial hold are not eligible for graduation.

A person may 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 after degree requirements have been met. 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.

## **MINIMUM REQUIREMENTS FOR**

### **Associate In Arts Degree**

Students should coordinate with the senior college to which they intend to transfer to ensure that the courses they take at Central Texas College will fulfill graduation requirements there. To receive an Associate in Arts degree students must complete a minimum of 64 semester hours which must include:

1. Twelve semester hours of communications to include a, b and c:
  - a. ENGL 1301 and 1302
  - b. Three semester hours of ENGL 2322, 2323, 2326, 2327, 2331 or 2332
  - c. Three semester hours of speech
2. Three semester hours of humanities or fine arts (see page 29)
3. Three semester hours of mathematics, MATH 1314 or higher
4. HIST 1301 and 1302
5. GOVT 2301 and 2302
6. Eight semester hours of foreign language (1411, 1412 sequence)
7. Eight semester hours of natural science
8. Four semester hours of physical education from activity courses
9. A minimum of three semester hours of computer instruction (see page 29)
10. A minimum of 25 percent of semester hours credit earned within the Central Texas College System
11. All required courses in the major as listed in the college catalog

12. Satisfy a, b. and c:
  - a. A minimum overall grade point average of 2.0 ("C" average)
  - b. A minimum of 2.0 ("C") on each course in the major
  - c. A minimum of 2.0 ("C") with Central Texas College
13. Meeting all other College and departmental requirements

In cases where freshman and/or sophomore degree requirements of the receiving college for a bachelor's degree differ from those listed above, changes can be made in the Associate in Arts Degree requirements when approved by the appropriate College official.

## Associate In Science Degree

Students should coordinate with the senior college to which they intend to transfer to ensure that the courses they take at Central Texas College will fulfill graduation requirements there. To receive an Associate in Science degree, students must complete a minimum of 64 semester hours which must include:

1. Twelve semester hours of communications to include a, b and c:
  - a. ENGL 1301 and 1302
  - b. Three semester hours of ENGL 2311, 2322, 2323, 2326, 2327, 2331 or 2332
  - c. Three semester hours of speech
2. Three semester hours of humanities or fine arts (see page 29)
3. HIST 1301 and 1302
4. GOVT 2301 and 2302
5. Twelve semester hours of laboratory science (I and II sequence)
6. A minimum of three semester hours of computer instruction (see page 29)
7. Six semester hours of mathematics, MATH 1314 or higher
8. Four semester hours of physical education from activity courses
9. A minimum of 25 percent semester hours of credit earned within the Central Texas College System
10. All required courses in the major as listed in the college catalog
11. Satisfy a, b. and c:
  - a. A minimum overall grade point average of 2.0 ("C" average)
  - b. A minimum of 2.0 ("C") on each course in the major
  - c. A minimum of 2.0 ("C") with Central Texas College
12. Meeting all other College and departmental requirements

In cases where freshman and/or sophomore degree requirements of the receiving college for a bachelor's degree differ from those listed above, changes can be made in the Associate in Science Degree requirements when approved by the appropriate College official.

## **Associate In General Studies Degree**

Students planning to attend a senior college should coordinate with the senior college to which they intend to transfer to ensure that the courses they take at Central Texas College will fulfill graduation requirements there. To receive an Associate in General Studies degree students must complete a minimum of 64 semester hours which must include:

1. Communications to include either a or b:
  - a. ENGL 1301 and three semester hours of oral communications
  - b. ENGL 1309
2. Three semester hours of humanities or fine arts (see page 29)
3. Three semester hours of mathematics, MATH 1314 or higher
4. HIST 1301 and 1302
5. GOVT 2301 and 2302
6. Three semester hours of computer instruction (see page 29)
7. Two semester hours of physical education from activity courses
8. If the major is kinesiology, music, journalism, or commercial art, all required courses in the major as listed in the College catalog must be completed
9. A minimum of 25 percent of semester hours credit earned within the Central Texas College System
10. A minimum of overall grade point of 2.0 ("C" average), to include a minimum 2.0 ("C" average) on all courses taken with Central Texas College
11. Meeting all other College and departmental requirements

In cases where freshman and/or sophomore degree requirements of the receiving college for a bachelor's degree differ from those listed above, changes can be made in the Associate in General Studies Degree requirements when approved by the appropriate College official.

## **Associate In Applied Science Degree**

Students must complete the specific degree requirements in the curriculum plan for their major field as shown in the program of study. The curriculum consist of a minimum of 64 semester hours and will include:

1. Communications to include either a or b:
  - a. ENGL 1301 and three semester hours of oral communications
  - b. ENGL 1309
2. Three semester hours of humanities or fine arts (see page 29)
3. Three semester hours of mathematics, MATH 1314 or higher, except for the Associate Degree Nursing program
4. Three semester hours of social or behavioral science (see page 29)
5. Three semester hours of computer instruction (see page 29)
6. A minimum of 36 semester hours of technical courses in the major or a closely related field

7. A minimum of 25 percent of semester hours credit earned within the Central Texas College System
8. All required courses in the major as listed in the college catalog
9. Satisfy a, b, and c:
  - a. A minimum overall grade point average 2.0 ("C" average)
  - b. A minimum of 2.0 ("C") on each course in the major
  - c. A minimum of 2.0 ("C") with Central Texas College
10. Meeting all other College and departmental requirements

**NOTE:** Students may be required to repeat major courses in their field of study if graduation is not accomplished within seven years after courses are completed.

## Certificate Of Completion

A Certificate of Completion will be awarded to students who fulfill the curricular requirements of special courses and programs. Minimum residency and GPA as listed for degree programs are required.

## Transferability Of Courses

Students are urged to consult the catalog of the institution to which they may transfer for the detailed information concerning coursework transfer. This catalog should be used by students as the basis for course planning. Courses taken in Developmental Studies will not satisfy degree requirements at the receiving institution.

## Developmental Studies

The developmental studies courses offered by the College are designed to provide a means for students to remove specific deficiencies or provide refresher coursework prior to enrolling in academic, occupational, or technical programs.

Students on academic probation or suspension may be required to complete developmental studies courses to satisfy probation or suspension re-admission requirements.

---

**Developmental studies courses may not be used  
to satisfy degree requirements and cannot be counted  
in the grade point average at Central Texas College.**

---

## HOW TO EARN A CERTIFICATE

### Certificates Conferred

Since the duties of military personnel normally prohibit them from full-time student status, the College provides indicators of progress toward the Associate Degree in the form of certificates. The College presents the Certificate of Award at two levels, 15 hours and 30 hours, to indicate skills obtained by the student through coursework as outlined in the program chosen by the student.

The student is eligible to receive the 15 hour Certificate of Award upon completion of 15 semester hours of credit on one program area. Nine of these hours must be taken with Central Texas College by traditional classroom methods including video study. An additional 15 semester hours of credit in the same program area of study will qualify the student for the 30-hour Certificate of Award. To receive the certificate the student must have a minimum 2.0 GPA.



# WHEN ARE CERTIFICATES AND DEGREES AWARDED?

Central Texas College awards certificates and degrees each year in May, August, and December.

## HOW TO APPLY FOR A CERTIFICATE OR DEGREE

Requests for Certificate and Requests for Degree, with appropriate non-refundable fees, must be submitted to the Counseling Office by:

	<b>DEADLINE</b>
Fall Semester for December Graduation	October 1st
Spring Semester for May Graduation	February 1st
Summer Semester for August Graduation	June 10th

**NOTE:** All College entrance and course requirements must be completed prior to a certificate or degree award. Request for Certificate or Request for 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. Official transcripts or GED scores from previously attended institutions, if applicable, must be on file in the Central Texas College Records Office by the above dates.

Any student who fails to file by the above listed graduation deadlines will be processed in the next degree order time frame. **NO STUDENT** will be denied a graduation appointment. The graduation date on the certificate or degree must conform to the dates listed above.

Students applying for graduation who do not complete remaining degree requirements on or about the graduation date will be declared non-graduates and will not be eligible for graduation fee reimbursement. Students declared non-graduates will be required to reapply for graduation and pay an additional graduation fee.

### Replacing A Lost Certificate or Degree

If a certificate or degree has been lost, stolen or damaged, a Request For Replacement may be obtained. An appropriate fee is required to replace a certificate or degree.

## COMMENCEMENT

### 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.

## HONORS

### Graduation With Honors

Candidates for degrees for Central Texas College may graduate with **HIGHEST HONORS** or **HONORS** based on 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 college-level courses taken at Central Texas College as well as courses transferred from other accredited institutions of higher learning are included. A repeated course will

not clear the graduate for HONORS; however, the GPA will reflect only the repeated course in the final GPA.

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 graduating 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 of traditional study with Central Texas College.

## EVALUATION OF PREVIOUS EDUCATION

### Transfer Students

Transfer of credit from regionally accredited college and universities may be accepted when the grade earned is "C" or better and the coursework applies to the student's curriculum. Passing grade lower than "C" may be considered for transfer in accordance with current evaluation procedures and curriculum requirements. A grade of "D" will not be accepted in transfer in major degree requirements. Students on suspension from other colleges must be eligible to return, on probation, to the suspending institution.

Due to the rapid changes taking place in the technological field today, coursework taken in a major field of study or courses directly related to that major field may not be accepted in transfer to satisfy specific Associate in Applied Science degree requirements. Acceptance of course credit in transfer for the above mentioned programs must be approved by appropriate Department Managers when coursework was completed seven years or longer before the student entered the Central Texas College program of study. The Computer Science and Industrial Technology Departments do not normally accept courses taken over five years prior to entry into a Computer Science or an industrial technology degree or certificate program.

### 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 area 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, Central Texas College 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. The Defense Activity for Non-Traditional Educational Support (DANTES) courses and Subject Standardized Tests (see NOTE below).
2. College Level Examination Program (CLEP)--both the General Examination and Subject Examination (see NOTE: below).
3. Institutional Course Challenge Examination--Students may request, through the appropriate College official, permission to take challenge examinations for certain courses. Students must not have previously enrolled in the course for college level credit and must have completed a minimum of six semester hours in residence with Central Texas College with a minimum 2.0 grade point average.

Those who do not make a grade of “A” or “B” will not be permitted to repeat the examination for that course at a later time. To obtain credit, the student must pass the examination with a grade of “A” or “B”, have completed a minimum of 6 semester hours of coursework at Central Texas College with a minimum 2.0 grade point average, and submit an application for credit award.

4. Credit for military schools attended, as recommended by the American Council on Education and recognized by Central Texas College.
5. Credit for military service basic training.
6. Military Job Training and Experience, as recommended by the American Council on Education and recognized by Central Texas College.
7. American College Testing Program-(ACT)(see NOTE: below).
8. College Board Admission Testing Program (see NOTE below).
9. Correspondence Extension Courses offered by regionally accredited institutions which are members of the National University Extension Association.
10. Other—To include certain types of civilian training, specialized testing, and work experience.

**NOTE:** To obtain credit, the student must pass the exam, apply for credit and have completed a minimum six semester hours of coursework at Central Texas College with a minimum 2.0 GPA or 6 semester hours of “C” or higher. Tests and other non-traditional educational experiences completed in excess of seven years prior to the student’s completion of 6 semester hours in residency with CTC will not be eligible for credit consideration. Credit will not be awarded for courses in which student was previously enrolled. Evaluated credit will be awarded only when it applies to the students’ degree requirements.

## **Evaluation Procedures**

Curriculum plans outlining accepted transfer and non-traditional credits as well as remaining requirements are available from the College, Military Education Centers, or the Navy Campus advisors upon the student’s request.

Evaluation and 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. Students on financial hold will not be eligible for evaluation of non-traditional educational experiences until the financial hold is cleared. Validated evaluated credit will be posted to the student’s transcript upon request.

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 the student. Addresses are listed in the front of this catalog.

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

## **Servicemembers Opportunity College**

Because of its efforts to serve the educational needs of servicemembers, Central Texas College has been designated a Servicemembers Opportunity College. As a member of the Servicemembers Opportunity College Associate Degree (SOCAD) and (SOCNAV) program, Central Texas College has committed itself to fully support and comply with SOC Principles and Criteria. Through this commitment, Central Texas College ensures that:

- Servicemembers share in the postsecondary educational opportunities available to other citizens.

- Servicemembers are provided with appropriately accredited educational programs, courses and services.
- Flexibility of programs and procedures, particularly in admissions, *credit transfer*, *recognition* of non-traditional learning experiences, scheduling, course format, and residency requirements, is provided to enhance access of servicemembers and their family members to undergraduate educational programs.

## SOC Criteria

In support of SOC criteria and service to its military students, Central Texas College:

- Has designed a transfer program which minimizes loss of credit, avoids duplication of credit, yet maintains program integrity.
- Has established guidelines which follow the general principles of good practice outlined in the *JOINT STATEMENT ON TRANSFER AND AWARD OF ACADEMIC CREDIT*.
- Accepts transfer credit earned from regionally accredited institutions consistent with servicemembers degree programs.
- Requires only 25 % of degree requirements to satisfy Central Texas College residency.
- Recognizes as study in residence all credit coursework offered by the College, regardless of location.
- Allows students to satisfy residency requirements with courses taken at the College at any time during their course of study.
- Provides the Individualized Career Evaluation Process (ICEP) to access learning equivalence and awards credit to qualified students for specialized military training and experience in accordance with the *ACE GUIDE TO THE EVALUATION OF EDUCATIONAL EXPERIENCES IN THE ARMED FORCES*.
- Provides the Individualized Career Evaluation Process (ICEP) which reflects the principles and guidelines set forth in the statement on *AWARDING CREDIT FOR EXTRA INSTITUTIONAL LEARNING* and awards credit for non-traditional learning assessment programs.

## SOCAD/SOCNAV DEGREE COMPLETION AGREEMENT

All students can continue their Central Texas College degree programs regardless of location. Through the "credit bank" provisions of the Servicemembers Opportunity College, a student may study at any other regionally accredited college and apply the work toward Central Texas College degree requirements, as long as 25 % of degree requirements, with a minimum 2.0 GPA 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 SOCAD/SOCNAV-2 agreements should be addressed to the SOCAD/SOCNAV advisor at the administrative office serving the student's location. Addresses are listed in the front of this catalog.

Students no longer attending Central Texas College who previously completed the minimum residency and GPA requirements may request a SOCAD/SOCNAV-2 Agreement by writing to:

Central Texas College  
 Director SOCAD/SOCNAV  
 P. O. Box 1800  
 Killeen, Texas 76540-9990

# PROGRAMS OF STUDY

## Program Offerings

Program requirements to earn a degree are listed alphabetically. Course descriptions for all courses offered are listed in numerical order, alphabetically by program.

## Semester Credit Hours

One semester hour of credit represents one hour of lecture class time or usually two-three 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 three-semester-hour course means there are three lecture hours per week for one 16-week semester and no lab hours required; (2-4) means there are two lecture hours and four lab hours per week for the same 16-week semester. This weekly requirement will be adjusted as necessary to compensate for terms/sessions/semesters with lengths other than 16 weeks for instance, (3-0) for an eight week term would require six hours of lecture per week and (2-4) would require four hours of lecture and eight hours of lab per week.

---

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

---

## Course Availability

Courses are offered to students at military installations which have sufficient student interest. However, not all courses are available every term due to the specialized nature of the course content, equipment requirements, and faculty availability.

Student need and interest are major factors in scheduling course sequences. Students should express their requirement to the local ESO or NCR. This will assist in scheduling courses which will aid the majority of students pursuing a program of study. The Central Texas College representative can furnish convenient planning brochures for most programs.

## 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: ENGL 1302 - Composition and Rhetoric II requires that ENGL 1301 Composition and Rhetoric I be successfully completed prior to registering for ENGL 1302.

Students who cannot schedule prerequisites must obtain prior approval to enroll in these courses from the appropriate College official. Failure to obtain approval could result in loss of credit toward the degree.

## 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.

## Special Selection

Many programs of study have a humanities/fine arts and social/behavioral science selection. Some courses can be used as either a humanities/fine arts or social/behavioral science elective. The student may designate which selection these courses satisfy. The special selections are listed below.

### Humanities/Fine Arts Electives

ANTH 2351 Cultural Anthropology

ARTS (all ARTS courses except ART. 2313, 2314)

*Foreign Language courses*

GEOG 1302 Cultural Geography

GEOG 1303 World Regional Geography

HIST 2311 and 2312 Survey of Western Civilization I and II

*Music courses (MUSI)*

Literature courses to include ENGL 1302 when it is not used to satisfy the English requirement

Philosophy courses to include Religion (PHIL)

SPCH 2341 Performance of Literature

### Social/Behavioral Science Electives

ANTH 2301 Physical Anthropology

ANTH 2351 Cultural Anthropology

ECON 2301 Macroeconomics

ECON 2302 Microeconomics

CRIJ 1307 Crime in America

AGRI 2317 Introduction to Agriculture Economics

Geography courses (except GEOG 1301)

Government courses (GOVT)

History courses (HIST)

Psychology courses (PSYC)

Sociology courses (SOCI)

### Computer Science/Microcomputer Technology Electives

Computer Science courses (COSC)

Microcomputer Technology courses (MISC)

Word Processing courses (WOPO)

AGRI 1309 Computers in Agriculture

CMET 1403 Computer Systems & Operational Programming

CMET 2402 Computer Circuit Analysis

CMET 2411 Theory of Interface Devices

DRDS 2410 Computer-Aided Drafting I

DRDS 2411 Computer-Aided Drafting II

FRMG 2309 Computers in Agriculture

# **CONTINUING EDUCATION PROGRAM**

The purpose of non-credit programs is to meet the current and changing educational requirements of a specific community. To achieve this purpose, instruction is provided in response to expressed needs. Classes generally 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 and requirements of the area being served. There are no limits to the number or variety of courses. Classes are offered in the vocational business fields as well as practical arts. Non-credit courses are offered in the following:

## **Business Education**

Classes offered in business are the result of close and constant cooperation with, and are established on the basis of specific requests from area agencies such as the Board of Realtors and Civilian Personnel Offices. The business courses, including secretarial and clerical courses, are developed to provide adult students pre-employment and in-service training in knowledge and skills to meet occupational requirements of employers.

## **Self Development Education**

Classes offered in this group are designed for persons who wish to learn a new language, hobby or skill and who derive self-satisfaction from learning and performing in new subjects.

## **Special Requests**

Other non-credit courses may be arranged to meet specific requests from interested groups. Central Texas College and its affiliated organizations are able to provide assistance for virtually every educational requirement.

# APPROVED CENTRAL TEXAS COLLEGE PROGRAMS BY SITE

	ALASKA	BOLLING AFB	CAMP PENDLETON	EUROPE	FORT BRAGG	FORT BUCHANAN	FORT KNOX	FORT LEE	FORT LEONARD WOOD	FORT POLK	FORT RILEY	PAGE ATLANTIC	PAGE PACIFIC	PACIFIC FAR EAST	PANAMA	POPE AFB	ROOSEVELT ROADS
ACCOUNTING TECHNOLOGY		*															
ADMINISTRATIVE SECRETARY	*	*						*		*	*	*	*				
AIR CONDITIONING & REFRIGERATION			*									*	*				
APPLIED MANAGEMENT	*		*				*	*	*	*	*	*	*	*	*	*	*
W/COMPUTER SCIENCE OPTION			*									*	*		*	*	*
W/MICROCOMPUTER TECHNOLOGY OPT.			*									*	*		*	*	*
ART													*	*			
AUTOMOTIVE BODY REPAIR	*	*	*			*		*		*	*	*	*			*	*
AUTOMOTIVE SERVICE & REPAIR	*	*	*			*		*		*	*	*	*			*	*
AVIATION MAINTENANCE TECHNOLOGY	*		*					*		*	*	*	*			*	*
AVIATION SCIENCE	*		*					*		*	*	*	*			*	*
BIOLOGY												*	*				
BUSINESS ADMINISTRATION	*	*					*	*		*	*	*	*			*	*
BUSINESS MANAGEMENT	*	*	*				*	*		*	*	*	*			*	*
CHEMISTRY			*				*			*	*	*	*				
COMMUNICATIONS ELECTRONICS TECH			*				*			*	*	*	*				
COMPUTER ELECTRONICS TECHNOLOGY			*				*			*	*	*	*				
COMPUTER SCIENCE BUS PROG ANALYST	*	*	*		*		*			*	*	*	*				
COMPUTER SCIENCE INFO TECH OPTION	*	*	*		*		*			*	*	*	*				
CONSUMER ELECTRONICS TECHNOLOGY	*	*	*		*		*			*	*	*	*				
CRIMINAL JUSTICE			*			*	*			*	*	*	*				
DIESEL MECHANICS							*			*	*	*	*				
DRAFTING & DESIGN	*		*				*			*	*	*	*				
EDUCATION		*	*				*			*		*	*			*	*
EARLY CHILDHOOD PROFESSIONS	*	*	*			*	*			*		*	*			*	*
EMERGENCY MEDICAL TECHNICIAN					*							*	*			*	*
ENGINEERING												*	*				
ENGLISH												*	*				
FINANCE & BANKING	*	*	*				*			*	*	*	*			*	*
FIRE PROTECTION TECHNOLOGY	*	*	*				*			*	*	*	*	*	*	*	*
FOOD SERVICE MANAGEMENT	*	*	*			*	*			*	*	*	*	*	*	*	*
FOREIGN LANGUAGE												*	*				
GEOLOGY												*	*				
HOTEL/MOTEL MANAGEMENT	*	*	*			*	*			*	*	*	*			*	*
KINESIOLOGY												*	*				
LAW ENFORCEMENT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LEGAL ASSISTANT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MAINTENANCE TECHNOLOGY			*				*		*	*	*	*	*			*	*
MATHEMATICS	*	*	*			*	*		*	*	*	*	*			*	*
MICROCOMPUTER TECH INFO MANAGEMENT	*	*	*		*		*		*	*	*	*	*			*	*
MICROCOMPUTER TECH PROG. ANALYST	*	*	*		*		*		*	*	*	*	*			*	*
OFFICE MANAGEMENT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OFFSET PRINTING	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PHOTOGRAPHY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
REAL ESTATE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SMALL GAS ENGINE REPAIR	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SOCIAL SCIENCE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SPEECH	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TELEVISION/RADIO BROADCASTING	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TRAINING MANAGEMENT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WELDING	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WORD PROCESSING SPECIALIST	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*



# ACCOUNTING TECHNOLOGY

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
ACTE	1301	Principles of Accounting I	3	ACTE	1302	Principles of Accounting II	3
<u>BUSI</u>	<u>1301</u>	Introduction to Business	3	ELCT*		Approved elective	3
<u>MATH</u>	<u>1342</u>	Elementary Statistics	3	MGMT	1305	Introduction to Management	3
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3	MGMT	1309	Income Tax	3
COSC	1300	Computer Info Processing		<u>SPCH</u>	<u>1321</u>	Business & Professional Speaking	3
or				PHED		Physical Education	1
MISC	1450	Microcomputers for Business	3-4				
PHED		Physical Education	1				
			<b>16-17</b>				<b>16</b>

### SECOND YEAR

First Semester				Credit	Second Semester				Credit
ACTE	2309	Fundamentals of Accounting III		3	ACTE	2310	Fundamentals of Accounting IV		3
MGMT	2305	Business Law I		3	MGMT	2306	Business Law II		3
ACTE	2305	Basics of Managerial Accounting		3	ACTE**		Accounting elective		3
ACTE	2311	Accounting and Financial Information Systems I		3	<u>ENGL</u>	<u>2311</u>	Technical Writing		3
ELCT†		Humanities/Fine Arts		3	ELCT††		Social/Behavioral Science		3
PHED		Physical Education		1	PHED		Physical Education		1
				16					16
					TOTAL HOURS				64-65

\* Approved Electives: ECON 2301, 2302; FIBA 2306; MGMT 1304, 1306, 1307, 2301, 2302; OADM 1309, or 2307.

\*\* Accounting Electives: ACTE 2306 or LEGA 2404.

† Humanities/Fine Arts Selection: See page 29.

†† Social/Behavioral Science Selection: See page 29.

# ADMINISTRATIVE SECRETARIAL

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
OADM*	1301	Beginning Shorthand	3	WOPO*	1304	Intermediate Information Processing Applications	3
WOPO*	1303	Beginning Keyboarding/Data Entry	3	OADM*	1302	Intermediate Shorthand	3
OADM	1305	Records Management	3	OADM	1306	Office Functions	3
OADM	1309	Business Mathematics and Calculating Machines	3	OADM	1308	Business Correspondence	3
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3	WOPO	1307	Word Processing/Transcription	3
WOPO	1101	MS-DOS: An Introduction	1	PHED		Physical Education	1
			<b>16</b>				<b>16</b>

(Continued on next page)

# ADMINISTRATIVE SECRETARIAL (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
MATH		<u>MATH 1314, 1324, or 1342</u>	3	WOPO 2303	Office Automation		3
WOPO	2302	Advanced Information Processing Applications	3	OADM 2305	Office Accounting II		3
OADM	2304	Office Accounting I	3	OADM 2307	Automated Office Management		3
ELCT		Elective	3	SPCH	<u>SPCH 1315 or 1321</u>		3
ELCT**		OADM, WOPO, MGMT or MISC	3-4	ELCT†	Humanities/Fine Arts		3
			15-16	ELCT††	Social/Behavioral/Science		3
							18
TOTAL HOURS							65-66

• Levels of shorthand and keyboarding will be determined by the students' previous training in these skills and/or by placement tests.

\*\* Electives or selections must be approved by the appropriate college official.

† Humanities/Fine Arts Selection: See page 29.

†† Social/Behavioral Science Selection: See page 29.

## AIR CONDITIONING & REFRIGERATION

### Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
AIRC	1400	Basic Air Conditioning & Refrigeration Theory	4	AIRC	1406	Electricity for Air Conditioning & Refrigeration II	4
AIRC	1401	Electricity for Air Conditioning & Refrigeration I	4	AIRC	1407	Mechanical Refrigeration Systems	4
AIRC	1403	Heating Systems	4	ELCT*		Computer Science/Micro-computer Technology	3
MATH		<u>MATH 1314</u> or higher	3	ENGL	1379	Communications Skills	3
PHED		Physical Education	1	<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I	3
							or
							<u>GOVT</u> <u>2302</u> State & Federal Govt. II
							3
							16
							17

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
AIRC	2400	Electricity for Air Conditioning & Refrigeration III	4	AIRC	2402	Commercial Refrigeration	4
AIRC	2401	Advanced Air Conditioning & Refrigeration Theory	4	AIRC	2404	Troubleshooting Air Cond. & Refrigeration Systems	4
AIRC	2403	Commercial Air Conditioning Systems I	4	AIRC	2406	Commercial Air Conditioning Systems II	4
AIRC	2405	Heat Pumps I	4	AIRC	2407	Heat Pumps II	4
ELCT**		Humanities/Fine Arts	3	<u>SPCH</u>	<u>1321</u>	Business and Professional Speaking	3
							19
TOTAL HOURS							71

\* Computer Science/Microcomputer Technology Selection: See page 29.

\*\* Humanities/Fine Arts Selection: See page 29.

# APPLIED MANAGEMENT

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
BUSI	1301	Introduction to Business	3	ECON	1303	Consumer Economics	3
ENGL*		English	3	ENGL*		English	3
MATH		MATH 1314 or higher	3	MGMT**		Management	3
MGMT	1305	Introduction to Management	3	SPCH*		Speech	3
MGMT	1306	Human Relations	3	ELCT***		Computer Science/Micro-computer Technology	3
PHED		Physical Education	1	PHED		Physical Education	1
			16				16

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
ACCT†	2301	Principles of Accounting I	3	ELCT††	Social/Behavioral Science		3
MGMT	2302	Personnel Management	3	MGMT~	2303	Law & Legal Assistance	3
MGMT	2309	Supervision	3	MGMT	2310	Personnel Counseling	3
ELCT††		Humanities/Fine Arts	3	MGMT**	Sophomore Management Selection(s)		3
MGMT**		Management Selection(s)	3	MGMT**	Sophomore Management Selection(s)		3
PHED		Physical Education	1	PHED	Physical Education		1
			16				16
TOTAL HOURS							64

\* ENGL 1301, 1302, 1379, 2311; SPCH 1315, 1321.

\*\* MGMT 1158, 1301, 1302, 1303, 1304, 1307, 1308, 1309, 1381, 1382, 1383, 1384, 1385, 1386, 2151, 2152, 2161, 2162, 2164, 2300, 2304, 2305, 2306, 2307, 2312, 2314, 2315, 2351, 2354, 2381, 2382, 2383, 2384, 2385, 2386; BUSI 1307; COSC 1300, 1403, 1405; OADM 1308, 2307; PSYC 2301; REAE 1301, 2304, or 2305.

\*\*\* Computer Science/Microcomputer Technology Selection: See page 29.

† ACCT 2301 can be substituted with OADM 2304 or HMMG 2304.

†† Humanities/Fine Arts and Social/Behavioral Science Selections: See page 29.

~ MGMT 2303 can be substituted with REAE 2305 or LEGA 2302.

# APPLIED MANAGEMENT WITH TECHNICAL OPTIONS

## Two-Year Associate in Applied Science Degree

### Option 1. Computer Science

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
MGMT	1305	Introduction to Management	3	MGMT	1301	Organization & Management	3
COSC	1403	Introduction to Computer Science & Programming	4	MGMT	1304	Work Organization	3
COSC	1405	Computer Concepts & Analysis	4	COSC	1406	Computer Organization & Architecture	4
ENGL	1379	Communications Skills	3	COSC	**	Computer Science/Micro-computer Technology	3
MATH		MATH 1324 or 1342	3	SPCH	1315	Public Speaking	3
PHED		Physical Education	1	PHED		Physical Education	1
			18				17

(Continued on next page)

# APPLIED MANAGEMENT WITH TECHNICAL OPTIONS (Cont.)

## SECOND YEAR

First Semester				Credit	Second Semester				Credit
MGMT	2302	Personnel Management		3	MGMT	2312	Fundamentals of Systems Management		3
MGMT	2303	Law and Legal Assistance		3					
COSC*	1404	COBOL Programming		4	COSC	2402	Syst. in the MIS Environment		4
COSC**		Computer Science Micro-computer Technology		3	<u>ACCT</u>	<u>2302</u>	Principles of Accounting II		3
<u>ACCT</u>	<u>2301</u>	Principles of Accounting I		3	ELCT†		Social/Behavioral Science		3
				16	ELCT††		Humanities/Fine Arts		3
									16
					TOTAL HOURS				68

\* COSC 2409 may be substituted

\*\* COSC 1401, 1407, 2404, 2405; MISC 1450, 1451, 1454, or 2453.

† Social/Behavioral Science Selection: See page 29.

†† Humanities/Fine Arts Selection: See page 29.

# APPLIED MANAGEMENT WITH TECHNICAL OPTIONS

Two-Year Associate in Applied Science Degree

## OPTION 2. MICROCOMPUTER TECHNOLOGY

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
MGMT	1305	Introduction to Management	3	MGMT	1301	Organization & Management	3
MISC	1420	Word Processing for Microcomputers	4	MGMT	1304	Work Organization	3
MISC	1450	Microcomputers for Business	4	MISC	1405	Computer Concepts and Analysis	4
ENGL	1379	Communications Skills	3	MISC	1451	Introduction to Micro-computer Programming	4
MATH		<u>MATH 1324 or 1342</u>	3	<u>SPCH</u>	<u>1321</u>	Business & Professional Speaking	3
PHED		Physical Education	1				
			18	PHED		Physical Education	1
							18

### SECOND YEAR

First Semester				Credit	Second Semester				Credit	
MGMT	2302	Personnel Management		3	MGMT	1306	Human Relations		3	
MGMT	2305	Business Law I		3	ELCT*		Computer Science/Micro-computer Technology		4	
<u>ACCT</u>	<u>2301</u>	Principles of Accounting I		3						
MISC	1430	Spreadsheets for Microcomputers		4	<u>ACCT</u>	<u>2302</u>	Principles of Accounting II		3	
					ELCT†		Social/Behavioral Science		3	
MISC	1440	Database for Microcomputers		4	ELCT††		Humanities/Fine Arts (Soph.)		3	
				17					16	
									TOTAL HOURS	69

\* Any MISC or COSC course for which prerequisites are completed.

† Social/Behavioral Science Selection: See page 29.

†† Humanities/Fine Arts Selection: See page 29.

# ART

## Two-Year Associate in Arts Degree

This is a suggested curriculum. See page 20 for degree requirements.

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
ARTS		Two courses from <u>ARTS 1303, 1311, 1316, and 2323</u>	6	ARTS		Two courses from <u>ARTS 1304, 1312, 1317, and 2324</u>	6
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	1411	Beginning Foreign Language	4	LANG	1412	Foreign Language	4
PHED		Physical Education	1	PHED		Physical Education	1
			17				17

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
ARTS		One course, sophomore level	3	ARTS		One course, sophomore level	3
ELCT		<u>ENGL 2322, 2323, 2326, 2327, or 2332</u>	3	ELCT		<u>SPCH 1318, 1321 or 2333</u>	3
ELCT		Natural Science elective	3	ELCT*		Natural Science elective	3
MATH		<u>MATH 1314</u> or higher	3	ELCT*		Computer Science/Micro-computer Technology	4
GOVT	2301	State and Federal Government I	3	GOVT	2302	State and Federal Government II	3
PHED		Physical Education	1	PHED		Physical Education	1
			16				17
				TOTAL HOURS			67

\* Computer Science/Microcomputer Technology Selection: See page 29.

Students should check the catalog 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.

## AUTOMOTIVE BODY REPAIR

### Two-Year Associate Degree in Applied Science

#### FIRST YEAR

First Semester			Credit	Second Semester			Credit
INDU	1400	Industrial Fundamentals	4	ATBR	1408	Roughing and Alignment II	4
ATBR	1403	Roughing and Alignment I	4	ATBR	1409	Auto Body Welding II	4
ATBR	1405	Auto Body Welding I	4	ATBR	1410	Auto Body Painting Funda.	4
ATBR	1407	Auto Body Fundamentals	4	ATBR	1411	Automotive Glass	4
PHED		Physical Education	1	MATH		<u>MATH 1314</u> or higher	3
			17				19

(Continued on next page)

# AUTOMOTIVE BODY REPAIR (Cont.)

## SECOND YEAR

First Semester				Credit	Second Semester				Credit
ATBR	2401	Panel Repair & Replacement		4	ATBR	2400	Major Vehicle Damage Repair		4
ATBR	2406	Frame Repair & Alignment		4	ATBR	2404	Advanced Auto Body Painting		4
AUTO	2405	Steering & Suspension System		4	ELCT*		Computer Science/Micro-computer Technology		4
ENGL	1379	Communications Skills		3	ELCT**		Humanities/Fine Arts		3
GOVT	2301	State & Federal Govt. I			SPCH	1321	Business & Professional Speaking		3
or									
GOVT	2302	State & Federal Govt. II		3					
				<b>18</b>					<b>18</b>
									<b>TOTAL HOURS</b>
									<b>72</b>

\* Computer Science/Microcomputer Technology Selection: See page 29.

\*\* Humanities/Fine Arts Selection: See page 29.

# AUTOMOTIVE SERVICE AND REPAIR

## Two-Year Associate Degree in Applied Science

## FIRST YEAR

First Semester				Credit	Second Semester				Credit
INDU	1400	Industrial Fundamentals		4	AUTO	1405	Automotive Air Conditioning		4
AUTO	1401	Basic Engines		4	AUTO	1407	Brake Systems		4
AUTO	1402	Basic Electrical and Test Equipment		4	AUTO	1408	Standard Transmissions and Transaxles		4
MATH		<u>MATH 1314</u> or higher		3	ENGL	1379	Communications Skills		3
PHED		Physical Education		1	ELCT*		Computer Science/Micro-computer Technology		3
				<b>16</b>					<b>18</b>

## SECOND YEAR

First Semester				Credit	Second Semester				Credit	
AUTO	2404	Ignition, Starting, & Charging		4	AUTO	2403	Automatic Transmissions and Transaxles		4	
AUTO	2405	Steering & Suspension Systems		4	AUTO	2406	Engine Diagnosis and Emission		4	
AUTO	2408	Advanced Engine Service		4	AUTO	2411	Automotive Advanced Tech.		4	
AUTO	2410	Fuel Systems & Injection		4	ELCT**		Humanities/Fine Arts		3	
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I			<u>SPCH</u>	<u>1321</u>	Business & Professional Speaking		3	
or										
<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II		3						
				19					18	
									TOTAL HOURS	71

\* Computer Science/Microcomputer Technology Selection: See page 29.

\*\* Humanities/Fine Arts Selection: See page 29.

# AVIATION MAINTENANCE TECHNOLOGY

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
AVMT	1201	Maintenance Publications-G	2	AVMT	1203	Aircraft Drafting-G	2
AVMT	1202	Weight and Balance-G	2	AVMT	1204	Airframe Materials and Corrosion Controls-G	2
AVMT	1305	Basic Aircraft Electricity-G	3	AVMT	1306	Aircraft Finishes-A	3
ENGL	1379	Communications Skills	3	AVMT	1402	Sheet Metal Structures-A	4
<u>PHYS</u>	<u>1305</u>	Survey of Physics	3	AVMT	2303	Airframe Inspection-A	3
				MATH	<u>MATH 1314</u> or higher		3
			13				17

Summer Semester			Credit
AVMT	2304	Aircraft Fuel Systems-A	3
AVMT	2402	Hydraulics and Pneumatics-A	4
			7

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
AVMT	2305	Aircraft Instrument Systems-A	3	AVMT	2404	Powerplant Maintenance Reciprocating Engines-P	4
AVMT	2306	Engine Electrical Systems-P	3	AVMT	2405	Engine Fuel Systems-P	4
AVMT	2307	Engine Lubrication and Cooling Systems-P	3	AVMT	2406	Aircraft Propellers-P	4
AVMT	2403	Aircraft Electrical Systems-A	4	AVMT	2407	Powerplant Maintenance Turbine Engines-P	4
			13				16

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

Summer Semester			Credit
ELCT*	Social/Behavioral Science		3
ELCT**	Humanities/Fine Arts		3
			6

TOTAL HOURS 72

\* Social/Behavioral Science Selection: See page 29.

\*\* Humanities/Fine Arts Selection: See page 29.

# AVIATION SCIENCE

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
ASCI	1200	Flight - Basic	2	ASCI	1201	Flight - Private	2
ASCI	1301	Aircraft Science	3	ASCI	1306	Meteorology	3
ASCI	1403	Air Navigation	4	<u>ENGL</u>	<u>1302</u>	Composition & Rhetoric II	3
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3	<u>SPCH</u>	<u>1315</u>	Public Speaking	3
<u>MATH</u>	<u>1314</u>	College Algebra	3	ELCT	*	Approved elective	3
PHED		Physical Education	1	PHED		Physical Education	1
			16				15

Summer Semester			Credit
ASCI	1204	Flight - Intermediate	2
ASCI	1305	Advanced Air Navigation	3
ASCI	2318	Propulsion Systems	3
			8

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
ASCI	2204	Flight - Instrument	2	ASCI	2205	Flight Commercial	2
ASCI	2301	Aerodynamics	3	ASCI	2300	Commercial Ground School	3
ASCI	2407	Instrument Ground		ASCI	2303	Air Transportation	3
		School	4	MISC**		Microcomputer Selection	4
PHYS	1305	Survey of Physics	3	ELCT†		Social/Behavioral Science	3
ELCT***		Humanities/Fine Arts	3				
			15				15
TOTAL HOURS							69

\* Business or Management elective

\*\* Microcomputer Selection: MISC 1450 or MISC 1451

\*\*\* Humanities/Fine Arts Selection: See page 29.

† Social/Behavioral Science Selection (Geography preferred): See page 29.

ASCI 2210 and ASCI 2211 are substitutes for ASCI 2204 and ASCI 2205 for Rotary Wing Transition Students.

# BIOLOGY

## Two-Year Associate in Science Degree

This is a suggested curriculum. See page 21 for degree requirements.

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
<u>BIOL</u>	<u>1408</u>	General Biology I	4	<u>BIOL</u>	<u>1409</u>	General Biology II	
<u>CHEM</u>	<u>1411</u>	General Chemistry I	4	or			
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3	<u>BIOL</u>	<u>1411</u>	General Botany	4
<u>HIST</u>	<u>1301</u>	History of the U.S. to 1877	3	<u>CHEM</u>	<u>1412</u>	General Chemistry II	4
<u>MATH</u>	<u>1314</u>	College Algebra	3	<u>ENGL</u>	<u>1302</u>	Composition & Rhetoric II	3
PHED		Physical Education	1	<u>HIST</u>	<u>1302</u>	History of the U.S. from 1877	3
			18	<u>MATH</u>	<u>1316</u>	Trigonometry	3
				PHED		Physical Education	1
							18

(Continued on next page)



# BIOLOGY (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
<u>BIOL</u>	<u>2428</u>	Vertebrate Zoology	4	<u>BIOL</u>	<u>1424</u>	Plant Taxonomy	4
<u>CHEM</u>	<u>2423</u>	Organic Chemistry I	4	<u>CHEM</u>	<u>2425</u>	Organic Chemistry II	4
<u>COSC</u>	<u>1403</u>	Intro to Computer Science and Programming	4	<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II	3
<u>ENGL</u>	<u>2311</u>	Technical Writing	3	<u>ELCT</u>		Humanities/Fine Arts	3
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I	3	<u>SPCH</u>	<u>1315</u>	Public Speaking	3
<u>PHED</u>		Physical Education	1	<u>PHED</u>		Physical Education	1
			19				18
				TOTAL HOURS			73

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

## BUSINESS ADMINISTRATION

### Two-Year Associate in Arts Degree

This is a suggested curriculum. See page 20 for degree requirements.

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
<u>SCIE</u>		Biology, Chemistry, Physics or Geology	4	<u>SCIE</u>		Biology, Chemistry, Physics, or Geology	4
<u>HIST</u>	<u>1301</u>	History of the U.S. to 1877	3	<u>HIST</u>	<u>1302</u>	History of the U.S. from 1877	3
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3	<u>ENGL</u>	<u>1302</u>	Composition & Rhetoric II	3
<u>MATH*</u>		Mathematics Selection	3	<u>BUSI</u>	<u>1301</u>	Introduction to Business	3
<u>PSYC</u>	<u>2301</u>	Introduction to Psychology	3	or			
<u>PHED</u>		Physical Education	1	<u>MGMT</u>	<u>1305</u>	Introduction to Management	3
			17	<u>ELCT†</u>		Humanities/Fine Arts	3
				<u>PHED</u>		Physical Education	1
							17

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
<u>ECON</u>	<u>2301</u>	Macroeconomics	3	<u>ACCT</u>	<u>2302</u>	Principles of Accounting II	3
<u>ACCT</u>	<u>2301</u>	Principles of Accounting I	3	<u>ELCT††</u>		Computer Science/Micro-computer Technology	4
<u>ENGL**</u>		English Selection	3	<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II	3
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I	3	<u>ECON</u>	<u>2302</u>	Microeconomics	3
<u>ELCT***</u>		Approved Elective	3	<u>SPCH</u>	<u>1315 or 1321</u>		3
<u>PHED</u>		Physical Education	1	<u>PHED</u>		Physical Education	1
			16				17
				TOTAL HOURS			67

\* Mathematics courses include MATH 1314, 1316, 1324, 1342, 1348, 2313, 2314, or 2315. Since senior college math requirements vary widely, students should consult the four-year institution they plan to attend.

\*\* English courses include ENGL 2322, 2323, 2326, 2327, 2331, or 2332.

\*\*\* Business, Management, Office Administration, Social Science or other related electives must be approved by the appropriate college official.

† Humanities/Fine Arts Selection: See page 29.

†† Computer Science/Microcomputer Technology Selection: See page 29.

# BUSINESS MANAGEMENT

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
MGMT	1306	Human Relations	3	MGMT	1304	Work Organization	3
ENGL	1301	Composition and Rhetoric I	3	MGMT	1308	Small Business Management	3
MATH*		Mathematics Selection	3	OADM	1309	Business Mathematics & Calculating Machines	3
ELCT		<u>BUSL 1301</u> or MGMT 1305	3	MISC	1450	Microcomputers for Business	4
SPCH		<u>SPCH 1315</u> or <u>1321</u>	3	ELCT		Elective	3
PHED		Physical Education	1	PHED		Physical Education	1
			16				17

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
MGMT		MGMT 2305 or 2306	3	MGMT	2309	Supervision	4
MGMT	2302	Personnel Management	3	MGMT	2317	Management Applications II	3
MGMT	2316	Management Applications I	3	ECON	2302	Microeconomics	3
ECON	2301	Macroeconomics	3	ACCT**	2302	Principles of Accounting II	3
ACCT**	2301	Principles of Accounting I	3	ELCT***		Humanities/Fine Arts	3
			15	ELCT		Elective	1
							17
				TOTAL HOURS			65

\* Mathematics Selection: MATH 1314, 1324, or 1342.

\*\* OADM 2304 or OADM 2305 can be substituted.

\*\*\* Humanities/Fine Arts Selection: See page 29.

# CHEMISTRY

## Two-Year Associate in Science degree

This is a suggested curriculum. See page 21 for degree requirements.

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
CHEM	1411	General Chemistry I	4	CHEM	1412	General Chemistry II	4
MATH*	1316	Trigonometry	3	MATH	1348	Analytic Geometry	3
ENGL	1301	Composition & Rhetoric I	3	HIST	1302	History of the U.S. from 1877	3
HIST	1301	History of the U.S. to 1877	3	ENGL	1302	Composition & Rhetoric II	3
SPCH	1315	Public Speaking or Humanities/Fine Arts	3	MISC	1450	Microcomputers for Business	4
PHED		Physical Education	1	PHED		Physical Education	1
			17				18

(Continued on next page)

# CHEMISTRY (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit	
<u>CHEM</u>	<u>2423</u>	Organic Chemistry I	4	<u>CHEM</u>	<u>2425</u>	Organic Chemistry II	4	
<u>MATH</u>	<u>2313</u>	Calculus I	3	<u>PHYS</u>	<u>2426</u>	Modern Physics II	4	
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I	3	<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II	3	
<u>ENGL</u>	<u>2311</u>	Technical Writing	3	<u>ELCT**</u>		Humanities/Fine Arts	3	
<u>PHYS</u>	<u>2425</u>	Modern Physics I	3	<u>MATH</u>	<u>2314</u>	Calculus II	3	
<u>PHED</u>		Physical Education	1	<u>PHED</u>		Physical Education	1	
			17				18	
							TOTAL HOURS	70

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

\*\* Humanities/Fine Arts Selection: See page 29.

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

# COMMUNICATIONS ELECTRONICS TECHNOLOGY

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
<u>CMET</u>	<u>1400</u>	Electronics and Computer Skills	4	<u>CMET</u>	<u>1403</u>	Computer Systems & Operational Programming	4
<u>CMET</u>	<u>1401</u>	Digital Circuits	4	<u>MATH</u>	<u>1314</u>	College Algebra	3
<u>ELTE</u>	<u>1401</u>	Electrical Circuits I	4	<u>ELTE</u>	<u>1402</u>	Electrical Circuits II	4
<u>CMET</u>	<u>1402</u>	Computer Systems	4	<u>ELTE</u>	<u>1403</u>	Solid State Electronics	4
			<b>16</b>	<u>ENGL</u>	<u>1379</u>	Communications Skills	3
							<b>18</b>

### SECOND YEAR

First Semester				Credit	Second Semester				Credit	
CMET	1409	CRT Systems		4	ELTE	2407	Communications Circuit II		4	
ELTE	1404	Communications Circuits I		4	ELTE	2412	Circuit and Systems		4	
ELTE	2406	Integrated Devices		4	ELCT†		Humanities/Fine Arts		3	
ELCT***		Social/Behavioral Science		4	CMET	2408	Digital Communications		4	
ELCT*		Approved technical elective		3	ELCT**		Academic elective		3	
				19					18	
									TOTAL HOURS	71

\* Selected course must be approved by the appropriate college official: CMET 2411, ELTE 2405, ELTE 2103 & 2303, ELTE 2409, ELTE 2411, or ELTE 2421.

\*\* Elective from one of the following: agriculture, art, business, communications, engineering, mathematics, music, science, social science.

\*\*\* Social/Behavioral Science Selection: See page 29.

† Humanities/Fine Arts Selection: See page 29.

# COMPUTER ELECTRONICS TECHNOLOGY

Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
CMET	1400	Electronics and Computer Skills	4	CMET	1403	Computer Systems & Operational Programming	4
CMET	1401	Digital Circuits	4	MATH	1314	College Algebra	3
ELTE	1401	Electrical Circuits I	4	ELTE	1402	Electrical Circuits II	4
CMET	1402	Computer Systems	4	ELTE	1403	Solid State Electronics	4
				ENGL	1379	Communications Skills	3
			16				18

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
CMET	1409	CRT Systems	4	CMET	2404	Computer System: Diagnosis & Maintenance	4
CMET	2402	Computer Circuit Analysis	4	ELTE	2412	Circuit and Systems	4
CMET	1405	LAN	4	ELCT†		Humanities/Fine Arts	3
ELTE	2406	Integrated Devices	4	ELCT*		Approved technical elective	4
ELCT***		Social/Behavioral Science	3	ELCT**		Academic elective	3
			19				18
						TOTAL HOURS	71

\* Selected course must be approved by the appropriate college official: CMET 1404, CMET 2405, CMET 2406, CMET 2408, ELTE 2103& 2303, ELTE 2409, ELTE 2411, and ELTE 2421.

\*\* Elective from one of the following: agriculture, art, business, communications, engineering, mathematics, music, science, social science.

\*\*\* Social/Behavioral Science Selection: See page 29.

† Humanities/Fine Arts Selection: See page 29.

# COMPUTER SCIENCE BUSINESS PROGRAMMER/ANALYST

Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
COSC	1403	Introduction to Computer Science & Programming	4	COSC	1404	COBOL Programming	4
COSC	1405	Computer Concepts and Analysis	4	COSC	1406	Computer Organization & Architecture	4
ENGL	1301	Composition & Rhetoric I	3	MISC	1461	Operating Systems	4
MATH		MATH 1314 or higher	3	COSC/MISC		Technical elective	4
PHED		Physical Education	1				
			15				16

(Continued on next page)

# COMPUTER SCIENCE BUSINESS PROGRAMMER/ANALYST (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
COSC	2403	Operating Systems & Job Control Language	4	COSC	2401	Advanced Cobol	4
COSC	2404	Machine Language Operations	4	MISC	2456	C Language Programming I	4
COSC/MISC		Technical elective	4	COSC		Sophomore Technical elective	4
ACCT*		Accounting	3	<u>SPCH</u>	<u>1321</u>	Business & Professional Speaking	3
ELCT**		Social/Behavioral Science	3	ELCT***		Humanities/Fine Arts	3
			18				18
TOTAL HOURS							67

\* Accounting Selection: WOPO 2304, OADM 2304, ACCT 2301.

\*\* Social/Behavioral Science Selection: See page 29.

\*\*\* Humanities/Fine Arts Selection: See page 29.

# COMPUTER SCIENCE INFORMATION TECHNOLOGY OPTION

## Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
COSC	1401	Computer Operations	4	MISC	1400	Microcomputer Fundamentals	4
MISC	1420	Word Processing for Microcomputers	4	MISC	1440	Data base for Microcomputers	4
MISC	1430	Spreadsheets for Microcomputers	4	MISC	1460	Desk Top Publishing	4
MISC	1450	Microcomputers for Business	4	MISC	1461	Operating Systems	4
PHED		Physical Education	1				
			<b>17</b>				<b>16</b>

## SECOND YEAR

First Semester				Credit	Second Semester				Credit
COSC	2490	Computer Resource Mgmt.		4	COSC	2409	Field Projects		4
MISC	2454	Data Communications &			COSC/MISC		Technical elective		4
		Networking		4	MATH		<u>MATH 1314</u> or higher		3
ACCT*		Accounting		3	ELCT***		Social/Behavioral Science		3
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I		3	<u>SPCH</u>	<u>1321</u>	Business & Professional		
ELCT**		Humanities/Fine Arts		3			Speaking		3
				17					17
					TOTAL HOURS				67

\* Accounting Selection: WOPO 2304, OADM 2304, ACCT 2301.

\*\* Humanities/Fine Arts Selection: See page 54.

\*\*\* Social/Behavioral Science Selection: See page 54.

# CONSUMER ELECTRONICS TECHNOLOGY

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
CMET*	1400	Electronics & Computer Skills	4	CMET	1403	Computer Systems and	
CMET	1401	Digital Circuits	4			Operational Programming	4
<u>MATH</u>	<u>1314</u>	College Algebra	3	<u>MATH</u>	<u>1316</u>	Trigonometry	3
ELTE	1401	Electrical Circuits I	4	ELTE	1402	Electrical Circuits II	4
ENGL	1379	Communications Skills	3	ELTE	1403	Solid State Electronic	4
				ELCT†		Humanities/Fine Arts	3
			18				18

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
CMET	1409	CRT Systems	4	COES	2409	Advanced TV Servicing	4
COES	2408	CATV & Audio Distribution		CMET**	2403	Interfacing Techniques	4
		Systems	4	ELTE	2409	Electronic Systems	
ELTE	2406	Integrated Devices	4			Troubleshooting	4
ELCT††		Social/Behavioral Science	3	ELCT	***	Computer Maintenance	
			15			Electronics	4
							16
				TOTAL HOURS			67

\* The appropriate college official may substitute ELTE 1303 for CMET 1400.

\*\* If student so desires, ELTE 2103 and ELTE 2303 may be substituted.

\*\*\* Selected course must be approved by an authorized Central Texas College personnel according to the student need: ELTE 2301, 2402, 2405, 2408; CMET 2408.

† Humanities/Fine Arts Selection: See page 29.

†† Social/Behavioral Science Selection (Geography preferred): See page 29.

# CRIMINAL JUSTICE

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
CRIJ	1301	Intro to Criminal Justice	3	CRIJ	1201	Defensive Tactics	2
CRIJ	1304	The Courts and Criminal		CRIJ*		Criminal Justice Options	
		Procedures	3			(three courses)	9
CRIJ	1307	Crime in America	3	ENGL**		English elective	3
CRIJ	1308	Fundamentals of Criminal		ELCT		Criminal Justice elective	3
		Law	3				
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3				
<u>PHED</u>	<u>1130</u>	Physical Conditioning	1				
			16				17

(Continued on next page)

## CRIMINAL JUSTICE (Cont.)

### SECOND YEAR

First Semester				Credit	Second Semester				Credit
CRIJ	2101	Emergency Medical Aid		1	CRIJ	2201	Firearms		2
CRIJ	2304	Juvenile Procedures		3	PSYC	2301	Introduction to Psychology		3
GOVT	2301	State & Federal Govt. I			SPCH	1321	Business & Professional Speaking		3
		or			ELCT***		Humanities/Fine Arts Selection		3
GOVT	2302	State & Federal Govt. II		3	ELCT†		Computer Science/Micro-computer Technology		3
SOCI	1301	Introduction to Sociology		3	ELCT		Elective		3
MATH		MATH 1314 or higher		3					17
PHED		Physical Education		1					
ELCT		Criminal Justice elective		3					
				17					67
									TOTAL HOURS

\* Criminal Justice Options: Students who plan to major in Law Enforcement may take the first three courses listed and those intending to major in Corrections may take the last two on the list plus one other course from the list. Those who prefer a more general Criminal Justice curriculum may take any three of the five courses listed below;

1. CRIJ 1309 Police Systems and Practices
2. CRIJ 1302 Criminal Investigation I
3. CRIJ 1303 Legal Aspects of Law Enforcement
4. CRIJ 1306 Correctional Systems & Practices
5. CRIJ 1314 Community Resources in Corrections

\*\* ENGL 1302 or 2311 (Technical Writing)

\*\*\* Humanities/Fine Arts Selection: See page 29.

† Computer Science/Microcomputer Technology Selection: See page 29.

Students planning to complete a baccalaureate degree in Criminal Justice/Law Enforcement should declare a major and develop a degree plan which will meet the transfer requirements of the college of their choice as soon as it can be determined.

## DIESEL MECHANICS

### Two-Year Associate in Applied Science Degree

#### FIRST YEAR

First Semester				Credit	Second Semester				Credit
INDU	1400	Industrial Fundamentals		4	DIEM	1404	Standard Power Trains		4
DIEM	1401	Diesel Engine Fundamentals		4	DIEM	1406	Diesel Starting and Charging Systems		4
DIEM	1405	Diesel Engine Auxiliary Systems		4	AUTO	1407	Brake Systems		4
ELCT*		Computer Science/Micro-computer Technology		3	MATH		MATH 1314 or higher		3
ENGL	1379	Communications Skills		3	PHED		Physical Education		1
				18					16

(Continued on next page)

# DIESEL MECHANICS (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
DIEM	2400	Hydraulic Systems		DIEM	2403	Diesel Engine Overhaul	4
		Fundamentals and Service	4	DIEM	2404	Automatic Power Trains	4
DIEM	2406	Diesel Fuel Injection Systems	4	DIEM	2405	Advanced Diesel Engine	
DIEM	2407	Diesel Engine Cylinder				Service	4
		Head Service	4	AUTO	2405	Steering and	
SPCH	1321	Business & Professional				Suspension Systems	4
		Speaking	3	GOVT	2301	State & Federal Govt. I	
ELCT**		Humanities/Fine Arts	3	or			
				GOVT	2302	State & Federal Govt. II	3
			18				19
						TOTAL HOURS	71

\* Computer Science/Microcomputer Technology Selections: See page 29.

\*\* Humanities/Fine Arts Selections: See page 29.

## DRAFTING & DESIGN

### Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
ENGR*	1304	Engineering Graphics	3	ENGR*	1305	Descriptive Geometry	3
DRDS	1401	Pictorial Drafting	4	DRDS	1403	Machine Drawing	4
DRDS	1402	Technical Illustration	4	DRDS	1404	Structural Drafting	4
TMTH	1301	Technical Mathematics	3	ENGL	1379	Communications Skills	3
				ELCT		Elective	3
			14				17

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
DRDS	2401	Pipe Drafting	4	DRDS	2403	Electronic Drafting	4
DRDS	2402	Architectural Drafting	4	DRDS	2405	Civil Design Drafting	4
DRDS	2410	Computer-Aided		DRDS	2411	Computer-Aided	
		Drafting I	4			Drafting II	4
ELCT**		Approved elective	3-4	ELCT††		Social/Behavioral Science	3-4
ELCT†		Humanities/Fine Arts	3				
			18-19				15-16
						TOTAL HOURS	64-66

\* DRDS 1405 may be substituted for ENGR 1304 and DRDS 1406 may be substituted for ENGR 1305.

\*\* Electives: DRDS 1301, 1303, 1400, 2404, 2406; ARTS 1316; OPRT 1301 or other elective approved by an appropriate college official.

† Humanities/Fine Arts Selection: See page 29.

†† Social/Behavioral Science Selection: See page 29.

Continental and International sites may substitute DRDS 2404 for DRDS 2410 and a computer science or microcomputer course for DRDS 2411.



# EARLY CHILDHOOD PROFESSIONS

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
CHDV	1301	Fundamentals of Early Childhood Education	3	CHDV	1305	Instructional Aids	3
CHDV	1303	Curriculum Resources	3	CHDV	1310	Growth and Development of Children	3
CHDV	1309	Child Guidance and Group Management	3	CHDV	1324	Safety, Health, & Nutrition	3
CHDV	2303	Managing Child Care Centers	3	CHDV	1327	Families and Communities in a Multicultural World	3
ENGL	1301	Composition & Rhetoric I	3	CHDV	1406	Learning Environments I	4
			15				16

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
CHDV	1408	Learning Environments II	4	CHDV	2101	Early Childhood Professions	1
CHDV	2301	The Child with Special Needs	3	CHDV	2305	Advanced Math and Science for Early Childhood	3
ELCT*		Computer Science/Microcomputer Technology	3-4	CHDV	2402	Special Projects	4
ELCT		SPCH 1315 or 1321	3	CHDV	2409	Learning Environments III	4
MATH		MATH 1314 or higher	3	ELCT**		Social/Behavioral Science	3
			16-17	ELCT***		Humanities/Fine Arts	3
							18
				TOTAL HOURS			65-66

\* Computer Science/Microcomputer Technology Selection: See page 29.

\*\* Social/Behavioral Science Selection: See page 29.

\*\*\* Humanities/Fine Arts Selection: See page 29.

## EDUCATION

### Two-Year Associate in Arts Degree

This is a suggested curriculum. See page 20 for degree requirements.

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
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	1411	Beginning French I, German I, or Spanish I	4	LANG*		Beginning French II, German II, or Spanish II	4
ELCT		Elective	3	SPCH	1315	Public Speaking	3
PHED		Physical Education	1	PHED		Physical Education	1
			18				18

(Continued on next page)

## EDUCATION (Cont.)

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
ENGL**		English	3	ENGL**		English	3
GOVT	2301	State & Federal Govt. I	3	GOVT	2302	State & Federal Govt. II	3
MATH		MATH 1314 or higher	3	ELCT***		Computer Science/Micro-	
PSYC	2301	Introduction to Psychology	3			computer Technology	3
SOCI	1301	Introduction to Sociology	3	ELCT		Elective	3
PHED		Physical Education	1	ELCT		Elective	3
			16	PHED		Physical Education	1
							16
TOTAL HOURS							68

\* If German taken first year, Beginning French or Spanish may be taken second year.

\*\* English courses include ENGL 2322, 2323, 2326, 2327, 2331, or 2332.

\*\*\* Computer Science/Microcomputer Technology Electives: See page 29.

NOTE: Students should enroll in electives that support their major and should coordinate with the institution to which they intend to transfer.

## EMERGENCY MEDICAL TECHNICIAN

### Certificate of Completion

### LEVEL I

#### Credit

EMET 1402	Emergency Medical Technician-Ambulance	
or		
EMET 1403	Emergency Medical Technician-Recertification	4
ELCT *	Approved Elective	11
		15
		TOTAL HOURS 15

\* EMET 1201, 1302, 1303, 1304, 1305, 2101, 2301, 2302, or 2303.

For this certificate, only six hours will be accepted as evaluated credit.

## EMERGENCY MEDICAL TECHNICIAN

### Two-Year Associate in Applied Science Degree

### LEVEL II

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
EMET 1201	Emergency Medical Technician Supplemental	2	MGMT 1306	Human Relations	3
EMET 1402	Emergency Medical Technician-Ambulance	4	EMET 1302	Military Medicine	3
ENGL 1301	Composition & Rhetoric I	3	ELCT**	Computer Science/Micro-computer Technology	3
MGMT 1305	Introduction to Management	3	PHED	Physical Education	1
MATH*	Mathematics Selection	3	ELCT***	Humanities/Fine Arts	3
PHED	Physical Education	1	ELCT†	Approved elective	3
		16			16

(Continued on next page)

# EMERGENCY MEDICAL TECHNICIAN LEVEL II (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
EMET	2101	Introduction to Paramedic	1	EMET	2302	Emergency Medical Center Management	3
EMET	2301	Disaster Planning	3	EMET	2303	Psychology of Emergencies	3
ACCT††	2301	Principles of Accounting I	3	ENGL	2311	Technical Writing	3
MGMT	2302	Personnel Management	3	ACCT††	2302	Principles of Accounting II	3
MGMT	2309	Supervision	3	ELCT***		Social/Behavioral Science	3
SPCH		SPCH 1315 or 1321	3	ELCT†		Approved elective	3
			16				18
				TOTAL HOURS			66

\* Mathematics Selection: MATH 1314 or 1324.

\*\* Computer Science/Microcomputer Technology Selection: See page 29.

\*\*\* Humanities/Fine Arts Selection and Social/Behavioral Science Selection: See page 29.

† Approved Elective: EMET 1303, 1304, 1305, 1403, PSYC 2301, MGMT 1301 or BIOL 2401.  
Non-military students may select an EMET elective.

†† OADM 2304 and 2305 may be substituted.

## ENGINEERING

### Two-Year Associate in Science Degree

This is a suggested curriculum. See page 21 for degree requirements.

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
ENGR	1304	Engineering Graphics	3	ENGR	1305	Descriptive Geometry	3
MATH	1348	Analytic Geometry	3	MATH	2314	Calculus II	3
MATH	2313	Calculus I	3	ENGL	1302	Composition & Rhetoric II	3
ENGL	1301	Composition & Rhetoric I	3	SCIE*		Biology, Chemistry, Physics, or Geology	4
SCIE*		Physics, or Geology	4	PHED		Physical Education	1
PHED		Physical Education	1	COSC/MISC		COSC 1403 or MISC 1451	4
			17				18

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
ENGL**		English	3	SPCH		SPCH 1315 or 1321	3
GOVT	2301	State & Federal Govt. I	3	GOVT	2302	State & Federal Govt. II	3
ELCT***		Humanities/Fine Arts	3	PHYS	2426	Modern Physics II	4
PHYS	2425	Modern Physics I	4	ELCT		Elective	3
PHED		Physical Education	1	PHED		Physical Education	1
			17				17
				TOTAL HOURS			69

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

\*\* English courses include ENGL 2322, 2323, 2326, 2327, 2331 and 2332.

\*\*\* Humanities/Fine Arts Selection: See page 29.

# ENGLISH

## Two-Year Associate in Arts

This is a suggested curriculum. See page 20 for degree requirements.

### FIRST YEAR

First Semester				Credit	Second Semester				Credit
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I		3	<u>ENGL</u>	<u>1302</u>	Composition & Rhetoric II		3
<u>MATH</u>	<u>1314</u>	College Algebra		3	<u>MATH</u>	<u>1316</u>	Trigonometry		3
<u>LANG*</u>	1411	Beginning French I, German I, or Spanish I		4	<u>LANG*</u>	1412	Beginning French II, German II, or Spanish II		4
<u>SCIE*</u>		Biology, Chemistry, Physics, or Geology		4	<u>SCIE*</u>		Biology, Chemistry, Physics, or Geology		4
<u>HIST</u>	<u>1301</u>	History of the U.S. to 1877		3	<u>HIST</u>	<u>1302</u>	History of the U.S. from 1877		3
<u>PHED</u>		Physical Education		1	<u>PHED</u>		Physical Education		1
				18					18

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
ENGL**		English	3	ENGL**		English	3
LANG	2311	Intermediate French I, German I, or Spanish I	3	LANG	2312	Intermediate French II, German II, or Spanish II	3
<u>SPCH</u>	<u>1315</u>	Public Speaking	3	MISC	1450	Microcomputers for Business	4
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I	3	<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II	3
ELCT***		Humanities/Fine Arts	3	ELCT		Elective	3
PHED		Physical Education	1	PHED		Physical Education	1
			16				17
						TOTAL HOURS	69

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

\*\* English courses include ENGL 2322, 2323, 2326, 2327, 2331 and 2332.

\*\*\* Humanities/Fine Arts Selection: See page 29.

# FINANCE AND BANKING

## Two-year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
ENGL	<u>1301</u>	Composition & Rhetoric I	3	FIBA	1301	Banking Principles	3
MATH*		Mathematics Selections	3	FIBA	1302	Money and Banking	3
SPCH		<u>SPCH 1315 or 1321</u>	3	FIBA	1305	Law & Banking Principles	3
ELCT		<u>BUSI 1301 or MGMT 1305</u>	3	MISC	1450	Microcomputers for Business	4
ELCT		MGMT 1304 or 1306	3	ELCT		FIBA elective	3
PHED		Physical Education	1	PHED		Physical Education	1
			16				17

(Continued on next page)

# FINANCE AND BANKING (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
FIBA	2303	Marketing for Bankers	3	FIBA	2304	Consumer Lending	3
<u>ACCT**</u>	<u>2301</u>	Principles of Accounting I	3	<u>ACCT**</u>	<u>2302</u>	Principles of Accounting II	3
MGMT		MGMT 2305 or 2306	3	ECON		<u>ECON 2301 or 2302</u>	3
MGMT	2316	Management Applications	3	MGMT	2317	Management Applications	3
ELCT		FIBA/REAE elective	3	ELCT		Humanities/Fine Arts	3
ELCT		Elective	1				
			<b>16</b>				<b>15</b>
				TOTAL HOURS			<b>64</b>

\* Mathematics Selection: MATH 1314, 1324, or 1342.

\*\* OADM 2304 and OADM 2305 can be substituted.

## FIRE PROTECTION TECHNOLOGY

Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
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		<u>MATH 1314</u> or higher	3
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3	<u>SPCH</u>	<u>1315</u>	Public Speaking	3
PHED		Physical Education	1	PHED		Physical Education	1
			<b>16</b>				<b>16</b>

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
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
ELCT*		Humanities/Fine Arts	3	ELCT**		Computer Science/Micro-computer Technology	3
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I		FPRT***		Elective	3
or							
<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II	3				
<u>ENGL</u>	<u>2311</u>	Technical Writing	3				
			<b>18</b>				<b>16</b>
				TOTAL HOURS			<b>66</b>

\* Humanities/Fine Arts Selections: See page 29.

\*\* Computer Science/Microcomputer Technology Selections: See page 29.

\*\*\* FPRT 2304, 2308, 2309, 2310, 2314; CHEM 1411 or 1412 may be substituted for FPRT 1307 and 1308.

# FOOD SERVICE MANAGEMENT

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
FSMG	1302	Nutrition	3	FSMG	1301	Supervising Kitchen Administration	3
FSMG	1303	Sanitation and Safety	3				
FSMG	1401	Food Preparation and Serving	4	FSMG	1305	Food Purchasing	3
ELCT*		MGMT/FSMG	3	FSMG	1306	Menu Planning	3
ENGL	1301	Composition & Rhetoric I	3	MATH	1342	Elementary Statistics	3
				ELCT*		ACCT/FSMG/HMMG/	
						MGMT/OADM Selection(s)	3-4
				SPCH	1315	Public Speaking	3
			16				18/19

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
FSMG	2304	Hospitality Industry/Sales Promotion	3	HMMG	2304	Financial Management	3
MGMT	1304	Work Organization	3	FSMG	2303	Cafeteria Management	3
HMMG	2301	Hospitality Industry Law	3	HMMG	2309	Hospitality Industry Computer Systems	3
MISC	1450	Microcomputers for Business	4	ELCT**		Humanities/Fine Arts	3
ELCT*		MGMT/FSMG/ACCT/HMMG/OADM	3-4	ELCT***		Social/Behavioral Science	3
			16-17				15
						TOTAL HOURS	65-67

\* Elective Options: Food Service Management Selections: FSMG 1300, 1304, 1308, 2150, 2151, 2201, 2250, 2251, 2252, 2353, 2355, 2356, 2401, 2402, 2452, or 2453. Accounting, Hotel/Motel Management and Management Selections: ACCT 2301, 2302; HMMG 1300, 1302, 1303, 1305, 1308, 2306; MGMT 1305, 1308, 2101, 2164, 2302, 2304, 2310; OADM 2304, 2305.

\*\* Humanities/Fine Arts Selection: See page 29.

\*\*\* Social/Behavioral Science Selection: See page 29.

## FOREIGN LANGUAGE

### Two-Year Associate in Arts Degree

This is a suggested curriculum. See page 20 for degree requirements.

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
LANG	1411	Beginning French I, German I, or Spanish I	4	HIST	1302	History of the U.S. from 1877	3
MATH		MATH 1314 or higher	3	LANG	1412	Beginning French II, German II, or Spanish II	4
HIST	1301	History of the U.S. to 1877	3	ELCT***		Humanities/Fine Arts	3
SCIE*		Biology, Chemistry, Physics, or Geology	4	SCIE*		Biology, Chemistry, Physics or Geology	4
PHED		Physical Education	1	PHED		Physical Education	1
			18				18

(Continued on next page)

## FOREIGN LANGUAGE (Cont.)

### SECOND YEAR

First Semester			Credit	Second Semester			Credit	
ENGL**		English	3	ENGL**		English	3	
LANG	2311	Intermediate French I, German I, or Spanish I	3	LANG	2312	Intermediate French II, German II, or Spanish II	3	
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I	3	<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II	3	
<u>SPCH</u>	<u>1315</u>	Public Speaking	3	MISC	1450	Microcomputers for Business	4	
LANG*		Second Language	4	LANG*		Second Language	4	
PHED		Physical Education	1	PHED		Physical Education	1	
			17				18	
							TOTAL HOURS	71

- \* Second language requirement varies with senior colleges. Check senior college catalog carefully. Check senior catalog for specific math and science requirements.

\*\* English Selection(s): ENGL 2322, 2323, 2326, 2327, 2331 or 2332.

\*\*\* Humanities/Fine Arts Selection: See page 29.

## GENERAL STUDIES

### Two-Year Associate in General Studies Degree

Students may select 34-37 Semester Credit hours from courses that fulfill the student's educational goals.

This is a suggested curriculum. See page 22 for degree requirements.

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
ENGL	1301	Composition & Rhetoric I		SPCH		Speech if ENGL 1301 taken	
or				or			
ENGL	1379	Communications Skills	3	ELCT		Student selection if ENGL 1379 taken	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
PHED		Physical Education	1	MATH		MATH 1314 or higher	3
ELCT		Student selection	9	ELCT*		Computer Science/Micro-computer Technology	3
			16	ELCT		Student selection	4
							16

### SECOND YEAR

First Semester			Credit	Second Semester			Credit	
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I	3	<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II	3	
ELCT**		Student selection	12	ELCT**		Humanities/Fine Arts	3	
PHED		Physical Education	1	ELCT		Student selection	10	
			16				16	
							TOTAL HOURS	64

\* Computer Science/Microcomputer Technology Selections: See page 29.

\*\* Humanities/Fine Arts Selection: See page 29.

Students must have a minimum of 15 semester credit hours within the Central Texas College System.

# GEOLOGY

## Two-Year Associate in Science Degree

This is a suggested curriculum. See page 21 for degree requirements.

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
<u>GEOL</u> 1403 Physical Geology	4	<u>GEOL</u> 1404 Historical Geology	4
<u>MATH*</u> 1316 Trigonometry	3	<u>MATH</u> 1348 Analytic Geometry	3
<u>HIST</u> 1301 History of the U.S. to 1877	3	<u>HIST</u> 1302 History of the U.S. from 1877	3
<u>CHEM</u> 1411 General Chemistry I	4	<u>CHEM</u> 1412 General Chemistry II	4
<u>ENGL</u> 1301 Composition & Rhetoric I	3	<u>ENGL</u> 1302 Composition & Rhetoric II	3
PHED Physical Education	1	PHED Physical Education	1
	18		18

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
<u>PHYS</u> 1401 College Physics I	4	<u>PHYS</u> 1402 College Physics II	4
<u>GOVT</u> 2301 State & Federal Govt. I	3	<u>GOVT</u> 2302 State & Federal Govt. II	3
<u>MATH</u> 2313 Calculus I	3	<u>MATH</u> 2314 Calculus II	3
<u>ENGL**</u> English	3	<u>SPCH</u> 1315 Public Speaking	3
PHED Physical Education	1	PHED Physical Education	1
COSC 1403 Introduction to Computer Science & Programming	4	ELCT*** Humanities/Fine Arts	3
	17		17
		TOTAL HOURS	71

\* Students deficient in mathematics must take College Algebra. This course should be taken during the summer term prior to the freshman year.

\*\* English courses include ENGL 2311, 2322, 2323, 2326, 2327, 2331, and 2332.

\*\*\* Humanities/Fine Arts Selection: See page 29.

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

# HOTEL/MOTEL MANAGEMENT

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
HMMG 1305 Energy Management	3	HMMG 1300 Food & Beverage Management	3
HMMG HMMG 1302 or 1307	3	HMMG 1303 Front Office Procedures	3
FSMG 1401 Food Preparation & Serving	4	FSMG 1301 Supervising Kitchen Administration	3
<u>ENGL</u> 1301 Composition & Rhetoric I	3	FSMG 1303 Sanitation and Safety	3
<u>MATH</u> <u>MATH</u> 1314 or higher	3	FSMG 1305 Food Purchasing	3
		ELCT* Hotel/Motel or Food Service Management elective	3
	16		18

(Continued on next page)



# HOTEL/MOTEL MANAGEMENT (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
FSMG	2304	Hospitality Industry Sales Promotion	3	HMMG	2301	Hospitality Industry Law	3
ELCT**		Humanities/Fine Arts	3	HMMG	2304	Financial Management	3
MISC	1450	Microcomputers for Business	4	HMMG	2309	Hospitality Industry Computer Systems	3
SPCH		<u>SPCH 1315 or 1321</u>	3	ELCT**		Social/Behavioral Science	3
ELCT*		Sophomore HMMG or FSMG elective	3	ELCT*		Sophomore Hotel/Motel Management elective	3
				ELCT*		Sophomore Hotel/Motel Management elective	3
			16				18
				TOTAL HOURS			68

\* HMMG 1306, 1308, 2302, 2305, 2306, 2307, 2308; FSMG 1300, 1302, 1304, 1306, 1307, 1308, 2303, 2306, 2401, 2402; MGMT 1305 or 1308.

\*\* Humanities/Fine Arts Selection and Social/Behavioral Science Selection: See page 29.

Students pursuing emphasis in specific areas must take the electives shown below:

Front Office Procedures HMMG 1306.

Marketing and Sales Promotion HMMG 1306 and HMMG 2307.

Food and Beverage Management HMMG 2308.

Housekeeping HMMG 2302.

Engineering and Facility Management HMMG 2305 and HMMG 2302.

## KINESIOLOGY (PHYSICAL EDUCATION)

### Two-Year Associate in Science Degree

This is a suggested curriculum. See page 21 for degree requirements.

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
BIOL	1408	General Biology I	4	BIOL	1409	General Biology II	4
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
MATH		<u>MATH 1314</u> or higher	3	MATH		<u>MATH 1314</u> or higher	3
PHED	1301	Foundations of Physical Health	3	COSC	1300	Computer Information Processing	3
PHED		Physical Education (Team Sport)	1	PHED		Physical Education (Individual Sport)	1
			17				17

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
ENGL*		English	3	ENGL*		English Selection	3
BIOL	2401	Human Anatomy	4	BIOL	2402	Human Physiology	4
GOVT	2301	State & Federal Govt. I	3	GOVT	2302	State & Federal Govt. II	3
PHED	1308	Sport Officiating	3	PHED	1306	Safety and First Aid	3
SPCH**		Speech	3	SOCI	2301	Introduction to Sociology	3
PHED	1130	Physical Conditioning	1	PHED	1138	Rhythmic Aerobics	1
			17				17
				TOTAL HOURS			68

\* English Selection: ENGL 2322, 2323, 2331, 2332, 2326, 2327.

\*\* Speech Selection: SPCH 1318, 1321, 2333.

# LAW ENFORCEMENT

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
LAWE	1301	Intro to Criminal Justice	3	LAWE	1201	Defensive Tactics	2
LAWE	1304	The Courts and Criminal Procedures	3	LAWE*	1302	Criminal Investigation I	3
LAWE	1307	Crime in America	3	LAWE*	1303	Legal Aspects of Law Enforcement	3
LAWE	1308	Fundamentals of Criminal Law	3	LAWE*	1309	Police Systems & Practices	3
ENGL	1301	Composition & Rhetoric I	3	ENGL**		English	3
PHED	1130	Physical Conditioning	1	ELCT***		Law Enforcement	3
			16				17

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
LAWE	2101	Emergency Medical Aid	1	LAWE	2201	Firearms	2
LAWE	2304	Juvenile Procedures	3	PSYC	2301	Introduction to Psychology	3
GOVT	2301	State & Federal Govt. I		SPCH	1321	Business & Professional Speaking	3
or				ELCT†		Humanities/Fine Arts	3
GOVT	2302	State & Federal Govt. II	3	ELCT†		Computer Science/Micro-computer Technology	3
SOCI	1301	Introduction to Sociology	3	ELCT***		Law Enforcement	3
MATH		MATH 1314 or higher	3				
PHED		Physical Education	1				
ELCT		Criminal Justice elective	3				
			17				17
				TOTAL HOURS			67

\* Law Enforcement Options: Students majoring in corrections may substitute LAWE 1306 and 1314 for any two of the following courses: LAWE 1302, 1303, and 1309.

\*\* ENGL 1302 or 2311 (Technical Writing)

\*\*\* Electives: LAWE 1305, 1310, 1315, 2301, 2303, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315. EMET 1402 may be taken in place of a LAWE elective.

† Humanities/Fine Arts Selection: See page 29.

†† Computer Science/Microcomputer Technology Selection: See page 29.

Students planning to complete a baccalaureate degree in criminal justice/law enforcement should declare a major and develop a degree plan which will meet the transfer requirements of the college of their choice, as soon as it can be determined.

# LEGAL ASSISTANT

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
LEGA	1401	Introduction to Paralegalism	4	LEGA	1306	Criminal Law	3
LEGA	1302	Legal Office Ethics and Management	3	LEGA	1307	Civil Litigation	3
LEGA	1304	Principles of Family Law	3	MATH	1324	Finite Mathematics	3
ENGL	1301	Composition & Rhetoric I	3	MISC	1420	Introduction to Word Processing Systems	4
GOVT	2301	State & Federal Govt. I	3	ENGL	1302	Composition & Rhetoric II	3
PHED		Physical Education	1	PHED		Physical Education	1
			17				17

(Continued on next page)

# LEGAL ASSISTANT (Cont.)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
LEGA 2302 Contract Law	3	LEGA 2405 Wills, Trust & Probate	4
LEGA 2306 Techniques of Legal Research	3	LEGA* Approved elective	3
LEGA* Approved elective	3	LEGA* Approved elective	3
ACCT 2301 Principles of Accounting I	3	SPCH <u>SPCH 1315 or 1321</u>	3
GOVT 2302 State & Federal Govt. II	3	ELCT** Humanities/Fine Arts	3
	15		16
		TOTAL HOURS	65

\* LEGA 1305, 1308, 1309, 1403, 2301, 2303, 2402, 2404.

\*\* Humanities/Fine Arts Selection: See page 29.

## MAINTENANCE TECHNOLOGY

### Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
INDU 1400 Industrial Fundamentals	4	AIRC 1403 Heating Systems	4
AIRC 1400 Basic Air Conditioning & Refrigeration Theory	4	MTNT 1402 Electricity	4
MTNT 1401 Carpentry I	4	ENGL 1379 Communications Skills	3
MATH <u>MATH 1314</u> or higher	3	WELD 1401 Beginning Gas Welding	4
PHED Physical Education	1	ELCT* Humanities/Fine Arts	3
	16		18

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
MTNT 2402 Carpentry II	4	MTNT 2404 Painting & Refinishing	4
MTNT 2403 Plumbing I	4	MTNT 2410 Plumbing II	4
AIRC 1407 Mechanical Refrigeration Systems	4	DRDS 1303 Architectural Blueprint Reading	3
ELCT** Computer Science/Micro-computer Technology	3	WELD 1402 Beginning Arc Welding	4
GOVT 2301 State & Federal Govt. I		SPCH <u>1321</u> Business & Professional Speaking	3
or GOVT 2302 State & Federal Govt. II	3		
	18		18
		TOTAL HOURS	70

\* Humanities/Fine Arts Selection: See page 29.

\*\* Computer Science/Microcomputer Technology Selection: See page 29.

# MATHEMATICS

## Two-Year Associate in Arts or Science Degree

This is a suggested curriculum. See pages 20 & 21 for degree requirements.

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
<b>MATH</b>	<b>1314</b>	College Algebra	3	<b>MATH</b>	<b>1348</b>	Analytic Geometry	3
<b>MATH</b>	<b>1316</b>	Trigonometry	3	<b>ELCT*</b>		Science or Language elective selected from 1401-1402 sequence	4
<b>ELCT*</b>		Science or Language elective selected from 1401-1402-1411 or 1412 sequence	4	<b>COSC</b>	<b>1403</b>	Introduction to Computer Science & Programming	4
<b>ENGL</b>	<b>1301</b>	Composition & Rhetoric I	3	<b>ENGL</b>	<b>1302</b>	Composition & Rhetoric II	3
<b>HIST</b>	<b>1301</b>	History of the U.S. to 1877	3	<b>HIST</b>	<b>1302</b>	History of the U.S. from 1877	3
<b>PHED</b>		Physical Education	1	<b>PHED</b>		Physical Education	1
			<b>17</b>				<b>18</b>

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
<u>MATH</u>	<u>2313</u>	Calculus I	3	<u>MATH</u>	<u>2314</u>	Calculus II	3
ENGL**		English	3	SPCH		Speech 1315 or 1321	3
<u>GOVT</u>	<u>2301</u>	State & Federal Govt. I	3	<u>GOVT</u>	<u>2302</u>	State & Federal Govt. II	3
SCIE*		Science elective	3-4	SCIE*		Science elective	3-4
ELCT***		Humanities/Fine Arts	3	ELCT		Elective	3
PHED		Physical Education	1	PHED		Physical Education	1
			16-17				16-17
							TOTAL HOURS
							67-69

\* Choice of elective determines the degree.

\*\* English courses include **ENGL 2322, 2323, 2326, 2327, 2331 or 2332**.

\*\*\* Humanities/Fine Arts Selection: See page 29.

This curriculum is recommended for students pursuing either an Associate in Arts degree or an Associate of Science degree from Central Texas College. Freshman with adequate background may enroll in **MATH 2313** (Calculus I) with the permission of the appropriate college official.

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

## MICROCOMPUTER TECHNOLOGY INFORMATION MANAGEMENT

### Two-Year Associate in Applied Science Degree

#### FIRST YEAR

First Semester			Credit	Second Semester			Credit
<b>MISC</b>	<b>1400</b>	Microcomputer Fundamentals	4	<b>MISC</b>	<b>1440</b>	Data Base for Microcomputers	4
<b>MISC</b>	<b>1420</b>	Word Processing for Microcomputers	4	<b>MISC</b>	<b>1451</b>	Intro to Microcomputer Programming	4
<b>MISC</b>	<b>1430</b>	Spreadsheets for Microcomputers	4	<b>MISC</b>	<b>1461</b>	Operating Systems	4
<b>MISC</b>	<b>1450</b>	Microcomputers for Business	4	<b>MGMT</b>	<b>1305</b>	Introduction to Management	3
<b>PHED</b>		Physical Education	1	<b>ENGL</b>	<b>1301</b>	Composition & Rhetoric I	3
			<b>17</b>				<b>18</b>

(Continued on next page)

# MICROCOMPUTER TECHNOLOGY INFORMATION MANAGEMENT (Cont.)

## SECOND YEAR

First Semester		Credit	Second Semester		Credit
MISC/COSC	Technical elective	4	MISC 2301	Information Center Mgmt.	3
MATH	<u>MATH 1314</u> or higher	3	MISC 2402	Systems in the MIS Environment	4
ACCT*	Accounting	3	MISC 2454	Data Communications & Networking	4
ELCT**	Humanities/Fine Arts	3	MISC/COSC	Technical elective	4
ELCT***	Social/Behavioral Science	3	<u>SPCH 1321</u>	Business & Professional Speaking	3
		<b>16</b>			<b>18</b>
			TOTAL HOURS		<b>69</b>

\* Accounting: WOPO 2304, OADM 2304, ACCT 2301.

\*\* Humanities/Fine Arts Selection: See page 29.

\*\*\* Social/Behavioral Science Selection: See page 29.

# MICROCOMPUTER TECHNOLOGY PROGRAMMER ANALYST

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
MISC 1405	Computer Concepts and Analysis	4	MISC 1404	COBOL Programming	4
MISC 1451	Introduction to Microcomputer Programming	4	MISC 1406	Computer Organization & Architecture	4
<u>ENGL 1301</u>	Composition & Rhetoric I	3	MISC 1454	PASCAL Programming	4
MATH	<u>MATH 1314</u> or higher	3	MISC 1461	Operating Systems	4
PHED	Physical Education	1			<b>16</b>
		<b>15</b>			

### SECOND YEAR

First Semester		Credit	Second Semester		Credit
MISC 2456	C Language Programming I	4	MISC 2402	Systems in the MIS Environment	4
MISC/COSC	Technical elective	4	MISC 2454	Data Communications & Networking	4
MISC/COSC	Technical elective	4	MISC/COSC	Technical elective	4
ACCT*	Accounting	3	<u>SPCH 1321</u>	Business & Professional Speaking	3
ELCT**	Social/Behavioral Science	3	ELCT***	Humanities/Fine Arts	3
		<b>18</b>			<b>18</b>
			TOTAL HOURS		<b>67</b>

\* Accounting: WOPO 2304, OADM 2304, ACCT 2301.

\*\* Social/Behavioral Science Selection: See page 29.

\*\*\* Humanities/Fine Arts Selection: See page 29.

# OFFICE MANAGEMENT

## Two-year Associate in Applied Science Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
WOPO* 1303	Beginning Keyboarding/ Data Entry	WOPO 1304	Intermediate Information Processing Applications
	3		3
OADM 1309	Business Mathematics and Calculating Machines	WOPO 1307	Word Processing and Transcription
	3		3
MGMT 1304	Work Organization	OADM 1305	Records Management
	3		3
MGMT 1305	Introduction to Management	OADM 1308	Business Correspondence
	3		3
ENGL 1301	Composition & Rhetoric I	ELCT**	OADM/WOPO/MGMT
	3		3
WOPO 1101	MS-DOS: An Introduction	PHED	Physical Education
	1		1
	<b>16</b>		<b>16</b>

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
OADM 2304	Office Accounting I	OADM 2305	Office Accounting II
	3		3
MGMT 2305	Business Law I	OADM 2307	Automated Office Administration
	3		3
SPCH 2303	Business & Professional Speaking	MGMT 2302	Personnel Management
	3		3
ELCT†	Social/Behavioral Science	MGMT 2306	Business Law II
	3		3
MATH	MATH 1314, 1324, or 1342	ELCT††	Humanities/Fine Arts
	3		3
PHED	Physical Education	ELCT**	OADM/WOPO/MGMT
	1		3
	<b>16</b>		<b>18</b>
		<b>TOTAL HOURS</b>	<b>66</b>

\* Levels of keyboarding will be determined by the student's previous training in these skills or by placement test.

\*\* Electives or selections approved by the appropriate college official.

† Social/Behavioral Science Selection: See page 29.

†† Humanities/Fine Arts Selection: See page 29.

## OFFSET PRINTING

### One-Year Certificate of Completion

First Semester	Credit	Second Semester	Credit
OPRT* 1301	Introduction to Offset Printing	OPRT* 1305	Copy Preparation & Layout
	3		3
OPRT* 1302	Camera and Darkroom Procedures, Stripping & Platemaking I	OPRT* 2301	Camera and Darkroom Procedures, Stripping & Platemaking II
	3		3
OPRT* 1303	Offset Press Operation I	OPRT* 2302	Offset Press Operation II
	3		3
OPRT* 1304	Bindery Operations	OPRT 1308	Offset Printing Equipment Maintenance
	3		3
OADM 1303	Beginning Typewriting	MISC 1450	Microcomputers for Business
	3		4
	<b>15</b>		<b>16</b>
		<b>TOTAL HOURS</b>	<b>31</b>

Students may apply for a Certificate of Completion upon satisfactory completion of all OPRT courses listed above.

# PHOTOGRAPHY

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
PHOT	1401	Introduction to Photography	4	PHOT	1403	Advanced Photography	4
PHOT	1402	Portrait Photography	4	PHOT	1404	Commercial Photography	4
ENGL	1379	Communications Skills	3	PHOT	1405	Advanced Print Making	4
MATH		<u>MATH 1314</u> or higher	3	ELCT*		Social/Behavioral Science	3
PHED		Physical Education	1	PHED		Physical Education	1
			15				16

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
PHOT	2403	Portrait Retouching	4	PHOT	2404	Photographic Production	4
PHOT	2406	Color Photography I	4	PHOT	2407	Color Photography II	4
COMM	1307	Communications Media	3	OADM	2304	Office Accounting I	3
ELCT**		Humanities/Fine Arts	3	MISC	1450	Microcomputers for Business	4
BUSI	<u>1301</u>	Introduction to Business	3	PHED		Physical Education	1
PHED		Physical Education	1	ELCT		Approved elective	3
			18				19

TOTAL HOURS 68

† Social/Behavioral Science Selection: See page 29.

†† Humanities/Fine Arts Selection: See page 29.

# REAL ESTATE

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
MGMT		MGMT 1304 or 1306	3	REAE	1301	Real Estate Fundamentals	3
ENGL	<u>1301</u>	Composition & Rhetoric I	3	REAE	1302	Real Estate Marketing	3
MATH		<u>MATH 1314, 1324, or 1342</u>	3	REAE		Real Estate elective	3
SPCH		<u>SPCH 1315 or 1321</u>	3	REAE		Real Estate elective	3
ELCT		<u>BUSI 1301</u> or		MISC	1450	Microcomputers for Business	4
		MGMT 1305	3	PHED		Physical Education	1
PHED		Physical Education	1				17
			16				

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
REAE	2300	Texas Real Estate Law:		REAE	2304	Real Estate Finance	3
		Earnest Money Contracts	3	MGMT	2317	Management Applications II	3
REAE	2302	Residential Real Estate		ECON		<u>ECON 2301 or 2302</u>	3
		Appraisal	3	ACCT	<u>2302</u>	Principles of Accounting II	3
REAE	2305	Real Estate Law	3	ELCT*		Humanities/Fine Arts	3
MGMT	2316	Management Applications I	3	ELCT		Elective	1
MGMT		MGMT 2305 or 2306	3				
ACCT	<u>2301</u>	Principles of Accounting I	3				16
			15				

TOTAL HOURS 64

\* Humanities/Fine Arts Selection: See page 29.

# SMALL GAS ENGINE REPAIR

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
INDU	1400	Industrial Fundamentals	4	SGER	1407	Small Gas Engine Service	4
SGER	1401	Gas Engine Fundamentals	4	MATH		<u>MATH 1314</u> or higher	3
ENGL	1379	Communications Skills	3	WELD	1402	Beginning Arc Welding	4
WELD	1401	Beginning Gas Welding	4	SGER*		SGER Selection	4
				ELCT**		Humanities/Fine Arts	3
			15				18

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
SGER	2402	Chain Saw Service and Repair	4	SGER	2311	Shop Organization and Management	3
SGER	2410	Lawn and Garden Equipment Service	4	SGER	2408	Outboard Motor Service and Repair	4
WELD	2407	GTAW Welding (TIG)	4	OADM	2304	Office Accounting I	3
GOVT		<u>GOVT 2301</u> or <u>2302</u>	3	ELCT***		Computer Science/Micro-computer Technology	3
SPCH	1321	Business & Professional Speaking	3	ELCT		Elective	3
			18				16
				TOTAL HOURS			67

\* SGER 1409, 2407, or 2409.

\*\* Humanities/Fine Arts Selection: See page 29.

\*\*\* Computer Science/Microcomputer Technology: See page 29.

## SOCIAL SCIENCE

### Two-Year Associate in Arts Degree

This is a suggested curriculum. See page 20 for degree requirements.

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
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	1411	Beginning French I, German I, or Spanish I	4	LANG	1412	Beginning French II, German II, or Spanish II	4
SCIE		Biology, Chemistry, Physics, or Geology	4	SCIE		Biology, Chemistry, Physics, or Geology	4
MATH	1314	College Algebra	3	ELCT*		Humanities/Fine Arts	3
PHED		Physical Education	1	PHED		Physical Education	1
			18				18

(Continued on next page)



# SOCIAL SCIENCE (Cont.)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit	
ENGL**	English		3	SPCH	Speech elective		3	
GOVT	<u>2301</u>	State & Federal Govt. I	3	GOVT	<u>2302</u>	State & Federal Govt. II	3	
PSYC	<u>2301</u>	Introduction to Psychology	3	SOCI	<u>1301</u>	Introduction to Sociology	3	
COSC		Computer Science elective	4	ELCT		Social Science elective	3	
ELCT		Sophomore Social Science	3	ELCT		Elective	3	
PHED		Physical Education	1	PHED		Physical Education	1	
			17				16	
							TOTAL HOURS	69

\* Humanities/Fine Arts Selection: See page 29.

\*\* English courses include ENGL 2322, 2323, 2326, 2327, 2331, and 2332.

## SPEECH

### Two-Year Associate in Arts Degree

This is a suggested curriculum. See page 20 for degree requirements.

## FIRST YEAR

First Semester		Credit	Second Semester		Credit
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 1411	Beginning French I, German I, or Spanish I	4	LANG 1412	Beginning French II, German II, or Spanish II	4
SPCH 1315	Public Speaking	3	ELCT	Elective	3
ELCT	Elective	3	MATH 1314	College Algebra	3
PHED	Physical Education	1	PHED	Physical Education	1
		17			17

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
ENGL*	English		3	ENGL*	English		3
<u>GOVT 2301</u>	State & Federal Govt. I		3	<u>GOVT 2302</u>	State & Federal Govt. II		3
<u>SPCH 2333</u>	Discussion		3	ELCT	Any Speech elective		3
SCIE**	Biology, Chemistry,			MISC 1450	Microcomputers for Business		4
	Physics, or Geology		4	SCIE**	Biology, Chemistry,		
ELCT***	Humanities/Fine Arts		3		Physics or Geology		4
PHED	Physical Education		1	PHED	Physical Education		1
			17				18
TOTAL HOURS							69

\* English courses include ENGL 2322, 2323, 2326, 2327, 2331, and 2332.

\*\* Check senior college catalog for specific science requirements.

\*\*\* Humanities/Fine Arts Selection: See page 29.

# TELEVISION/RADIO BROADCASTING

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester				Credit	Second Semester				Credit
TELE	1301	Introduction to Broadcasting	3	TELE	1305	Broadcast Writing	3		
TELE	1402	Beginning Radio Production	4	TELE	1406	Electronic News Gathering	4		
TELE	1403	Beginning Television		TELE	1407	Advanced Radio Production	4		
		Production	4	TELE	1408	Advanced Television			
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3			Production	4		
<u>SPCH</u>	<u>1315</u>	Public Speaking	3	MATH		<u>MATH 1314</u> or higher	3		
			17				18		

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
TELE	2304	Broadcast Sales	3	TELE	2306	Telecommunications	
TELE	2407	Electronic Field Production	4			Seminar	3
TELE	2309	Broadcast Operations	3	TELE	2408	Telecommunications	
ELCT*		Social/Behavioral Science	3			Internship	4
ELCT**		Humanities/Fine Arts	3	COMM	1307	Communications Media	3
PHED		Physical Education	1	MISC	1450	Microcomputers for Business	4
			17	PHED		Physical Education	1
				ELCT***		Approved elective	3
							18
				TOTAL HOURS			70

\* Social/Behavioral Science Selection: See page 29.

\*\* Humanities/Fine Arts Selection: See page 29.

\*\*\* Approved Elective: TELE 1405, 2301, 2307 or 2409.

# TRAINING MANAGEMENT SYSTEMS

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
MGMT	1381	Management of Performance		MGMT	1385	Analysis of Training	
		Oriented Training	3			Requirements	3
MGMT	1383	Evaluation of Instruction		MGMT*		Training Management	
		and Training	3			Electives	6
MGMT	1384	Setting Objectives & Goals	3	ELCT**		Approved elective	3
ENGL	1379	Communications Skills	3	ELCT†		Computer Science/Micro-	
MATH		MATH 1314 or higher	3			computer Technology	3
PHED		Physical Education	1	PHED		Physical Education	1
			16				16

(Continued on next page)

# TRAINING MANAGEMENT SYSTEMS (Cont.)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
MGMT 2381 Job Performance & Motivation	3	MGMT 2384 Assessing of Training Standards, Goals & Objectives	3
MGMT* Training Management electives	3	MGMT* Training Management electives	3
ELCT*** Soph. Management electives	3	SPCH 1321 Business & Professional Speaking	3
ELCT† Humanities/Fine Arts	3	ELCT† Social/Behavioral Science	3
ELCT** Approved Elective	3	ELCT** Approved elective	3
PHED Physical Education	1	PHED Physical Education	1
	<b>16</b>		<b>16</b>
		<b>TOTAL HOURS</b>	<b>64</b>

\* MGMT 1382, 1386, 1387, 1388, 1389, 2382, 2383, 2385, 2386.

\*\* Approved Elective: MGMT 2150, 2151, 2161, 2162, 2255, 2256, 2257, 2257, 2259, 2351, 2358.

\*\*\* MGMT 2302, 2310, or BUSI 1307.

† Computer Science/Microcomputer Technology Selection: See page 29.

Social/Behavioral Science Selection: See page 29.

Humanities/Fine Arts Selection: See page 29.

## WELDING

### Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
INDU 1400 Industrial Fundamentals	4	WELD 1403 Intermediate Arc Welding	4
WELD* 1401 Beginning Gas Welding	4	WELD 1405 Advanced Gas Welding	4
WELD** 1402 Beginning Arc Welding	4	WELD 1406 Blueprint for Welders	4
MATH MATH 1314 or higher	3	ENGL 1379 Communications Skills	3
		PHED Physical Education	1
	<b>15</b>		<b>16</b>

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
WELD 2401 Advanced Arc Welding	4	WELD 2404 Pipe II	4
WELD 2402 Pipe I	4	WELD 2406 Welding Fabrication and Layout	4
WELD 2407 GTAW Welding (TIG)	4	WELD 2408 GMAW Welding (MIG)	4
GOVT 2301 State & Federal Govt. I		ELCT† Humanities/Fine Arts	3
or		SPCH 1321 Business & Professional Speaking	3
GOVT 2302 State & Federal Govt. II	3		
ELCT*** Computer Science/Micro-computer Technology	3		
	<b>18</b>		<b>18</b>
		<b>TOTAL HOURS</b>	<b>67</b>

\* WELD 1301 may be substituted.

\*\* WELD 1302 may be substituted.

\*\*\* Computer Science/Microcomputer Technology Electives: See page 29.

† Humanities/Fine Arts Electives: See page 29.

# WORD PROCESSING SPECIALIST

## Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
WOPO*	1303	Beginning Keyboarding/ Data Entry	3	WOPO*	1304	Intermediate Information Processing Applications	3
<u>ENGL</u>	<u>1301</u>	Composition & Rhetoric I	3	WOPO	1307	Word Processing/ Transcription	3
OADM	2304	Office Accounting	3				
OADM	1305	Records Management	3	SPCH	<u>SPCH 1315 or 1321</u>		3
ELCT		WOPO/MISC	4	ELCT	WOPO/MISC		3-4
WOPO	1101	MS-DOS: An Introduction	1	OADM	1308	Business Correspondence	3
				WOPO	WOPO Selection		1
			17				16-17

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
WOPO	2302	Advanced Information Processing Applications	3	WOPO** 2303	Office Automation	3	
OADM	1306	Office Functions	3	WOPO 2304	Automated Accounting	3	
MATH		<u>MATH 1314, 1324, or 1342</u>	3	OADM 2305	Office Accounting II	3	
ELCT†		Humanities/Fine Arts	3	OADM 2307	Automated Office Mgmt.	3	
ELCT***		Elective	3	ELCT††	Social/Behavioral Science	3	
PHED		Physical Education	1	PHED	Physical Education	1	
			16				16

TOTAL HOURS 64-65

\* Levels of keyboarding will be determined by the students' previous training in these skills or by placement test. Students who receive advanced standing in keyboarding may select an approved elective to fulfill hour requirements.

\*\* WOPO 2306 may be substituted.

\*\*\* Electives or selections must be approved by the appropriate college official.

† Humanities/Fine Arts Selection: See page 29.

†† Social/Behavioral Science Selection: See page 29.

# COURSE DESCRIPTIONS

## Accounting (ACCT)

### **ACCT 2301 Principles of Accounting I [ACCO 2403] (3-0) Credit: 3**

An introduction to accounting with emphasis on the accounting cycle and accounting systems. Topics include cash transactions, receivables, inventories, assets, liabilities, and partnerships.

### **ACCT 2302 Principles of Accounting II [ACCO 2404] (3-0) Credit: 3**

A continuation of ACCT 2301, accounting for corporations, analysis of financial statements, accounting for manufacturing operations and introductory managerial accounting concepts. Prerequisite: ACCT 2301

## Accounting Technology (ACTE)

### **ACTE 1301 Principles of Accounting I [ACCT 1301] (3-0) Credit: 3**

An introduction to accounting with emphasis on the accounting cycle and accounting systems. Topics include cash transactions, receivables, inventories, assets, liabilities, and partnerships.

### **ACTE 1302 Principles of Accounting II [ACCT 1302] (3-0) Credit: 3**

A continuation of ACTE 1301, accounting for corporations, analysis of financial statements, accounting for manufacturing operations and introductory managerial accounting concepts. Prerequisite: ACTE 1301

### **ACTE 2305 Basics of Managerial Accounting (3-0) Credit: 3**

A study of the methods by which accounting data are used by management in planning, coordination, 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: ACTE 1302.

### **ACTE 2306 Cost Accounting (3-0) Credit: 3**

An introduction to the objectives and procedures of cost accounting and control for business firms. It covers the principles & methods of accounting for materials, direct labor, and the distribution of overhead expenses, as well as cost records, operating reports and budgetary control. Prerequisite: ACTE 1302.

### **ACTE 2309 Fundamentals of Accounting III (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: ACTE 1302 with a minimum grade of C.

### **ACTE 2310 Fundamentals of Accounting IV (3-0) Credit: 3**

Continuation of ACTE 2309. 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: ACTE 2309.

### **ACTE 2311 Accounting & Financial Information Systems I (3-0) Credit: 3**

Study of overall flow systems emphasizing financial data and computerized systems. It covers flow and logic concepts, developing meaningful control concepts and data reporting techniques. Prerequisite: ACTE 1302.

### **ACTE 2312 Accounting & Financial Information Systems II (3-0) Credit: 3**

This course is a continuation of ACTE 2311. Prerequisite: ACTE 2311.

## **Air Conditioning (AIRC)**

### **AIRC 1201 Air Conditioning & Refrigeration Theory (1-2) Credit: 2 & Application I**

This course deals with the basic physical principles of air conditioning and refrigeration equipment. Introduction to basic thermodynamics and physics that pertain to heat, temperatures, pressures, fluids and refrigerants. Mechanics that pertain to piping and the specialized tools needed for piping.

### **AIRC 1202 Air Conditioning & Refrigeration Theory (1-2) Credit: 2 Application II**

Continuation of Air Conditioning and Refrigeration Theory and Applications I. Contents of this course include the identification of various types of air conditioning systems, compressors, metering devices and a service procedure for basic air conditioning and refrigeration system. Prerequisite: AIRC 1201.

### **AIRC 1400 Basic Air Conditioning & Refrigeration Theory (3-3) Credit: 4**

This course introduces the student to basic thermodynamics-heat transfer, temperature-pressures, and characteristics of refrigerants; pressure-temperature relationships of refrigerants; the refrigeration cycle; major components of refrigeration systems and their relationship to each other. The use of temperature recording devices, special tools-manifold gauge set, charging station, vacuum and vacuum pump, refrigerant recovery equipment and micron gauges is covered.

### **AIRC 1401 Electricity for Air Conditioning and (3-3) Credit: 4 Refrigeration I**

This course introduces the student to the basic concepts of electricity as they apply to air conditioning and refrigeration. It includes quantities, units, circuits, laws, measurements, alternating current fundamentals, magnetism, electron, magnetism, instruments, power, inductance, capacitance and transformers.

### **AIRC 1403 Heating Systems (3-3) Credit: 4**

This course introduces the student to residential heating systems, natural gas, liquified petroleum, electrical, oil, hydronic and special applications; emphasis will be placed on natural gas and electrically forced air systems, heat exchangers, gas circuits, air side, cabinet construction, sequencers, limits and heating elements. Corequisite: AIRC 1401.

### **AIRC 1406 Electricity for Air Conditioning (3-3) Credit: 4 & Refrigeration II**

This course reviews the alternating current fundamentals, simple alternating current circuits, single-phase air conditioning circuits, three-phase circuits, single and three-phase transformers, three-phase induction motors, single-phase motors and motor control, generation, transmission, and distribution of electrical energy. Prerequisite: AIRC 1401.

### **AIRC 1407 Mechanical Refrigeration Systems (3-3) Credit: 4**

This course provides the student with an in-depth study of mechanical refrigeration systems. The major components of a refrigeration system are examined to include compressors, evaporators, condensers, refrigerant flow control devices, interconnecting lines, driers, receivers and accumulators. The charging with refrigerants, air conditioning systems and refrigerant piping, the use of pressures in diagnosis of refrigeration circuit malfunctions are covered. Corerequisite: AIRC 1400 and 1401.

### **AIRC 2400 Electricity for Air Conditioning (3-3) Credit: 4 & Refrigeration III**

This course provides the student with the fundamentals of electrical testing and electrical troubleshooting of air conditioning and refrigeration circuits, circuit analysis and the repair or replacement of circuit components. Emphasis will be placed on air conditioning electrical systems. An overview of the single family residential wiring to include the construction of main and branch circuits is presented. Prerequisite: AIRC 1401 and 1406.

**AIRC 2401 Advanced Air Conditioning & Refrigeration Theory** (3-3) Credit: 4

This course will provide the student with an in-depth study of the basic principles of air conditioning design, heat load calculation, air distribution design, building components composition, and insulation. The student will construct ducts to include flex ducts and will install galvanized round pipe and equipment. Prerequisite: all AIRC 1400 courses.

**AIRC 2402 Commercial Refrigeration** (3-3) Credit: 4

This course introduces the student to the different types of commercial refrigeration units and systems. Instruction is provided in controls and control circuits for commercial refrigeration. Heat loss and heat gain calculations for commercial applications, equipment selection, locating and piping procedures, and service procedures for different systems will be covered. Prerequisite: all AIRC 1400 course.

**AIRC 2403 Commercial Air Conditioning I** (3-3) Credit: 4

This course is designed to cover heat transfer, heat loss and heat gain calculations as they apply to commercial heating and air conditioning. Instruction includes psychometrics of conditioned air, duct design and layout, equipment selection and location, shop drawings, controls and control circuits for automatic conditioning of air. Prerequisites: all AIRC 1400 courses.

**AIRC 2404 Troubleshooting Air Conditioning & Refrigeration Systems** (3-3) Credit: 4

This course will provide the student with an in-depth study of schematic wiring diagrams and electrical troubleshooting using the diagrams. Prerequisite: all AIRC 1400 courses.

**AIRC 2405 Heat Pumps I** (3-3) Credit: 4

This course will introduce the student to heat pumps to include geothermal system, heating, cooling and defrost cycles, components, reversing valves, flow controls, accumulator piping, heat pump controls, system design, ground loop heat exchangers. Prerequisite: all AIRC 1400 courses.

**AIRC 2406 Commercial Air Conditioning II** (3-3) Credit: 4

This course is a continuation of Commercial Air Conditioning I. It covers installation, operations of VAV systems, troubleshooting and repair of light commercial air conditioning, up to 25 tons capacity. Prerequisite: AIRC 2403.

**AIRC 2407 Heat Pumps II** (3-3) Credit: 4

This course is a continuation of Heat Pumps I. It covers analysis of system operations, troubleshooting, service and repair. Prerequisite: AIRC 2405.

## **Anthropology (ANTH)**

**ANTH 2301 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 2351 Cultural Anthropology [ANTH 2302]** (3-0) Credit: 3

Study of the human behavior (nations and societies) the world over, comparing and describing the cultural patterns of westernized industrial nations, Asiatic people, the Middle East, and today, the cultures of the emerging Third World nations. Also a study is made of the relationship of Cultural Anthropology to the other social sciences (Psychology, Sociology, History, etc.).

## **Applied Physics (APPH)**

**APPH 1350 Applied Physics I** (3-0) Credit: 3

This course is designed for students in technical areas who must be able to apply certain basic principles of physics to their career field. The course considers only certain areas of physics; especially mechanics, heat, fluids and the nature of matter.

**APPH 1351 Applied Physics II****(3-0) Credit: 3**

This is a continuation of Applied Physics I for students in technical areas who must be able to apply certain basic principles of physics to their career field. This course covers wave motion, light electricity and magnetism, applied electronics and an introduction to nuclear energy. Prerequisite: APPH 1350.

**Art (ARTS)****ARTS 1303 Art History I [ART. 1307]****(3-0) Credit: 3**

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

**ARTS 1304 Art History II [ART. 1308]****(3-0) Credit: 3**

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

**ARTS 1311 Design: 2-D [ART. 1303]****(2-4) Credit: 3**

This course gives basic instruction in the elements and principles of design, with emphasis on the study of form and color theory. It is a study of design in two- dimensional formats.

**ARTS 1312 Design: 3-D [ART. 1304]****(2-4) Credit: 3**

This course gives basic instruction in the principles and elements of design as applicable to three dimensional design problems.

**ARTS 1316 Drawing I [ART. 1301]****(2-4) Credit: 3**

This course involves a study of the basic drawing skills including both abstraction and expressive drawing in charcoal, pencil, pen, wash, conte, and mixed media.

**ARTS 1317 Drawing II [ART. 1302]****(2-4) Credit: 3**

This course continues the development of skills, application of drawing media, and personal expression explored in Drawing I. Prerequisite: ARTS 1316.

**ARTS 1325 Drawing & Painting Media [ART. 2307]****(2-4) Credit: 3**

This is an introduction to materials and techniques of drawing and painting for non-Art majors.

**ARTS 2311 Design: Computer Aided Art****(2-4) Credit: 3**

This course is designed primarily for the Commercial Art major, but can apply to Fine Art as well. The student will learn to use standard computer-aided techniques in creating and elaborating upon designs and in lettering production. Prerequisite: Computer Science Elective and ARTS 1311.

**ARTS 2313 Advertising and Illustration I [ART. 2305]****(2-4) Credit: 3**

This course is an introduction to the basic processes, materials, and techniques of illustration, layout and commercial design, techniques, philosophy of aesthetics, and public accessibility.

**ARTS 2314 Advertising and Illustration II [ART. 2306]****(2-4) Credit: 3**

This course is an advanced study of commercial art production. It continues principles covered in Advertising and Illustration I. Prerequisite: ARTS 2313.

**ARTS 2316 Oil Painting I [ART. 2302]****(2-4) Credit: 3**

This course is an introduction to the techniques and materials of painting with oil-based paints.

**ARTS 2317 Oil Painting II [ART. 2303]****(2-4) Credit: 3**

This course is a continuation of techniques explored in Art 2316 with emphasis on individual expression. Prerequisite: Art 2316.

**ARTS 2323, 2324 Figure Drawing I & II [ART. 1305, 1306]****(2-4) Credit: 3,3**

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

**ARTS 2326 Sculpture I [ART. 2317]****(2-4) Credit: 3**

This course is an introduction to sculpture making techniques including assemblage, carving and lost wax casting.

**ARTS 2327 Sculpture II [ART. 2318]****(2-4) Credit: 3**

This course is a continuation of ARTS 2326, with emphasis on personal expression. Prerequisite: ARTS 2326.



- ARTS 2333 Printmaking [ART. 2301] (2-4) Credit: 3**  
This introductory course covers the fundamentals and creative experimentation in etching, serigraphy and other printmaking media.
- ARTS 2336 Fiberarts I [ART. 2311] (2-4) Credit: 3**  
This course involves a study of weaving, rug making, dying and paper making. Emphasis will vary from one semester to another.
- ARTS 2337 Fiberarts II [ART. 2312] (2-4) Credit: 3**  
This course is a continuation of ARTS 2336. Emphasis will vary from semester to semester.
- ARTS 2341 Jewelry & Art Metals I [ART. 2313] (2-4) Credit: 3**  
This course is an introduction to jewelry making and metal working techniques. Basic fabrication techniques are stressed.
- ARTS 2342 Jewelry & Art Metals II [ART. 2314] (2-4) Credit: 3**  
This course is a continuation of jewelry making and metal working techniques. Lost wax casting and surface treatments are emphasized. Prerequisite: ARTS 2341.
- ARTS 2346 Ceramics I [ART. 2309] (2-4) Credit: 3**  
This course is an introduction to making pottery by hand and/or wheel methods. Glazing and decoration techniques are also covered.
- ARTS 2347 Ceramics II [ART. 2310] (2-4) Credit: 3**  
This course is a continuation of techniques of pottery making. Prerequisite: ARTS 2346.
- ARTS 2356 Photography I [ART. 1309] (2-4) Credit: 3**  
This course is an introduction to the basics of photography. Technical information will include camera operation, black and white camera techniques, knowledge of chemistry, and presentation skills. Much emphasis will also be placed on design, history and contemporary trends as a means of developing and understanding of photographic aesthetics. Students will be asked to complete projects which address art, journalism and commercial photography.
- ARTS 2357 Photography II [ART. 2320] (2-4) Credit: 3**  
This course extends the student's knowledge of technique and guides them in developing a personal outlook toward a specific application of the photographic process. Prerequisite: ARTS 2356
- ARTS 2366 Watercolor Painting [ART. 2304] (2-4) Credit: 3**  
This course covers various techniques of painting in watercolor. It stresses color and composition in application of the medium.
- ARTS 2367 Acrylic Painting [ART. 2308] (2-4) Credit: 3**  
This course covers the properties of color, theory of color and form, and technical procedures of the medium.
- ARTS 2371 Foundations of Art (2-4) Credit: 3**  
This course is an introduction to the creative media. Enhancing artistic awareness and sensitivity through the creative and imaginative use of art material and tools is the focus of the course. Students will also be exposed to art history and culture through the exploration of a variety of art works with an emphasis on aesthetic judgement and growth.
- ARTS 2376 Problems in Contemporary Arts [ART. 2308] (2-4) Credit: 3**  
This course is an examination of current concerns and practices in contemporary visual art. Recent historical influences, modern aesthetics, contemporary media and techniques, and public accessibility will be covered in classroom lectures and on site examinations of art and art production.

## **Automotive Body Repair (ATBR)**

### **ATBR 1403 Roughing & Alignment I (3-3) Credit: 4**

This course is designed to provide the student with a fundamental working knowledge of the theory and application of damage analysis and reversal as it applies to minor body damage. Emphasis will be placed on damage classification and identification, proper tool selection and use for specific repairs, heat shrinking, metal finishing techniques, and the alignment of moveable body panels. Prerequisite or Corequisites: INDU 1400, ATBR 1407 or ATBR 1405.

### **ATBR 1405 Auto Body Welding I (3-3) Credit: 4**

This course is designed to provide the student with a working knowledge and practical skill development in the use of oxyacetylene welding equipment as it relates to auto body repair procedures. Emphasis will be placed on safety, equipment construction and function, types and preparation of joints, and welding procedures on body steel. Prerequisite or Corequisite: INDU 1400.

### **ATBR 1407 Auto Body Fundamentals (3-3) Credit: 4**

This course is designed to provide the student with basic skills in general body shop safety, hand and power tools use, measurement techniques, selection and use of repair materials, and nonmetal parts repair. Also covered in the course are details of both conventional and unitized body construction including parts nomenclature and methods of attachment. The student will also be introduced to general shop operation and to the methods of collision repair estimation. Prerequisite or Corequisite: INDU 1400.

### **ATBR 1408 Roughing & Alignment II (3-3) Credit: 4**

This is an advanced course designed to provide the student with further practical skill development in the correction of minor body damage and is an introduction to the repair of body structural damage. Emphasis will be placed on proper analysis and correction through the use of measurement techniques and hydraulic repair equipment. Prerequisites: ATBR 1403, 1405, 1407 and 1409.

### **ATBR 1409 Auto Body Welding II (3-3) Credit: 4**

This course is designed to provide the student with a working knowledge and practical skill development in the use of GMAW (MIG), resistance spot welder, and shielded metal arc welder as they relate to auto body repair. Emphasis will be placed on safety, equipment construction and function, joint preparation, and welding procedures on both mild and HSLA body steel. Prerequisite: ATBR 1405.

### **ATBR 1410 Auto Body Painting Fundamentals (3-3) Credit: 4**

This course is designed to provide the student with a basic knowledge and skills required in the painting of body panels. Emphasis will be placed on the proper use and care of the spray gun; surface preparation for different repair materials, sanding, masking, cleaning, compounding, preparation of refinished material, and recognition and correction of paint problems. Prerequisite or Corequisites: INDU 1400, ATBR 1407.

### **ATBR 1411 Automotive Glass (3-3) Credit: 4**

This course is designed to provide the student with a knowledge of the types of glass and weather sealing devices and service, and various types of power assist and minor electrical repair. Prerequisite or Corequisite: INDU 1400.

### **ATBR 2400 Major Vehicle Damage Repair (3-3) Credit: 4**

This course is a continuation of ATBR 2401 and 2406 and places emphasis on developing the skills involved in major vehicle damage repairs utilizing the latest techniques and equipment including body sectioning and the use of recycled parts. Prerequisite: All first year courses, ATBR 2401 and 2406.

### **ATBR 2401 Panel Repair and Replacement (3-3) Credit: 4**

This course places heavy emphasis on straightening and fitting panels and employs welding, dinging, bumping and alignment procedures. The use of body fillers, contour finishing and metal preparation are also included. Prerequisite: All first year courses.

**ATBR 2404 Advanced Auto Body Painting (3-3) Credit: 4**

This course is designed to increase the students knowledge and skills in auto body refinishing. Emphasis will be placed on the techniques and materials used in the spot repair of both enamels and lacquers; the use of color coat/clear coat systems, tinting and blending of spot repairs, stripe and accent painting, and complete vehicle refinishing. Prerequisite: ATBR 1407 and 1410.

**ATBR 2406 Frame Repair & Alignment (3-3) Credit: 4**

This course is 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 1405, 1407 and 1408.

## **Automotive Service and Repair (AUTO)**

**AUTO 1150 Auto Maintenance Procedures (Elec & Body) (0.3-1) Credit: 1**

Designed to teach the student to perform maintenance and troubleshooting on the electrical systems and body maintenance.

**AUTO 1151 Auto Maintenance Procedures (Brakes) (0.3-1) Credit: 1**

Provides the student with the knowledge and skills to maintain and troubleshoot the brake system as detailed in the service manual.

**AUTO 1253 Operational Maintenance Course (0.5-2) Credit: 2**

Course is designed to teach vehicle operators to perform maintenance and operate the M809 series 5-ton and unit generators.

**AUTO 1254 Operators Training & Maintenance (2-2) Credit: 2**

This course is designed to teach proper operation and maintenance of vehicles, includes forms, safety, accident forms, PMCS, and use of publications and includes NSC Defensive Driving.

**AUTO 1255 Motor Sergeant's Maintenance Management (1.5-1) Credit: 2**

Provides training in procedures and techniques of establishing, conducting, and evaluating standard maintenance programs for unit vehicles. Includes maintenance operations, organization management, controls, requirements, training and records.

**AUTO 1401 Basic Engines (3-3) Credit: 4**

This course is designed to provide the student with a knowledge of the fundamentals of internal combustion engines, emission controls and engine systems to include identification of components and basic operation. This course will place heavy emphasis on basic engine troubleshooting, repair and testing to determine engine mechanical condition. Prerequisite or Corequisite: INDU 1400.

**AUTO 1402 Basic Electrical & Test Equipment (3-3) Credit: 4**

This course will provide the student with a good understanding of basic electrical principles, electrical circuits, electrical diagrams, wiring repairs, lighting systems and electrical troubleshooting through the use of hands-on training. Emphasis will be placed on usage and interpretation of common test equipment. The student will also be able to test and diagnose the lead acid storage battery. Prerequisite or Corequisite: INDU 1400.

**AUTO 1405 Automotive Air Conditioning (3-3) 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 recharging and compressor service. Prerequisite or Corequisite: INDU 1400.

**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 tune-ups. Emphasis will be placed upon the procedures to diagnose, adjust, and replace electrical, carburetor, and ignition system components. Prerequisite: AUTO 1401 and 1402.

**AUTO 1407 Brake Systems (3-3) 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, bleeder, and other equipment necessary to effect brake repairs will be taught with emphasis on power brake and dual brake systems. Training will also include principles on anti-skid brake systems and heavy duty systems. Prerequisite or Corequisite: INDU 1400

**AUTO 1408 Standard Transmissions & Transaxles (3-3) Credit: 4**

A course designed to provide an understanding of function, construction, operation, and maintenance of manual shift transmissions, transaxles, clutches, drive lines and differentials. Prerequisite or Corequisite: INDU 1400.

**AUTO 2250 Operational Maintenance (0.5-2) Credit: 2**

To familiarize the student with basic theories and principles of operational maintenance of military vehicles.

**AUTO 2251 Power Generator Mechanics Course (1.5-4.5) Credit: 2**

This course is designed to teach wheel vehicle mechanics the skills necessary to perform organizational maintenance on power generators. 1.5 KW through 10 KW.

**AUTO 2402 Shop Organization & 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 layout, general business practices and in the use of time, rate, and parts manual. This course places special emphasis on established business principles and preparations for employment. Prerequisite: Sophomore standing.

**AUTO 2403 Automatic Transmission & Transaxles (3-3) Credit: 4**

A study of the theory of operation, construction and maintenance of automatic transmissions and transaxles, including locking torque converters and automatic overdrive. This course emphasizes the diagnosis, repair and overhaul techniques used in rebuilding transmissions. Prerequisite: AUTO 1408.

**AUTO 2404 Ignition, Starting & Charging (3-3) Credit: 4**

Provides a review of the basic electrical system. Course content includes the ignition system theory and service for the conventional, transistor, and computer controlled systems. Starting motor and charging systems theory, testing and service will also be included. Prerequisite: AUTO 1402.

**AUTO 2405 Steering & Suspension Systems (3-3) Credit: 4**

This course is 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. It includes wheels, tires, steering gears and linkages, wheel alignment factors, diagnosis, repair and alignment procedures on live automobiles. The course will also include principles of heavy duty suspension systems. Prerequisite or Corequisite: INDU 1400.

**AUTO 2406 Engine Diagnosis & Emission (3-3) Credit: 4**

A course designed to provide an understanding of engine troubleshooting procedures, utilizing conventional test equipment, engine oscilloscopes, exhaust gas analyzers and computer engine analyzers. Diagnostic adjustment and repair of engine emission control are included. Prerequisite: AUTO 1401, 1402, 1406, 2404, 2408 and 2410.

**AUTO 2408 Advanced Engine Service (3-3) Credit: 4**

This course covers a brief review of basic engines. Hands-on work will involve valve train and cylinder head service including valve grinding and guide repair. Included in this course will be the procedures necessary for the replacement of an engine shortblock assembly including necessary testing and adjustments. Prerequisite: AUTO 1401.

**AUTO 2410 Fuel Systems & Injection (3-3) Credit: 4**

A course designed to provide an understanding of the principles, design and operation of automotive fuel systems. Carburetors, fuel pumps, fuel injection and computer controlled units will be covered. Hands-on work will include troubleshooting, repair and adjustment of these system as well as emission control devices. Prerequisite: AUTO 1401.

**AUTO 2411 Automotive Advanced Technology (3-3) Credit: 4**

Course is designed to provide the student with the information and knowledge to perform service on the new and emerging technologies in the automotive field. As new product technology is introduced by the manufacturers, this course will be updated to include these developments. Special emphasis will be placed upon computerized control developments and other vehicle design changes. Prerequisite: Sophomore standing and approval of the appropriate college official.

## **Aviation Maintenance Technology (AVMT)**

**AVMT 1201 Maintenance Publications - G (2-2) Credit: 2**

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

**AVMT 1202 Weight and Balance - G (2-2) Credit: 2**

Since weight and balance of 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 1203 Aircraft Drafting - G (2-2) Credit: 2**

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 1204 Airframe Materials & Corrosion Control - G (2-2) Credit: 2**

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 nondestructive testing methods; performing penetrant, chemical etching and magnetic particle inspection; performing basic heatbreaking processes; identifying and selecting aircraft hardware and materials; identifying and selecting cleaning materials; and actually performing aircraft cleaning and corrosion control.

**AVMT 1305 Basic Aircraft Electricity - G (2-4) Credit: 3**

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 1306 Aircraft Finishes - A (2-4) Credit: 3**

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 on an aircraft are included.

**AVMT 1320 A & P Mechanic General Course (3-0) Credit: 3**

This course introduces an experienced mechanic to the very basics of aircraft maintenance. The course will include applying the principles of mathematics, physics and electricity to aircraft maintenance, solving weight and balance problems, selecting and using specifications from FAA Regulations, and identifying and properly employing materials and hardware commonly used in aircraft maintenance. Prerequisites: 18 months aircraft maintenance experience and FAA evaluation certification that the student is qualified to take the course to obtain the FAA powerplant or airframe rating.

**AVMT 1402 Sheet Metal Structures - A****(2-6) Credit: 4**

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 2303 Airframe Inspection - A****(2-4) Credit: 3**

The objective of this course is to prepare the student to perform uniform conformity and airworthiness inspection on 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 2304 Aircraft Fuel Systems - A****(2-4) Credit: 3**

This course covers the theory and practical experiences inspection, repair, and service of aircraft fuel systems that include fuel dump systems, fluid quantity indicators, 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 2305 Aircraft Instrument Systems - A****(2-4) Credit: 3**

This course is designed to instruct the student in the repair, inspection, servicing, and installation of heading, speed, altitude, time, 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 2306 Engine Electrical Systems - P****(2-4) Credit: 3**

This course is designed to give instruction in the troubleshooting, 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 2307 Engine Lubrication & Cooling Systems - P****(2-4) Credit: 3**

This course includes the identification and selection of lubricants as well as the repair, inspection, and troubleshooting of the components. It also covers the theory and practical applications of the repair, inspection, troubleshooting and servicing of cooling exhaust systems. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

**AVMT 2308 Aircraft Airframe Course****(3-0) Credit: 3**

The Airframe course has been established to teach qualified aircraft mechanics the fundamentals of aircraft airframe maintenance. The course is sequenced to give the student instruction in all areas of aircraft structures and their components. Evaluation examinations will be administered periodically throughout the course. Prerequisite: 18 months aircraft maintenance experience and FAA evaluation certification that the student is qualified to take the course to obtain the FAA airframe rating and AVMT 1201.

**AVMT 2309 Aircraft Powerplant & Systems****(3-0) Credit: 3**

The powerplant course has been established to teach qualified aircraft mechanics the fundamentals of aircraft powerplant maintenance. The course is sequenced to give the student instruction in all areas of powerplants and their components. Evaluation examinations will be administered periodically throughout the course. Prerequisite: 18 months aircraft maintenance experience and FAA evaluation certification that the student is qualified to take the course to obtain the FAA powerplant rating and AVMT 1201.

**AVMT 2402 Hydraulics & Pneumatics - A (2-6) Credit: 4**

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 2403 Aircraft Electrical Systems - A (2-6) Credit: 4**

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

**AVMT 2404 Powerplant Maintenance Reciprocating Engines - P (2-6) Credit: 4**

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 Aviation Maintenance Technology courses.

**AVMT 2405 Engine Fuel Systems - P (2-8) Credit: 4**

This course covers the inspection, repair, servicing, and troubleshooting 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 2406 Aircraft Propellers - P (2-8) Credit: 4**

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 troubleshooting 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 2407 Powerplant Maintenance Turbine Engines - P (2-6) Credit: 4**

Designed to prepare the student in maintaining, repairing, rigging, overhauling and inspecting turbine engines. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

**Aviation Science (ASCI)**  
**Formerly Career Pilot**

**ASCI 1200 Flight-Solo [CAPI 1200] (1-1) Credit: 2**

Flight training to meet the requirements for solo flight. A minimum of 32 hours of instruction of which 13 hours are dual flight instruction and .5 hours are solo flight with 18.5 hours of oral instruction and briefings. This course is the first of two flight courses necessary to obtain the Private Pilot Certificate. Prerequisite: ASCI 1403 or concurrent enrollment; FAA Medical Certificate of at least a Class II and FAA Student Pilot Certificate (Must be obtained within two weeks of starting class.)

**ASCI 1201 Flight-Private (1-2) Credit: 2**

Examining Authority Flight Only - Flight training to finish meeting the requirements of Federal Aviation Regulations to obtain the Private Pilot Certificate. Instruction will consist of a minimum of 42 hours of which 10 are dual instruction, 19.5 is solo practice, 2 hours are in an approved ground trainer and 16.5 hours of oral instruction and briefings. This course, in conjunction with ASCI 1200, will more than meet the requirements for the issuance of the Private Pilot Certificate. Prerequisite: ASCI 1200 and completion of ASCI 1403 prior to completion of this course. FAA Student pilot Certificate with at least a Class II FAA Medical Certificate.

**ASCI 1204 Flight-Intermediate [CAPI 1204] (1-3) Credit: 2**

This is the first of two flight courses necessary to obtain the instrument rating on the certificate of a student who holds at least a Private Pilot Certificate with an airplane category. The flight training will consist of a minimum of 64 hours of instruction of which 13 hours are dual instruction in airplanes, 6 hours of instruction in an approved ground trainer, 30 hours of solo flight, and 15 hours of oral instruction and briefings. Prerequisites: At least a Private Pilot Certificate with an Airplane rating, 3 hours of instrument instruction, hold at least a Class II FAA Medical Certificate, and have completed or be concurrently enrolled in ASCI 1305 - Advance Air Navigation.

**ASCI 1301 Aircraft Science [CAPI 1301] (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.

**ASCI 1305 Advanced Air Navigation [CAPI 1305] (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: ASCI 1403.

**ASCI 1306 Meteorology [CAPI 1306] (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.

**ASCI 1403 Air Navigation [CAPI 1403] (3-3) Credit: 4**

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 of the Private Pilot Certificate.

**ASCI 2204 Flight-Instrument [CAPI 2204] (1-3) Credit: 2**

This is the second of two flight courses necessary to obtain the instrument rating on the certificate of a student who holds at least a Private Pilot Certificate with an airplane category. The flight training will consist of a minimum of 70 hours of instruction of which 23 hours of instruction are conducted in an airplane, 10 hours in an approved ground trainer, 25 hours of solo cross country, and 12 hours of oral instruction and briefings. Prerequisites: Hold at least a Private Pilot Certificate with an airplane category; Hold a Class II FAA Medical Certificate; have a minimum of 95 hours of flight experience of which 25 hours were solo cross country since the Private Pilot Certificate was issued; 20 hours of instrument instruction of which no more than 10 were in an approved ground trainer; have completed or complete ASCI 2407 before the end of this course.

**ASCI 2205 Flight-Commercial [CAPI 2205] (1-3) Credit: 2**

This course will be used to prepare the student for the Commercial Pilot Certificate with an airplane category. The training will consist of a minimum of 64 hours of which 10 hours of dual instruction will be in high performance aircraft, 5 hours of dual instruction in a primary trainer, 30 hours of solo practice of which 5 will be cross country in a high performance airplane, 5 hours of solo practice at night, 10 hours of solo cross country in a primary trainer, 10 hours of local solo, and 19 hours of oral instruction and briefings. Prerequisites: Hold at least a Private Pilot Certificate with airplane category and instrument rating; have at least 145 hours of flight time of which no more than 40 were in an approved ground trainer; hold a current Class II FAA medical Certificate; have completed or be concurrently enrolled in ASCI 2300 (Commercial Aviation) (Approved ground school must be completed prior to finishing ASCI 2205).

**ASCI 2206 Multi-Engine Flight [CAPI 2206] (1-1) Credit: 2**

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 32 hours of instruction is provided, including 10 hours of dual flight, and 20 hours of oral instruction and briefing. Prerequisite: ASCI 2205 or a Commercial Pilot Certificate.



**ASCI 2208 Instructor Rating [CAPI 2208] (2-2) Credit: 2**

This flight course prepares the experienced pilot for the FAA Certified Flight Instructor Certificate for airplane. Includes 25 hours of dual flight and 39 hours of oral instruction and briefings. Prerequisite: Commercial Pilot Certificate.

**ASCI 2209 Airline Transport Pilot [CAPI 2209] (1-2) Credit: 2**

The Airline Transport Pilot Rating is the most comprehensive issued by the Federal Aviation Administration. Flight and ground training to qualify for the certificate is provided, which includes 25 hours of dual flight, two flight hours for the FAA Check Flight, and 21 hours of oral instruction and briefings. Prerequisites: First Class FAA Medical Certificate; Age 23; 1,500 hours of approved flight time; and Instrument Rating.

**ASCI 2210 Commercial Transition Flight I [CAPI 2210] (1-3) Credit: 2**

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 64 hours of instruction which includes 20 hours of dual flight with two hours in the simulator, 25 hours of solo flight, and 17 hours of oral instruction and briefings. Prerequisite: FAA Commercial Rotorcraft Helicopter Rating, Class II FAA Medical and ASCI 2300 or concurrent enrollment.

**ASCI 2211 Commercial Transition Flight II [CAPI 2211] (1-3) Credit: 2**

A continuation of Commercial Transition Flight I to complete the requirements for a Commercial Single Engine Land Aircraft Rating. The course consists of 64 hours of instruction, which includes 20 hours of dual flight, of which 5 will be in the simulator and 5 hours in a complex aircraft, 25 hours of solo flight with 5 hours in a complex aircraft, and 19 hours of oral instruction and briefings. Prerequisite: ASCI 2210 and 2307 or concurrent enrollment.

**ASCI 2212 Instrument Flight Instructor [CAPI 2212] (1-2) Credit: 2**

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 48 hours of instruction is provided, including 20 hours of dual flight and two hours of FAA check flight and 26 hours of oral instruction and briefings. Prerequisite: Certified Flight Instructor Certificate and Instrument Rating.

**ASCI 2213 Multi-Engine Flight Instructor [CAPI 2213] (1-2) Credit: 2**

This course is designed to prepare an applicant for the FAA Multi-Engine Flight Instructor Flight Test. A minimum of 48 hours of instruction is provided, including 20 hours of dual flight instruction and two hours of FAA check flight and 26 hours of oral instruction and briefings. Prerequisite: FAA Multi-Engine Rating and FAA Flight Instructor Single-Engine Land Rating.

**ASCI 2214 Commercial Helicopter Rating [CAPI 2214] (1-3) Credit: 2**

Additional Category Commercial Helicopter Rating Course. A minimum of 64 hours solo, and 13 hours oral instruction and briefings; and one hour for the FAA check flight. Prerequisite: FAA Commercial Pilot Rating Single-Engine Land.

**ASCI 2215 Helicopter Instructor Rating [CAPI 2215] (2-2) Credit: 2**

Course prepares a pilot that is helicopter rated for the FAA Certified Flight Instructor Certificate for helicopter. This course includes 39 hours of ground training and 25 hours of instructor training, which involves 20 hours of a dual flight in a helicopter, and 5 hours of practice ground instruction by the student. Prerequisite: Commercial Pilot Certificate with a helicopter category rating.

**ASCI 2300 Commercial Ground School [CAPI 2300] (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: ASCI 1305.

**ASCI 2301 Aerodynamics [CAPI 2301] (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.

**ASCI 2303 Air Transportation [CAPI 2303] (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.

**ASCI 2318 Propulsion Systems [CAPI 2318] (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.

**ASCI 2407 Instrument & Ground School [CAPI 2307] (3-3) Credit: 4**

Basic radio fundamentals 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: ASCI 2300.

## **Biology (BIOL)**

**BIOL 1308 Biological Science [BIOL 1301] (3-0) Credit: 3**

A study of selected topics of biological science for the non science major. Topics include the cell concept, systems of the human body, aging, and introduction to genetics, evolution and ecology. (This course may be offered via television.)

**BIOL 1408 General Biology I [BIOL 1401] (3-3) Credit: 4**

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

**BIOL 1409 General Biology II [BIOL 1402] (3-3) Credit: 4**

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

**BIOL 1411 General Botany [BIOL 1403] (3-3) Credit: 4**

The study of structure and function of plant cells, tissues, and organs. An evolutionary survey and life histories of the following representative groups: algae, fungi, mosses, liverworts, ferns, and seed producing organisms. Plant reproductive and functional interactions with their environment and with humans. Selected laboratory exercises will complement the lecture topics.

**BIOL 1413 General Zoology [BIOL 1404] (3-3) Credit: 4**

A survey of important invertebrate and vertebrate groups of the animal kingdom emphasizing relevant biological concepts; includes laboratory experiments and dissections.

**BIOL 1424 Plant Taxonomy [BIOL 2405] (3-3) Credit: 4**

An introduction to the identification, classification, and evolutionary relationships of vascular plants with emphasis on flowering plants. The importance of herbaria, collection techniques, and construction and use of taxonomic keys will be included in both the lecture and laboratory. Prerequisite: BIOL 1411.

**BIOL 2316 Genetics [BIOL 2303] (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 1408 and 1409 or consent of instructor.

**BIOL 2401 Human Anatomy [BIOL 1405] (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 specimen dissection in the lab.

**BIOL 2402 Human Physiology [BIOL 1406] (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 2401.

**BIOL 2427 Microbiology [BIOL 2404]****(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 premed students.

**BIOL 2428 Vertebrate Zoology [BIOL 2402]****(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 1408, 1409 or consent of the instructor.

## **Business (BUSI)**

**BUSI 1301 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.

**BUSI 1307 Personal Finance [BUSS 2306]****(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.

**BUSI 1372 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 viewpoints and includes sources of advice and counseling. A course to permit the supervisor to better advise subordinates on economic problems.

## **Chemistry (CHEM)**

**CHEM 1406 Introduction to General Chemistry [CHEM 1404]****(3-3) Credit: 4**

This course is designed primarily to satisfy the requirements of nursing students seeking a B.S. degree or background for physiology. The course covers the fundamentals of general and descriptive chemistry with applications from medicine, modern living, agriculture, etc. It is also suitable for non-science majors who need a laboratory science credit. It also serves as background for those who have no chemical background.

**CHEM 1407 Physiological Chemistry [CHEM 2404]****(3-3) Credit: 4**

A study of organic and physiological chemistry for nursing students interested in the processes of life. Basic principles, nomenclature, principal reactions and methods of synthesis and the major classes of physiologically important compounds are studied. Prerequisite: CHEM 1406.

**CHEM 1411 General Chemistry I [CHEM 1401]****(3-4) Credit: 4**

The first of two courses for science related majors, this course covers the basics of atomic and molecular structure, bonding, states of matter, solutions, and some descriptive chemistry. Emphasis is placed on solutions of chemical problems. Prerequisite: MATH 1314 or consent of instructor.

**CHEM 1412 General Chemistry II [CHEM 1402]****(3-4) Credit: 4**

The second of two courses for science related majors, this course covers equilibrium processes, acid-base concepts, elementary thermodynamics and kinetics, electrochemistry, nuclear chemistry, and descriptive chemistry of some families of elements. Chemistry 1411 is a prerequisite.

**CHEM 2423, 2425 Organic Chemistry I & II [CHEM 2401, 2402]****(3-4) Credit: 4,4**

This course provides a thorough foundation in organic chemistry. A mechanistic approach is used. The student is introduced to planning a synthesis in lecture. The laboratory introduces students to basic techniques, synthesis of compounds and instrumental analysis. A course designed for science majors and minors. Prerequisite: CHEM 1411, 1412 or consent of the instructor. CHEM 2425 has a prerequisite of CHEM 2423.

## **Child Development (CHDV)**

### **CHDV 1301 Fundamentals of Early Childhood Education (2-2) Credit: 3**

This course covers the history, philosophy, and ethics of child care, types of child care, facilities, laws and standards that are applicable to child care centers. Emphasis is placed on the responsibilities and duties of the child care worker. Experiences are gained in how to provide for the child's health needs and how to make the child care center a safe place for children.

### **CHDV 1303 Curriculum Resources (3-2) Credit: 3**

This is a three hour credit course, which, taken concurrently with Introduction to Center Operations, articulates with Early Childhood Professions II. The second in a series of core courses, this course provides hands-on experience in selecting, preparing, and presenting discovery learning activities. The focus is on inexpensive teacher made materials. Includes *planning and implementing* developmentally appropriate learning activities in art, literature, music, movement, dramatic play, science, math, and *manipulatives*. Developing a curriculum which adapts to the needs of children with special needs, and includes a multicultural approach, is embraced.

### **CHDV 1305 Instructional Aids (2-2) Credit: 3**

This course is designed to instruct child care personnel and teachers' 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 1306 Physical Development and Disorders in Children (2-2) Credit: 3**

Normal motor development and techniques for screening young children for motor skills development. Methods and materials for assisting children with physical disabilities and for promoting activities of daily living.

### **CHDV 1307 Techniques for Child Guidance for the Special Child (2-2) Credit: 3**

Normal development of emotional responses in children; understanding emotional behavior disorders in children; *techniques for screening children for emotional difficulties*; methods and materials for assisting children with emotional disabilities.

### **CHDV 1309 Child Guidance and Group Management (2-2) Credit: 3**

This three hour credit course provides an examination of theoretical approaches to guidance; appropriate application; planning strategies; advanced observation techniques; site-based experiences; ethical problem solving; and teamwork skills in group management. Direct and indirect methods of guiding the individual child or group of children toward positive self esteem and self control are emphasized.

### **CHDV 1310 Growth and Development of Children (2-2) Credit: 3**

This is a three hour lecture course which includes the examination of emotional, social, physical, and intellectual development of the child to puberty. Considers genetic and prenatal influences on the child; includes study of individual differences in ages and stages of development. Prerequisites: CHDV 1303, 1322, and 1501.

### **CHDV 1322 Introduction to Center Operations (3-2) Credit: 3**

This is a three hour credit course, which, when taken concurrently with *Curriculum Resources*, articulates with Early Childhood Professions II. The third in a series of core courses, this course emphasizes roles and relationships of early childhood professionals in center based settings; licensing regulations; legislation and advocacy; career development and goal setting; family/care provider relationships; and management issues and policies.

**CHDV 1324 Safety, Health, and Nutrition (2-2) Credit: 3**

This is a three hour credit course which focuses on information, issues, procedures, and experiences related to the safety and health of a child in a care and education setting. Staff teamwork, ethical problem solving, and interpersonal relationship skills are incorporated in course objectives. Prerequisites: CHDV 1303, 1322, and 1501.

**CHDV 1327 Families and Communities in a Multicultural World (2-2) Credit: 3**

This course explores the factors that influence a child's development--culture, family, neighborhood, child care staff, and community. Includes professional development experiences in self understanding and leadership. Emphasizes strategies for utilizing parents and the community resources; parent education guidelines; ethical problem solving; and activities for building staff relationships and developing cross-cultural awareness and sensitivity.

**CHDV 1406 Learning Environments I (3-2) Credit: 4**

This is a four hour credit course which focuses on developmentally appropriate activities, guidance, and the environment for infant-toddler care. Provides for opportunities to maximize long-range development that occurs within the first three years of life, and includes writing daily and weekly activities and objectives. Staff team building and ethical problem solving are embedded in course objectives. Prerequisites: CHDV 1303, 1322, and 1501.

**CHDV 1408 Learning Environments II (3-2) Credit: 4**

This is a four hour credit course which centers on developmentally appropriate practice during the play years. It includes developing and designing interest centers and environments for discovery learning; scheduling and planning age appropriate activities; and writing daily and weekly activities and objectives. Staff team building and ethical problem solving are embedded in course objectives.

**CHDV 1501 Introduction to Early Childhood Education (3-6) Credit: 5**

This is a five hour credit course which articulates with Early Childhood Professions I. The first in a series of core courses, this course provides an introduction to theories and practices in early childhood care and education, and opportunities to observe children in a variety of settings. At the completion of this course, the student will demonstrate mastery at a beginning level in the competencies of the functional areas of: professionalism; child growth, development and learning; guidance and group management; curriculum development, content and implementation; family and community relations; safety, health, and nutrition; and program management.

**CHDV 2101 Early Childhood Professions (1-0) Credit: 1**

A course that deals with trends and advancements in early childhood. When used in the Child Development Associate Program, this course will provide instruction on preparing a portfolio and preparing for assessment.

**CHDV 2301 The Child with Special Needs (2-2) Credit: 3**

This is a three hour course which provides an overview of disabling conditions in children; emphasizes mainstreaming strategies; and includes curriculum planning, observation, and hands-on experiences with children in center settings. Problem solving activities and teamwork skills are embedded in course objectives. Prerequisite: CHDV 1310 or approval of the appropriate college official.

**CHDV 2303 Managing Child Care Programs (2-2) Credit: 3**

This is the first of two courses in child care administration. It covers the practical aspects of managing a child care center, with emphasis on legal issues and applications; fiscal management; personnel planning, hiring, and staff development; physical plant responsibilities; program and enrollment policies; duties to parents; and program implementation.

**CHDV 2304 Management Techniques for Directors (2-2) Credit: 3**

This is the second of two courses in child care administration. It covers the theoretical aspects of managing child development programs. The main emphasis is placed on leadership styles, formulating and implementing staff development and program goals, problem solving, delegation and decentralization, increasing staff morale, preventing burnout, and theories of managing a child care center. Prerequisite: CHDV 2303 or approval of the appropriate college official.

**CHDV 2305 Advanced Math and Science in Early Childhood (2-2) Credit: 3**

Emphasis is placed on strategies, activities, materials for teaching mathematical and science concepts and skills for early childhood. This course includes identifying, classifying, sequencing, ordering and predicting cause/effect relationship skills for preschool children. Science activities as presented will stimulate the child's cognitive growth. Methods are presented that will assist three to five year olds to discover information about their natural and manmade world. Prerequisite: CHDV 1303 or approval of the appropriate college official.

**CHDV 2402 Special Projects (1-15) Credit: 4**

This course is designed to allow the advanced Child Development student the opportunity to undertake a project that involves working with preschool 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.

**CHDV 2409 Learning Environments III (3-2) Credit: 4**

This is a four hour credit course which focuses on the developmentally appropriate needs and characteristics of school-age children. It includes curriculum strategies for a population that experiences great changes in physical, mental, and social development; environmental planning; age appropriate materials and activities; guiding children in self management; and conflict resolution. Staff teamwork, ethical problem solving, and interpersonal relationship skills are incorporated in the course objectives.

**CHDV 2410 Learning Environments IV (3-2) Credit: 4**

This course addresses the unique curriculum planning needed in group home-based care and centers serving less than 10 children, includes strategies for developmentally appropriate proactive for mixed age groups, planning the environment, and ways to use mixed-age grouping to the children's advantage.

**Communications (COMM)**  
**[Formerly Journalism (JOUR)]**

**COMM1307 Communications Media [JOUR 1301] (3-0) Credit: 3**

Instruction in mass media of modern world. A survey of all mass media, their purposes, and their methods of operation.

**COMM2311 News Gathering and Reporting [JOUR 1302] (3-0) Credit: 3**

Instruction in the fundamental news gathering and writing techniques, interviewing techniques, and discussion of news sources and values.

**Communications Electronics Technology (ELTE)**

**ELTE 1303 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 1401 Electrical Circuits I (3-3) Credit: 4**

The first of a two course study of electrical circuitry. This course includes a study of the elementary principles of electricity. It includes coverage of DC topics such as elementary physics, Ohm's Law series and parallel resistive networks, and a power formula; and AC topics such as power generation, inductive and capacitive, waveform types, and voltage measurements. It also includes the study and use of analog and digital multimeter.

- ELTE 1402 Electrical Circuits II** (3-3) **Credit: 4**  
The second course in the study of electrical circuitry. This course includes alternating current circuit topics such as single and polyphase systems, impedance calculation, resonant circuits, transformers, and an in-depth study of the use of the triggered-sweep oscilloscope. Prerequisite: ELTE 1401
- ELTE 1403 Solid State Electronics** (3-3) **Credit: 4**  
A study of the active electronic devices (i.e., diodes, transistors, etc.) and their more common circuit applications. This course covers circuit design methods of simple power supplies, amplifiers, and switching circuits. This is a technical course requiring a working knowledge of simple algebra. Prerequisite or Corequisite: ELTE 1402.
- ELTE 1404 Communications Circuits I** (3-3) **Credit: 4**  
A study of those basic circuits used throughout industry today. Prerequisite or Corequisite: ELTE 1403.
- ELTE 1405 Principles of Electricity & Electronics** (3-3) **Credit: 4**  
An elementary study in the basic principles of DC & AC circuits with an introduction to semiconductor devices. This course covers only those fundamental concepts necessary for a student to understand the basic principles of TV and Radio servicing.
- ELTE 1406 Mobile Security Systems** (3-3) **Credit: 4**  
A study of various types of electronic security systems, related sensors and control devices used in 12V systems. Emphasis will be placed on installation, testing and final performance evaluation.
- ELTE 1407 Home Entertainment Systems** (3-3) **Credit: 4**  
A study of the basic operating principles, installation techniques, and preventative maintenance of stereo systems, CD players, video recorders, audio cassette decks, and equalizers.
- ELTE 1408 Auto Sound Systems** (3-3) **Credit: 4**  
A study of speaker principles and systems, and amplifying and equalization networks, as used in automobile sound systems with emphasis on installation and final performance evaluation.
- ELTE 2103 Individualized Research** (1-0) **Credit: 1**  
This course allows the student to prepare the backup and research that is necessary in order for the student to complete ELTE 2303. Approval of the appropriate college official and 3rd semester student.
- ELTE 2301 Broadcast Equipment Maintenance** (1-6) **Credit: 3**  
The operation, preventive maintenance procedures, and troubleshooting of modern day radio and television broadcast equipment. The course gives the student that much needed practical experience that can only be gained in a live station atmosphere. Prerequisite: ELTE 1404 and ELTE 2407 and approval of the appropriate college official.
- ELTE 2303 Special Intensive Study** (0-9) **Credit: 3**  
An intensive study in the design, theory of operation, and construction techniques used in a project which holds special interest to the student and is in the field of his/her major. A student obtaining a second or third degree must repeat the course with 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: ELTE 2103 and the approval of the appropriate college official and 4th semester student.
- ELTE 2401 Personal Mobile Communications Systems** (3-3) **Credit: 4**  
This course covers the installation, operation, and final performance testing of cellular telephones, mobile telephones, CB and Marine radios.
- ELTE 2402 Advanced Test Equipment** (3-3) **Credit: 4**  
Includes the use and normal user calibration techniques for all phases of Electronic Test Equipment from the very simple to the most advanced. Prerequisite: ELTE 1403.
- ELTE 2403 Home Security Systems** (3-3) **Credit: 4**  
A study of various types of electronic security systems, related sensors and control devices used in modern homes, duplexes, and complex style apartment security systems.

- ELTE 2404 CATV, MATV, and CCTV Systems** (3-3) **Credit: 4**  
 A study of large scale TV cable systems, small scale master antenna systems and closed circuit surveillance systems. It includes the design, selection, configuration, installation, and troubleshooting.
- ELTE 2405 Satellite Systems** (3-3) **Credit: 4**  
 This course provides the student with the knowledge of operation and theory of Satellite Receiving Systems. The detailed theory covers such areas as transmission up linking, down linking, overall systems block diagram antennas and motor controllers, single and double conversion systems, receiver theory; operation of general troubleshooting procedures, L.N.A. and down converters. There is also emphasis placed on antenna installation and alignment procedures. The student will be responsible for setting up a complete system from antenna alignment to receiver hook up to a television set. Prerequisites: ELTE 1403 and 1404.
- ELTE 2406 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 and CMET 1401
- ELTE 2407 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 1403 and 1404.
- ELTE 2408 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 1403.
- ELTE 2409 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: CMET 1409.
- ELTE 2410 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.
- ELTE 2412 Circuits and Systems -Troubleshooting & Repair** (3-3) **Credit: 4**  
 This course is an in-depth study of current troubleshooting and maintenance techniques for linear (analog) and digital electronics equipment including transducers, switching components, motors and generators (servo systems), control circuits, and special power supplies. Prerequisite: CMET 1409 and appropriate college official.

## **Computer Electronics Technology (CMET)**

- CMET 1400 Electronics & Computer Skills** (2-4) **Credit: 4**  
 This course is a study of modern electronics construction techniques, including the use of hand tools and fabrication equipment. It includes high reliability soldering, the production of printed circuit boards, cable and harness making, wire wrapping techniques, and other related skills.
- CMET 1401 Digital Circuits** (3-3) **Credit: 4**  
 This course provides a study 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-flops, registers, and counter circuits. It also covers numbering systems, arithmetical circuitry, and elements of control circuits.
- CMET 1402 Computer Systems** (3-3) **Credit: 4**  
 This is an introductory course covering the setup, operation, and basic preventive maintenance of a personal computer system. It will include an introduction to some basic software packages useful to the first-time computer owner.



**CMET 1403 Computer Systems & Operational Programming (3-3) Credit: 4**

This course provides a study of the theory of the operation of several computer systems, to include instructions, an introduction to logic diagrams, and circuit schematics, programming as a troubleshooting tool, and operational characteristics.

**CMET 1405 Local Area Networks (3-3) Credit: 4**

This course covers system design, configuration, operation, management, and troubleshooting of local and wide area networks.

**CMET 1409 CRT Systems (3-3) Credit: 4**

This is a study of the vertical and horizontal scanning circuits, video amplifiers, and other related circuits encountered in the most common video display systems. It includes theory of circuit operation and practical laboratory exercises in troubleshooting. Prerequisite: ELTE 1403 or ELTE 1405.

**CMET 2402 Computer Circuit Analysis (3-3) Credit: 4**

This course provides a comprehensive study of the clock and pulse generation circuit, waveshaping circuits, trigger and control circuits, and synchronization and counting circuits as well as other circuits used in modern computers. Prerequisites: CMET 1401 and CMET 1403.

**CMET 2404 Computer System Diagnosis & Maintenance (3-3) Credit: 4**

This course includes operation, preventive maintenance procedures, and troubleshooting of modern computer equipment, to include advanced diagnostic programming for the finding, documenting, and repairing computer malfunctions. It provides the much needed practical experience that can only be gained in a live computer atmosphere. Prerequisite: CMET 2402 or equivalent.

**CMET 2408 Digital Communications (3-3) Credit: 4**

This course is designed to allow students to become proficient in all aspects of digital communications. It begins with a concentrated investigation of digital modulation and transmission. The most common modulation schemes used in modern systems - FSK, PSK, and Quadrature Amplitude Modulation (Eight and Sixteen) will be covered in depth. Also included is a study of numerous data communications concepts, including transmission methods, circuits, topologies, error control mechanisms, and data formats. It provides a study of digital transmissions techniques, including PCM, MPA sampling, encoding, and companding. Time-division multiplexing, adaptive delta modulation PCM, and differential PCM are covered. The North American Digital Hierarchy for digital transmissions is outlined, including line encoding schemes, error detection/correction methods, and synchronization techniques. Prerequisites: CMET 1401 & ELTE 1403.

**CMET 2410 Advanced Consumer Servicing (3-3) Credit: 4**

This course includes the maintenance, alignment, and servicing of VCRs, camcorders, HiFi stereo sound systems and equipment. Prerequisite: CMET 1409

**CMET 2411 Theory of Interface Devices (3-3) Credit: 4**

This course is a study of the microprocessor and its interface with external memory, enhancements, and devices that make up a complete computer system. The course will also include the operation of these peripheral devices. Prerequisite: CMET 1403 and ELTE 1403.

## **Computer Science (COSC)**

**COSC 1100 Special Topics (0-3) Credit: 1**

Recent developments and topics of current interest. May be repeated when topics vary.

**COSC 1300 Computer Information Processing (3-0) Credit: 3**

This is an up-to-date survey of computer hardware and software systems with developments that will provide the basis for further advancements in information processing. It provides a comprehensive overview of a computer--what it is, what it can and cannot do, how it operates, and how it may be instructed to solve problems. It covers terminology and examines the application of computers in a broad range of organizational settings and social environments. An overview of BASIC programming is provided. This is a computer literacy course for non-computer majors.

**COSC 1400 Computer Science Fundamentals (3-3) Credit: 4**

This provides the students with fundamental skills needed to design computer programs. Focus will be on problem analysis and developing algorithms for step-by-step solutions to problems. Students will learn to use an on-line editor to enter programs via a terminal in a hands-on environment. A high-level language will be used for programming and debugging.

**COSC 1401 Computer Operations (3-3) Credit: 4**

This provides students with a knowledge of the duties and responsibilities of a computer operator. Training is provided to develop the student's ability to work in a computer center.

**COSC 1402 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 2403 and approval of the appropriate college official.

**COSC 1403 Introduction to Computer Science & Programming (3-3) Credit: 4**

Introductory programming course for Computer Science major. Problem solving, algorithm development, pseudo code, and flowcharting. A high-level language is covered in-depth through programming assignments.

**COSC 1404 COBOL Programming (3-3) Credit: 4**

Provides the student with skills and fundamentals in solving business data processing problems using COBOL. The student becomes effective in COBOL programming techniques involving sequential files, single and double dimension table handling, and control breaks. Prerequisite: COSC 1403.

**COSC 1405 Computer Concepts and Analysis (3-3) Credit: 4**

Provides the essential foundation for computer science majors in computer concepts, terminology, and business computer systems. Students will be introduced to word processor and spread sheet software.

**COSC 1406 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. Prerequisites: (COSC 1403 and COSC 1405) or (COSC 1400 and COSC 1401).

**COSC 1407 RPG Programming (3-3) Credit: 4**

Report Program Generator, a problem oriented language involving fixed program logic, file description, input calculation, and output for practical business oriented problems. Prerequisite: COSC 1403.

**COSC 1408 AS/400 Concepts & Operations (3-3) Credit: 4**

An introduction to the concepts and operations of AS/400 hardware and software. Prerequisite: 8 semester hours computer courses.

**COSC 2110 Topics in Computer Science Laboratory (0-3) Credit: 1**

Laboratory for COSC 2310 when topic has a laboratory required. Prerequisite: Concurrent enrollment in COSC 2310.

**COSC 2310 Topics in Computer Science (3-0) Credit: 3**

Study of recent developments and topics of current interest in computer science. Prerequisite: 12 hours computer science or the approval of the appropriate college official.

**COSC 2401 Advanced COBOL (3-3) Credit: 4**

Offers the student of COBOL programming an in-depth study of the theory, programming techniques, and programming efficiencies that will be required of the commercial COBOL programmer. A thorough coverage is given to file design and the special features of ANSI COBOL language. Emphasis is placed on multi-dimensional table handling, searching and sorting techniques, and VSAM (Indexed) file

manipulation. Structured design and programming will be stressed. Programming assignments will require detailed knowledge of necessary Job Control Language (JCL) for program execution. Prerequisites: COSC 1404, COSC 2403, and COSC 2404.

**COSC 2402 Systems In The MIS Environment (3-3) Credit: 4**

This course examines advanced systems including data base, distributed processing, teleprocessing, local area networks, management information systems and decision support systems. Emphasis will be placed on database management systems through the development of a data base project. Prerequisite: 12 semester hours Computer Science.

**COSC 2403 Operating Systems and Job Control Language (3-3) Credit: 4**

A study of computer operating system concepts including major software concepts including major software components and their functions. An in-depth coverage of Job Control Language and/or command language. Use of utilities for data set maintenance and manipulation of system control information. Prerequisites: (COSC 1404 and COSC 1406) or (COSC 1400, COSC 1401 and concurrent enrollment in COSC 1406).

**COSC 2404 Machine Language Operations (3-3) Credit: 4**

Assembly and machine language concepts. Emphasis onabend resolution and dump reading. Competencies will be developed through programming assignments. Prerequisite: COSC 1404 and COSC 1406.

**COSC 2405 Information Structures (3-3) Credit: 4**

Advanced programming techniques to include two and three dimensional arrays, linked lists, index structures, binary search, sorting techniques, direct access processing and subroutines. Programs will be written in a high-level language. Prerequisite: Eight semester hours programming.

**COSC 2406 Database Programming (3-3) Credit: 4**

A study of the DB2 relational database management system under MVS on an IBM mainframe. Topics include SQL, data manipulation, data definitions, and the Query Management Facility (QMF). Students will code application programs in COBOL with embedded SQL. Prerequisite: 16 semester hours of computer science including COSC 1404.

**COSC 2408 CICS Programming (3-3) Credit: 4**

An introduction to programming for the teleprocessing environment under CICS. Applications will be written and tested on-line. Prerequisites: COSC 1404 and 2404.

**COSC 2409 Field Projects (1-9) Credit: 4**

This course consists of practical applications in the field of computer science. It is designed to fit the career objectives of the student. Prerequisite: Approval of the appropriate college official.

**COSC 2410 Systems Analysis and Design (3-3) Credit: 4**

Study of structured systems development using a computer-aided systems engineering (CASE) tool. Emphasis on tools and techniques of systems analysis and design for producing logical methodologies for dealing with complexity in the development of information systems. Prerequisite: COSC 1405 and eight semester hours of programming.

**COSC 2490 Computer Resource Management (3-3) Credit: 4**

This course covers the procurement, use and evaluation of computer resources including hardware, software, and people. Topics include capacity planning, upgrades, downsizing, choosing the correct hardware and software, compatibility, connectivity, and vendor versus in-house support. Prerequisite: MISC 1461.

## **Consumer Electronics Technology (COES)**

**COES 2301 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: CMET 1409, or equivalent.

**COES 2408 CATV, MATV, & CCTV Systems (3-3) Credit: 4**

A study of large scale TV cable systems, small scale master antenna systems and close circuit surveillance systems. It includes the design, selection, configuration, installation, and troubleshooting.

**COES 2409 Advanced Television Servicing (2-4) Credit: 4**

The operation and servicing 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: CMET 1409.

## **Criminal Justice (CRIJ)**

**CRIJ 1201 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.

**CRIJ 1301 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 Criminal Investigation I (3-0) Credit: 3**

Investigative theory, collection and preservation of evidence, sources of information, interview and interrogation, uses of forensic sciences, case and trial preparation.

**CRIJ 1303 Legal Aspects of Law Enforcement (3-0) Credit: 3**

Police authority, responsibilities, constitutional constraints, law of arrest, search and seizure, police liability, examples of case law that currently affect police decisions will be reviewed.

**CRIJ 1304 The Courts and Criminal Procedures (3-0) Credit: 3**

The judiciary in the criminal justice system, structure of American Court System, prosecution, right to counsel, pre-trial release, grand juries, adjudication process, types and rules of evidence and sentencing.

**CRIJ 1305 Traffic Law (3-0) Credit: 3**

This course is designed to cover all laws pertaining to the control and enforcement of traffic. The student 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 Correctional Systems and Practices (3-0) Credit: 3**

Corrections in the criminal justice system, organization of correctional systems, correctional role, institutional operations, alternate to institutionalization, treatment and rehabilitation, current and future issues.

**CRIJ 1307 Crime in America (3-0) Credit: 3**

American crime problems in historical perspective, social and public policy factors affecting crime; impact and crime trends, social characteristics of specific crimes, and prevention of crime.

**CRIJ 1308 Fundamentals of Criminal Law (3-0) Credit: 3**

A study of the nature of criminal law, philosophical and historical development, major definition and concepts, classification of crime, elements of crimes and penalties using Texas statutes as illustrations, criminal responsibility.

**CRIJ 1309 Police Systems and Practices (3-0) Credit: 3**

Analyses of the police profession, organization of law enforcement systems, the police role, police discretion, ethics, police-community interaction, and current and future issues facing police agencies.

- CRIJ 1310 Criminal Investigation II** (3-0) **Credit: 3**  
Modern methods and skills required for criminal investigation, to include discovery methods, development and lifting latent fingerprints, criminal scene sketches, the use of plaster and silicone rubber for reproducing evidence at the crime scene, use of modern investigation aids, and techniques of criminal interviews. Prerequisite: CRIJ 1302.
- CRIJ 1311 Basic Polygraph Techniques** (3-0) **Credit: 3**  
Designed to orient law enforcement students on the basics of polygraph techniques as they apply to case research and preparation, pretest procedures, polygraph usage in criminal investigations, legality concerning polygraph, and avenues of polygraphist career. Prerequisite: CRIJ 1302, 1303 or 1304.
- CRIJ 1312 Commissioned Security Officer Course** (2.5-.5) **Credit: 3**  
This course is designed to have the student meet the requirements specifically identified in the state of Texas Commissioned Security Officer Training Manual and the Provisions of the Private Investigators and Private Security Agencies Act, Article 4413 (29bb) V.A.C.S. as amended by 65th Texas legislature.
- CRIJ 1314 Community Resources in Corrections** (3-0) **Credit: 3**  
An introductory study of the role of the community in corrections, community programs for adults and juveniles, administration of community programs, legal issues, and future trends in community treatment.
- CRIJ 2101 Emergency Medical Aid** (1-1) **Credit: 1**  
This course will focus on the first aid fundamentals that will be helpful to patrol officers in the event of a first aid emergency situation. Procedures recommended by the American Red Cross will be used as guidelines for this course.
- CRIJ 2201 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.
- CRIJ 2301 Probation and Parole** (3-0) **Credit: 3**  
This course will provide the student with some understanding of the criminal evolution of corrections and explore with the student the many avenues into which the corrections field branches. Develops in each student a basic understanding of the various methods of corrections so that they may function efficiently in the field.
- CRIJ 2303 Criminal Justice Seminar** (3-0) **Credit: 3**  
A problems course dealing with current criminal justice trends, issues, and literature. Prerequisite: Approval of the appropriate college official. This course may be repeated for credit in courses dealing with different problems and issues.
- CRIJ 2304 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 Traffic Planning and Administration** (3-0) **Credit: 3**  
This course consists of the application of traffic problems from the administrative point of view, including traffic engineering, education, and enforcement at the supervisory level.
- CRIJ 2307 Penology (Jail Operation and Management)** (3-0) **Credit: 3**  
A survey of the basic concepts of penal and correctional rationale as employed by criminal justice administrators. An overview of the operation and management principles of the institutional setting will be examined in-depth.
- CRIJ 2308 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 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 the 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 Correctional Control and Administration (3-0) Credit: 3**  
The course prepares the student to perform supervisory functions related to control of prisoners and contraband, segregation and accountability of prisoners, procedures required at correctional facility, emergency measures, prisoner privileges, and the records and reports of the detention center.

**CRIJ 2311 Advanced Security Officer Training (2.5-.5) Credit: 3**  
This course is designed to provide the student with increased working knowledge of security principles and procedures. The student will become familiar with each phase of security. Emphasis will be placed on the security problems as seen through the eyes of a security supervisor.

## **Developmental Studies (DS--)**

**DSO 0300 Developmental Communication (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 0101 Study Skills (1-0) Credit: 1**  
Techniques of study such as time management, listening and note-taking, text marking, library and research skills, preparing for examinations, and utilizing learning resources.

**DSED 0300 College Study Skills (3-0) 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 note taking, marking tests, learning through media, concentration, retention of information, and taking examinations.

**DSED 0301 College Study Skills and TASP (1-2) Credit: 3**  
This course is designed to provide an opportunity for students to learn and adopt new methods to become successful in school and life. Emphasis is placed on high level study skills and the improvement of time management, effective listening and note taking, learning through media, concentration, retention of information, taking examinations, creativity, and relationships in life.

**DSLA 0300, 0301 English for International Students I and II (3-2) Credit: 3,3**  
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. (Previously numbered ENGL 0303, 0304.)

**DSLA 0310 Reading and Vocabulary I (3-2) Credit: 3**  
This course is designed for speakers of languages other than English with TOEFL scores below 400. The primary objectives are to develop reading fluency, increase vocabulary, and to prepare the students to function in an academic environment.

**DSLA 0314 Writing I (3-2) Credit: 3**  
This course is designed for speakers of languages other than English with TOEFL scores below 400 and students with limited English proficiency. The objective is to develop writing skills, including organization of ideas and application of grammar necessary to form well-developed sentences and paragraphs.

**DSLA 0315 Grammar I (3-1) Credit: 3**  
This course is designed for speakers of languages other than English with TOEFL scores below 400. The objective of the intermediate-level grammar course is to develop standard English usage with emphasis on well-developed sentences.

**DSLA 0316 Listening Comprehension I (3-2) Credit: 3**

This course is designed for speakers of languages other than English with TOEFL scores below 400. The primary objective is to develop aural comprehension of specific conversational patterns in the areas of surface, implied, and inferred meaning.

**DSLA 0317 Speaking I (3-1) Credit: 3**

This course is designed for speakers of languages other than English with TOEFL scores of 380 or below. The primary objective is to move students from recognition of language to oral production. The emphasis is on pronunciation and dialog.

**DSLA 0320 Reading and Vocabulary II (3-2) Credit: 3**

This course is designed for speakers of languages other than English with TOEFL scores between 450 and 499. The objectives are to develop reading fluency and build vocabulary and prepare students to function in an academic environment. This course includes various techniques for becoming a better student in English.

**DSLA 0321 Writing II (3-2) Credit: 3**

This course is designed for speakers of languages other than English with TOEFL scores above 400. The objectives are to develop writing skills, standard English usage, organization of ideas and application of grammar.

**DSLA 0322 Academic Listening & Speaking II (3-2) Credit: 3**

This course is designed for speakers of languages other than English with TOEFL scores between 400 and 450. The objectives are to develop beginning note-taking and speaking skills which will prepare students to function in an academic environment.

**DSLA 0332 Academic Listening & Speaking III (3-2) Credit: 3**

This course is designed for speakers of languages other than English with TOEFL scores above 450. The primary objectives are to improve note-taking and oral reporting abilities which will prepare students for college level coursework.

**DSMA 0100 Mathematics Laboratory I (0-1) Credit: 1**

This course provides a setting for students to develop and expand mathematical skills in a laboratory setting under the guidance of an instructor. This laboratory may be used with any basic or developmental mathematics course.

**DSMA 0101 Basic Developmental Mathematics (1-1.5) Credit: 1**

This course helps students prepare to pursue college-level academic work. It uses varied instructional techniques to identify deficiencies and provide a review of fundamental operations in mathematics.

**DSMA 0102 Developmental Mathematics Lab (0-3) Credit: 1**

This course provides a setting for students to develop and expand mathematical problem solving skills in a structured environment under the tutelage of an instructor.

**DSMA 0111 Basic Mathematics I (2-0) Credit: 1**

This course covers basic arithmetic calculations such as adding, subtracting, multiplying, and dividing fractions, decimals, and integers.

**DSMA 0112 Basic Mathematics II (2-0) Credit: 1**

This course covers basic algebraic operations such as operations on real numbers, polynomials, linear equations, and factoring.

**DSMA 0113 Basic Mathematics III (2-0) Credit: 1**

This course is a continuation of Basic Mathematics II. It includes ratio and proportion, graphs, linear equations, inequalities, radical expressions and quadratic equations.

- DSMA 0300 Developmental Mathematics I** (5-1) **Credit: 3**  
 This developmental course includes adding, subtracting, multiplying, and dividing fractions, decimals, and integers, order of operations, percent, line graphs, bar graphs, pie graphs, pictographs, areas of plane figures, exponents, and an introduction to signed numbers and algebra. A laboratory is required.
- DSMA 0301 Developmental Mathematics II** (5-1) **Credit: 3**  
 Designed for students who need a review of fundamental algebraic operations. Topics include operations on real numbers, polynomials, linear equations, linear inequalities, factoring, graphing, and selected stated problems. (Previously numbered MATH 1300). A laboratory is required.
- DSMA 0302 Fundamentals of Mathematics I** (3-0) **Credit: 3**  
 This course includes operations with common fractions, decimals and positive integers, order of operations, prime factorizations, greatest common factors, least common multiples, percents, and basic equations. Also included is an introduction to consumer and business applications, statistical graphing, and basic geometry.
- DSMA 0303 Developmental Mathematics IV** (5-1) **Credit: 3**  
 This course presupposes the knowledge of DSMA 0301. Topics include operations with rational expressions, linear equations, systems of linear equations, radical expressions, complex numbers, quadratics and functions. A laboratory is required.
- DSMA 0304 Fundamentals of Mathematics II** (3-0) **Credit: 3**  
 This course includes operations with real numbers, variable expressions, simple equations, polynomials, algebraic applications, factoring polynomials, and an introduction to graphs and linear equations.
- DSMA 0306 Intermediate Developmental Algebra I** (3-0) **Credit: 3**  
 This course presupposes that the student has successfully completed Fundamentals of Mathematics II or has equivalent knowledge. Topics include a review of factoring, rational expression, radical expressions, complex numbers, radical equations, quadratics and the study of the parabola.
- DSMA 0307 Intermediate Developmental Algebra II** (3-0) **Credit: 3**  
 This course presupposes that the student has successfully completed Intermediate Developmental Algebra I. Topics include the straight line, systems of equations and inequalities, determinants, functions and relations, inverses and composite functions, and an introduction to exponential and logarithmic functions.
- DSMA 0308 Pre-College Math** (3-0) **Credit: 3**  
 This developmental course includes topics in mathematics to include arithmetic operations, basic algebraic concepts and notations, geometry and real and complex numbers systems. The course also covers relations and functions, inequalities, factoring, polynomials, rational expressions, and quadratics with an introduction to complex numbers, exponential and logarithmic function, determinants and matrices and sequences, and series.
- DSRE 0100 Developmental Reading Laboratory** (0-1) **Credit: 1**  
 This course provides a setting for students to develop and expand reading skills in a structured environment under the tutelage of an instructor.
- DSRE 0101 Developmental Reading Laboratory** (0-1) **Credit: 1**  
 This course helps prepare for college level academic work using varied instructional techniques to help students improve their proficiency in reading comprehension and rate, word recognition and vocabulary development.
- DSRE 0111 Basic Reading I** (1-0) **Credit: 1**  
 This course improves reading skills, vocabulary, comprehension, and reading rate.
- DSRE 0112 Basic Reading II** (1-0) **Credit: 1**  
 This is a continuation of Basic Reading I. It emphasizes vocabulary development, comprehension, and fluency.
- DSRE 0113 Basic Reading III** (1-0) **Credit: 1**  
 This is a continuation of Basic Reading II.



- DSRE 0300 Developmental Reading I** (2-2) **Credit: 3**  
 Designed for students who have difficulty reading college texts, specifically those who score below 200 on the reading section of the TASP or the Placement Test. Emphasizes word attack skills, vocabulary development, comprehension, fluency, and study and test-taking skills.
- DSRE 0301 Developmental Reading II** (2-2) **Credit: 3**  
 Designed for students who have difficulty reading college texts, specifically those who score at least 200 on the reading section of the TASP or the Placement Test or pass DSRE 0300. Emphasizes vocabulary development, comprehension, fluency, and study and test-taking skills.
- DSSP 0300 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 0111 Basic Writing I** (1-0) **Credit: 1**  
 This course covers basic composition skills such as idea generation, organization, style, utilization or standard English, and revision.
- DSWR 0112 Basic Writing II** (1-0) **Credit: 1**  
 This course is a continuation of Basic Writing I. It emphasizes the correct use of grammar, organization and style.
- DSWR 0113 Basic Writing III** (1-0) **Credit: 1**  
 This course is a continuation of Basic Writing II.
- DSWR 0301 Developmental Writing I** (3-1) **Credit: 3**  
 A study of basic composition designed to aid the student in acquiring the writing skills needed for college level writing. Includes an intensive study of basic composition skills. Designed for students who score below 180 on the writing section and at least 200 on the reading section of the TASP Test or the Placement Test. Emphasizes paragraph writing, with attention given to grammar problems as they occur in the context of the paragraph. Intended for native English speakers or for those students who have made a score of 500 or more on the Test of English as a Foreign Language (TOEFL).
- DSWR 0302 Developmental Writing II** (3-1) **Credit: 3**  
 A study of basic composition designed to aid the student in acquiring the writing skills needed for college level writing. Designed for students who score between 180 and 220 on the TASP Test or Placement Test or pass DSWR 0301. Emphasizes essay writing, with attention given to grammar problems as they occur in the context of the essay.
- DSWR 0303 Fundamentals of Writing I** (3-0) **Credit: 3**  
 Fundamentals of Writing I is a course in basic writing skills at the sentence and paragraph level. Course includes instruction in basic grammar, sentence structure, punctuation, and other necessary skills leading to the proper construction of a paragraph.
- DSWR 0304 Fundamentals of Writing II** (3-0) **Credit: 3**  
 This course is a continuation of Fundamentals of Writing I and emphasizes composition skills at the paragraph and essay level. Includes a study of sentence-level grammar and punctuation, and presents the organizational skills needed to write a basic essay.

## **Diesel Mechanics (DIEM)**

- DIEM 1401 Diesel Engine Fundamentals** (3-3) **Credit: 4**  
 This course is designed to provide the student with a working knowledge of the fundamentals of the diesel engines. The development, uses, advantages/disadvantages, design, components, operating principles (2-stroke and 4-stroke cycle), diesel fuels, and the combustion process and exhaust emissions will be covered. Emphasis will be placed on operating principles and component function. The student will perform preoperational services, start and stop a diesel engine and identify engine components and systems. Prerequisite or Corequisite: INDU 1400.

**DIEM 1404 Standard Power Trains****(3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of standard power trains. Theory of gears and torque, operating principles, troubleshooting and service of clutches, standard transmissions and transfer cases, drive lines, differential carriers and axles will be covered. Emphasis will be placed on operating principles, components and service. The student will disassemble, clean, inspect and reassemble clutches and transmissions. Prerequisite or Corequisite: INDU 1400.

**DIEM 1405 Diesel Engine Auxiliary Systems****(3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of diesel engine air induction and exhaust systems, cooling systems and lubrication systems. System design, operating principles, components, test equipment, and service will be covered. Emphasis will be placed on turbochargers, blowers, troubleshooting, component removal and replacement, test equipment and systems testing. The student will troubleshoot, test, remove, repair and replace components of auxiliary systems. Prerequisite or Corequisite: INDU 1400 and DIEM 1401.

**DIEM 1406 Diesel Starting and Charging Systems****(3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of diesel engine starting and charging systems. Principles of electricity, system design, operating principles, components, test equipment and service will be covered. Emphasis will be placed on basic electricity, troubleshooting, component removal and replacement, and systems testing. The student will troubleshoot, test, remove, repair and replace components of starting and charging systems. Prerequisite or Corequisite: INDU 1400, DIEM 1401 and DIEM 1405.

**DIEM 2400 Hydraulic Systems Fundamentals & Service****(3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of hydraulics. Hydraulic principles, pumps, valves, circuits, fluids, cylinders and troubleshooting will be covered. Emphasis will be placed on hydraulic principles, basic control systems, and troubleshooting. The student will disassemble, clean, inspect, and reassemble hydraulic pumps, valves, and cylinders. The student will use hydraulic trainers to perform numerous practical exercises on hydraulic principles, control systems and troubleshooting. Prerequisite or Corequisite: INDU 1400.

**DIEM 2403 Diesel Engine Overhaul****(3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of diesel engine overhaul procedures. Engine disassembly, cleaning component inspection and measurements, special tools, reassembly, basic tune-up and run-in will be covered. Emphasis will be placed on component inspection and measurement and basic tune-up and run-in. The student will overhaul diesel engine. Prerequisite: All Diesel courses or approval of the appropriate college official.

**DIEM 2404 Automatic Power Trains****(3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of automatic power trains. Operating principles, troubleshooting and service of torque converters, transmissions, retarders and hydrostatic drives will be covered. Emphasis will be placed on torque converter and transmission service. The student will disassemble, clean, inspect, test and reassemble an automatic transmission. Prerequisite: DIEM 2400 and DIEM 1404 or AUTO 1408.

**DIEM 2405 Advanced Diesel Engine Service****(3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of diesel engine service procedures. Troubleshooting and diagnostics, test equipment, fuel injection pump and service, tune-up, governors, fuel pump and injector timing, and valve adjustment will be covered. Emphasis will be placed on tune-up, governor and rack adjustment, valve timing and fuel pump service and calibration. The student will perform a tune-up on various diesel engines, remove and install fuel injection pumps and injectors, adjust governors and disassemble, clean, inspect, reassemble and calibrate fuel injection pumps. New service and product update topics may be presented in this course. Prerequisite: DIEM 1401, 1405, 1406, 2406 and 2407.

**DIEM 2406 Diesel Fuel Injection Systems****(3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of diesel engine fuel systems. System designs, operating principles, troubleshooting and test equipment will be covered. Emphasis will

be placed on test equipment and injector and nozzle service. The student will remove, test, disassemble, clean, repair, reassemble and install fuel injectors and nozzles. Prerequisite: DIEM 1401.

**DIEM 2407 Diesel Engine Cylinder Head Service (3-3) Credit: 4**

This course is designed to provide the student with a working knowledge of diesel engine cylinder head service. Design, component testing, measurements, test equipment and service equipment will be covered. Emphasis will be placed on valve, seat, and guide service and injector tube replacement. The student will remove, clean, service and reinstall a cylinder head. Prerequisite: DIEM 1401, 1405 and 2406.

**DIEM 2409 Diesel Internship (1-20) Credit: 4**

This course consists of on-the-job diesel mechanics training that utilizes the principles, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved work site under the supervision of a College instructor/coordinator.

## **Drafting and Design (DRDS)**

**DRDS 1302 Blueprint Reading (2-2) Credit: 3**

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

**DRDS 1303 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 Fundamentals of Drafting (2-4) Credit: 4**

An overview of drafting to include shape and size description lettering, geometric construction, multi-view projection dimensioning, pictorial drawings, copy reproduction, and the use of equipment essential to the field of drafting.

**DRDS 1401 Pictorial Drafting (3-3) Credit: 4**

A course mainly concerned with pictorials. Includes the theory of obliques and isometric drawings. Also covered are one and two point perspectives and shade and shadow applications. Prerequisite: ENGR 1304 or DRDS 1405 or concurrent enrollment.

**DRDS 1402 Technical Illustration (3-3) Credit: 4**

Introduction to pictorial drawings as used in industrial catalogs, assembly sheets, newspaper publications, and promotional literature. Work to be done in various media to include pencil, ink, transfer tapes, and air brush. Prerequisite: ENGR 1304, DRDS 1405, or DRDS 1401 or concurrent enrollment.

**DRDS 1403 Machine Drawing (2-4) Credit: 4**

Drawing 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 1304 or DRDS 1405, ENGR 1305 or DRDS 1406, DRDS 1401 or concurrent enrollment.

**DRDS 1404 Structural Drafting (2-4) Credit: 4**

A study of the AISC 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: DRDS 1405 or ENGR 1304, DRDS 1406 or ENGR 1305 or concurrent enrollment.

**DRDS 1405 Technical Drafting (2-4) Credit: 4**

Freehand and instrument drawing, dimensioning, fastening, pictorial methods, charts and graphs, projections drawings, geometry or graphical construction.

**DRDS 1406 Applied Descriptive Geometry (2-4) Credit: 4**

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 1304 or DRDS 1405.

**DRDS 2350 Applied Statics I** (3-0) **Credit: 3**

A study of the principles of mechanics of rigid bodies in equilibrium with emphasis in the areas of friction, centroids, center of gravity and moments of inertia.

**DRDS 2351 Applied Statics II** (3-0) **Credit: 3**

A continuation of Applied Statics I. This course covers the application of knowledge and skills relative to the stability of structures and safe loads that can be carried by girders. Activities include computation of the center of gravity of an object when given the appropriate information, a discussion of the variety and strength of material used, and brief practices on designed equilibrium tools and mechanisms.

**DRDS 2401 Pipe Drafting** (2-4) **Credit: 4**

Design and detailing of pipe systems make use of standard practices and symbols; includes single line, double line, plan profile and isometric drawings of pipe systems. Prerequisite: Sophomore standing in the Drafting Program.

**DRDS 2402 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: Sophomore Standing in the Drafting Program.

**DRDS 2403 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 correction diagrams, printed circuits, control circuits, and schematic diagrams. Some review of lettering and mechanical drawing principles. Prerequisite: Sophomore standing in the Drafting Program.

**DRDS 2404 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. Prerequisite: Second semester Sophomore standing in the Drafting Program.

**DRDS 2405 Civil Design Drafting** (3-3) **Credit: 4**

Drafting problems and techniques in civil engineering projects including key maps, drainage, plans and profiles, typical roadway cross sections, earthwork, land development and surveying. Prerequisite: Second semester Sophomore standing in the Drafting Program.

**DRDS 2406 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. Prerequisite: Second semester Sophomore standing in the Drafting Program.

**DRDS 2410 Computer-Aided Drafting I** (2-4) **Credit: 4**

A course designed to introduce the computer to the student of drafting as another means of preparing detailed drawings. Emphasis is placed on equipment familiarization, graphics/terminal functions and the application of computer graphics to the development of drawings to the standards set by industry. Prerequisites: Sophomore standing in Drafting Program and approval of the appropriate college official.

**DRDS 2411 Computer-Aided Drafting II** (2-4) **Credit: 4**

This course is a continuation of DRDS 2410. Emphasis will be placed on the use of the CADAM system as a design and problem-solving instrument. The student will select problems from the drafting field of his choice. Prerequisite: DRDS 2410 and approval of the appropriate college official.

## **Economics (ECON)**

**ECON 1303 Consumer Economics [BUSS 1302]** (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 viewpoints and includes sources of advice and counseling. A course to permit the supervisor to better advise subordinates on economic problems.

**ECON 2301 Macroeconomics (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, and foreign economic policy.

**ECON 2302 Microeconomics (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.

## **Emergency Medical Technician (EMET)**

**EMET 1201 Emergency Medical Technician Supplemental (1-1) Credit: 2**

This course supplements the instruction and course content and types of didactic and practical experiences in EMET 1402. This course in conjunction with EMET 1402, will meet and/or exceed the emergency medical service requirements for all states.

**EMET 1302 Military Medicine (2-2) Credit: 3**

This course increases the military medic's ability to provide pre-hospital care in an isolated environment and prepares the medic in military-specific subjects such as specialty extraction and evacuation; battlefield triage; nuclear, biological and chemical casualty management; preventive medicine; field hygiene and sanitation; as well as specific medical support procedures such as radio telephone. Portions of this course may be used to satisfy the National Registry requirements for continuing education. Prerequisite: EMET 1402 or equivalent in MOS 91A, 91B, 91C (Army), HM-0000, HM-8404 (Navy), 902 series (Air Force).

**EMET 1303 First Responder (2-1) Credit: 3**

This course prepares the first responder, or medically untrained, to be proficient in not only providing basic life support to victims of emergencies, but also in taking any actions necessary to minimize the patient's discomfort and prevent further injury. This course has been designed to meet the specifications of the Department of Transportation's First Responder Training Course.

**EMET 1304 Drug and Alcohol Abuse (3-0) Credit: 3**

This course discusses the physiological and psychological effects of drug and alcohol abuse on the individual, the family and on society. Students learn the symptoms of drug and alcohol abuse and how to recognize them in individuals. The course discusses the problems causing abuse and how to understand and help the user. The course also includes discussion of the organizations available for treatment of the user, their effectiveness and an evaluation of alternate treatment programs.

**EMET 1305 Emergency Medical Seminar (3-0) Credit: 3**

This course is designed to keep the Emergency Medical Technician abreast of new developments, trends, current major issues, legal professional concerns, and other important factors that have an impact upon the emergency medical field. This course may be repeated for credit.

**EMET 1402 Emergency Medical Technician - Ambulance (2-5) Credit: 4**

This course exposes the student to the didactic and practical experiences outlined in the 1986 Department of Transportation's NHTSA curriculum. All of the skills and knowledge elements necessary to deal with the broad spectrum of illness or injury in the pre-hospital phase of care are included.

**EMET 1403 Emergency Medical Technician - Recertification (2-4) Credit: 4**

Covers all didactic and practical experiences covered in courses EMET 1402, 1201, and 1302. Through National Registry approval this course provides the necessary continuing education, CPR, and refresher training requirements needed for national recertification. Prerequisite: EMET 1402 or certification as an EMT.

**EMET 2101 Introduction to Paramedic (1-0) Credit: 1**

This course provides an overview of the paramedic's roles in both civilian and military environments, the paramedic's function, legal responsibilities and career opportunities. Prerequisite: EMET 1402 or EMET 1403.

**EMET 2301 Disaster Planning (3-0) Credit: 3**

This course is designed to help administrators to prepare emergency operation plans and to train existing personnel to cope with a disaster if it should strike. The course provides valuable information on how to plan and prepare efficient responses to earthquake, floods, fires, nuclear attacks and other emergency situations. It includes elements of disaster preparation, organization of emergency operation plans, training of personnel, the emergency operations center and coordination with other organizations.

**EMET 2302 Emergency Medical Center Management (3-0) Credit: 3**

This course provides the student with an understanding of management theories and functions as they relate to the operations of an emergency medical center. Prerequisite: MGMT 1305.

**EMET 2303 Psychology of Emergencies (3-0) Credit: 3**

This course covers communicating with families involved in emergencies and the EMT's role in counseling. It also considers personality structures, defense mechanisms, and the developmental stages of man.

## **Engineering (Civil and General) (ENGR)**

**ENGR 1101 Introduction to Engineering (1-0) Credit: 1**

Introduction to all engineering fields and the opportunities within the scope of professional work.

**ENGR 1304 Engineering Graphics [ENGR 1301] (2-4) Credit: 3**

Freehand and instrument drawing, dimensioning, fastening, pictorial methods, charts and graphs, projections drawing, geometry of graphical construction. Required for beginning engineering students.

**ENGR 1305 Descriptive Geometry [ENGR 1302] (2-4) Credit: 3**

Involves points, 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 1304.

## **English (ENGL)**

**ENGL 1301 Composition and Rhetoric I (3-0) Credit: 3**

A study of the principles and techniques of written compositions including sentence structure, paragraph development, and paper organization. Also stresses the development of critical thinking as it applies to the textual analysis of expository prose.

**ENGL 1302 Composition and Rhetoric II (3-0) Credit: 3**

A continuation of ENGL 1301, emphasizing in more depth the principles and techniques of written compositions. Focus of compositions is on the development of critical thinking as it relates to the textual analysis of literary genres: the short story, poetry, drama, and the novel. Formal research paper is required. Prerequisite: Completion of ENGL 1301 with a grade of "C" or better, or equivalent.

**ENGL 1313 College Reading [ENGL 1308] (2-1) Credit: 3**

Designed for students who wish to improve their abilities in analytical reading and critical thinking. Development of inferential and interpretive comprehension skills as well as higher levels skills in analysis, synthesis, and evaluation are stressed. Prerequisite: College level reading skills.

**ENGL 1379 Communications Skills [ENGL 1309] (3-0) Credit: 3**

Instruction in grammar and diction, writing expository papers, writing effective business correspondence and reports, and oral presentations.

**ENGL 2311 Technical Writing [ENGL 2309] (3-0) Credit: 3**

Study of writing in technical, scientific, and business fields; reports, proposals, and other papers. The course includes presentation of oral reports. Prerequisite: ENGL 1301 or experience with WordPerfect.

**ENGL 2322 English Literature I [ENGL 2301] (3-0) Credit: 3**

A survey of English literature from Beowulf through the eighteenth century. Prerequisite: ENGL 1301 and ENGL 1302, or equivalent.

**ENGL 2323 English Literature II [ENGL 2302] (3-0) Credit: 3**

A survey of English literature beginning with the pre-Romantic periods through the early twentieth century. Prerequisite: ENGL 1301 and ENGL 1302, or equivalent.

**ENGL 2326 American Literature I [ENGL 2305] (3-0) Credit: 3**

A survey of the major American writers from the Colonial Period to Whitman. Prerequisite: ENGL 1301 and ENGL 1302, or equivalent.

**ENGL 2327 American Literature II [ENGL 2306] (3-0) Credit: 3**

Survey of major American writers from Whitman to the present. Prerequisite: ENGL 1301 and ENGL 1302, or equivalent.

**ENGL 2331 World Literature I [ENGL 2303] (3-0) Credit: 3**

A survey of masterpieces of Western world literature from Homer through the Renaissance. Prerequisite: ENGL 1301 and ENGL 1302, or equivalent.

**ENGL 2332 World Literature II [ENGL 2304] (3-0) Credit: 3**

A survey of masterpieces of Western world literature from the Renaissance to the twentieth century. Prerequisite: ENGL 1301 and ENGL 1302, or equivalent.

## **Finance and Banking (FIBA)**

**FIBA 1301 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 (trusts, international and safe deposit), accounting and marketing, external and internal controls and the public service obligations of banks.

**FIBA 1302 Money and Banking (3-0) Credit: 3**

The 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 money supply; cash assets and liquidity management; investments, loans, earnings and capital; the Federal Reserve and its policies and operations, Treasury Department operations; and the changing international monetary systems.

**FIBA 1303 Credit Department Management (3-0) Credit: 3**

The primary objective of this course is to provide material which can be used by small and medium size financial institutions in strengthening their performance of the commercial lending function. It includes an analysis of the essential elements of the credit function, a discussion of key operations and training areas, and information on types of functional or departmental organization which can be used to carry out the required tasks.

**FIBA 1304 Residential Mortgage Underwriting (3-0) Credit: 3**

This course teaches the student the importance of the underwriting decision and how to logically evaluate both the borrower and the property. All elements that enter into the decision-making process are covered. Subjects include, but are not limited to: income analysis, financial statement analysis of self-employed person, fundamentals of residential property appraisal and property standards.

**FIBA 1305 Law and Banking Principles (3-0) Credit: 3**

This course serves as a guide to law and legal issues with special emphasis on the Uniform Commercial Code. Subjects include the sources and applications of banking law, torts and crimes, contracts, real and personal property, bankruptcy, and the legal implications of consumer lending. It is designed for entry level and office level personnel in the financial services industry who require an overview of the legal aspects of banking.

**FIBA 2301 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 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's supervisory role.

**FIBA 2303 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 Consumer Lending (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 Investment Principles (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 relationships 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 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 of cash budgets are studied. Prerequisite: ACCT 2301 or ACTE 1301.

## **Fire Protection (FPRT)**

**FPRT 1301 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 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 Fire Protection Systems****(3-0) Credit: 3**

Study of the required standards 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 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 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 communication systems; importance of public relations, report writing and record keeping; measurement 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 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 Fire Service Chemistry II****(3-0) Credit: 3**

A continuation of FPRT 1307. Prerequisite: FPRT 1307.

**FPRT 2301 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 layout, fire prevention programs, extinguishing factors and techniques, hazardous situation and prevention methods. Gaining cooperation between the public and private fire department organization. Study of elementary industrial fire hazards in manufacturing plants. Prerequisite: FPRT 1301.

**FPRT 2302 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 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 lighting and control.

**FPRT 2304 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 city's liability for acts of the fire department and fire prevention bureaus. An in-depth study of various cases concerning fire fighters, fire departments and municipalities.

**FPRT 2305 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 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 law, decisions and opinions; kinds of arsonists, interrogation procedures, cooperation and coordination between fire fighters and arson investigators and other related topics. Prerequisite: FPRT 2305.

**FPRT 2308 Hazardous Materials 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 radioactive materials. The formation of toxic fumes and health hazards is also stressed. Ignition and combustion characteristics of gases, liquids, and solids related to free-burning fire and explosion phenomena. Familiarization with radiological instruments, human exposure to radiation, decontamination procedures, common uses of radioactive materials and operational procedures. Prerequisite: FPRT 2303.

**FPRT 2309 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 examinations 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 Marine Fire Protection (3-0) Credit: 3**  
This course covers the specific fire protection concerns of the maritime industry. It provides an in-depth study of the causes of fires, fire prevention, special fire fighting techniques, special equipment and fire safety as they relate to watercraft.

**FPRT 2314 Fire Service Hydraulics (3-0) Credit: 3**  
This course covers the fundamental concepts needed to solve a broad range of fire protection hydraulic problems. It includes the measurements of water from flowing orifices; the characteristics of water flow through conduits; the pressure, volume and frictional characteristics of mobile and stationary fire pumps; the trajectory and patterns of fire streams; and the relationship between fixed and mobile fire suppression equipment.

**FPRT 2404 Fire Fighting Tactics and Strategy (4-0) Credit: 4**  
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 Manual Aid and large scale command problems. Prerequisite: Completion of, or registration therein of, all other required fire courses.

## **Food Service Management (FSMG)**

**FSMG 1300 Quantity Food Production (3-0) Credit: 3**  
An introductory course in culinary skills. Covers basic institutional food preparation. Emphasizes the use of equipment and tools common to an institutional food service kitchen. Stresses the human relations challenges inherent to large food service programs.

**FSMG 1301 Supervising Kitchen Administration (3-0) Credit: 3**  
A study of the supervisory procedures necessary to control food, beverage operations, including supervision of the preparation crew, with emphasis on weights and measure, portion control, converting standard recipes and production formulas. Secondary emphasis is placed on daily food production reports, taxes, reports to all levels of government, and the metric system.

**FSMG 1302 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. Students must pass the national certification examination to receive credit for this course.

**FSMG 1303 Sanitation and Safety\*****(3-0) Credit: 3**

This course includes a study of personal cleanliness; sanitary practices in food preparation; cause; investigation and control of illness caused by food contamination; food storage and refrigeration; sanitation of dishes, equipment, and kitchens; cleansing materials, garbage and refuse disposal; safety precautions and accident prevention. Upon completion of this course, the student will have sufficient knowledge to pass the Educational Institute of National Restaurant Association (NRA) sanitation examinations. Students must pass the national certification examination to receive credit for this course.

**FSMG 1304 Work Organization****(3-0) 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 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 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 control, types of menus for various public and private institutions. Students must pass the national certification examination to receive credit for this course. Prerequisite: FSMG 1302.

**FSMG 1307 Meat Science\*****(3-0) Credit: 3**

An introduction 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. Students must pass the national certification examination to receive credit for this course.

**FSMG 1308 Restaurant Merchandising****(2-3) Credit: 3**

Sales promotion, interior decor, types and uniformity of service, food and beverage display, menu and room styling.

**FSMG 1309 Short Order Food Preparation****(1-6) Credit: 3**

Short order food preparation is an introductory course that includes instruction on the basic equipment, tools and preparation techniques necessary to qualify a student to operate a short order food station sufficiently efficient to handle large numbers of customers in a short time.

**FSMG 1401 Food Preparation and Serving****(3-0) Credits: 4**

This course is an introduction to techniques of food preparation. It includes the evaluation of the preparation of vegetables, pastries, oven dishes, soups, salads, meats, fish, and poultry. Techniques include the evaluation of experimental cookery, food marketing, food preservation, serving and table service. The laboratory portion will be accomplished through visits of local food service facilities, conducted and coordinated by the instructor. Prerequisite: FSMG 1303.

**FSMG 1402 Basic Baking and Pastry Production****(2-6) Credit: 4**

This is an introductory course in baking and pastry production in a commercial food service establishment or in a bakery. Students learn how to properly use the tools and equipment used in baking and how to make breads, yeast-raised dough products, fried bakery products (donuts and crullers), variety pies, layer cakes and cupcakes, puff pastries, variety cookies, and how to decorate cakes and pastries. Prerequisite: FSMG 1303.

<b>FSMG 2150 Food Purchasing and Financial Management</b>	<b>(1.3-1.3)</b>	<b>Credit: 1</b>
Preparing financial statements, food pricing, quality and quantity, purchasing, and controlling food costs.		
<b>FSMG 2151 Nutrition and Menu Planning</b>	<b>(1.5-1.5)</b>	<b>Credit: 1</b>
Nutrition and menu planning in the food service industry.		
<b>FSMG 2201 Food Service Terminology</b>	<b>(2-0)</b>	<b>Credit: 2</b>
This course is an introduction to the terminology utilized in the food service industry.		
<b>FSMG 2250 Advanced Culinary Skills</b>	<b>(1-3)</b>	<b>Credit: 2</b>
This course is designed to give fine points of culinary skills and theory. Preparation of classical food menus and the arts of serving foods.		
<b>FSMG 2251 Culinary Skills</b>	<b>(2-2)</b>	<b>Credit: 2</b>
Culinary Skills introduces the student to the methods, techniques, and terminology needed to effectively manage a quality food kitchen.		
<b>FSMG 2252 Nutrition and Physical Fitness</b>	<b>(2.5-0)</b>	<b>Credit: 2</b>
The relationship between proper nutrition and physical fitness. Lectures deal with calorie consumption, apathy, self-discipline, performance, and other character deficiencies as they relate to obesity and physical fitness.		
<b>FSMG 2303 Cafeteria Management*</b>	<b>(3-0)</b>	<b>Credit: 3</b>
This course points out the specific differences between an industrial cafeteria and conventional restaurant and explains how to cope with the unusual problems of industrial and institutional feeding. Students must pass the national certification examination to receive credit for this course. Prerequisite: FSMG 1301 or MATH selection.		
<b>FSMG 2304 Hospitality Industry Sales Promotion*</b>	<b>(3-0)</b>	<b>Credit: 3</b>
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, converts these prospects into customers, and keeps customers returning and buying. Students must pass the national certification examination to receive credit for this course.		
<b>FSMG 2306 Layout and Design</b>	<b>(3-0)</b>	<b>Credit: 3</b>
Fundamentals of equipment layout for optimum production and operational efficiency. This course will include procedures to design and decorate remodeling projects.		
<b>FSMG 2353 Creative Cooking</b>	<b>(2-3)</b>	<b>Credit: 3</b>
Creative cooking is the art of combining creativity and design with superior food preparation and serving. The art of "Garde Manger" is taught. Prerequisite: FSMG 1303.		
<b>FSMG 2355 Kitchen Management and Food Servicing</b>	<b>(2.5-2.5)</b>	<b>Credit: 3</b>
This course introduces the student to the methods, techniques, and terminology needed to effectively manage a quality food kitchen.		
<b>FSMG 2356 Gourmet Cooking</b>	<b>(2-3)</b>	<b>Credit: 3</b>
Gourmet Cooking introduces the student to the art of cooking as practiced by professional master chefs. Prerequisite: FSMG 1303.		
<b>FSMG 2401 Classical Food Preparation</b>	<b>(3-3)</b>	<b>Credit: 4</b>
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 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 exhibition, buffets, centerpieces, and the role of the Executive Chef will be emphasized. This course will include an exhibition planned and prepared by the student. Prerequisite: FSMG 1303.

**FSMG 2452 The Chef's Course (2.5-2.5) Credit: 4**

This course is designed to develop a combination of good management practices, food preparation expertise and artistic creativity in laboratory exercises in food preparation. Students will be required to prepare and serve a buffet meal. Prerequisite: FSMG 1303 and 2401.

**FSMG 2453 Dining Facility Management (2.5-4) Credit: 4**

This course is designed to provide Food Service personnel the technical knowledge and skills to manage and operate a unit or consolidated dining facility under garrison or field conditions.

\* Nationally certified courses.

## **French (FREN)**

**FREN 1411 Beginning French I [FREN 1401] (4-2) Credit: 4**

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

**FREN 1412 Beginning French II [FREN 1402] (4-2) Credit: 4**

Elementary grammar is completed. Pronunciation, drill, and conversation based on reading are continued. Stress is given to everyday conversational phrases. Prerequisite: FREN 1411.

**FREN 2311 Intermediate French I [FREN 2301] (3-0) Credit: 3**

This course includes grammar review, composition, and reading of French masterpieces, with conversation based on material read. Prerequisite: FREN 1411, 1412 or two years of French in an accredited high school.

**FREN 2312 Intermediate French II [FREN 2302] (3-0) Credit: 3**

This course continues the drill on syntax as needed for reading, composition, and conversation. Prerequisite: FREN 2311.

## **Geography (GEOG)**

**GEOG 1300 Introduction to Geography [GEOG 1301] (3-0) Credit: 3**

This is an introductory level course that combines physical and cultural geography using a regional approach. The course examines the physical environment of the earth and explains maps; covers man's adaptation to environmental extremes; and explores man's use of his environment, ranging from adaptation within a tribal culture to the highly modernized urban world.

**GEOG 1301 Elements of Physical Geography [GEOG 2301] (3-0) Credit: 3**

A course which examines the physical characteristics of the Earth's environment, using maps as a tool for expressing location and interrelationships. Principle topics to be discussed are the atmosphere and oceans, weather, climate, environments of earth materials and vegetation, land forms and their development.

**GEOG 1302 Cultural Geography [GEOG 2302] (3-0) Credit: 3**

A survey of human geography and the ways mankind adapts and reacts to his environment. Cultural is defined and the various aspects of culture are described and compared. Important topics to be discussed are population, health, livelihoods, communities, urbanization, organizational interaction (including economics and politics), present and future global problems.

**GEOG 1303 World Regional Geography [GEOG 2303] (3-0) Credit: 3**

The study of major developing and developed regions of the world stressing their similarities and differences, and their physical and cultural interrelationships. An additional emphasis is the diversity of ideas and practices to be found in those regions.

## Geology (GEOL)

### **GEOL 1301 Earth Science [EASC 1301] (3-0) Credit: 3**

A course designed for Education majors. This course covers the nature of the earth as revealed by geology, astronomy, meteorology, and other related physical sciences.

### **GEOL 1403 Physical Geology [GEOL 1401] (3-3) Credit: 4**

Introductory course in the nature and properties of the material which make up the earth. Topics included are processes of glaciation, volcanism, weathering, and erosion. Modern theories such as plate tectonics are also studied. Field work, including the study of local rocks and minerals, is an integral part of the course.

### **GEOL 1404 Historical Geology [GEOL 1402] (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 1411 Beginning German I [GERM 1401] (4-2) Credit: 4**

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

### **GERM 1412 Beginning German II [GERM 1402] (4-2) Credit: 4**

Elementary grammar is completed. Pronunciation, drill, and conversation based on reading are continued. Stress is given to everyday conversational phrases. Prerequisite: GERM 1411.

### **GERM 2311 Intermediate German I [GERM 2301] (3-0) Credit: 3**

Includes grammar review, composition and practice in conversation, with readings in contemporary German writings, including short stories and some longer works, providing a conversational basis. Prerequisite: GERM 1411, GERM 1412 or two years of German in an accredited high school.

### **GERM 2312 Intermediate German II [GERM 2302] (3-0) Credit: 3**

Continues the drill of syntax as needed for reading, composition and conversation. Prerequisite: GERM 2311.

## Government (GOVT)

### **GOVT 2301 State and Federal Government I (3-0) Credit: 3**

An introductory, survey course on various United States, Texas, and local government topics. This course includes study of the U.S. and Texas constitutions, federalism, local governments, elections in the nation, state and locally, civil liberties, and interest groups.

### **GOVT 2302 State and Federal Government II (3-0) Credit: 3**

Introductory, survey course on various United States, Texas, and local government topics. This course includes studying institutions of the national and Texas governments, to include the executive, legislative, and judicial branches, the bureaucracy, and the public policy including defense and foreign relations as examples.

### **GOVT 2304 Introduction to Political Science [GOVT 1301] (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 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, civil war.

**HIST 1302 History of the United States from 1877 (3-0) Credit: 3**  
Reconstruction, 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 2301 Texas History (3-0) Credit: 3**  
A survey of Texas from the Spanish exploration to the present.

**HIST 2311 Survey of Western Civilization I [HIST 1303] (3-0) Credit: 3**  
An introductory, survey course from the rise of Near Eastern civilization to the conclusion of the French Revolution. Special emphasis is placed on the period 1500-1815. Topics covered include Ancient Times, the Middle Ages, the Renaissance, the Reformation, the Establishment of West-European leadership, the Transformation of Eastern Europe, the Enlightenment, the Scientific Revolution, the French Revolution.

**HIST 2312 Survey of Western Civilization II [HIST 1304] (3-0) Credit: 3**  
An introductory, survey course from 1815 to the present with particular emphasis upon the twentieth century. Topics covered include the international impact of the French Revolution, Reaction vs. Progress, the Industrial Revolution, the Revolutions of 1848, the Rise of large Nation-States, European Imperialism, European Civilization 1870-1914, World War I and the Russian Revolution, Totalitarianism and World War II, the Contemporary World.

**HIST 2370 International Relations and U.S. Foreign Policy (3-0) Credit: 3**  
[HIST 2301]

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 2371, 2372 Military History I and II [HIST 2350, 2351] (3-0) Credit: 3,3**  
Courses designed to give the non-commissioned officer a concept of the development of the U.S. Army from pre-revolutionary days to the present, the effect of society on the structures and development of the Army, and the history of the development of tactics and strategies based on modern technology.

**HIST 2373 U.S. Naval Heritage [HIST 2352] (3-0) Credit: 3**  
This course will enhance the student's appreciation and understanding of the American naval heritage. It will study the events, individuals, technological advances and schools of thought which have affected American naval development.

## **Hotel/Motel Management (HMMG)**

**HMMG 1300 Food and Beverage Management (3-0) Credit: 3**  
This is an introductory course in food and beverage operation, with an introduction to purchasing, receiving, storage, preparation and service. §

**HMMG 1302 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, and includes planning for today and tomorrow. §

**HMMG 1303 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 forms for accounting controls. §

**HMMG 1305 Energy Management (3-0) Credit: 3**  
This course includes techniques that will save money through effective energy conservation methods. Energy management functions to be studied include energy problems facing the hospitality industry, an action plan for energy management, implementing an energy management program and energy management consisting of retrofit and design. §

**HMMG1306 Convention Management and Service (3-0) Credit: 3**

This course defines the scope of various segments of the Convention Market, explains what is required to meet individual needs, and, most importantly, explores methods and techniques that lead to better service. §

**HMMG1307 Tourism and the Hospitality Industry (3-0) Credit: 3**

Presents a comprehensive systems review of tourism, stressing the interrelationships and interdependencies of the various component elements. It explains from a marketing point of view, through practical real-life examples and applications, how tourism works and how it can be utilized by various businesses. §

**HMMG1308 Hotel/Motel Security Management (3-0) Credit: 3**

This course explains the issues surrounding the need for individualized security programs, examines a wide variety of security equipment and procedures, discusses guest protection and internal security for asset protection, and outlines OSHA regulations that apply to lodging properties. §

**HMMG2301 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. §

**HMMG2302 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. §

**HMMG2304 Financial Management (3-0) Credit: 3**

Methods and application of financial management within combined food service facilities. Primary emphasis upon sales accountability and internal controls utilized within bar, dining room, and hotel operational area. Secondary emphasis on budgeting and forecasting with applications of effective labor/sales ratios. Prerequisite: FSMG 1301 or Math Selection. §

**HMMG2305 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. §

**HMMG2306 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. §

**HMMG2307 Marketing of Hospitality Services (3-0) Credit: 3**

This course is designed to provide students with basic knowledge and practical experience which will enable them to develop strategic marketing plans for Hotel/Motel properties. Prerequisite: FSMG 2304. §

**HMMG2308 Food and Beverage Controls (3-0) Credit: 3**

Covers the principles and procedures involved in an effective system of food, beverage, labor and sales income control. Emphasizes the development and use of standards and the calculation of actual costs. Prerequisite: FSMG 1300. §

**HMMG2309 Hospitality Industry Computer Systems (3-0) Credit: 3**

This course provides an overview of information needs of lodging properties and food service establishments; addresses essential aspects of computer systems, such as hardware and generic applications; focuses on computer-based property management systems for both front office and back office functions; and focuses on computer-based restaurant management systems for both service-oriented and management-oriented functions. §



## **Humanities (HUMA)**

### **HUMA 1315 Introduction to Fine Arts [FINA 1301] (3-0) Credit: 3**

This is an introductory course designed to give the student a fundamental understanding of the creation and appreciation of diverse modes of expression through the visual and performing arts, within the context of Fine and Applied Arts.

## **Industrial Fundamentals (INDU)**

### **INDU 1400 Industrial Fundamentals (3-3) Credit: 4**

Required introductory course for students in all of the Industrial Technology curriculums except Air Conditioning. The course includes common hand and power tools, precision measuring devices, electrical test equipment, thread repair, special tools, soldering, bearings and seals, use of publications, basic shop math, and industrial trades safety. This course is a prerequisite or corequisite for all Industrial Technology AAS Degree curriculums except Air Conditioning.

## **Japanese (JAPN)**

### **JAPN 1370 Introduction to Japanese [JAPN 1300] (3-0) Credit: 3**

This course provides students with conversational and academic skills in basic "survival" Japanese by presenting the language in a practical, contextual setting. Grammar is reinforced by example with emphasis on understanding the structure and mastery of the structure in conversation.

### **JAPN 1311 Elementary Japanese I [JAPN 1301] (3-0) Credit: 3**

Introduction to Japanese with attention given to conversation, grammar and the written forms. There will also be readings of simple texts dealing with Japanese life and culture.

### **JAPN 1312 Elementary Japanese II [JAPN 1302] (3-0) Credit: 3**

Continuation of Japanese conversation, grammar and the written forms. Emphasis is on reading texts dealing with Japanese life and culture. Prerequisite: JAPN 1311.

### **JAPN 1411 Beginning Japanese I [JAPN 1401] (4-2) Credit: 4**

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

### **JAPN 1412 Beginning Japanese II [JAPN 1402] (4-2) Credit: 4**

Elementary grammar is completed. Pronunciation, drill, and conversation based on reading are continued. Stress is given to everyday conversational phrases. Prerequisite: JAPN 1411.

## **Law Enforcement (LAW)**

### **LAW 1201 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.

### **LAW 1301 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.

### **LAW 1302 Criminal Investigation I (3-0) Credit: 3**

Investigative theory, collection and preservation of evidence, sources of information, interview and interrogation, uses of forensic sciences, case and trial preparation.

- LAWE 1303 Legal Aspects of Law Enforcement (3-0) Credit: 3**  
Police authority, responsibilities, constitutional constraints, law of arrest, search and seizure, police liability, examples of case law that currently affect police decisions will be reviewed.
- LAWE 1304 The Courts and Criminal Procedures (3-0) Credit: 3**  
The judiciary in the criminal justice system, structure of American Court System, prosecution, right to counsel, pre-trial release, grand juries, adjudication process, types and rules of evidence and sentencing.
- LAWE 1305 Traffic Law (3-0) Credit: 3**  
This course is designed to cover all laws pertaining to the control and enforcement of traffic. The student 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.
- LAWE 1306 Correctional Systems and Practices (3-0) Credit: 3**  
Corrections in the criminal justice system, organization of correctional systems, correctional role, institutional operations, alternate to institutionalization, treatment and rehabilitation, current and future issues.
- LAWE 1307 Crime in America (3-0) Credit: 3**  
American crime problems in historical perspective, social and public policy factors affecting crime; impact and crime trends, social characteristics of specific crimes, and crime prevention.
- LAWE 1308 Fundamentals of Criminal Law (3-0) Credit: 3**  
A study of the nature of criminal law, philosophical and historical development, major definition and concepts, classification of crime, elements of crimes and penalties using Texas statutes as illustrations, criminal responsibility.
- LAWE 1309 Police Systems and Practices (3-0) Credit: 3**  
Analyses of the police profession, organization of law enforcement systems, the police role, police discretion, ethics, police-community interaction, and current and future issues facing police agencies.
- LAWE 1310 Criminal Investigation II (3-0) Credit: 3**  
Modern methods and skills required for criminal investigation, to include discovery methods, development and lifting latent fingerprints, criminal scene sketches, the use of plaster and silicone rubber for reproducing evidence at the crime scene, use of modern investigation aids, and techniques of interviews and interrogations. Prerequisite: LAW 1302.
- LAWE 1314 Community Resources in Corrections (3-0) Credit: 3**  
An introductory study of the role of the community in corrections, community programs for adults and juveniles, administration of community programs, legal issues, and future trends in community treatment.
- LAWE 1315 Street Survival (3-0) Credit: 3**  
This course stresses the preparation, planning and appropriate reactions to hazardous situations for on-duty police officers. Students will gain awareness of the conditions which lead to personal injury and death. Instruction will be given to improve the student's tactical procedures and safeguards while performing police work.
- LAWE 2101 Emergency Medical Aid (1-1) Credit: 1**  
This course will focus on the first aid fundamentals that will be helpful to patrol officers in the event of a first aid emergency situation. Procedures recommended by the American Red Cross will be used as guidelines for this course.
- LAWE 2201 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.

- LAWE 2301 Probation and Parole (3-0) Credit: 3**  
 This course will provide the student with some understanding of the evolution of criminal corrections and explore with the student the many avenues into which the corrections field branches. Develops in each student a basic understanding of the various methods of corrections so that they may function efficiently in the field.
- LAWE 2303 Criminal Justice Seminar (3-0) Credit: 3**  
 A problems course dealing with current criminal justice trends, issues, and literature. Prerequisite: Approval of the appropriate college official. This course may be repeated for credit in courses dealing with different problems and issues.
- LAWE 2304 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.
- LAWE 2306 Traffic Planning and Administration (3-0) Credit: 3**  
 This course consists of the application of traffic problems from the administrative point of view, including traffic engineering, education, and enforcement at the supervisory level.
- LAWE 2307 Penology (Jail Operation and Management) (3-0) Credit: 3**  
 A survey of the basic concepts of penal and correctional rationale as employed by criminal justice administrators. An overview of the operation and management principles of the institutional setting will be examined in-depth.
- LAWE 2308 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.
- LAWE 2309 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 the 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.
- LAWE 2310 Correctional Control and Administration (3-0) Credit: 3**  
 The course prepares the student to perform supervisory functions related to control of prisoners and contraband, segregation and accountability of prisoners, procedures required at correctional facility, emergency measures, prisoner privileges, and the records and reports of the detention center.
- LAWE 2311 Anti-Terrorism (3-0) Credit: 3**  
 This course explores the origins, philosophies, and current trends in worldwide terrorism and hostage taking incidents. Role playing exercises allow students to utilize all the course material in "hands-on" hostage negotiation situations.
- LAWE 2312 Homicide Investigation (3-0) Credit: 3**  
 This course emphasizes the investigative process and teamwork required in analyzing the homicide crime scene. It addresses the roles of the various forensic disciplines in relation to the investigator as well as the functions of the crime laboratory. Additionally, students will learn how to analyze wounds and injuries in drawing conclusions about the cause of death.
- LAWE 2313 Illegal and Controlled Substances (3-0) Credit: 3**  
 This course presents an in-depth approach to the medical and legal aspects on the topic of illegal and controlled substances. Students will learn how to identify dangerous drugs by their distinct characteristics and explain their effects on the human body. Most importantly, student will learn the theories and principles of drug law enforcement which will prepare them to bring a drug case successfully to prosecution.

**LAWE 2314 Organized Crime (3-0) Credit: 3**

This course provides the student with information on the growth and development of organized crime and its effect on the majority of crimes committed in the U.S. today. Students will also learn about the different facets of organized crime and will analyze how the federal and state authorities are fighting it.

**LAWE 2315 Interviewing and Interrogation Techniques (3-0) Credit: 3**

This course provides the student with an understanding of the communication process and the techniques for improving listening skills. This knowledge has a direct application for the police officer who must conduct interviews/interrogations on the job.

**LAWE 2318 Computer Theft (3-0) Credit: 3**

This course discusses the types of computer crime, the methods that are used, the different categories of the perpetrators, the laws involved, methods of prevention and the future outlook. Prerequisites: COSC 1300 or higher or MISC 1451 or higher.

**LAWE 2350 First Responder (3-0) Credit: 3**

This course covers health knowledge with regard to individual and group welfare. It is concerned with the principles and practices of first aid for the sick and injured for the non-medically trained individual. Emphasis is given to the preventive aspects as well as care following injury or illness.

## **Legal Assistant (LEGA)**

**LEGA 1302 Legal Office Ethics and Management (3-0) Credit: 3**

This course will provide the ethical considerations applicable to the legal assistant; office organization, specialized bookkeeping, and accounting for attorneys' fees and billing procedures, scheduling and calendaring, legal research, management of personnel, proofreading, management of investigations and file preparation, legal drafting, management and organization procedures for specialized areas of law, special considerations with respect to attorney's trust account, preparation of law office forms, check list and files, and disbursement on behalf of clients.

**LEGA 1304 Principles of Family Law (3-0) Credit: 3**

The legal aspects of divorce and annulment separation, defense, custody, habeas corpus, support, alimony, tax consulting, out-of-state divorces and validity and jurisdiction service will be discussed. Students will receive a review analysis of separation and custody agreements, as well as the other documents involved in divorce proceedings.

**LEGA 1305 Law of Real Property and Real Estate Transactions (3-0) Credit: 3**

Study of the law of real property and in-depth survey of the more common types of real estate transactions and conveyances, such as deeds of trust, etc.; drafting problems involving projects related to the subject matter; study of the system for recording and search of public documents.

**LEGA 1306 Criminal Law (3-0) Credit: 3**

A study of the Texas Penal Code including definitions of various kinds of defenses and trial procedures; the United States Constitution as it pertains to criminal law; practice in drafting subpoenas, writs, briefs and other trial papers.

**LEGA 1307 Civil Litigation (3-0) Credit: 3**

This course is an overview of civil litigation in both state and federal court with particular emphasis on the areas in which a legal assistant can assist the trial attorney. Particular attention is paid to preparation for litigation (interviewing client and witnesses, reviewing public information), discovery proceedings (interrogatories, request for admissions, depositions and document production) pre-trial proceedings (motions to dismiss, motions for summary judgment, pre-trial orders), and trial (witnesses and exhibits). Attention is also devoted to practical techniques required to cope with protracted or complex litigation, including organization of pleadings, documents and depositions; preparation of summaries, chronologies

and indices; and maintaining a complex file in an orderly manner. Mention is made of the legal theories involved in complex litigation (e.g., products liability, civil rights, securities and antitrust). Principal emphasis is on procedural techniques rather than substantive areas of law.

**LEGA 1308 Consumer Protection and Bankruptcy (3-0) Credit: 3**

A study of consumer law for the paralegal, business person, and consumer, of legislation and legal rights surrounding the purchase of consumer goods and services bought primarily for personal, family, or household purposes, to include the Consumer Credit Protection Act, the Uniform Consumer Credit Code, and the Fair Debt Collection Practices Act, as well as a survey of federal and state deceptive trade practices act and automobile "lemon laws." Students will also learn the appropriate federal, state, and local administrative bodies to contact in case of consumer problems and some of the procedures involved. This course will also give an in-depth study of both debtor and creditor rights in debt relief and bankruptcy. No prerequisite required.

**LEGA 1309 Military Law I (3-0) Credit: 3**

An introduction to the military legal system for junior military legal clerks as well as civilian practitioners who deal with the military. Topics covered include the military Judge Advocate General's Corps organization and structure, the structure and operation of field offices, Staff Judge Advocates, Post Judge Advocates, and Command Judge Advocates. An introduction to the Uniform Code of Military Justice and appropriate military regulations that cover military law subjects is included. This course will also serve as an introduction to the practice of military justice, claims, legal assistance, administrative law, and civil law as practiced in a typical Staff Judge Advocate's Office.

**LEGA 1401 Introduction to Paralegalism (4-0) Credit: 4**

This course provides a general introduction to the law with emphasis on the role of the legal assistant. To give a Legal Assistant student the necessary legal background, topics to be covered include the American system of law (constitutional law, statutory law, criminal law and tort law); court systems; and court procedures. General concepts of law are introduced for students with no specific prior legal knowledge. This serves as the introductory course for the program of Legal Assistant.

**LEGA 1403 Military Law II (4-0) Credit: 4**

A more in-depth look at the operation and management of the military's Judge Advocate General's Corps. Detailed coverage of military justice, claims, legal assistance, administrative law, and civil law, with detailed review of the Uniform Code of Military Justice and appropriate military and federal regulations. Preparation of legal documents used in the military adds a practical aspect to the material, which will include charge sheets, claims forms, and administrative and disciplinary appeals.

**LEGA 2301 Tort and Personal Injury (3-0) Credit: 3**

A study of the fundamental principles of evidence and of the law of torts and insurance, including special research assignments related to the subject matter; consideration of the techniques of investigation involved in the lawyer's handling of tort and insurance claims and workmen's compensation; a study of the various forms of pleadings involved in commencing such claims in court actions. This course will also cover how to use cameras, tape recorders, video equipment and other investigative equipment, documenting cases and gathering evidence. Prerequisite: LEGA 2306.

**LEGA 2302 Contract Law (3-0) Credit: 3**

A study of the law of personal property, contracts, including those special forms related to the law of sales and credit transactions, special drafting problems of various instruments and legal research projects; and a survey of the Uniform Commercial Code and its effect on the course subject matter. Prerequisite: LEGA 1402.

**LEGA 2303 Business Organizations (3-0) Credit: 3**

A study of the formation and operation of corporations, partnerships, limited partnerships, business trusts and other business vehicles, including a survey of the fundamental principles of law applicable to each; special research projects related to the subject matter. Prerequisite: LEGA 1402.

**LEGA 2306 Techniques of Legal Research (3-3) Credit: 3**

This course focuses on the importance of legal research as part of a legal assistant's responsibilities. It explores principles of legal research, kinds of law books, components of a law book, citations, reading and finding constitutional law, regulations, cases, law and statutory law. Students will learn how to use the various legal research tools such as indexes, digests, Shepards, and treatises. Other sources of research, the federal and state codes and reports and administrative regulations will also be covered.

**LEGA 2402 Income Taxation and Legal Accounting (3-3) Credit: 4**

Study of federal, state and local income taxation of individuals and taxpaying entities such as estates, trusts and corporations. Emphasis is placed on the preparation of basic tax returns and other tax-related documents. The course also includes a general introduction to accounting as it relates to legal problems. Prerequisites: LEGA 1402 and ACCO 2403 or 2404.

**LEGA 2405 Wills, Trust and Probate (3-3) Credit: 4**

The forms and principles of law for wills and trusts are covered. The organization and jurisdiction of the Texas Probate Court are studied. The administration of estates under Texas Probate Law is analyzed and estate and inheritance taxes are reviewed. Prerequisite: LEGA 1401 and LEGA 1402. 1301.

## **Maintenance Technology (MTNT)**

**MTNT 1214 Fundamentals of Concrete and Masonry I (2-2) Credit: 2**

This course is an introduction to the use of concrete in the building trades industry. The student will learn safety procedures, proper use of tools and equipment, material types and uses, basic blue print reading, materials estimating, and state and federal guidelines regulating the trade. Concrete construction techniques, setting of forms and reinforcement, various concrete mixes, and finishing techniques will also be covered.

**MTNT 1215 Fundamentals of Concrete and Masonry II (2-2) Credit: 2**

This course is a continuation of MTNT 1214. The student will learn the basic theories of masonry applications, choose materials, properly use tools and equipment, prepare and use mortar and do basic brick construction designs, complete simple walls and corners and care for and repair brick masonry. Prerequisite: MTNT 1214.

**MTNT 1401 Carpentry I (3-3) 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: INDU 1400.

**MTNT 1402 Electricity (3-3) 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: INDU 1400.

**MTNT 1411 Basic Masonry I (3-6) Credit: 4**

This course is an introduction to the highly skilled craft of masonry and safety methods, practices and proper use of tools and equipment. The student will learn the names, uses, and maintenance of the basic masonry tools and equipment. A basic study of masonry materials and federal and state guidelines regulating the trade, safety, and building plans.

**MTNT 1412 Basic Masonry II (3-5) Credit: 4**

This course covers the theory and practical applications of the basic bricklaying techniques such as mortar making and spreading, setting courses and laying of brick. Prerequisite: MTNT 1411.

**MTNT 1413 Intermediate Masonry I (3-6) Credit: 4**

The student will learn the theory and practical applications of laying straight leads and walls using standard bonds, and the construction of piers. Use of plain and reinforced mortars will be emphasized. Prerequisite or corequisite: MTNT 1412.

**MTNT 2402 Carpentry II****(3-3) Credit: 4**

This course is a continuation of MTNT 1401, with additional emphasis placed on cabinetry, exterior and interior trim and finish work, including door and hardware installation. Prerequisite: MTNT 1401.

**MTNT 2403 Plumbing I****(3-3) Credit: 4**

This course covers the theory and practical application of 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: INDU 1400.

**MTNT 2404 Painting and Refinishing****(3-3) 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: INDU 1400.

**MTNT 2405 Foundations, Framing, and Roofing****(3-3) Credit: 4**

The student will be introduced to form fabrication, setting foundations, setting piers and castings and will practice framing and roofing residential buildings. Students will also have practical exercises in roofing. The course also covers modern placement methods of materials for structures and building layout systems. Prerequisite: MTNT 1401.

**MTNT 2406 Building Materials and Estimating****(3-3) Credit: 4**

This course begins with a study of the manufacturing process, uses, and selection of building construction materials, and continues with exercises in estimating areas, volumes of concrete, foundations, linear and board foot requirements, wall framing, ceiling joist, roof rafter and sheathing material requirements. Prerequisite: MTNT 1401.

**MTNT 2407 Interior-Exterior Finishing****(3-3) Credit: 4**

A study of interior and exterior finishing. The topics covered are cornice treatment, roof coverings, window installation and trim, exterior doors, frames and trim, exterior wall coverings which are typically applied by carpenters, insulation and vapor barriers, wall and ceiling coverings, finishing floors, stair finish, shelving and interior trim. The student will also learn the importance of truing areas where cabinets will be installed. Prerequisite or corequisite: MTNT 2405.

**MTNT 2408 Mill Cabinetry Construction and Installation****(3-3) Credit: 4**

This course is designed to teach the student to plan operations, select lumber and perform a variety of operations and basic skills required in mill cabinetry. Students will receive practical experience in layout, construction, installation of cabinet work and applying plastic laminates. Prerequisite or corequisite: MTNT 2402.

**MTNT 2409 Milling Machines****(3-3) Credit: 4**

Practical application in the basic skills in the set-up and operation of wood machines. The course also covers mass production of fine cabinetry and mill work and wood finishing. Prerequisite or corequisite: MTNT 2408.

**MTNT 2410 Plumbing II****(3-3) Credit: 4**

This course is a continuation of MTNT 2403 Plumbing I with additional emphasis on "roughing-in" procedures. Course content will include hot and cold water systems, natural gas and propane piping, circulation systems, measuring and siting in accordance with established codes, cost estimating, and sprinkler systems. Also included are the procedures involved in cast iron pipe installation. Prerequisite: MTNT 2403.

**MTNT 2414 Intermediate Masonry II****(3-5) Credit: 4**

This course is designed to develop the student's ability to lay brick to the line, alone and in group situations with maximum efficiency, safety and work quality. The theory and practice of special construction such as bond patterns, fire places, arches and lintels will be covered. Prerequisite: MTNT 1413 or consent of the appropriate college official.

**MTNT 2415 Advanced Masonry I and Blueprint Reading**

**(3-6) Credit: 4**

This course is designed to teach the student how to read masonry blueprints and the relationship with other trade construction features. Students will learn how to lay out and build masonry structures in compliance with the dimensional and material specifications of the blueprints. The student will use a blueprint to build masonry structures with the laying of brick, cement masonry units and rock. Prerequisite: MTNT 2414 or concurrent enrollment.

**MTNT 2416 Advanced Masonry II and Estimating**

**(3-6) Credit: 4**

This course will teach the Masonry student the skills necessary to estimate the amount and cost of building material, mortar, equipment and other materials required to complete a given job. The student will also learn how to estimate man hours required and convert all of the above estimations into a monetary figure used in bidding and how to use estimation formulas. It also provides additional training in bricklaying. Prerequisite: MTNT 2415 or consent of the appropriate college official.

**Management (MGMT)**

**MGMT 1158 Training Manager's Workshop**

**(1.5-0) Credit: 1**

This course is designed for battalion and company commanders and S-3s for their training management duties and stresses training status, goals, priorities, resources and short and long term plans.

**MGMT 1171 Personnel Counseling Seminar**

**(1-0) Credit: 1**

This course covers the major theories of counseling and the use of basic influence and attending skills.

**MGMT 1301 Organization and Management**

**(3-0) Credit: 3**

Organizational structure can have considerable impact on the manner in which an organization functions. Students study 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 with how the organization must be structured to fit its environment and operation.

**MGMT 1302 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 Fundamentals of Industrial Management**

**(3-0) Credit: 3**

Application of the system's approach of 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 Work Organization**

**(3-0) 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 process and work distribution methods, quantity and quality control planning and the current impact of governmental guidelines upon such procedures.

**MGMT 1305 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 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 Insurance**

**(3-0) Credit: 3**

Introduction to theory and practice of insurance, including life, fire, automobile and personal and business risk.



- MGMT 1308 Small Business Management (3-0) Credit: 3**  
Methods and applications of financial management in a small business. Primary emphasis on internal controls and sales accountability. Secondary emphasis on budgeting, forecasting, effective sales/labor ratios, licensing requirements.
- MGMT 1309 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 1381 Management of Performance Oriented Training (3-0) Credit: 3**  
**[MGMT 1201]**  
A course designed to provide a performance oriented approach of managing training in which the manager learns to establish performance oriented objectives, tests, and follow-up evaluations.
- MGMT 1382 Briefing Techniques, Aids and Devices (3-0) Credit: 3**  
**[MGMT 1202]**  
A course designed to provide the manager with the capability of employing proper briefing methods and to develop the skills required to produce briefing aids to include charts, graphs, posters, slides, filmstrip, transparencies, opaques, and other media.
- MGMT 1383 Evaluation of Instruction and Training (3-0) Credit: 3**  
**[MGMT 1203]**  
A course designed to provide the manager with the rationale, methods, and procedures for evaluating the effectiveness and efficiency of instruction training. Emphasis will be directed toward evaluating performance oriented training and developing the suggestions for improvement which can be provided to management.
- MGMT 1384 Setting Objectives and Goals [MGMT 1204] (3-0) Credit: 3**  
A course designed to provide managers with the processes involved in defining objectives, determining desired goals, and analyzing performance training to enhance achievement of goals and objectives.
- MGMT 1385 Analysis of Training Requirements [MGMT 1205] (3-0) Credit: 3**  
Designed to provide managers with techniques for determining organizational and personnel training requirements. Definition of needs and ensuring they are compatible with available resources will be stressed.
- MGMT 1386 Professional Resource Management (3-0) Credit: 3**  
**[MGMT 1206]**  
A course designed to provide managers with the capability to assist subordinates in the screening, selection, evaluation, and application of employee training programs.
- MGMT 1387 Professional Development of the Manager (3-0) Credit: 3**  
**[MGMT 1207]**  
A course designed to equip leaders with skills necessary to provide assistance to subordinates in problem solving. Emphasis will be placed on effective, active and passive performance by leaders which will correct mistakes or reinforce good performance that will cause individuals to be motivated.
- MGMT 1388 The Training System Management [MGMT 1208] (3-0) Credit: 3**  
A course designed to provide managers with methods required to plan, organize, staff, influence, and control training. The main purpose will be to develop a plan and employ limited resources to accomplish systems objectives.
- MGMT 1389 Managerial Theories [MGMT 1209] (3-0) Credit: 3**  
A course designed to provide examination of managerial theories to include management functions, decision-making skills, problem solving techniques, and performance standard oriented approaches to management.

<b>MGMT 2101 Stress Management</b>	<b>(1-0)</b>	<b>Credit: 1</b>
This course identifies the factors causing stress, shows how to interpret the signs of stress and explains the basic fundamentals involved in the management of personal and organizational stress. The instruction covers the most common causes of stress in the work place and prescriptive measures that can be taken by the manager to obtain high performance and low stress levels within the organizational setting.		
<b>MGMT 2102 Management Seminar</b>	<b>(1-0)</b>	<b>Credit: 1</b>
A course that deals with trends, issues, advancements and literature in the management field.		
<b>MGMT 2103 Time Management</b>	<b>(1-0)</b>	<b>Credit: 1</b>
This course enables the student to understand the role time plays in one's personal and professional life and to perceive time as the one element that cannot be created in greater quantities. Instruction includes a study of the constraints that time places over individual lives and the techniques that managers and workers can employ to accommodate their goals.		
<b>MGMT 2104 Income Tax</b>	<b>(1-0)</b>	<b>Credit: 1</b>
This seminar is designed as a practical, hands-on approach to the basic fundamentals of income tax preparation for the individual to complete the Form 1040, 1040A, or the 1040EZ. Information for all aspects of this preparation will be provided in a general manner and will not delve into specific minutia of income tax law. The instructor will be able to answer most of the tax questions asked by the students. However, it must be realized that the instructor is not a tax attorney or an accountant. For specific legal advice concerning a complex tax questions, the student will be encouraged to seek professional assistance.		
<b>MGMT 2105 Briefing Techniques, Aids and Devices</b>	<b>(1-0)</b>	<b>Credit: 1</b>
A course designed to provide students with a review of instructional techniques, selection of contents of instruction, preparation of lesson plans and instructional devices or aids to provide a good learning environment.		
<b>MGMT 2150 Trainers Workshop (TW)</b>	<b>(1.5-0)</b>	<b>Credit: 1</b>
<b>MGMT 2151 Platoon Trainer's Workshop</b>	<b>(1.5-0)</b>	<b>Credit: 1</b>
<b>MGMT 2152 Training Supervisor's Workshop</b>	<b>(1.5-0)</b>	<b>Credit: 1</b>
<b>MGMT 2161 Unit and Organizational Supply</b>	<b>(2.5-0)</b>	<b>Credit: 1</b>
To provide the students the skills and knowledge to accomplish the duties required of units and organizational supply personnel.		
<b>MGMT 2162 Personal Finance Management</b>	<b>(1.3-0)</b>	<b>Credit: 1</b>
Develops an understanding of the personal business activities and actions that affect personal and family accounts, budgets, budgetary control, bank accounts, charge accounts, borrowing, buying and investing.		
<b>MGMT 2164 Army Personnel</b>	<b>(1-0)</b>	<b>Credit: 1</b>
This course is designed to provide the student with the knowledge of fundamental personnel management concepts used in industry, the Army and U.S. Civil Service.		
<b>MGMT 2172 Introduction to Management Theory</b>	<b>(1-0)</b>	<b>Credit: 1</b>
This course will help to increase the student's ability to relate to and manage personnel. Instruction is provided in management theories, functions and roles. Leadership abilities, motivation methods and time management will be emphasized.		
<b>MGMT 2173 Leadership Communication In Management</b>	<b>(1-0)</b>	<b>Credit: 1</b>
This course will provide communications skills, counseling techniques and stress management to enhance the student's ability to manage personnel effectively.		
<b>MGMT 2174 Supervisory Management</b>	<b>(1-0)</b>	<b>Credit: 1</b>
This course is designed to update the student's supervisory education and to prepare him/her for more complex problems whether they are economic, technical, professional, scientific or educational.		

<b>MGMT 2255 Platoon Trainer's Workshop</b>	<b>(2-0)</b>	<b>Credit: 2</b>
<b>MGMT 2256 Training Supervisor's Workshop</b>	<b>(2-0)</b>	<b>Credit: 2</b>
Provide training management for the medium sized organization (battalion) to include long and short range plans, LRC, and ARTEP.		
<b>MGMT 2257 Trainer's Workshop (TW)</b>	<b>(2.3-0)</b>	<b>Credit: 2</b>
<b>MGMT 2258 Training Manager's Workshop</b>	<b>(2-0)</b>	<b>Credit: 2</b>
Provide training management information for battalion sized units to include long and short range goals, training assets, money and allocations, and ARTEP standards.		
<b>MGMT 2259 Platoon Trainer's Workshop</b>	<b>(2.3-0)</b>	<b>Credit: 2</b>
Course provides management of training instruction at the platoon level, includes long and short range planning and ARTEP integrated training for small groups.		
<b>MGMT 2261 Leadership and Communications Seminar</b>	<b>(2-0)</b>	<b>Credit: 2</b>
Upon completion of this course the student will be able to better communicate with and supervise personnel. The student will have an increased interpersonal awareness, better interact in group situations, organize work and manage time better and will be able to reduce stress.		
<b>MGMT 2300 Credit and Collections</b>	<b>(3-1)</b>	<b>Credit: 3</b>
This course covers the elements of mercantile and consumer credit organization of a credit department, sources of credit information, collection tolls and procedures.		
<b>MGMT 2301 Marketing Principles</b>	<b>(3-0)</b>	<b>Credit: 3</b>
The study of marketing as an exchange relationship in public and private organizational concerns. Including 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.		
<b>MGMT 2302 Personnel Management</b>	<b>(3-0)</b>	<b>Credit: 3</b>
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.		
<b>MGMT 2303 Law and Legal Assistance</b>	<b>(3-0)</b>	<b>Credit: 3</b>
Nature and scope of the law, court system, 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.		
<b>MGMT 2304 Labor-Management Relations</b>	<b>(3-0)</b>	<b>Credit: 3</b>
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 are covered.		
<b>MGMT 2305 Business Law I</b>	<b>(3-0)</b>	<b>Credit: 3</b>
Nature and scope of law; court system; law of contracts; principal and agent; business organizations, including partnerships and corporation; Texas community property laws.		
<b>MGMT 2306 Business Law II</b>	<b>(3-0)</b>	<b>Credit: 3</b>
Additional studies in law of business, dealing with bailments, carriers, mortgages, suretyships, negotiable instruments, banks and banking, wills and estates, sales, bankruptcy. No prerequisite is required for this course.		

- MGMT 2307 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 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 Personnel Counseling** (3-0) **Credit: 3**  
This course is designed to improve the listening and decision making skills of managers and supervisors to help employees achieve greater productivity and satisfaction in their jobs and quality of work life (QWL).
- MGMT 2312 Fundamentals of Systems Management** (3-0) **Credit: 3**  
Introduction to the "systems" concept of management and integration of this concept with the more traditional "principles" approach. This course combines theory and application of systems management and focuses on systems as they exist in many fields such as education, law enforcement, military, industry, and a variety of nonprofit organizations.
- MGMT 2314 Ethics in Management** (3-0) **Credit: 3**  
A study of the field of business management as it relates to major ethical theories. The course provides actual case studies in which ethical principles are used in solving today's business problems.
- MGMT 2315 Public Relations** (3-0) **Credit: 3**  
A course designed to prepare the students for jobs in the business world covering various principles and processes of contemporary public relations as well as effective means of influencing the public. The course traces the origins of public relations and discusses current and future trends. It looks at public relations standards, a code of ethics, and public relations as a profession.
- MGMT 2316 Management Applications I** (1-5) **Credit: 3**  
This course is a management laboratory that emphasizes management decision making skills that are necessary for the modern manager to successfully deal with resource problems in his/her place of business and career field. The course is designed for the student desiring to further his/her management training by applied learning techniques utilizing decision making case studies, computer-assisted models, or other instructional techniques. Prerequisite: Approval of appropriate college official.
- MGMT 2317 Management Applications II** (1-5) **Credit: 3**  
Management Applications II is the second in a two-part management laboratory sequence that emphasizes management decision making skills for various business career fields. Instruction is individually tailored to meet the specific career needs of the student. The course is designed for the student desiring to further his/her management training by applied learning techniques utilizing decision making case studies, computer-assisted models, or other instructional techniques. Prerequisites: MGMT 2316 and consent of the appropriate college official.
- MGMT 2318 Total Quality Management** (3-0) **Credit: 3**  
This course is designed to provide an understanding of the total quality management methods and procedures necessary to produce quality products and services. Students will learn how to establish management controls that result in minimum deviation from desired standards, calculate the true costs of producing an inferior product, analyze symptoms of organizations that lack commitment to total quality management, and define the role of each level of management and of each employer.
- MGMT 2320 Business Operations** (3-0) **Credit: 3**  
This course is an introduction and practical approach to small business operations and management. Subjects include the analysis of one's personal skills, experience, and expectations in starting a business; technical and managerial skills necessary to run a business profitably; market place statistics; gathering and analyzing data; purchasing and inventory; record-keeping; and product marketing. Other subjects include tax considerations for small business; revenue sources; and measures of profitability.

- MGMT 2321 Business Plan Development (3-0) Credit: 3**  
 This course involves the development and presentation of a plan to create or expand a business. It provides the student with an opportunity to develop and demonstrate a mastery of the essential competencies required for business opportunity analysis, the development of a marketing and promotional plan, and the development of a business financial plan. Students will prepare a business prospectus that will describe a business the students want to develop or expand.
- MGMT 2322 Salesmanship (3-0) Credit: 3**  
 This is a course in professional personal selling designed for those students who will most likely represent organizations that sell products to the public and other organizations.
- MGMT 2351 Advanced Leadership (3-0) Credit: 3**  
 Presents advanced leadership and management techniques, organizational goals, problem solving, communications and management of changes.
- MGMT 2354 Management Problems (3-0) Credit: 3**  
 This course is designed to develop and improve the soldier's skills to enable him/her to effectively execute the duties required of the military manager.
- MGMT 2358 Trainer's Workshop (TW) (2.5-0) Credit: 3**  
 This course provides management of training for the small unit, individual SQT and small group performance oriented training.
- MGMT 2381 Job Performance and Motivation [MGMT 2201] (3-0) Credit: 3**  
 A course designed to provide managers with the capability of applying approaches that influence employee job performance through the adoption of appropriate leadership and motivation techniques, and assessment of group and individual behavior patterns. Communication problem solving techniques in a changing society, as they affect the day-to-day efforts of subordinates, will also be explored.
- MGMT 2382 Individual Orientation Techniques [MGMT 2202] (3-0) Credit: 3**  
 A course designed to provide managers with the skills required to orient personnel in individual job tasks and to facilitate the continuity of the organization's functions.
- MGMT 2383 Group Orientation Techniques [MGMT 2203] (3-0) Credit: 3**  
 A course designed to develop managerial skills required in group training efforts. Emphasis is placed on integrating individual experiences into the group orientation efforts. Prerequisite: MGMT 2382.
- MGMT 2384 Assessing of Training Standards, Goals and Objectives [MGMT 2204] (3-0) Credit: 3**  
 A course designed to provide managers with the ability to establish realistic and relevant training standards. The relationship among organizational goals, training objectives, and training standards are emphasized to ensure continuity of effort. Personnel involved in the process and appropriate strategies and methodologies in the establishment of training standards are also stressed. Prerequisite: MGMT 1201.
- MGMT 2385 Management Training Theory [MGMT 2295] (3-0) Credit: 3**  
 This course provides the manager with a basic knowledge of management training theories and application of the aspects of training which influence effectiveness of management and the learning process.
- MGMT 2386 Management Learning Strategies [MGMT 2206] (3-0) Credit: 3**  
 This course is designed to provide managers with a systematic approach to training program development. Theoretical and empirical modes of learning and topics related to social problems affecting the design of instruction environments will be emphasized.

## Mathematics (MATH)

### **MATH 1171 Basic Concepts of Statistics [MATH 1101] (1.25-0) Credit: 1**

Basic Concepts of Statistics is a one semester hour course designed to present introductory statistical methods. Emphasis is placed on the theory of probability and basic understanding of statistical language and mathematical symbols used. This course will introduce the student to collection and tabulation of data, sampling, averages, probability and distribution.

### **MATH 1314 College Algebra [MATH 1302] (3-0) Credit: 3**

Topics include theory of equations, exponential and logarithmic functions, systems of linear equations, matrices and determinants, arithmetic and geometric sequences, binomial theorem, permutations and combinations. This course is recommended for students intending to enroll in advanced mathematics courses. Prerequisite: DSMA 0303 or equivalent, or acceptable placement test score.

### **MATH 1316 Trigonometry [MATH 1303] (3-0) Credit: 3**

Wrapping function, circular functions, trigonometric functions, polar coordinates, identities, applications to right triangles and oblique triangles, inverse functions, trigonometric equations. Prerequisite: DSMA 0303 or equivalent.

### **MATH 1324 Finite Mathematics [MATH 1305] (3-0) Credit: 3**

Topics include linear systems, matrices, linear programming, set theory, counting theory, probability, statistics. Prerequisite: DSMA 0303 or equivalent.

### **MATH 1342 Elementary Statistics [MATH 1308] (3-0) Credit: 3**

Collection and tabulation of data, bar charts, graphs, sampling, averages, dispersion, correlation, index numbers, normal curve, probability, inferential statistics, applications. Prerequisite: DSMA 0303 or equivalent.

### **MATH 1348 Analytic Geometry [MATH 1304] (3-0) Credit: 3**

An algebraic treatment of straight lines, circles, parabolas, hyperbolas, ellipses. Transformation of coordinates, curve sketching, polar coordinates. Prerequisite: MATH 1316 or equivalent and MATH 1314.

### **MATH 2313 Calculus I [MATH 2301] (3-0) Credit: 3**

A first course in differential calculus. Prerequisite: MATH 1348 or equivalent or concurrent enrollment in MATH 1348.

### **MATH 2314 Calculus II [MATH 2302] (3-0) Credit: 3**

A first course in Integral Calculus. Prerequisite: MATH 2313 or equivalent.

### **MATH 2315 Calculus III [MATH 2303] (3-0) Credit: 3**

A further study of limits, functions, sequences, series, elementary differential equations, partial derivatives, multiple integrals, surface integrals. Prerequisite: MATH 2314 or equivalent.

### **MATH 2320 Differential Equations [MATH 2304] (3-0) Credit: 3**

Fourier series, linear differential equations, Laplace transforms, and series solution, all with applications. Prerequisite: MATH 2315.

## Microcomputer Technology (MISC)

### **MISC 1131 Introduction to Unix (1-0) Credit: 1**

An introduction to the fundamentals of Unix. Topics include an overview of system structure, file systems, shells, shell scripts, communications, system administration, and a comparison of UNIX and MS-DOS capabilities. Provides practical lab exercises by topic.

### **MISC 1141 MS-DOS Fundamentals (1-1) Credit: 1**

A coverage of commonly used DOS commands and procedures. Introduces basic DOS concepts, disk preparation, storing and retrieving of information on disk, and file manipulation.

- MISC 1306 Introduction to BASIC** (2-1) **Credit: 3**  
Offers an introduction to programming in BASIC for the student interested in using a computer at home, in a small business or as a tool in a subject area such as math or science. Applications will illustrate personal computing techniques. Introduction to programming for non-computer majors.
- MISC 1400 Microcomputer Fundamentals** (3-3) **Credit: 4**  
Provides the student with fundamental skills needed in designing computer programs. Focus will be on problem analysis and developing algorithms for the step-by-step solution to problems. Students will learn to use a microcomputer under the MS-DOS operating system in a hands-on environment. A microcomputer language will be used for programming and debugging.
- MISC 1403 Introduction to Computer Science and Programming** (3-3) **Credit: 4**  
Problem solving, algorithm development, pseudo code flow charting and a high level language are covered in-depth.
- MISC 1404 COBOL Programming** (3-3) **Credit: 4**  
Provides the student with skills and fundamentals in solving business data processing problems using COBOL. The student becomes effective in COBOL programming techniques involving sequential files, single and double dimension table handling, and control breaks.
- MISC 1405 Computer Concepts and Analysis** (3-3) **Credit: 4**  
Provides the essential foundation for computer science majors in computer concepts, terminology, and business computer systems. Students will be introduced to word processor and spread sheet software.
- MISC 1406 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. Prerequisites: (MISC 1403 or MISC 1451) and (MISC 1405).
- MISC 1420 Word Processing for Microcomputers** (3-3) **Credit: 4**  
An entry level course designed to teach the use of a current state-of-the-art word processor in a hands-on environment to include installation of word processor software.
- MISC 1430 Spreadsheets for Microcomputers** (3-3) **Credit: 4**  
An entry level course designed to teach and use of a current state-of-the-art spreadsheet in a hands-on environment to include installation of spreadsheet software.
- MISC 1440 Data Base for Microcomputers** (3-3) **Credit: 4**  
An entry level course designed to teach the use of a current state-of-the-art data base in a hands-on environment to include installation of data base software.
- MISC 1450 Microcomputers for Business** (3-3) **Credit: 4**  
An introduction to the use of the microcomputer as a business tool. Designed specifically for the business oriented, this course will provide familiarity with the microcomputer and its use in the business sector. A hands-on introduction to the use of a word processor, spreadsheet, and database is provided. Types of hardware and software available for business will be studied.
- MISC 1451 Introduction to Microcomputer Programming** (3-3) **Credit: 4**  
Introductory programming course for Microcomputer Technology Major. Problem solving, algorithm development, pseudo code and flow charting. A high level language is covered in-depth through programming assignments.

**MISC 1454 PASCAL Programming (3-3) Credit: 4**

A thorough coverage of Structured Programming. Emphasis on top-down programming and modular organization. Major topics to be covered include constants, variables, expressions, input and output, self-contained procedures, making decision (REPEAT-UNTIL, WHILE-DO and FOR loops), data types, arrays, character strings, records and set pointers, and disk files. Prerequisite: MISC 1451 or COSC 1403.

**MISC 1460 Desk-Top Publishing (3-3) Credit: 4**

Designed to provide the student with a working knowledge of desktop publishing. Taught in a hands-on environment. Prerequisite: MISC 1420 or MISC 1450.

**MISC 1461 Operating Systems (3-3) Credit: 4**

A study of microcomputer operating systems. Topics include commands, system configuration, batch files, directory and hard disk management. Prerequisite: 8 semester hours of computer courses.

**MISC 2301 Information Center Management (3-0) Credit: 3**

Defines the infrastructure of information centers and describes their role and responsibilities in terms of assisting professionals with varying degrees of computer knowledge in using computer technology in the performance of their job function. Prerequisite: MISC 1450.

**MISC 2302 Hardware/Software Selection and Acquisition (3-0) Credit: 3**

Selection and acquisition of hardware and software. Topics include capacity sizing of key hardware components, compatibility considerations, lease/purchase alternatives, in-house versus packaged software, documentation and training provided, vendor responsibilities and support, future up-grade capability to support growth, procurement proposals and contracting. Prerequisite: 12 semester hours of MISC courses or equivalent experience.

**MISC 2401 Advanced COBOL (3-3) Credit: 4**

Offers the student of COBOL programming an in-depth study of the theory, programming techniques, and programming efficiencies that will be required of the commercial COBOL programmer. A thorough coverage is given to file design and the special features of ANSI COBOL language. Emphasis is placed on multi-dimensional table handling, searching and sorting techniques, and indexed file manipulation. Structured design and programming will be stressed. Prerequisite: MISC 1404.

**MISC 2402 Systems in the MIS Environment (3-3) Credit: 4**

This course examines advanced systems including data base, distributed processing, teleprocessing, local area networks, management information systems and decision support systems. Emphasis will be placed on database management systems through the development of a data base project. Prerequisite: 12 semester hours of computer courses.

**MISC 2405 Information Structures (3-3) Credit: 4**

Advanced programming techniques to include two and three dimensional arrays, linked list, index structures, binary search, sorting techniques, direct access process, and subroutines. Programs will be written in a high-level language. Prerequisite: Eight semester hours of programming.

**MISC 2453 Advanced BASIC Programming (3-3) Credit: 4**

An in-depth study of advanced techniques for writing efficient and well designed commercial applications. Interactive and conversational programming techniques, to include data editing, menus, string manipulation. File handling will be emphasized. Prerequisite: MISC 1451 and one other programming language.

**MISC 2454 Data Communications & Networking (3-3) Credit: 4**

A study of data communications and networking of microcomputer systems. Topics include communications hardware and software, and Local Area Networks. Prerequisite: MISC 1461.

**MISC 2455 Microcomputer Field Projects (1-9) Credit: 4**

This course consists of practical applications in the field of microcomputers. It is designed to fit the career objectives of the student. Prerequisite: Approval of the appropriate college official.



**MISC 2456 C Language Programming I****(3-3) Credit: 4**

The use of C in application programming. Major topics include fundamental flow-control constructions, statement grouping, decision-making, looping with termination test at top (While, For) or bottom (Do), and case selection (Switch). Detailed use of functions with internal, external, and global variables. Address arithmetic and call by reference will also be covered. Prerequisite: COSC 2404 or MISC 1454.

**MISC 2457 Programming with ADA\*****(3-3) Credit: 4**

An introduction of the basic syntax and semantics of ADA programming language. The design and use of the language will be the general theme of the course while programming exercises will be used to illustrate specific implementations of the language structure. Emphasis will be on importance of style and linguistic considerations. Prerequisite: MISC 1454.

**MISC 2458 C Language Programming II****(3-3) Credit: 4**

This course builds upon the skill attained in MISC 2456 C Language Programming I. Major topics include an analysis of searching and sorting algorithms pertaining to structures such as linked-lists; sparse memory management; and binary trees. Software engineering concepts and project management techniques are covered. Numerous programming exercises and projects are used to reinforce concepts. Prerequisite: MISC 2456.

\* ADA is a registered trademark of the United States Department of Defense.

## **Music (MUSI)**

**MUSI 1141 Choir [MUSI 1107]****(1-2) Credit: 1**

This course is recommended to all music students, but it is open to all college students. Preparation for on-campus and public performances.

**MUSI 1181 Class Piano I [MUSI 1101]****(1-1) Credit: 1**

Introduction to the keyboard, the study of Mikrokosmos Vol. I by Bartok, easy selections from the classic and contemporary piano literature. Scales on two octaves through two key signature. Memory work is emphasized throughout. One hour daily practice required. Prerequisite: Credit or enrollment in MUSI 1301 or 1302.

**MUSI 1182 Class Piano II [MUSI 1102]****(1-1) Credit: 1**

A continuation of Class Piano I. Scales, chords and arpeggios on two octaves through two key signatures. Literature: Little Dances by Bach, a classic Sonatina, selections from the easy romantic and contemporary piano literature. Memory work is emphasized throughout. One hour daily practice required. Prerequisite: MUSI 1181 or consent of the instructor; credit or enrollment in MUSI 1301 or 1302.

**MUSI 1183, 1184 Class Voice I & II [MUSI 1105, 1106]****(1-1) Credit: 1, 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. Basic vocal literature will be introduced. Prerequisite: Credit or enrollment in MUSI 1301.

**MUSI 1216 Ear Training I [MUSI 1205]****(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 and triads, and exercises in melodic dictation. Prerequisite: Credit or enrollment in MUSI 1301.

**MUSI 1217 Ear Training II [MUSI 1206]****(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: MUSI 1216 and credit or enrollment in MUSI 1302.

**MUSI 1269, 1270 Private Piano I & II [MUSI 1201-1202]****(0-2) Credit: 2, 2**

For students with considerable keyboard skill. Scales, chords and arpeggios on four octaves in all keys. Literature: Two-or Three-part Inventions by Bach, a Classic Sonata, selections from the romantic, impressionistic and modern piano literature. All work is to be memorized. One hour private lesson per week. Two hours daily practice required. Prerequisite: MUSI 2182 or audition, credit or enrollment in MUSI 1302, 2311, or 2312.

**MUSI 1281, 1282 Private Voice I & II [MUSI 1203-1204] (0-2) Credit: 2, 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 and Italian, and for more advanced students, German and French. Prerequisite: MUSI 1184 and/or audition; credit or enrollment in MUSI 1301 or 1302.

**MUSI 1301 Music Fundamentals (2-1) 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. Limited ear training and sight singing exercises and melodic dictation. Cadences on the keyboard.

**MUSI 1302 Music Theory (2-1) 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 dominants, the sequence. Analysis of short works. Cadences and sequences on the keyboard. Prerequisite: MUSI 1301 or consent of the instructor.

**MUSI 1306 Music Appreciation [MUSI 1305] (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 1308 Music Literature I [MUSI 2304] (3-1) Credit: 3**

A survey of the development of music from the Ancient World to the present time, with an in-depth study of the music from the 15th through the 19th century. Principal forms, periods and composers and the literature of each of the historical periods.

**MUSI 1309 Music Literature II [MUSI 2305] (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 2271, 2272 Private Piano III & IV [MUSI 2201-2202] (0-2) Credit: 2, 2**

Scales, chords and arpeggios on four octaves in all keys. Literature: WTC Preludes and Fugues by Bach, a classic Sonata or a standard Concerto, selections from the romantic, impressionistic and modern piano literature. All work is to be memorized. One hour private lesson per week. Two hours daily practice required. Prerequisite: MUSI 1270 and credit or enrollment in MUSI 2311.

**MUSI 2181 Class Piano III [MUSI 1103] (1-1) Credit: 1**

Scales, chords and arpeggios on two octaves through three key signatures. Literature: Short Preludes by Bach, a classic Sonatina, selection from the romantic and contemporary piano literature. All work is to be memorized. One hour daily practice required. Prerequisite: MUSI 1182 or consent of the instructor, credit or enrollment in MUSI 1301, 1302 or 2311.

**MUSI 2182 Class Piano IV [MUSI 1104] (1-1) Credit: 1**

A continuation of Class Piano III. Scales, chords and arpeggios on two octaves through four key signatures. Literature: Short Preludes by Bach, a classic Sonatina, selection from the romantic and contemporary piano literature. All work is to be memorized. 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 1269. Prerequisite: MUSI 2181 or consent of the instructor, credit or enrollment in MUSI 1302, 2311 or 2312.

**MUSI 2283, 2284 Private Voice III & IV [MUSI 2203-2204] (0-2) Credit: 2, 2**

A continuation of MUSI 1281 and 1282. More difficult songs from the classic and romantic literature, oratorio and operatic arias, modern French songs, 20th century American songs. One one-hour private lesson per week. Prerequisite: MUSI 1282 and credit or enrollment in MUSI 2311 or 2312.

**MUSI 2303 Plano Pedagogy** (2-1) **Credit: 3**  
Open to music majors only. The study of piano teaching methods from the beginning through the intermediate grades. The development of technique, memory, style, and musicianship. The planning of a balanced repertoire, review and evaluation of piano literature. Laboratory includes supervised practice teaching. Prerequisite: Credit or enrollment in MUSI 2272 and 1302 or consent of the instructor.

**MUSI 2311 Intermediate Harmony [MUSI 2306]** (3-2) **Credit: 3**  
A study of the harmonic materials of the 18th and 19th centuries through analysis and written exercises. Dominant and secondary seventh chords, secondary dominants, the diminished seventh chord, the Neapolitan sixth, the augmented sixth chords, nonharmonic tones, harmonic dictation for the keyboard. Prerequisite: MUSI 1302.

**MUSI 2312 Advanced Harmony [MUSI 2307]** (3-2) **Credit: 3**  
The study of harmony as an organizing element of the large-scale musical structure. Diatonic, chromatic and enharmonic modulations; the modulating sequence. Melody harmonization, analysis of larger works, harmonic dictation. Modulation to related and distant keys on the keyboard. Prerequisite: MUSI 2311.

**MUSI 2369, 2370 Advanced Private Piano I & II** (0-2) **Credit: 3,3**  
Scales, chords and arpeggios on four octaves in all keys. Literature: Partitas, Suites or Preludes and Fugues by Bach, a Beethoven Sonata or a standard Concerto, romantic, impressionistic and modern selections. All work is to be memorized. One hour private lesson per week. Three hours daily practice required. Prerequisite: MUSI 2272 or audition, credit or enrollment in MUSI 2311 or 2312.

## **Office Administration (OADM)**

**OADM 1131 Beginning Typing I** (1.5-1.5) **Credit: 1**  
A beginning course in touch typing. The course will emphasize mastery of machine parts and the keyboard.

**OADM 1133 Intermediate Typing I** (1.5-1.5) **Credit: 1**  
A continuation of Beginning Typing II and Beginning Typewriting. Students will increase typing accuracy and speed. Prerequisite: OADM 1303 or 1232 or ability to type 25 WPM for five minutes with no more than five errors.

**OADM 1232 Beginning Typing II** (1.5-1.5) **Credit: 2**  
A continuation of Beginning Typing I. Special emphasis will be placed on speed development. The course will include an introduction to letter writing, tabulating, and preparing manuscripts. Prerequisite: OADM 1131.

**OADM 1234 Intermediate Typing II** (1.5-1.5) **Credit: 2**  
A continuation of Intermediate Typing I. Students will compose and type business letters, tabulations, and manuscripts of a more demanding nature. Prerequisite: OADM 1133.

**OADM 1301 Beginning Shorthand** (3-3) **Credit: 3**  
An introduction of shorthand. Students will receive initial training in shorthand emphasizing reading, writing, theory principles, brief forms, and related activities.

**OADM 1302 Intermediate Shorthand** (3-3) **Credit: 3**  
Students will continue shorthand training and reinforcement of theory. Prerequisite: OADM 1301 or equivalent.

**OADM 1303 Beginning Typewriting** (3-3) **Credit: 3**  
A beginning course in touch typewriting for the mastery of machine parts and the keyboard. Special emphasis on speed development, including an introduction to letter writing, tabulating, and preparing manuscripts.

**OADM 1304 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 a more demanding content will be instructed.

**OADM 1305 Records Management (3-0) Credit: 3**

This course introduces the basic principles and procedures of records storage and control. Topics include records storage methods, procedures for the operation and control of manual and automated storage systems; rules for indexing, and principles for the selection of records equipment and supplies. Prerequisite: WOPO 1303.

**OADM 1306 Office Functions (3-0) Credit: 3**

Designed for the student who wishes to prepare for a career as an executive secretary. The following topics are covered: human relations skills, meetings and conferences, travel arrangements, information sources, mail handling, telephone techniques, receptionist duties, scheduling, and related office routines.

**OADM 1308 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. Keyboarding ability and sound background in English are strongly recommended.

**OADM 1309 Business Mathematics & Calculating Machines (3-3) Credit: 3**

Technique familiarization in the operation of the most commonly used office machines: computation; calculations; speed drills; percentages, discounts and net values, chain discounts, and business forms. Emphasis will be placed on business mathematics.

**OADM 2301 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 Advanced Typewriting (3-3) Credit: 3**

This course includes advanced work in such specialized production as tabulation, inter-office correspondence, manuscripts, telegrams, legal forms, medical forms, special inter-office forms, and additional work on the arrangement of business letters with special features. Prerequisite: OADM 1303, 1304.

**OADM 2304 Office Accounting I (3-3) Credit: 3**

Elementary principles of accounting, journalization, posting, statements, special journals, subsidiary ledgers, payroll records, and payroll taxes. Special emphasis is placed on personal, family, and small business accounting systems.

**OADM 2305 Office Accounting 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, introduction to partnership and corporate accounting, special journals and ledgers, business papers and business procedures relating to accounting voucher systems. Prerequisite: OADM 2304 or equivalent.

**OADM 2307 Automated Office Management (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 various systems that affect the modern office. Prerequisite: Sophomore standing or consent of the instructor.

**OADM 2308 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: keyboarding, filing, duplication, use of telephone, preparation of correspondence, voice transcription machine, record keeping, proofreading, etc.

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

Students will be provided a combination of occupational related class work instruction and on-the-job training in cooperation with Office Administration Department and other campus offices. Students will demonstrate advanced competencies with work experiences in the following areas: taking dictation, keyboarding, letter composing, telephone procedures, filing; work scheduling, financial calculating, duplicating, transcribing from dictation equipment, etc.

**OADM 2350 Machine Shorthand****(3-3) Credit: 3**

This course is an introduction to machine shorthand. It covers machine shorthand principles, abbreviations, derivatives, word lists, and operation of the machine. The students develop dexterity and keyboard mastery through writing practices and laboratory exercises.

**Offset Printing (OPRT)****OPRT 1301 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 Camera and Darkroom Procedures,  
Stripping and Platemaking I****(2-5) 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 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 all types of stock, image position, sheet delivery, and the maintaining of correct image density.

**OPRT 1304 Bindery Operations****(2-5) Credit: 3**

Theory and operation of the paper cutter, paper drill, stitcher, collator and paper folder and basic binding techniques. This course also contains a study of the basic characteristics of paper and ink and the processes involved in the manufacture.

**OPRT 1305 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 1308 Offset Printing Equipment Maintenance****(2-5) Credit: 3**

A thorough study of the adjustments, preventive maintenance and simple repair on darkroom, composing room, press room and bindery equipment. Prerequisite: OPRT 1301 or OPRT 1303.

**OPRT 2301 Camera and Darkroom Procedures, Stripping and Platemaking II** (2-5) 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 2302 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.

## **Philosophy (PHIL)**

**PHIL 1301 Introduction to Philosophy [PHIL 2301]** (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 1304 World Religions [HIST 2304]** (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.

**PHIL 2303 Logic** (3-0) Credit: 3

Nature and methods of correct reasoning, deductive proof, inductive proof, fallacies, and arguments.

**PHIL 2306 Introduction to Ethics [PHIL 2302]** (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 2307 Introduction to Social and Political Philosophy** (3-0) Credit: 3

Critical examination of the major theories concerning the organization of societies and government.

**PHIL 2374 History and Philosophy of Judaism [PHIL 2304]** (3-0) Credit: 3

A general survey of Old Testament as to origin, literature, and history with special study of the institutions, religions, and natural life of the Hebrew people.

**PHIL 2375 History and Philosophy of the Early Christian Period [PHIL 2305]** (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 1401 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 storytelling photographs. Printing and composing photographs for publication are included.

**PHOT 1402 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 storytelling pictures for fashion and advertising is provided. Prerequisite: PHOT 1401 or consent of instructor.

**PHOT 1403 Advanced Photography (3-2) Credit: 4**

The course includes elements of composition and film exposure development for specific gamma studies. 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 1401 or consent of instructor.

**PHOT 1404 Commercial Photography (3-2) Credit: 4**

A study is made of 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 part 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 1402, or consent of the instructor.

**PHOT 1405 Advanced Print Making (3-2) Credit: 4**

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 1402, 1403, 1404 or consent of instructor.

**PHOT 2403 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 Photographic Production (1-8) 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, 1402, 1404 and 2406.

**PHOT 2406 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. Prerequisite: PHOT 1401.

**PHOT 2407 Color Photography II (3-2) Credit: 4**

Positive and negative color film processing, sensitometry, and color printing. Prerequisite: PHOT 2406.

**Physical Education (PHED)**

**PHED 1100 Football & Basketball [PYED 1100] (1-2) Credit: 1**

**PHED 1101 Volleyball & Softball [PYED 1101] (1-2) Credit: 1**

**PHED 1102 Beginning Badminton [PYED 1102] (1-2) Credit: 1**

**PHED 1103 Beginning Bowling [PYED 1103] (1-2) Credit: 1**

**PHED 1104 Soccer [PYED 1104] (1-2) Credit: 1**

**PHED 1106 Beginning Swimming [PYED 1106] (1-2) Credit: 1**

**PHED 1107 Beginning Tennis [PYED 1107] (1-2) Credit: 1**

**PHED 1108 Beginning Golf [PYED 1108] (1-2) Credit: 1**

**PHED 1109 Basketball & Soccer [PYED 1109] (1-2) Credit: 1**

**PHED 1110 Karate [PYED 1110] (1-2) Credit: 1**

**PHED 1111 Roller Skating [PYED 1111] (1-2) Credit: 1**

**PHED 1112 Angling [PYED 1112] (1-2) Credit: 1**

<b>PHED 1113 Country Western Dance [PYED 1113]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1114 Volleyball [PYED 1114]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1115 Basketball [PYED 1115]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1117 Hunting [PYED 1117]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1118 Jogging [PYED 1118]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1119 Racquetball [PYED 1119]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1120 Body Building [PYED 1120]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1123 Advanced Bowling [PYED 2100]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1124 Advanced Swimming [PYED 2101]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1125 Intermediate Tennis [PYED 2102]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1126 Advanced Golf [PYED 2103]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1127 Tumbling [PYED 2104]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1128 Figure Development [PYED 2105]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1129 Advanced Badminton [PYED 2106]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1130 Physical Conditioning [PYED 2108]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1131 Aerobics [PYED 2109]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1132 Varsity Athletics [PYED 2110]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1133 Weight Training [PYED 2111]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1134 Cycling [PYED 2113]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1135 Archery [PYED 2114]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1136 Figure Control [PYED 2115]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1138 Rhythmic Aerobics [PYED 2119]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1139 Modern Dance [PYED 2107]</b>	<b>(1-2)</b>	<b>Credit: 1</b>
<b>PHED 1151 Scuba Diving [PYED 2120]</b>	<b>(1-2)</b>	<b>Credit: 1</b>

Instruction in and participation in scuba diving. Prerequisite: Demonstrated swimming skills.

**PHED 1301 Foundations of Physical Education [PYED 1301](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.

**PHED 1304 Foundations of Health [PYED 1302] (3-0) Credit: 3**

A fundamental course in principles and problems of healthy living. Emphasis on current information and thought to be applied to individual daily lives.

**PHED 1306 Safety & First Aid [PYED 2302] (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.

**PHED 1308 Sports Officiating [PYED 2301] (3-0) Credit: 3**

Theory and practice in techniques of officiating. Officiating experience.



**PHED 1336 Principles of Recreational Leadership (3-0) Credit: 3**  
**[RECR 1302]**

A study of the development of skills and leadership ability in various program areas of recreation including boys clubs, city recreation and armed forces. It describes recreational leadership methods for selection and discusses the principles and problems of recreational supervision.

## **Physical Sciences (PHYS)**

**PHYS 1305 Survey of Physics [PHYS 1303] (3-0) Credit: 3**

A survey of the fundamental principles of physics designed to acquaint students with the basic concepts of classical and modern physics which are the foundation of everyday phenomena.

**PHYS 1311 Survey of Astronomy [ASTR 1301] (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 class.

**PHYS 1312 Descriptive Astronomy [ASTR 1302] (3-0) Credit: 3**

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

**PHYS 1315 General Physical Science [GESC 1301] (3-0) Credit: 3**

This is an introductory course for students who need to acquire a basic understanding of the philosophy and methods of science. Topics will be selected from various fields of physical science and will cover a review of the basic principles and theories.

**PHYS 1401 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 and three hours of laboratory per week. Prerequisite: MATH 1316 or registration therein.

**PHYS 1402 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 1413 Environmental Science (3-3) Credit: 4**

This is a one semester lab course designed for the non-science major. Emphasis is placed on a global approach to principles and problems in our environment. Topics include energy resources, air and water pollutants, environmental causes of cancer, pesticides and other toxic chemicals, solid and hazardous wastes, noise limits, crowding, land use and abuse, economic considerations and some governmental regulatory agencies. Lab includes methods of measurement, analysis and interpretation of environmental data.

**PHYS 1415 Physical Science (3-3) Credit: 4**

A course designed for non-science majors which survey topics from physics, chemistry, geology, astronomy, and meteorology. Lab includes experiments designed to demonstrate principles of the Physical Sciences.

**PHYS 2425 Modern Physics I [PHYS 2401] (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 and three hours of laboratory per week. Prerequisite: MATH 2313 or registration therein.

**PHYS 2426 Modern Physics II [PHYS 2402] (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 and three hours of laboratory per week. Prerequisite: PHYS 2425 or equivalent.

## Psychology (PSYC)

### **PSYC 2301 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.

### **PSYC 2306 Understanding Human Sexuality [PSYC 2307] (3-0) Credit: 3**

The study of the physiological, sociological, and psychological aspects of human sexuality. Prerequisite: PSYC 2301, PSYC 2315, or consent of the instructor.

### **PSYC 2308 Child Growth and Development [PSYC 2303] (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, from birth through adolescence.

### **PSYC 2315 Personality Adjustment [PSYC 2302] (3-0) Credit: 3**

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

### **PSYC 2316 Psychology of Personality [PSYC 2305] (3-0) Credit: 3**

The study of various approaches to determinants, development, and assessment of personality. Prerequisite: PSYC 2301.

### **PSYC 2319 Social Psychology [PSYC 2306] (3-0) Credit: 3**

The study of individual behavior within the social environment.

## Real Estate (REAE)

### **REAE 1300 Real Estate Mathematics (3-0) Credit: 3**

This course includes, but is not limited to, basic arithmetic skills and review of mathematical logic, percentage, interest, time-valued money, depreciation, amortization, proration, and estimation of closing statements. In addition, there is an introduction to real estate investments and the basic mathematical skills needed by the successful real estate agent.

### **REAE 1301 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 1303 Introduction to Residential Construction (3-0) Credit: 3**

This course is a beginner's orientation to the concepts and terminology of residential construction including one-to-four family residential units. Topics include site analysis; foundation work; framing, interior and exterior walls; plumbing and electrical work; energy efficiency; roofing; paint and trim work; the role of architects, builders, and real estate brokers in the new home construction business; and other related topics. This course is accepted by the Texas Real Estate Commission as a "related" real estate course for license credit toward both the salesman's and broker's license. The course is also apropos for the general consumer public seeking an orientation to new home construction.

**REAE 2300 Texas Real Estate Law: Earnest Money Contracts** (3-0) Credit: 3

This course is approved by the Texas Real Estate Commission as a "core" real estate course that can be applied for credit toward both the real estate salesman's and broker's licenses. Contents include the required excerpts from Section 7A(3) of the Texas Real Estate License Act of 1975, as amended, including: legal concepts of real estate, land description, real property rights and estates in land, contracts, conveyances, encumbrances, foreclosures, recording procedures, and evidence of titles. In addition, there is thorough coverage of the Broker-Lawyer Committee Statement of Principles and detailed instruction in the actual preparation of all promulgated contract forms, with emphasis on those forms most commonly used.

**REAE 2301 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 the appropriate college official.

**REAE 2302 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: REAE 1301 or consent of the appropriate college official.

**REAE 2303 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 the appropriate college official.

**REAE 2304 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-process 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 the appropriate college official.

**REAE 2305 Real Estate Law** (3-0) Credit: 3

This course consists of legal concepts of real estate, land descriptions 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, acknowledgements, constructive notice, mortgages, closings, landlord and tenant relationships, regulation of real estate, and real estate taxation.

**REAE 2306 Real Estate Seminar** (3-0) Credit: 3

This course is a special subjects course that may vary in content with each offering. It is designed to provide a classroom setting in order to meet the changing needs in real estate education and training. Subjects may range from math, finance, law, contracts, construction, appraisal, property management, taxation, investments, interior decoration, site analysis, blueprint reading, microcomputer applications,

and various other subjects. License applicants are instructed to inquire with the appropriate college official as to whether the Texas Real Estate Commission will accept credits toward license requirements.

**REAE 2307 Income Property Appraisal (3-0) Credit: 3**

This 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 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: REAE 1301, REAE 2302 or consent of the appropriate college official.

**REAE 2308 Real Estate Investments (3-0) Credit: 3**

This course shall include an analysis of real estate investment, characteristics, techniques of investment analysis, time-values money, discounted and nondiscounted investment criteria, leverage, tax shelters, depreciation, and applications to property tax. In addition, a study of consumer investment alternatives to real estate and the customer/client counseling concerns for real estate investments will be covered. Prerequisites: REAE 1301, MATH 1307 or REAE 1300, REAE 2304, or approval of the appropriate college official.

**REAE 2309 Advanced Real Estate Finance (3-0) Credit: 3**

This is an advanced course in real estate finance designed for the licensed real estate salesman of broker, entry level mortgage loan processor, general contractor, or real estate investor. Subjects include: monetary systems, primary and secondary markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative financial instruments, equal credit opportunity acts, community reinvestment act, and the Texas Housing Agency. In addition, students will receive an extensive amount of "hands-on" training in qualification under-writing guidelines, closing costs, yield analysis, graduated payment mortgages, adjustable rate mortgages, and other variable rate programs. Prerequisites: REAE 2304, Real Estate Finance; and REAE 1300, Real Estate Math or equivalent.

**REAE 2310 Real Estate Law: Contracts II (3-0) Credit: 3**

This course is approved by the Texas Real Estate Commission as a "core" real estate course that can be applied for credit toward both the real estate salesman's and broker's license requirements. Contents include the required excerpts from the Texas Real Estate License Act, as amended, including legal concepts of real estate, land description, real property rights, estates in land, contracts, conveyances, encumbrances, foreclosures, recording procedures, and evidence of titles. In addition, there is thorough coverage of the Broker-Lawyer Committee State of Principles and detailed instruction in the actual completion of all promulgated contract forms, with an emphasis on those forms most commonly used. This course is designed to give the real estate student an advanced class on using earnest money contracts in accordance with generally accepted principles of form and salesmanship.

## **Small Gas Engine Repair (SGER)**

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

A study of the fundamental principles and operation of the two and four-stroke air-cooled engine. Testing and maintenance procedures are performed on the ignition, compression, fuel, starting and lubrication systems of 2 HP and 8 HP engines. Prerequisite or corequisite: INDU 1400.

**SGER 1407 Small Gas Engine Service (2-4) Credit: 4**

This course provides the student with "hands-on" experience in the repair and overhaul of small gas engines. Emphasis will be placed on valve reconditioning, magnetos, and ignition repair, carburetor overhaul, crankshaft replacement and other types of service requirements. Prerequisite: SGER 1401.

**SGER 1409 Motorcycle Service****(2-4) Credit: 4**

This course is designed to provide the student with the necessary skills to perform preventative maintenance, and an understanding of the theory and operation of two and four stroke motorcycle engines. Study will include the battery, electrical, fuel tune-up, drive-line and brake systems. Prerequisite: SGER 1401.

**SGER 2311 Shop Organization & Management****(3-0) Credit: 3**

This course is designed to provide the student with an understanding of small engine repair business management. Areas of study include customer relations, warranty provisions, service, salesmanship, organization and shop lay-out, and the financial and operational aspects of managing a small engine repair business. Prerequisite: Sophomore standing.

**SGER 2402 Chain Saw Service & Repair****(2-4) Credit: 4**

This course provides the student with the theory and repair skills necessary to service all types of modern chain saws. Areas of study will include preventative maintenance, chains, guide bars, sprockets, clutches, fuel, ignition and lubrication systems. Prerequisite: SGER 1401.

**SGER 2407 Off-Road Small Engine Repair & Service****(2-4) Credit: 4**

This course provides the student with experiences in the maintenance and repair of mini-bikes, go-carts, snowmobiles, mobile generators, farm equipment and other small engine applications. Prerequisite: Sophomore standing.

**SGER 2408 Outboard Motor Service & Repair****(2-4) Credit: 4**

This course is designed to provide the student with the necessary skills to disassemble, repair, and assemble outboard engines and lower drive units on various types of outboard engines. Special emphasis will be placed on the cooling, ignition and fuel systems, and the use of special tools, and service manuals. Prerequisite: Sophomore standing.

**SGER 2409 Motorcycle Repair****(2-4) Credit: 4**

This course is designed to provide the student with the necessary skills to disassemble, repair, replace, and assemble motorcycle engines, drive train components, transmission, and suspension systems. Special emphasis will be placed on special tools and test equipment. Prerequisite: SGER 1409.

**SGER 2410 Lawn & Garden Equipment Service****(2-4) Credit: 4**

This course is designed to provide the student with "hands-on" experience in the repair of all types of power lawn care units including lawn mowers, riding mowers, garden tractors, tillers and other similar small engine applications. Skills employed will utilize both oxygas and arc welding equipment when necessary. Prerequisite: SGER 1407, WELD 1401. Corequisite: WELD 1402.

## **Sociology (SOCI)**

**SOCI 1301 Introduction to Sociology [SOCI 2301]****(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 1306 Contemporary Social Problems [SOCI 2302]****(3-0) Credit: 3**

Identification and analysis of contemporary social problems, development of criteria for evaluating problems for social betterment.

**SOCI 2301 Marriage and The Family [SOCI 2306]****(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 2336 Criminology [SOCI 2303]****(3-0) Credit: 3**

Cases 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.

## Spanish (SPAN)

**SPAN 1411 Beginning Spanish I [SPAN 1401] (4-2) Credit: 4**

The study of Spanish grammar and development of vocabulary. Stresses conversation in Spanish.

**SPAN 1412 Beginning Spanish II [SPAN 1402] (4-2) Credit: 4**

A continuation of Beginning Spanish I, with continued emphasis on conversation. Prerequisite: SPAN 1411.

**SPAN 2311 Intermediate Spanish I [SPAN 2301] (3-0) Credit: 3**

Continued emphasis on conversation, correct pronunciation and correct writing. Reading from various Spanish-American authors. Prerequisites: SPAN 1411, 1412 or 2 years of Spanish at an accredited high school.

**SPAN 2312 Intermediate Spanish II [SPAN 2302] (3-0) Credit: 3**

Continues the readings from Spanish-American authors. Emphasizes grammar, composition, and conversation. Prerequisite: SPAN 2311 or equivalent.

## Speech (SPCH)

**SPCH 1144 Forensic Activities (1-0) Credit: 1**

Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments.

**SPCH 1145 Forensic Activities (1-0) Credit: 1**

Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments.

**SPCH 1315 Public Speaking [SPCH 1301] (3-0) Credit: 3**

Research, composition, organization, and delivery of speeches for various purposes and occasions in a variety of communication situations.

**SPCH 1318 Interpersonal Communications [SPCH 2305] (3-0) Credit: 3**

Theory, examples and participation in exercises to improve effective one-to-one and small group communication.

**SPCH 1321 Business & Professional Speaking [SPCH 2303] (3-0) Credit: 3**

Theories and skills of speech communication as applied to business and professional situations. Includes participating in an interview, the preparation of a resume and cover letter, engaging in a problem solving discussion, and delivering speeches in public.

**SPCH 2144 Forensic Activities (1-0) Credit: 1**

Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments.

**SPCH 2145 Forensic Activities (1-0) Credit: 1**

Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments.

**SPCH 2333 Discussion [SPCH 2304] (3-0) Credit: 3**

Study of the principles of systematic investigation and reflective thinking as applied to discussion. Practice in discussion of current problems by use of various forms: round table, panel, sales conferences, committee, parliamentary and lecture-forum.

**SPCH 2341 Oral Performance of Literature [SPCH 1303] (3-0) Credit: 3**

Study and practice in the principles of the oral reading of literature. Stresses analyzing good literature and recreating the logical and emotional content for an audience. Also includes grouping oral interpretation.

## **Tagalog (TAGA)**

### **TAGA 1401 Beginning Tagalog I**

**(3-3) Credit: 4**

This course covers the fundamentals skills involved in comprehending, speaking, reading and writing Tagalog. It also includes basic vocabulary, grammatical structures and culture.

## **Mathematics, Technical (TMTH)**

### **TMTH 1301 Technical Mathematics**

**(3-0) Credit: 3**

This course includes a study of algebra, trigonometric functions, graphs of trigonometric functions, solution of triangles and plane and solid geometry. Prerequisite: DSMA 0303 or permission of the appropriate college official.

## **Television/Radio Broadcasting (TELE)**

### **TELE 1301 Introduction to Broadcasting**

**(3-0) 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 Restricted Operator's Permit is included in this course of study.

### **TELE 1305 Broadcast Writing**

**(3-0) Credit: 3**

This course covers the stylistic writing techniques as needed for commercial copy, promotional copy, and public service announcements. Practical experience will be available through College owned stations.

### **TELE 1402 Beginning Radio Production**

**(3-3) Credit: 4**

In this course the fundamental techniques and practices of production and programming are emphasized with a great deal of practical experience in an actual radio production facility. Production of commercials, and basic news will be studied. Each student will be trained to competently operate a radio control board, turntables, tape recorders, and CD players.

### **TELE 1403 Beginning Television Production**

**(3-3) Credit: 4**

This course is designed to give the student the fundamental skills in camera operation, microphone techniques, basic set design, basic graphics, and lighting. In addition, each student will participate in the production of live broadcasts from the college owned television stations and other live and taped productions. A basic study of the operation of a television station will be covered.

### **TELE 1405 Radio-Television Announcing**

**(3-3) Credit: 4**

This course covers the duties and responsibilities of the announcer, such as operation of 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 radio and television stations.

### **TELE 1406 Electronic News Gathering**

**(3-3) Credit: 4**

This course is designed to introduce the student to the fundamentals of videography with emphasis on television electronic news gathering. Basic picture composition, field lighting and audio techniques will be taught. Students will advance from small format camcorders to professional field cameras and edit group and individual video projects. Laboratory exercises will provide extensive hands-on training in the practical aspects of the electronic news gathering videographer.

### **TELE 1407 Advanced Radio Production**

**(3-3) Credit: 4**

Major emphasis in this course is advanced training in the production of radio commercials, promotion announcements, and radio dramas. An in-depth study of the programming formulas and different types of radio broadcasting is presented. Each student will be trained to competently operate a multitrack recorder and multitrack console. Prerequisite: TELE 1402 or approval of the appropriate college official.

**TELE 1408 Advanced Television Production (3-3) Credit: 4**

This course offers advanced training in television production. Included will be experience as a camera operator, floor director, talent, lighting director, technical director, producer, graphics, video tape operator and audio engineer. Practical experience in television program production will be available through the use of College owned television stations. In addition, a critical look will be given to television programming techniques, types of station structure, and innovative technological breakthroughs. Prerequisite: TELE 1403 or approval of the appropriate college official.

**TELE 2301 Technical Aspects of Broadcasting (3-0) Credit: 3**

This course will help the student develop a broad technical vocabulary and the basic understanding of the technical aspects of Telecommunications. Emphasis is placed on the study of operating fundamentals and the technical limitations of telecommunications systems. Broadcast technical standards and their rationale are a major part of the course. Limited emergency maintenance techniques for production personnel are also taught.

**TELE 2304 Broadcast Sales (3-0) Credit: 3**

This course is designed to give the student a working knowledge of broadcast time sales. Areas of study include sales call preparation, sales presentations, spot scheduling, client interviews, collections, rate cards, contracts, and sales promotions. Station ratings and their use in broadcast sales will also be studied. Prerequisite: TELE 1301 or approval of the appropriate college official.

**TELE 2306 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 on his chosen industry. Prerequisite: Sophomore standing or approval of the appropriate college official.

**TELE 2307 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. Prerequisite: TELE 1301 or approval of the appropriate college official.

**TELE 2309 Broadcast Operations (3-0) Credit: 3**

This course is designed to provide the student with an understanding and appreciation for the overall operation of radio and television stations as businesses. The relationship of the various departments of radio/TV stations and functions will be covered. Emphasis on how each department contributes to the economic condition of a station will be made. Prerequisite: TELE 1301.

**TELE 2407 Electronic Field Production (3-3) Credit: 4**

Electronic field production techniques are covered including field camera operations, electronic editing principles, remote audio and lighting techniques. Students assist television station staff with remote production assignments. Prerequisite: TELE 1406 or approval of the appropriate college official.

**TELE 2408 Telecommunications Internship (1-8) Credit: 4**

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 intern study from any of the following broadcast-related areas: graphic arts, set design, photography, cinematography, broadcast journalism, sales, radio production, television production, broadcast promotion, traffic and continuity. Prerequisite: TELE 1402 and 1403 or approval of the appropriate college official.



**TELE 2409 Telecommunications Projects (1-8) Credit: 4**

The telecommunications 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 College owned radio or television stations. 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 1402 and 1403 or approval of the appropriate college official.

**Welding (WELD)**

**WELD 1250 Basic Oxy Welding (2-2.3) Credit: 2**

Instruction in selected types of weld joints and edge preparation includes safety requirements and maintenance of metal-working tools, supplies and equipment.

**WELD 1251 Basic Arc Welding (2-2.3) Credit: 2**

Provides the student with basic arc welding skills, includes selection of electrodes, heat ranges, types of joints, edge preparation, shop safety and maintenance of equipment.

**WELD 1301 Basic Gas Welding (1-2) Credit: 3**

This course covers the theory and practice of oxyacetylene cutting and welding of metals in horizontal, vertical and overhead positions.

**WELD 1302 Basic Arc Welding (1-2) Credit: 3**

This course covers the theory and practice of electric arc welding. Welds will be made in all positions with various types of electrodes.

**WELD 1401 Beginning Gas Welding (3-3) Credit: 4**

Instruction will be conducted in oxyacetylene welding theory and practical application. Course of study will include use and operation of oxyacetylene cutting equipment. Safety and proper care of oxyacetylene equipment will be stressed. Prerequisite or Corequisite: INDU 1400 or consent of the appropriate college official.

**WELD 1402 Beginning Arc Welding (3-3) 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. Prerequisite or Corequisite: INDU 1400 and WELD 1401 or consent of the appropriate college official.

**WELD 1403 Intermediate Arc Welding (3-3) 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 1405 Advanced Gas Welding (3-3) Credit: 4**

Instruction will be given on oxyacetylene 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 1406 Blueprint for Welders (3-3) Credit: 4**

This course covers the fundamentals of drawing interpretation as applied in the welding trade. Emphasis will be on welding symbols and their significance, familiarization with terms, sites, shapes and abbreviations.

**WELD 2401 Advanced Arc Welding (3-3) 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 Pipe I** (3-3) 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 2404 Pipe II** (3-3) 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 2406 Welding Fabrication & Layout** (3-3) Credit: 4  
Practical application of steel fabrication and general layout work. Blueprint reading of welding prints with welding symbols will be included. Prerequisite: WELD 1406 and 2401.
- WELD 2407 GTAW Welding (TIG)** (3-3) Credit: 4  
This course provides instruction in the theory and practice of Gas Tungsten Arc Welding (GTAW) of aluminum. The course of study includes types of power sources, shielding gases and metals. Welding is performed using 1/16, 3/32, and 1/8 tungsten rod in all positions. Prerequisites: WELD 1402 and 1405.
- WELD 2408 GMAW Welding (MIG)** (3-3) Credit: 4  
This course covers the theory and practice of Gas Metal Arc Welding (GMAW) of mild steel and aluminum. The course of study includes the study of the types of metal transfer and shielding gases used in these processes. Welding will be performed in the 1, 2, 3, and 4G positions using .035 wirefeed. Prerequisite: WELD 1402 or ATBR 1409.

## **Word Processing (WOPO)**

- WOPO1101 MS-DOS: An Introduction** (1-.5) Credit: 1  
A 24-hour basic introduction to the structure and operation of IBM and IBM compatible microcomputer systems. For professional, managerial, administrative and clerical personnel who will use but are not familiar with IBM and IBM compatible microcomputer systems. Instruction consists of short lecture/demonstrations and hands-on practice with actual equipment. Topics include IBM microcomputer system components and operating/controlling the system with MS-DOS.
- WOPO1102 WordPerfect: An Introduction** (1-.5) Credit: 1  
A 24-hour course for professional personnel, word processing operators, writers, editors, and publishers. Hands-on with minimum lecture; includes demonstration, discussion/question/answer sessions. Topics covered: the basic WordPerfect program; document formatting, text entry, spell check, thesaurus, outlining, footnoting, merging letters, document saving, retrieving, and editing; WordPerfect directory/files management; printer/font selection and control; and printing documents.
- WOPO1103 Microsoft Word: An Introduction** (1-.5) Credit: 1  
A 24-hour course for professional personnel, word processing operators, writers, editors, and publishers. Hands-on with lecture; includes demonstration, discussion/question/answer sessions. Topics covered: overview of word processing; structure of Microsoft Word program; document formatting, text entry, retrieving, editing and printing document files; directory/files management; merging and printer/font selection and control.
- WOPO1104 LOTUS 1-2-3: An Introduction** (1-.5) Credit: 1  
A 24-hour course introducing participants to the worksheet and graphics capabilities of LOTUS 1-2-3 applications software. For professional, managerial, administrative, or financial analyst personnel with prior microcomputer experience who need budgetary, financial, or other computer database supported information portrayal/analysis capabilities. Instruction consists of short lecture/demonstrations and hands-on practice. Includes discussion/question/answer sessions using practice exercises and examples. Topics include: LOTUS operating menus, worksheet design, creation, mathematical functions, protecting, storage, retrieval, moving, copying, editing, data manipulation, graphics development, LOTUS macros, on-line Helps, tutorials and references.

**WOPO1105 WordStar/Mail Merge****(1-1) Credit: 1**

A 30-hour course for professional personnel, word processing operators, writers, editors, and publishers. Hands-on with minimum lecture; includes demonstration, discussion/question/answer sessions. Topics include: overview of WordStar structure; defining files; document formatting, text entry; creating form letters using Mail Merge; saving, retrieving, and editing document files; WordStar directory/files management; printer/font selection and control; and printing.

**WOPO1106 Enable: An Introduction****(1-1) Credit: 1**

A 30-hour course for professional, managerial, administrative, and financial analyst personnel having no prior microcomputer experience. A hands-on, minimum lecture approach using actual equipment. Includes discussion/question/answer sessions based upon instructor furnished practice exercises and examples. Topics include: Microcomputer system components, operation, and care; integrated software, the ENABLE applications modules; spreadsheet concepts, database management and word processing; graphics; and telecommunications operations.

**WOPO1107 Spreadsheet Applications****(1-5) Credit: 1**

A 24-hour course introducing participants to the worksheet and graphics capabilities of spreadsheet applications software. For professional, managerial, administrative or financial analyst personnel with prior microcomputer experience who need budgetary, financial, or other computer database supported information portrayal/analysis capabilities. Instruction consists of short lecture/demonstrations and hands-on practice. Includes discussion/question/answer sessions using practice exercises and examples. Topics include: Spreadsheet operating menus, worksheet design, creation, mathematical functions, protecting, storage, retrieval, moving, copying editing, data manipulation, graphics development, spreadsheet macros, on-line Helps, tutorials and references.

**WOPO1108 Word Processing Applications****(1-5) Credit: 1**

A 24-hour course for professional personnel, word processing operators, writers, editors, and publishers. Hands-on with minimum lecture; includes demonstration, discussion/question/answer sessions. Topics include: overview of word processing structure of word processing program; defining files; document formatting, text entry, retrieving, and editing and printing documents files; directory/files management; merging and printer/font selection and control.

**WOPO1109 DataBase Applications****(1-5) Credit: 1**

A 24-hour course introducing participants to the capabilities of a database structure. Hands-on with minimum lecture; includes demonstration, discussion/question/answer sessions. Topics include: how to create, edit, browse, sort, search, and delete a database structure. In addition, participants will learn how to modify an existing structure, create a report, and how to change or replace fields using a search criteria.

**WOPO1303 Beginning Keyboarding/Data Entry****(3-3) Credit: 3**

A beginning course in the fundamentals and techniques of keyboarding and data entry on personal computers. Special emphasis on speed development, including an introduction to letter writing, tabulating, and preparing manuscripts.

**WOPO1304 Intermediate Information Processing Applications****(3-3) Credit: 3**

A continuation of WOPO 1303. Additional skills in terms of accuracy and speed will be evidenced by students in utilizing personal computers. Composition and typing of business letters, tabulations and manuscripts of more demanding content will be instructed. Prerequisite: WOPO 1303 or consent of the appropriate college official.

**WOPO1305 Applicational Software****(3-3) Credit: 3**

A course for professional, managerial, administrative, and financial analyst personnel having no prior microcomputer experience. A hands-on lecture/lab approach using actual equipment. Includes discussion/question-answer sessions based upon instructor-furnished practice exercises and examples. Topics include: Microcomputer system components, operating/controlling the system with MS-DOS; spreadsheet operating menus, worksheet design and creation, mathematical functions, graphics development, spreadsheet macros, and data manipulation; overview of the word processing program's structure, defining files, document formatting, text entry, retrieving, editing and printing document files, merging, printer control, and font selection.

**WOPO1307 Word Processing/Transcription (3-3) Credit: 3**

This course is designed to train students in the theory of word processing. It introduces the student to word processing facilities and equipment. It provides hands-on experience with word processing equipment to include processing, editing, storing information, printing devices, formatting, type style, and paragraphing. Transcribing machines are utilized in conjunction with information creation. Prerequisite: Minimum typing skills of 40 WPM.

**WOPO2302 Advanced Information Processing Applications(3-3) Credit: 3**

This course includes advanced work in such specialized production as tabulation, inter-office correspondence, manuscripts, legal forms, medical forms, special inter-office forms, and additional work on the arrangement of business letters with special features. Personal computers and applicable softwares are used extensively in preparing students to be highly productive office employees. Prerequisites: WOPO 1304 or equivalent.

**WOPO2303 Office Automation (3-3) Credit: 3**

The students will work with advanced problems utilizing hands-on experience with information processing facilities and equipment. Hands-on experience includes the following: editing, storing, printing, formatting, computing and networking. A thorough study of present and future systems, i.e., interchangeability and adaptability of software. Prerequisite: 6 WOPO hours or equivalent.

**WOPO2304 Automated Accounting (3-3) Credit: 3**

Elementary principles of accounting, such as journalization, posting, statements, special journals; subsidiary ledgers will be studied utilizing software packages. Special emphasis is placed on personal, family and small business accounting systems. Prerequisite: OADM 2304.

**WOPO2306 Information Systems and Applications (3-3) Credit: 3**

This course is designed to give secretarial, clerical, management, and word processing students an insight into the present and future office environment with regard to the current trend towards automation. Through class discussion, individual and/or group projects, research and input from various speakers from related areas of private industry, students will become aware of the impact of current trends toward automation in the office as well as related business fields. Prerequisite: 12 WOPO hours or equivalent.

**WOPO2308 Information System Internship I (2-4) 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. Actual work training will be available in following areas: information processing, filing, duplication, use of telephone, preparation of correspondence, voice transcription machine, record keeping, proofreading, etc.

**WOPO2309 Information System Internship II (2-4) Credit: 3**

Students will be provided a combination of occupationally related class work instruction and on-the-job training in cooperation with Office Administration offices. Students will demonstrate advanced competencies with work experiences in the following areas: taking dictation, information processing, letter composing, telephone procedures, filing work scheduling, financial calculating, duplication, transcribing from dictation equipment, etc.

**WOPO2310 Word Processing Center Management (3-0) Credit: 3**

This course covers the factors that influence work efficiency and human behavior in the information processing center environment. This course includes a consideration of systems limitations and capabilities, work flow, system security, scheduling, managerial theories, system evaluation, human relations, and supervision. Prerequisite: Sophomore standing or the consent of the instructor.

# INDEX

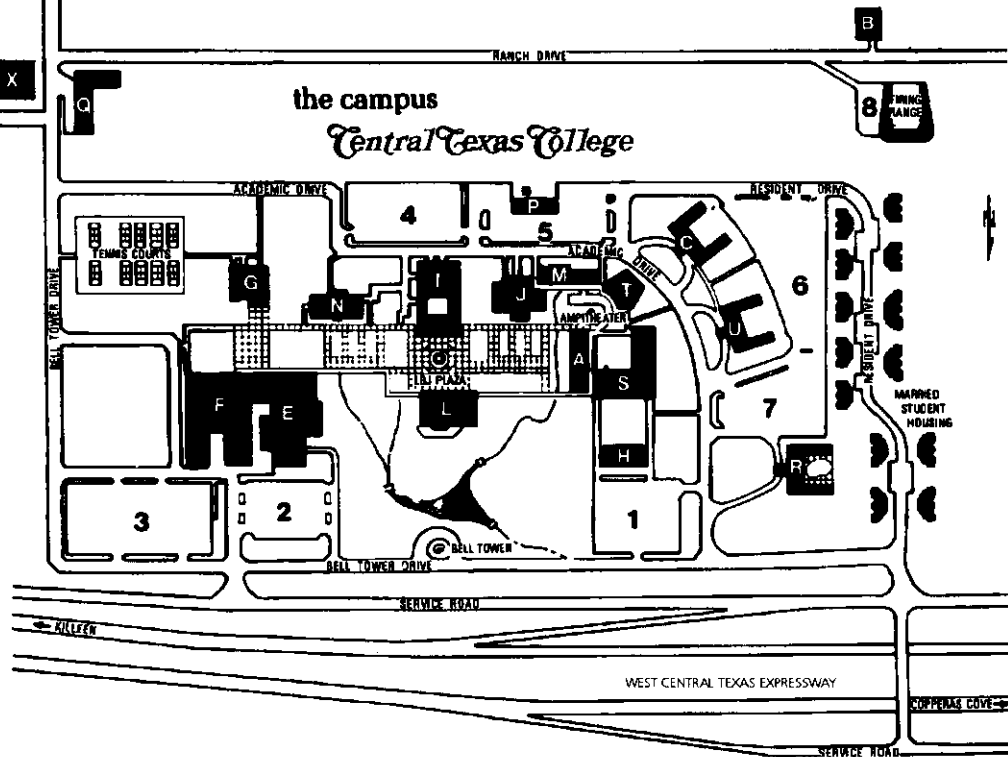
	PAGE		PAGE
<b>A</b>			
Ability To Benefit	4	Continuing Education Program	30
Absences	10	Correspondence Courses	26
Academic Load	10	Cost of Classes	3, 7
Academic Policy	14	Counseling	4
Academic Probation	15	Course Admission	7
Academic Standards	14	Course Descriptions	68
Academic Suspension	15	Course Numbers	12
Accreditation	ii	Course Offerings	28, 68
Adding Classes	7	Course out of Sequence	12
Addresses	i	Credit by Examination	25
Address Change	16	Credit, Non-Traditional & Traditional	25
Administrative Offices	vi	Credit, Resident	11
Admission, Early	5	Credit, Transfer	12
Admission Requirements	4		
Admission Requirements, Departmental	6	<b>D</b>	
Advanced Standing Exams	25	Degree Completion Agreement, SOC	27
Advisement, Pre-Registration	4	Degree, How to Apply for	24
Associate in Applied Science Degree	22	Degree/Certificate Programs	
Associate in Arts Degree	20	Accounting Technology	32, 68
Associate in General Studies Degree	22	Administrative Secretarial	32, 130, 145
Associate in Science Degree	21	Air Conditioning & Refrigeration	33, 69
Attendance Policy	10	Applied Management	34, 119
Auditing Classes	16	Applied Management with Technical Options	34, 35, 88, 125
Aviation Science Admissions	6	Art	36, 71
		Auto Body Repair	36, 73
<b>B</b>		Automotive Service and Repair	37, 74
Behavior, Class	18	Aviation Maintenance	38, 76
Board of Trustees	vi	Aviation Science	39, 78
Bookstore	3	Biology	39, 81
<b>C</b>		Business Administration	40, 68, 82
Calendar	6	Business Management	41, 119
Catalog, The	2	Chemistry	41, 82
Certificates	23	Communications Electronics Technology	42, 85, 87
Challenge Exam, Institutional	25	Computer Electronics Technology	43, 85, 87
Change of Address	16	Computer Science Programmer/Analyst	43, 88, 125
Change of Grades	14	Computer Science Information Tech. Option	44, 88, 125
Changing Registration	7	Consumer Electronics Technology	45, 85, 87
Cheating	16	Criminal Justice	45, 91
Class Membership	11	Diesel Mechanics	46, 96
Classification	11		
Collusion	16		
Commencement	24		
Common Course Numbering	12		

	<b>PAGE</b>		<b>PAGE</b>
Drafting & Design	47, 98	Evaluation	26
Early Childhood		Evaluation of Military Credit	25
Professions	48, 83	Examination, Credit by	25
Education	48		
Emergency Medical		<b>F</b>	
Technician	49, 100	Faculty	ix
Engineering	50, 101	Falsification of Records	16
English	51, 101	Fees	3, 18
Finance & Banking	51, 102	Financial Aid	8, 15
Fire Protection Technology	52, 103	Forms Required	4
Food Service Management	53, 105		
Foreign Language	53	<b>G</b>	
General Studies	54	GED Equivalency	4, 5
Geology	55, 109	GI Bill	9
Hotel/Motel Management	55, 110	Grade, Change of	14
Kinesiology	56, 134	Grade, Reporting	12
Law Enforcement	57, 112	Grade Requirements	14
Legal Assistant	57, 115	Grade and Point Average	13, 14
Maintenance Technology	58, 117	Grades and Financial Aid	14, 15
Mathematics	59, 125	Grades for Repeated Courses	14
Microcomputer Technology	59, 60, 125	Graduation	24
Office Management	61, 130, 145	Grants	8
Offset Printing	61, 132		
Photography	62, 133	<b>H</b>	
Real Estate	62, 137	Harassment	3, 18
Small Gas Engine Repair	63, 139	High School Requirements	4
Social Science	63	Historical Background of the College	1
Speech	64, 141	Honors	24
Television/Radio Broadcasting	65, 142	How Many Hours Should You Take	10
Training Management Systems	66, 119	How to Apply for Certificate or Degree	24
Welding	66, 144	How to Begin	4
Word Processing Specialist	67, 145	How to Choose Courses	12
Degree Requirements	11, 20	How to Earn a Certificate	23
Degree Conferred	20	How to Obtain Transcripts	18
Department of Defense Civilians	9	How to Obtain Financial Aid	8
Developmental Studies	23	How to Sign Up for Classes	7
Directory	vii	How You May Return After	
Disciplinary Action	16, 17, 18	Probation or Suspension	15
Discrimination	3	How You Receive Credit by	
Dropping Classes	7	Evaluation	25
Drug and Alcohol Abuse	17	How You Receive Grades	12
Due Process	18		
<b>E</b>		<b>I</b>	
Early Admission	5	If You Don't Make the Grade	15
Educational Objectives	1	Illegal Substances	17
Educational Philosophy	2	Incomplete, Grade of	14
Electives, Approved	29	Incomplete, Removal of	14
Electives, Technical	28	Institutional Challenge Exam	25
Entrance Exams	4		
Equal Opportunity Policy	3		

	PAGE		PAGE
International Student, Admission Requirements	4	<b>S</b>	
International Student, Advisement	4	Satisfactory Progress, Grade Requirements	9, 15
<b>L</b>		Scholastic Honesty	16
Late Registration	7	Semester Credit Hours	28
Loans	8	Servicemembers Opportunity College	26
<b>M</b>		SOC Agreement, Degree Completion	27
Military Credit	25	SOCAD/SOCNAV	27
Military Education Benefits	9	Standard Uniform Application	6
Military Tuition Assistance	9	Statement of Purpose	1
<b>N</b>		Student Discipline	18
Name Changes	16	Student Financial Aid	8
Non-Credit Courses	30	Student Records	10
Non-Traditional Credit	25	Suspension, Academic	15
<b>O</b>		<b>T</b>	
Official Enrollment	11	Table of Contents	iii
Official Evaluation	25	Tardiness	10
Official Registration	7	Term Calendar	6
Other Costs	3	Textbooks	3, 17
<b>P</b>		Transcript Ordering	5, 18
Payment	8	Transcripts Required for Admission	5
Pell Grant	8	Transfer Credit to CTC	5, 25
Plagiarism	16	Transfer Credit to other Colleges	12, 23
Prerequisite Courses	12, 28	Transient Student Admission Requirements	5
Privacy Act	10	Tuition Charges	8
Probation, Academic	15	Tuition Refund	8
Probations, Disciplinary	18	Tuition and Fee Schedules	3, 7
Program Availability	2	<b>U</b>	
Program Locations	31	Uniform Application of Standards	6
Programs of Study	28	Unsatisfactory Progress	15
Purpose	1	<b>V</b>	
<b>R</b>		Veterans Benefits	9
Records Access	10	Visitors in Class	16
Records Required	5	<b>W</b>	
Refunds	8	What Degrees Are Offered	20
Registration Periods	6	What Requirements must be met for a Degree	11, 20
Registration Requirements	4, 7	When are Certificates and Degrees Awarded	24
Repeating a Course	14	When is Commencement Held	24
Return to Class After Suspension	15	When to Register	6
		Whom to See for Classes	7
		Withdrawal Policy	19

# Important Campus Locations

- A** (Bldg. 104) Academic
- B** (Bldg. 110) Farm & Ranch Management
- C** (Bldg. 111) Systems Services
- D** (Bldg. 136) University of Central Texas
- E** (Bldg. 101) Engineering Arts Technology
- F** (Bldg. 118) Vocational Skills Center
- G** (Bldg. 103) Physical Education
- H** (Bldg. 108) Administration
- I** (Bldg. 106) Student Center
- J** (Bldg. 112) Fine Arts
- L** (Bldg. 102) Library
- M** (Bldg. 109) Telecommunications
- N** (Bldg. 113) Nursing
- P** (Bldg. 107) Power Plant/Campus Police
- Q** (Bldg. 122) Physical Plant
- R** (Bldg. 120) Student Residential Hall
- S** (Bldg. 105) Science
- T** (Bldg. 121) Computer Science
- U** (Bldg. 119) Student Services
- W** (Bldg. 117) Child Development Center
- X** (Bldg. 139) Administrative Computer Center



Parking Lots Designated by Numbers



