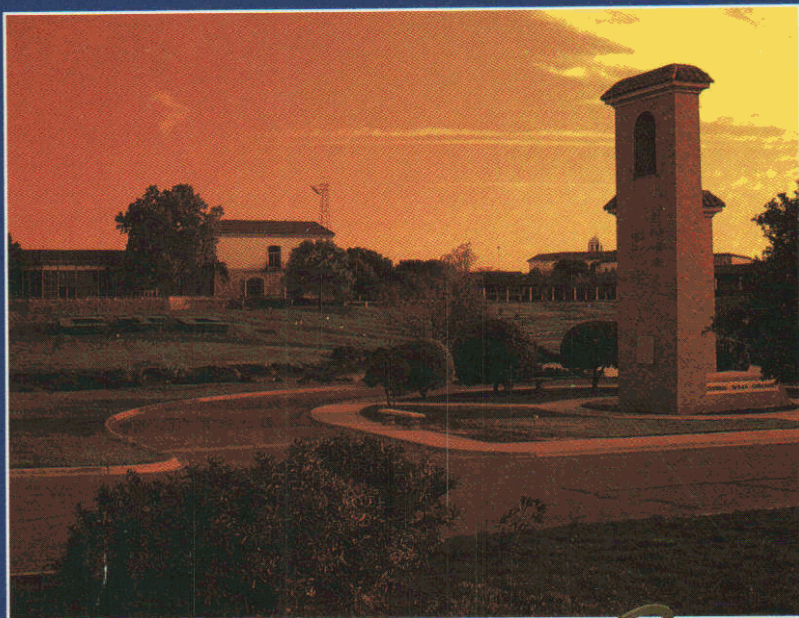


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# CENTRAL TEXAS COLLEGE

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*A Great Place  
to Start!*

1989 – 1991 CATALOGUE

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## **MAJOR CAMPUS ADDRESSES COLLEGE PROGRAMS**

**CENTRAL CAMPUS**  
CENTRAL TEXAS COLLEGE  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-1298

**EUROPE CAMPUS**  
CENTRAL TEXAS COLLEGE  
Office of the Dean  
Yorkhof Kaserne Building 1205  
APO New York 09165  
(Civilian) 06181-13027/13028  
(Military) 322-8219/8871

**FORT HOOD CAMPUS**  
CENTRAL TEXAS COLLEGE  
Dean, Fort Hood Campus  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-1326

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

**SERVICE AREA CAMPUS**  
CENTRAL TEXAS COLLEGE  
Executive Dean, Service Area Campus  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-1227

**NAVY PACIFIC CAMPUS**  
CENTRAL TEXAS COLLEGE  
4250 Pacific Highway, Suite 122  
San Diego, CA 92110  
1-619-226-6626

**CONTINENTAL AND NAVY  
CAMPUSES**  
CENTRAL TEXAS COLLEGE  
Office of the Dean  
P.O. Box 1800  
Killeen, Texas 76540-9990  
1-817-526-1368/1356

**PACIFIC FAR EAST CAMPUS**  
CENTRAL TEXAS COLLEGE  
Office of the Dean  
Office of Student Services  
Office of Administrative Services  
Camp Market-Building P-1530  
Republic of Korea  
APO San Francisco, CA 96483  
722-3833 (Dean)  
722-3814 (Administration)  
722-3807 (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 catalogue, 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.

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

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## Board of Trustees

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## Chancellor's Message

---

The Board of Trustees, the Administration, the Faculty and the Staff of Central Texas College have all pledged that you, our students, will always remain our first priority. We will never forget the special trust and confidence that you have placed in us to insure that the highest standards of educational excellence will always be the foundation of our institutional goals and objectives. As your community college, we take great pride in our ability to meet the educational needs of all of our students: the first-time enrollee, the military servicemember, the returned military veteran, the senior citizen, the educationally or economically disadvantaged, or those just wishing to pursue a College education. As we enter the third decade of our existence as an educational institution we will continue to rely on over twenty years of experience and the wisdom gained from listening to students, those past and present, to the leaders of business and industry who provide the jobs so vital to our continued economic growth, and to the leadership at Fort Hood who understand the special educational needs of the military student.



The educational challenges that face us today are related to the enormous and dynamic impact that changing technology has and will continue to have on the work place and the ever increasing demands on the need for practical and useful knowledge that will prepare you for this environment. We place a high priority on ensuring that our curriculum, our laboratories and equipment, our libraries, and our faculty remain technically current and at the forefront of the base of knowledge in every program we offer.

In addition to these important programmatic considerations is the commitment to ensure that you our students are treated courteously, with dignity, and provided all of the student services in a cheerful, helpful manner that are your right to receive. You are our most important product and we intend to treat you that way.

Lastly, we recognize that your decision to enroll in Central Texas College and pursue your educational objectives often entails some very real sacrifices both in time and money. We will never take your commitment for granted and pledge to assist in making your experience with Central Texas College enjoyable and rewarding.

Thank you.

James R. Anderson, Ph.D.  
Chancellor



# Central Texas College

*An Operating Unit of the American Educational Complex*

---

Thirteenth

1989-1991

## GENERAL CATALOGUE

Accredited by  
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Texas Association of Broadcast Educators  
Texas Association of College Admissions Counselors  
Texas Association of Public Junior Colleges  
Texas Association of Collegiate Registrars and Admission Officers  
Texas Association of Collegiate Veterans Program Officers  
Texas Association of Student Financial Aid Administrators

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## Central Texas College

As a result of unparalleled achievement, Central Texas College has grown from a single campus public community college in Central Texas to an international educational complex. In 1965, Central Texans voted to create a college district resulting in an enormous challenge as to whether to develop a traditional community college or to create a master plan for the future.

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

Considering cost effectiveness, efficiency, and immediate application to present needs and future growth, it was clearly recognized that no single educational institution could provide all the programs to meet the career development needs of people in commerce, business and industry, military, government, and the world society. Today, Central Texas College is an operating unit of the American Educational Complex. Central Texas College provides a "total career educational program."

The American Educational Complex, comprised of Central Texas College and American Preparatory Institute, has mushroomed into a multi-million-dollar-a-year educational system with numerous activity centers within the state and worldwide. The American Educational Complex has been recognized as a leader in providing educational services that successfully address the unique needs of today's students.

## Worldwide Services

From its 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 CTC serves the armed services across the nation and overseas. This commitment to provide expanded educational opportunities carries the same thrust of dedication which is characteristic of Central Texas College.

Central Texas College provides the opportunity for higher education to military personnel serving our country in the United States and in foreign lands. Technical-vocational programs are offered by the College at over 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 Fleets. For further information concerning College offerings around the world, the Continental and International Catalogue should be consulted.



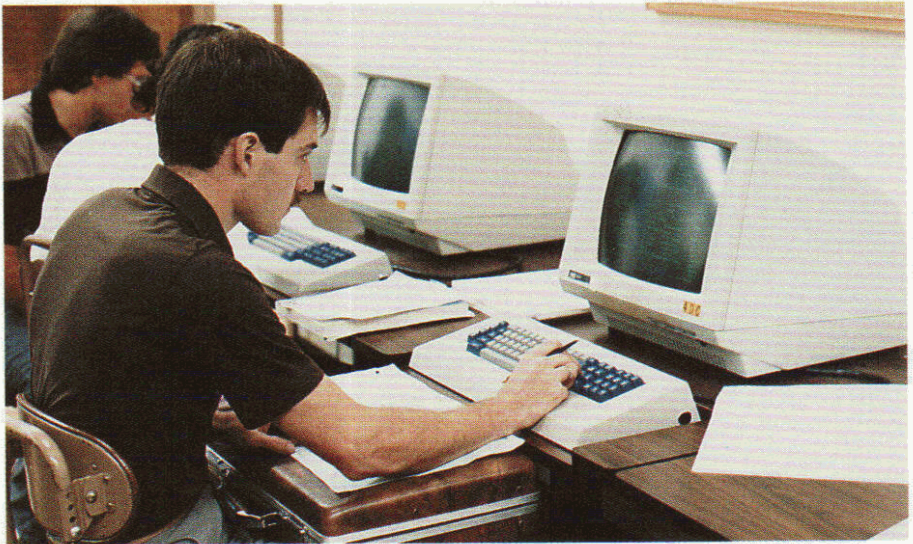
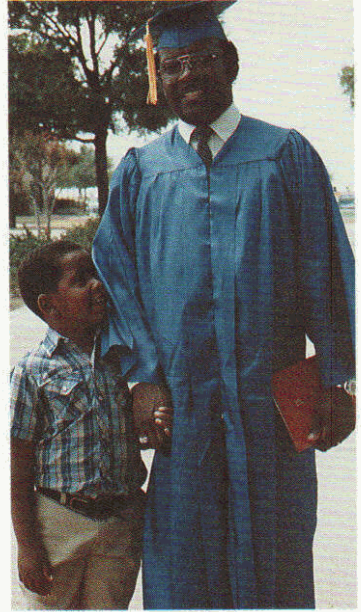
# Campus Scenes

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

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

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



# Central Campus College Calendar

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

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

This College Calendar addresses only Central Campus activities. Students attending Central Texas College at other locations should contact Central Texas College officials serving their locations.

## Proposed College Calendar Fall 1989–Fall 1991

### 1989

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

SEPTEMBER						
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OCTOBER						
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29	30	31				

NOVEMBER						
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DECEMBER						
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31						

### 1990

JANUARY						
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7	8	9	10	11	12	13
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28	29	30	31			

FEBRUARY						
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MARCH						
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APRIL						
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MAY						
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JUNE						
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JULY						
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AUGUST						
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

#### DATES

August 21-23  
August 28  
August 30  
September 4  
October 2  
November 10  
November 23-24  
December 13-19

#### DATES

January 3-5  
January 12  
January 15  
January 16  
February 1  
February 18  
March 12-16  
May 4-10  
May 12

#### DATES

May 22-24  
May 28  
June 1  
June 4  
  
June 11  
July 4  
July 10  
July 11  
August 16  
August 15-16

#### FALL 1989

Fall Registration  
Dormitory open for occupancy  
Classes begin; late registration begins  
Labor Day (closed)  
Last day to apply for Fall graduation  
Veteran's Day (closed)  
Thanksgiving Holiday (closed)  
Final Exams

#### SPRING 1990

Spring Registration  
Dormitory opens for occupancy  
Martin L. King observance (closed)  
Classes begin; late registration begins  
Last day to file for Spring graduation  
Presidents Day (closed)  
Spring Break  
Final exams  
Graduation

#### SUMMER 1990

Summer Registration  
Memorial Day (closed)  
Dormitory opens for occupancy  
Classes begin; late registration begins  
(Summer Session I & 11 week courses)  
Last day to apply for Summer graduation  
Independence Day (closed)  
Final exams Summer Session I  
Classes begin Summer Session II  
Final exams 11-week courses  
Final exams Summer Session II

# Proposed College Calendar Fall 1989–Fall 1991 (cont)

## 1990

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

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

NOVEMBER						
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## 1991

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MAY						
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JULY						
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SEPTEMBER						
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AUGUST						
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OCTOBER						
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DECEMBER						
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30	31					

## DATES

August 22-24  
August 27  
August 29  
September 3  
October 1  
November 12  
November 22-23  
December 12-18

## DATES

January 3-4 & 7  
January 10  
January 14  
January 21  
February 1  
February 18  
March 11-15  
May 3-9  
May 11

## DATES

May 21-23  
May 27  
May 31  
June 3  
June 10  
July 4  
July 9  
July 10  
August 15  
August 14-15

## DATES

August 21-23  
August 26  
August 28  
September 2  
October 1  
November 11  
November 28-29  
December 11-17

## FALL 1990

Fall Registration  
Dormitory open for occupancy  
Classes begin; late registration begins  
Labor Day (closed)  
Last day to apply for Fall graduation  
Veteran's Day (closed)  
Thanksgiving Holiday (closed)  
Final exams

## SPRING 1991

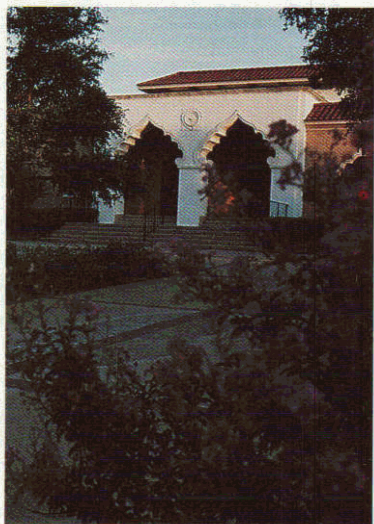
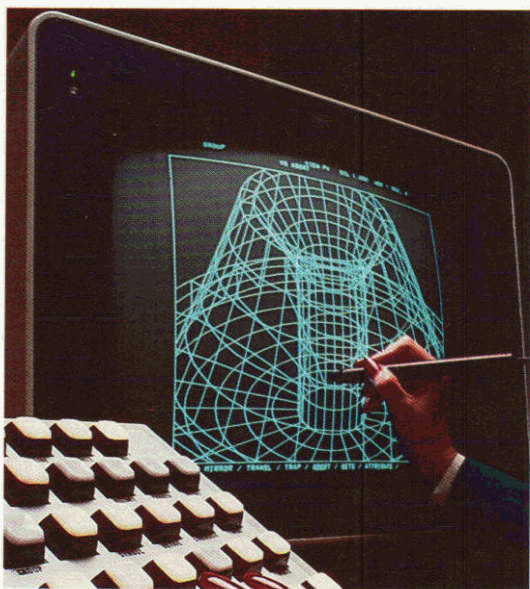
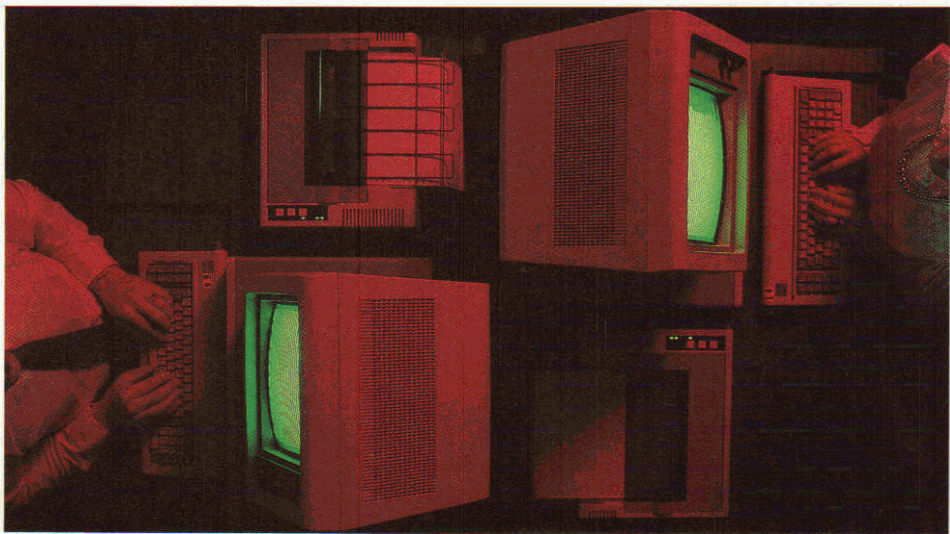
Spring Registration  
Dormitory opens for occupancy  
Classes begin; late registration begins  
Martin L. King observance (closed)  
Last day to file for Spring graduation  
Presidents Day (closed)  
Spring Break  
Final Exams  
Graduation

## SUMMER 1991

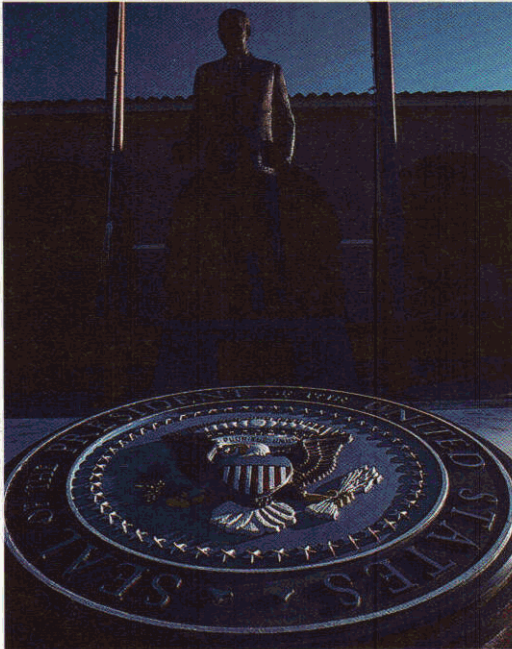
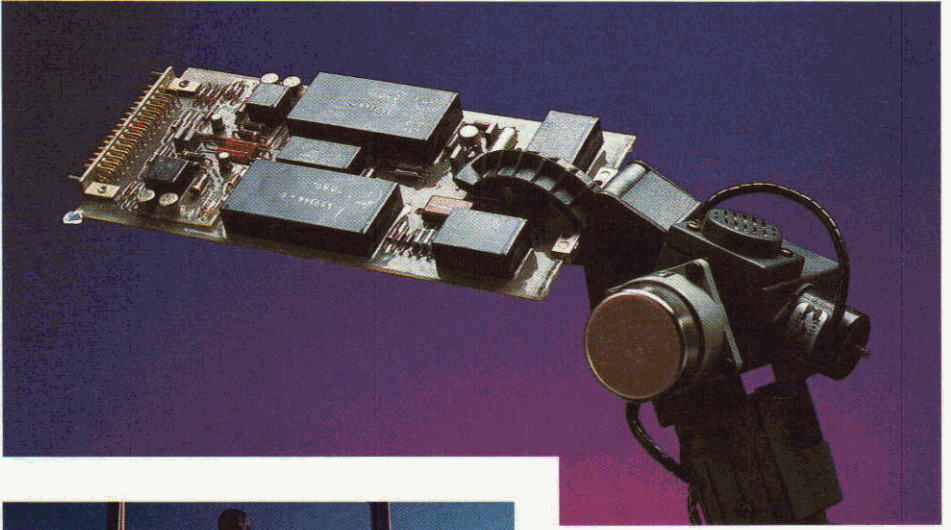
Summer Registration  
Memorial Day (closed)  
Dormitory opens for occupancy  
Classes begin; late registration begins  
(Summer Session I & 11-week courses)  
Last day to apply for Summer graduation  
Independence day (no classes)  
Final exams Summer Session I  
Classes begin Summer Session II  
Final exams 11-week courses  
Final exams Summer Session II

## FALL 1991

Fall Registration  
Dormitory open for occupancy  
Classes begin; late registration begins  
Labor Day (closed)  
Last day to apply for Fall graduation  
Veteran's Day (closed)  
Thanksgiving Holiday (no classes)  
Final exams







# **CENTRAL CAMPUS**

## **1989–91 Faculty**

<b>Barbara Adams, <i>Faculty</i> (1988)</b> NURSING Diploma: St. Joseph's Hospital, Phoenix, Arizona	<b>Vocational Nursing</b>
<b>Wynona W. Alexander, <i>Department Manager</i> (1969, 1974)</b> ART B.A., East Texas State University M.A., East Texas State University Ph.D., North Texas State University	<b>Art</b>
<b>Exzella O. Alfred, <i>Assistant Faculty</i> (1985)</b> NURSING Diploma, Harlem Hospital School of Nursing B.S.N., Hunter College M.A., Teachers College, Columbia University M.Ed., Teachers College, Columbia University	<b>Associate Degree Nursing</b>
<b>Gordon D. Bacon, <i>Director, Child Development Center</i> (1985)</b> CHILD DEVELOPMENT B.A., Montana State University M.A., University of Montana	<b>Child Development</b>
<b>Kathleen Bacon, <i>Faculty</i> (1988)</b> COMPUTER SCIENCE A.A.S., Central Texas College B.A., State University of New York M.S., American Technological University	<b>Computer Science</b>
<b>Patricia Bayless, <i>Associate Faculty</i> (1988)</b> NURSING A.S.N., University of Maine at Augusta	<b>Vocational Nursing</b>
<b>Gayle J. Blum, <i>Associate Faculty</i> (1980)</b> NURSING Diploma: Hillcrest School of Nursing B.S.N., University of Mary Hardin-Baylor M.S.N., Texas Women's University	<b>Associate Degree Nursing</b>
<b>Bethelee Bodkin, <i>Associate Faculty</i> (1984)</b> NURSING Diploma: St. Elizabeth Hospital B.S.N., University of Texas of Austin M.S.N., University of Texas at Austin	<b>Nursing</b>
<b>J. Parker Bogue, <i>Faculty</i> (1973)</b> SOCIAL SCIENCE B.A., University of Maine M.A., University of Maryland Ph.D., University of Maryland	<b>History</b>
<b>John W. Brewer, <i>Faculty</i> (1978)</b> INDUSTRIAL TECHNOLOGY B.S., American Technological University M.S., American Technological University	<b>Air Conditioning</b>



## 1989-91 Faculty

<b>Ruby Brown, Assistant Faculty</b> (1988) NURSING A.S.N., Galveston College B.S.N., University of South Carolina M.Ed., Southern University A & M College	<b>Associate Degree Nursing</b>
<b>Wayne L. Caldwell, Department Manager</b> (1974) OFFSET PRINTING A.A.S., Central Texas College	<b>Offset Printing</b>
<b>Elizabeth L. Cheatham, Faculty</b> (1974) OFFICE ADMINISTRATION B.A., Louisiana Tech University M.B.A., Louisiana Tech University	<b>Office Administration</b>
<b>Daniel A. Corbin, Faculty</b> (1987) BUSINESS MANAGEMENT B.S., University of Illinois M.A., University of Illinois J.D., University of Texas School of Law Licensed C.P.A., State of Texas	<b>Legal Assistant/Accounting</b>
<b>John Cornelius, Department Manager</b> (1978, 1980) BUSINESS MANAGEMENT B.A., Texas Christian University M.S., American Technological University	<b>Mid-Management/ Real Estate &amp; Banking</b>
<b>B. J. Cummings, Faculty</b> (1982) INDUSTRIAL TECHNOLOGY A.A.S., Central Texas College	<b>Auto Body Repair</b>
<b>Richard Diller, Faculty</b> (1984) COMPUTER SCIENCE A.A.S., Central Texas College B.S., U.S. Military Academy M.S., U.S. Naval Post Graduate School	<b>Computer Science</b>
<b>Charles P. Dolney, Faculty</b> (1986) INDUSTRIAL TECHNOLOGY B.S., University of Houston	<b>Maintenance Technology</b>
<b>Donald Donaldson, Instructor</b> (1985) INDUSTRIAL TECHNOLOGY A.A.S., Central Texas College	<b>Diesel Mechanics</b>
<b>Lucian J. Endicott, Jr.,</b> (1987) COMPUTER SCIENCE B.A., Emory University B.Ed., The University of Melbourne (Australia)	<b>Computer Science</b>
<b>Mary C. Felld, Faculty</b> (1973) OFFICE ADMINISTRATION B.A., Lamar University M.A., University of Texas at Austin	<b>Office Administration</b>
<b>Ronald R. Fitz-Randolph, Faculty</b> (1981) COMPUTER SCIENCE B.A., University of Oklahoma M.S., American Technological University	<b>Computer Science</b>

## 1989–91 Faculty

<b>Harriet Foster, Associate Faculty</b> (1983) NURSING B.S.N., University of Mary Hardin-Baylor	<b>Vocational Nursing</b>
<b>Adel M. Galanffy, Department Manager</b> (1967, 1973) MUSIC M.M., Franz Liszt Music Conservatory	<b>Piano</b>
<b>Robert Garner, Faculty</b> (1988) COMMUNICATIONS A.A., McClennan Community College B.A., Baylor University M.A., Baylor University	<b>Communications</b>
<b>James D. Gebhardt, Chief Flight Instructor</b> (1978, 1981) CAREER PILOT A.A.S., Central Texas College B.A.S., University of Mary Hardin-Baylor M.S., American Technological University	<b>Career Pilot</b>
<b>Curtis Gibson, Department Manager</b> (1981) (1987) CAREER PILOT B.S., East Carolina University M.S., American Technological University	<b>Career Pilot</b>
<b>Jane M. Gibson, Faculty</b> (1979) COMMUNICATIONS B.A., Abilene Christian University M.A.T., Southwest Texas State University	<b>Intensive English/Foreign Language</b>
<b>Donna S. Giebler, Faculty</b> (1976, 1980) OFFICE ADMINISTRATION B.S., Howard Payne College M.S.Ed., Howard Payne College	<b>Office Administration</b>
<b>Robert W. Grazinski, Instructor</b> (1984, 1988) COMPUTER SCIENCE B.A., American Technological University M.S., American Technological University	<b>Computer Science</b>
<b>Terry L. Hale, Faculty</b> (1985) COMPUTER SCIENCE B.S., Baylor University	<b>Computer Science</b>
<b>Audrie E. Hall, Faculty</b> (1985) ELECTRONICS B.S., Lamar State University M.B.A., Stephen F. Austin University	<b>Electronics</b>
<b>Timothy R. Hall, Department Manager</b> (1969, 1974) MATHEMATICS B.A., Oklahoma State University M.S., West Texas State University	<b>Mathematics</b>
<b>William G. Handorf, Faculty</b> (1969, 1976) SOCIAL SCIENCE A.A., Morton Junior College B.A., Northwestern University M.A., Northwestern University Ed.D., American University	<b>Psychology/Sociology</b>

## 1989-91 Faculty

<b>Elaine E. Hayes, <i>Department Manager</i> (1986)</b> NURSING B.S., Louisiana College M.S.N., The University of Texas at Austin	<b>Associate Degree Nursing</b>
<b>John L. Henderson, <i>Faculty</i> (1970)</b> COMMUNICATIONS B.A., West Texas State University M.A., West Texas State University	<b>English</b>
<b>Patrick K. Hidy, <i>Faculty</i> (1976)</b> SCIENCE A.A.S., Phillips County Community College B.S., East Texas State University M.S., East Texas State University	<b>Biology</b>
<b>Lewis M. Hilley, <i>Department Manager</i> (1979)</b> PHYSICAL EDUCATION A.B., Baylor University M.Ed., University of Texas at Austin Ed.D., University of Texas at Austin	<b>Physical Education</b>
<b>Anna R. Holston, <i>Faculty</i> (1988)</b> COMMUNICATIONS B.A., Paine College M.A., Pepperdine University	<b>English</b>
<b>Erdeene V. Hyde, <i>Department Manager</i> (1968, 1976)</b> COMMUNICATIONS B.A., Bethany Nazarene College M.A., East Texas State University	<b>English/Reading</b>
<b>Truell W. Hyde, <i>Department Manager</i> (1968)</b> SOCIAL SCIENCE B.S., Texas Tech University M.Ed., Texas Tech University	<b>History</b>
<b>Kay D. Insogna, <i>Faculty</i> (1989)</b> MATHEMATICS B.S., Stephen F. Austin State University M.S., Stephen F. Austin State University	<b>Mathematics</b>
<b>Nancy Isett, <i>Associate Faculty</i> (1985)</b> ART B.A., University of Texas at Austin B.F.A., University of Texas at Austin M.F.A., University of Texas at Austin	<b>Art</b>
<b>Edward B. Jasuta, Jr., <i>Director</i> (1970, 1980)</b> TELECOMMUNICATIONS B.A., University of Texas at El Paso M.S., American Technological University	<b>Telecommunications</b>
<b>Jeanette M. Jost, <i>Faculty</i> (1978, 1981, 1985)</b> NURSING Diploma: Scott & White Hospital School of Nursing B.S.N., University of Mary Hardin-Baylor M.S., American Technological University	<b>Associate Degree Nursing</b>

## 1989-91 Faculty

<b>Jack L. Kinn, <i>Faculty</i> (1980)</b> COMPUTER SCIENCE B.G.S., University of Nebraska at Omaha M.S.B.A., Boston University	<b>Computer Science</b>
<b>Peter W. Knightes, <i>Faculty</i> (1982)</b> SCIENCE B.S., State University College at Oneonta, New York M.Ed., Texas A & M University	<b>Geology</b>
<b>Billie J. Laney, <i>Faculty</i> (1970)</b> SOCIAL SCIENCE B.A., Southern Methodist University M.A., East Texas State University Ph.D., East Texas State University	<b>Psychology/Sociology</b>
<b>Ray Stanley Laney, <i>Division Director</i> (1969)</b> BUSINESS MANAGEMENT B.B.A., University of Texas at Austin M.S., East Texas State University Ph.D., East Texas State University	<b>Business/Management</b>
<b>Gloria L. Lyons, <i>Faculty</i> (1974)</b> NURSING B.S.N., Winston Salem University M.S.N., Texas Women's University	<b>Associate Degree Nursing</b>
<b>Herbert J. Maglietta, <i>Department Manager</i> (1974)</b> DRAFTING & DESIGN B.S., Southwest Texas State University M.Ed., Southwest Texas State University	<b>Drafting &amp; Design</b>
<b>Catherine M. Mason, <i>Department Manager</i> (1976, 1978)</b> CHILD DEVELOPMENT B.S., American Technological University M.S., Texas Women's University	<b>Child Development</b>
<b>Edgar A. Odom, <i>Director of Training,</i> <i>Centex Police Academy</i> (1975, 1984)</b> CRIMINAL JUSTICE A.A., Central Texas College B.S., American Technological University M.C.J., American Technological University	<b>Criminal Justice Division</b>
<b>Gary R. Ragsdale, <i>Department Manager</i> (1971)</b> OFFICE ADMINISTRATION B.S., Abilene Christian University M.B.A., Abilene Christian University Ed.D., Arizona State University	<b>Office Administration</b>
<b>Paula J. Ray, <i>Faculty</i> (1976, 1980)</b> SCIENCE B.S., Kansas State University M.S., Kansas State University M.S., American Technological University	<b>Biology</b>
<b>Shirley L. Robertson, <i>Faculty</i> (1981)</b> NURSING B.S., Texas Christian University M.S., University of Texas	<b>Associate Degree Nursing</b>

## 1989–91 Faculty

<b>D. Gail Robinson, <i>Department Manager</i></b> (1973, 1980) COMPUTER SCIENCE A.A.S., Central Texas College B.S., American Technological University M.S., American Technological University	<b>Computer Science</b>
<b>Theodore C. Robinson, Sr., <i>Faculty</i></b> (1971, 1974) COMPUTER SCIENCE B.S., American Technological University M.S., American Technological University	<b>Computer Science</b>
<b>Lee Roy Rose, <i>Faculty</i></b> (1976) INDUSTRIAL TECHNOLOGY A.A.S., Central Texas College	<b>Automotive Service &amp; Repair</b>
<b>Max L. Rudolph, <i>Faculty</i></b> (1979) TELECOMMUNICATIONS A.A.S., Central Texas College B.S., American Technological University M.S., American Technological University	<b>Telecommunications</b>
<b>Gus D. Rummel, <i>Department Manager</i></b> (1970) ELECTRONICS B.S., University of Houston M.S., American Technological University	<b>Computer Maintenance</b>
<b>Aida Sapp, <i>Assistant Faculty</i></b> (1988) NURSING M.S.N., Texas Women's University B.S.N., University of Mary Hardin-Baylor M.S.N., University of Texas at Austin	<b>Associate Degree Nursing</b>
<b>Lisa M. V. Sebt, <i>Instructor</i></b> (1988) COMMUNICATIONS B.A., Juniata College M.A., West Virginia University	<b>Intensive English/Foreign Language</b>
<b>Shane K. Simon, <i>Faculty</i></b> (1981) COMMUNICATIONS B.S., Southwest Texas State University M.A., Southwest Texas State University	<b>Speech</b>
<b>Noel M. Smith, Sr., <i>Faculty</i></b> (1977) DRAFTING & DESIGN B.S., University of Houston M.S., North Carolina State College	<b>Drafting &amp; Design</b>
<b>Ed Spence, <i>Department Manager</i></b> (1972, 1978) HOSPITALITY INDUSTRY B.S., University of Mary Hardin-Baylor M.S., American Technological University	<b>Food Service &amp; Hotel/Motel</b>
<b>Antonio V. Suarez-Barrio, <i>Executive Dean,</i></b> <i>Criminal Justice Division</i> (1973, 1986) CRIMINAL JUSTICE A.A., Yuba College B.S., University of Nebraska M.S., American Technological University M.C.J., American Technological University M.P.A., Nova University D.P.A., Nova University	<b>Criminal Justice Division</b>

## 1989-91 Faculty

<b>Doris Louise Sutton, Faculty</b> (1984) MATHEMATICS B.S., West Texas State University M.S., West Texas State University	<b>Mathematics</b>
<b>Ella Teague, Faculty</b> (1968) PHYSICAL EDUCATION B.S., Sul Ross State University M.Ed., Sul Ross State University	<b>Physical Education</b>
<b>Dora Thrash, Associate Faculty</b> (1974) NURSING B.S.N., Prairie View A & M M.S.N., Texas Women's University	<b>Associate Degree Nursing</b>
<b>H. Allan Tolbert, Faculty</b> (1969, 1980) BUSINESS MANAGEMENT B.S., Texas Tech University M.A., Texas Tech University	<b>Mid-Management</b>
<b>Lavinia Trull, Instructor</b> (1975, 1985) FARM & RANCH MANAGEMENT A.S., Central Texas College B.S., American Technological University	<b>Agriculture</b>
<b>Timothy Walker, Faculty</b> (1984) INDUSTRIAL TECHNOLOGY B.S., Tarleton State University	<b>Welding</b>
<b>James D. Waters, Faculty</b> (1984) SCIENCE B.S., Tarleton State University M.S., Tarleton State University	<b>Biology/Geology</b>
<b>Henry R. Wessels, Faculty</b> (1974, 1980) CAREER PILOT Diploma: Spartan School of Aeronautics A.A.S., Central Texas College B.A.S., University of Mary Hardin-Baylor	<b>Aviation Maintenance Technology</b>
<b>Beverly J. Wickersham, Faculty</b> (1976) COMMUNICATIONS B.A., Baylor University M.A., Sam Houston State University	<b>English</b>
<b>Dennis L. Williams, Faculty</b> (1969) COMMUNICATIONS B.A., Texas Christian University	<b>English</b>
<b>Norman R. Williams, Department Manager</b> (1968) SCIENCE B.S., Texas Tech University M.S., Texas Tech University	<b>Biology</b>
<b>Naomi Wilson, Assistant Faculty</b> (1986) NURSING B.S.N., University of Southern Maine M.S.N., University of Texas at Austin	<b>Associate Degree Nursing</b>



## 1989–91 Faculty

**Raiford Williams, *Department Manager* (1968)**

**Agriculture**

FARM & RANCH MANAGEMENT

B.S., Sam Houston State University

M.S., Sam Houston State University

Ed.D., University of Missouri at Columbia

**Kenneth J. Word, *Faculty* (1977)**

**Mathematics**

MATHEMATICS

A.S., Central Texas College

B.S., Southwest Texas University

M.A., Southwest Texas State University

Ph.D., University of Texas at Austin

**Donnie D. Yeilding, *Faculty* (1974, 1982)**

**English**

COMMUNICATIONS

B.A., Stephen F. Austin State University

M.Ed., Stephen F. Austin State University

**Thomas D. Yeilding, *Faculty* (1976, 1981)**

**Government**

SOCIAL SCIENCE

B.A., Hardin-Simmons University

M.A., Hardin-Simmons University

Ph.D., North Texas State University

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

# GENERAL INFORMATION

## HISTORY

To provide increased opportunities in higher education, the voters of the Killeen and Copperas Cove Independent School Districts and the Nolanville Common School District created the Central Texas Union Junior College District in July, 1965. A \$2,000,000 bond issue to construct and equip the campus followed in October, 1965. In January, 1966, 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. Since that time, Central Texas College has expanded to include three Texas Campuses: Central Campus in Killeen, the Fort Hood Campus, and the Service Area Campus. Additionally, a full-service support facility is located in the Killeen Mall. The Central Campus Physical Plant now includes the present thirty-two buildings. The current student population for the three Texas Campuses is approximately 7,000 per semester.

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

## EDUCATIONAL PHILOSOPHY

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

In order to ensure the fullest service possible to the civilians of the surrounding area, to the personnel of the large military installation adjacent to the Central Campus and to the personnel of military installations around the world, the educational programs of the College are designed to meet the needs of full-time and part-time students. To accommodate diverse educational needs, Central Texas College provides a variety of educational programs.

The objective of Central Texas College is to become a total learning environment, encompassing traditional and non-traditional forms of education. The guiding principle of the total learning environment is the College's commitment to meet the real educational needs of all the people. The College proposes to make available, in its total environment, the opportunity to achieve success in life, which is the birthright of every American.

## EDUCATIONAL OBJECTIVES

Central Texas College meets the varied educational needs of its students by providing the following categories of programs:

1. For students working toward a baccalaureate or professional degree, the College offers a wide range of first-year and second-year courses which transfer to senior colleges and universities.
2. The College offers one-year and two-year programs in technical and occupational fields for students interested in preparing for careers in a variety of business, health, industrial, and other vocational occupations.
3. The College provides general education courses for those students wishing to develop competence, skills, and attitudes essential to effective performance as an individual, as a citizen, and as a productive member of society.
4. For the person wishing to improve job skills or to move into a new career, the College offers credit and non-credit continuing education courses, as well as service programs on cultural, civic, and other topics of community interest. Continuing education services are provided to individual adults, business, industrial, and military organizations.

5. The College provides 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.

## **THE CATALOGUE**

This catalogue is an official bulletin of Central Texas College containing policies, regulations, procedures, tuition and fees in effect at the time this catalogue was published. The College reserves the right to make changes at any time to reflect current board policies, administrative regulations and procedures, amendments required by state law, and tuition or fee changes. The catalogue serves two purposes: first, to provide general policy for all Central Texas College operations and second, to provide specific information, policy, and directives for the Texas Campuses. Rules, regulations, and procedures for the Continental and International Campuses are found in the Central Texas College Continental and International Catalogues.

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

Other official bulletins published by the College include the Continental and International Catalogue describing policies, procedures, regulations, and fees for campuses outside the State of Texas and the Student Handbook, which includes the Institution's policies and regulations relating to student conduct and student activities at the Central Campus.

## **EQUAL OPPORTUNITY POLICY**

Central Texas College is committed to its policy of equal educational opportunity and administers its educational programs without regard to sex, handicap, race, color, age or national origin in its educational and vocational programs, activities, or employment as required by Title IX, Section 504 Title VI.

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. Appeals to higher administrative authority are considered on the merits of the case. If you need assistance pursuing a grievance matter contact the Director of Student Services, Central Texas College in Room 100 of the Roy J. Smith Student Center, (817) 526-1258.

## **PROGRAM AND COURSE AVAILABILITY**

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

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

# **ADMISSIONS AND REGISTRATION**

## **GENERAL ADMISSION INFORMATION**

Requests for application materials or questions concerning admission should be addressed to the Admissions Office, P.O. Box 1800, Killeen, Texas, 76540-9990.

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. Departmental approval is required to register for certain courses, as published in the registration schedule.

### **Admission Requirements—All Students**

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

### **Entrance Examinations**

American College Test (ACT) or Scholastic Aptitude Test (SAT) entrance examinations are recommended for admission counseling. Test scores should be forwarded to Central Texas College or included with your application. **NOTE:** The College may prescribe specific courses to be taken, to include development courses, or impose other conditions as may be appropriate, for any student admitted who is found to be deficient in English writing, reading or mathematic skills.

## **FORMS REQUIRED**

In addition to the above criteria, students must complete an Application for Admission and provide residency certification 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. Test scores are required prior to admission to all programs.

1. **HIGH SCHOOL GRADUATES:** Degree or certificate seekers who have not previously completed 12 semester hours of coursework from a regionally accredited college or university must submit an official high school transcript.
2. **HIGH SCHOOL EQUIVALENCE GRADUATES:** Who have not previously completed 12 semester hours of coursework 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 previous college study from accredited colleges or universities they previously attended.
5. **TEXAS ACADEMIC SKILLS PROGRAM TEST SCORES:** Official copies of TASP Test Scores sent directly from NES must be on file for all students requiring TASP testing prior to the accumulation of 15 semester hours of college credit.

**NOTE:** Students are responsible for requesting their official records to be forwarded directly from the issuing institution to the Central Texas College campus serving the student's location. Transcripts must bear original seal or mark and signature of the registrar to be acceptable.

Addresses are listed in the front of the catalogue. If transcripts of previous education are issued to CTC in a student's former name, without a social security number, CTC 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.

## **Transient Students**

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

## **Readmission Requirements**

Central Texas College students who have not enrolled for two years or more at the College must re-complete the admission process. Students who have attended other institutions during their absence from Central Texas College must provide transcripts from all institutions attended during the absence.

## **Early Admissions**

Early admission offers the opportunity for high school seniors to earn college credits while currently enrolled in high school or during summer sessions after completion of junior year. 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 that they are a senior.
3. The student will be expected to adhere to all policies of the College and the high school to include attendance, and any testing requirements for regular admission to the College.

Students who meet the above criteria will be accepted at Central Texas College on individual approval to take one (1) course per semester or one (1) course each summer session at Central Texas College. Credentials must be re-submitted each semester for early admission.

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

## **INTERNATIONAL STUDENTS**

### **INTERNATIONAL ADMISSION REQUIREMENTS (Texas Campuses Only):**

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

1. **IMMIGRANT AND REFUGEE STUDENTS:**
  - a. Immigrant Card, or
  - b. I-94 Departure Record
2. **NON-IMMIGRANT ALIEN STUDENTS:** (applies to all students holding visa category A-M issued by U.S. Immigration and Naturalization Service):
  - a. Official copy of transcript for last four years of secondary school. The official transcript must be an original copy translated into English and must show each course completed and grade earned.
  - b. Official copy of transcript from each college or university attended. All foreign transcripts must be certified English translations to assist counselors in placement and evaluation procedures.

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

- c. Test of English as a Foreign Language (TOEFL): Minimum acceptable score is 500. If the test score is below 500, the student must enroll in the Intensive English course.
- d. Financial Statement indicating sufficient funding for tuition, fees, and personal expenses.

- e. Tuition Deposit—A deposit of \$500 must be on file with the Admissions Office prior to issuance of Form I-20. (\$100.00 is non-refundable should student fail to complete registration with Central Texas College.)
- f. Dormitory Application and deposit: A \$100.00 deposit is required before a reservation may be made for a student. If no charges are made against the deposit, upon graduation or termination, a refund may be applied for by the student.
- g. Compliance with all requirements and procedures established for visa category by U.S. Immigration and Naturalization Service.
- h. International students must purchase medical insurance upon enrollment at Central Texas College.
- i. Assistance in finding appropriate housing is available if dormitory space is filled.

International students wishing to apply to Central Texas College should address inquiries to the Director of International Student Services, who will provide forms and instructions to complete the requirements listed above.

## DEPARTMENTAL ADMISSIONS REQUIREMENTS

### Career Pilot Students

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

### Nursing Students

Applicants for the program must follow the regular procedures for admission to Central Texas College. In addition, the following is required of all applicants for admission to the Nursing Program.

1. Application to the Nursing Program.
2. Transcripts of previous college credits. It is the applicant's responsibility to ensure Central Texas College has received the transcripts.
3. Completion of the courses prerequisite to NURI 1901 with a C or above:
  - ENGL 1301
  - MATH 1301
  - PSYC 1101
  - PSYC 2301
4. All transfer courses accepted in the Nursing curriculum must have a grade of C or above. Science courses that are over 5 years old must be repeated.
5. A personal interview with the Director of the Nursing Program. Interviews are held on Wednesdays. Call for an appointment when transcripts are in hand.
6. After a student has been accepted for admission, the following must be on record in the nursing office prior to the first day of class:
  - a. Proof of physical exam completed within the last 6 months signed by a M.D. or D.O.
  - b. CPR certification—BLS Course A.
7. Neither the college nor hospitals provide medical coverage or workmen's compensation for emergency illness or injury. Medical coverage is the responsibility of the student.
8. Requests for admission or readmission for transfer students, challenge students, and former CTC Nursing students will be prioritized as follows:
  - a. First priority: Former CTC students with a passing average in previous nursing course.
  - b. Second priority: Challenge students ranked by grade on exam.
  - c. Transfer students with passing grades in previous nursing courses.
  - d. Former CTC students or transfer students with a failing average.



## PROGRESSION REQUIREMENTS

For the student to progress in the Nursing Program, the following requirements must be met.

1. Achievement of a grade of "C" or better in all courses in the curriculum, including academic and nursing courses.
2. Prerequisites to each nursing course have been successfully completed.
3. Achievement of the grade of Satisfactory in the clinical area.
4. Current CPR Certification.
5. Current liability insurance.
6. Proof of physical exam or diagnostic tests as recommended or required.

## TRANSFER STUDENTS

1. Must meet general admission requirements of Central Texas College and the Nursing Department.
2. Must have a GPA of 2.5.
3. Must present syllabi of nursing courses already completed.
4. Must present transcripts from all colleges attended.
5. May be requested to challenge certain nursing courses, depending on the transcripts.
6. Placement in nursing courses will be dependent upon availability and recommendations of the Admissions and Standards Committee.

## READMISSION POLICY

1. Readmission to any nursing course is dependent upon availability of class openings after current class progression but is not automatic.
2. The student must complete the nursing program within 4 calendar years of enrollment in NURI 1901.
3. The student who does not successfully complete any nursing course or who withdraws from a nursing course with a failing average may apply for readmission to the nursing program only one time. This applies to the following Nursing courses: NURI 1901, 1902, 1101, 2903, 2102, 2904, 2101, 2103 and 1401.
4. Consideration for readmission of former students is based on the following:
  - a. Former team recommendation.
  - b. Academic grade average and clinical evaluation.
  - c. Reason(s) for failure, if applicable.
  - d. Resolution of outside extenuating circumstances, if applicable.
  - e. Completion of remedial work or completion of corresponding Level 1 or Level 2 academic courses (if recommended).
  - f. The recommendation of the Admission and Standards Committee; an interview of the former student may be required.
5. Selection of students for readmission will be made in July and December.
6. After a student has been accepted for readmission, the following must be on record in the nursing office prior to the first day of class.
  - a. Proof of Physical Exam signed by M.D. or D.O. within the last 6 months.
  - b. Current CPR certification: Level 1 students—BLS Course A  
Level 2 students—BLS Course C

## CHALLENGE STUDENTS

The challenge option is available for the following students:

1. Licensed Vocational Nurses (Texas License).
2. Transfer students from Diploma programs.
3. Transfer students from other ADN or BSN programs, if recommended. If interested in challenge option make an appointment with Director of Nursing Program.

## BRIDGING FOR LVN

Currently licensed LVNs may take a summer Bridging course after completion of six pre-requisite courses and, if successful, complete the ADN program in two semesters. Contact the nursing department for further information.

## VOCATIONAL NURSING PROGRAM

Admission requires application to the Nursing Program, successful completion of the NET or ACT/SAT tests, and a personal interview with the Director of the program.

### PROGRESSION REQUIREMENTS

In order for the student to progress in the Vocational Nursing Program, the following requirements must be met:

1. A student must make 70% or higher on each examination and have a 70% or higher performance rating in each clinical area and campus laboratory.
2. If a student fails any course examination (less than 70%), the student will be allowed to re-take the examination one time. If the student fails to achieve a 70% grade when they repeat the examination, they are terminated.

### READMISSION POLICY

1. Students may re-enter on an individual basis. The student must complete a re-entry petition, receive counseling, complete specified courses as directed by the counselor or complete a suspension period of one term.

### PROGRESS RECORDS FURNISHED STUDENT

1. Students are provided grades on examinations and periodic individual evaluation conferences are held.
2. Grades are provided at the completion of each major subject and clinical evaluations are provided to each student as required.
3. Transcripts are available upon written request by the student. Charges are listed in the catalogue.
4. Upon completion of each term, the following grading system is used:

P = Satisfactory mastery of the course (70% or higher)

N = Incomplete mastery of course competencies within the clock hours designated per term for course completion.

XN = Administrative Termination (limited to internal reports, posted to the permanent academic record as the grade of N). To be used in reporting excessive absences to the Offices of Student Aid and other agencies.

W = Official withdrawal from course in which enrolled.

## 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 serviced by Central Texas College. The subsequent sections of the catalogue provide information required and unique to Texas campuses.

### Central Texas College Texas Service Locations

Central Texas College provides services at ten Texas locations which include:

- Central Campus, located between Killeen and Copperas Cove, Texas.
- Fort Hood Campus, located within the College District at Fort Hood, Texas.
- Service Area Campus operates satellite offices strategically located in fourteen counties with offices in Brady, Copperas Cove, Gatesville, Hamilton, Killeen, Lampasas and San Saba.
- Central Texas College Mall Center in the Killeen Mall at 2100 So. W.S. Young Dr.

The following pages provide data and information particularly applicable to students at the above locations.

## **REGISTRATION**

### **New Student Pre-Registration Advisement**

All first-time students are required to participate in the pre-registration advisement process on one of our campuses. This process includes meeting with counseling staff and referral to other specialized services, such as Financial Aid, Veterans Services, and Testing Services. Schedule bulletins containing necessary registration information are available at all registration and academic department offices.

## **WHEN TO REGISTER FOR CLASS**

### **Registration Periods**

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

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

### **Late Registration**

Students are permitted to register late as published in the Schedule Bulletin. The fee schedule for late registration is listed on page 9. Students who complete registration after courses begin are not excused from meeting attendance or academic requirements and must arrange with the instructor to make up any assignments missed. No students are permitted to register after the scheduled late registration date.

### **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**

Students must complete the published registration procedure each term, including payment of all tuition and fees, to gain admission to classes. Installment paying of tuition is not permitted. Students who withdraw are not entitled to remain in class on an unofficial basis. See page 29 for withdrawal grade.

## **COST OF CLASSES**

### **Tuition and Fees**

All tuition and fees are subject to change without notice. All tuition and fees must be paid at the time of enrollment. A student is not officially registered until payment is made in full. Until all the student's obligations to the college have been satisfied, the student may not graduate or have transcript(s) issued. For tuition and fee schedules in effect at the time of publication, see pages 9 and 10.

# SCHEDULE OF TUITION AND FEES

## CENTRAL CAMPUSES 1989-1991

### Effective Date: Fall Semester 1989

#### TUITION \*

Semester Hours	Resident	Nonresident & International
1	\$ 51.00	\$225.00
2	\$ 51.00	\$240.00
3	\$ 51.00	\$255.00
4	\$ 68.00	\$270.00
5	\$ 85.00	\$285.00
6	\$102.00	\$300.00
7	\$119.00	\$315.00
8	\$136.00	\$330.00
9	\$153.00	\$345.00
10	\$170.00	\$360.00
11	\$187.00	\$375.00
12	\$204.00	\$390.00
13	\$204.00	\$405.00
14	\$204.00	\$420.00
15	\$204.00	\$435.00
16	\$204.00	\$450.00
17	\$204.00	\$465.00
18	\$204.00	\$480.00

#### INDIVIDUALIZED INSTRUCTION

(Tuition in addition to above semester-hour tuition)

<b>Aviation Maintenance</b> . . . . .	\$75.00	<b>Music: Piano and Voice</b>	
<b>Career Pilot **</b>		1 Semester Credit Hour . . . . .	\$90.00
CAPI 1200 . . . . .	\$1870.00	2 Semester Credit Hours . . . . .	\$140.00
CAPI 1204 . . . . .	\$1820.00	3 Semester Credit Hours . . . . .	\$160.00
CAPI 2204 . . . . .	\$2225.00	<b>Other Special Instruction</b>	
CAPI 2205 . . . . .	\$2730.00	1 Semester Credit Hour . . . . .	\$50.00
CAPI 2206 . . . . .	\$1750.00	2 Semester Credit Hours . . . . .	\$60.00
CAPI 2208 . . . . .	\$1485.00	3 Semester Credit Hours . . . . .	\$75.00
CAPI 2209 . . . . .	\$4070.00	<b>Photography</b> . . . . .	\$20.00
CAPI 2210 . . . . .	\$2015.00	<b>Physical Education</b>	
CAPI 2211 . . . . .	\$2675.00	Bowling . . . . .	\$36.00
CAPI 2212 . . . . .	\$1335.00	Fitness Center . . . . .	\$36.00
CAPI 2213 . . . . .	\$3210.00	Golf . . . . .	\$22.00
<b>Criminal Justice</b>		Karate . . . . .	\$22.00
Firearms . . . . .	\$25.00	<b>Welding</b>	
<b>Food Service</b>		4 Semester Credit Hours . . . . .	\$25.00
FSMG 1401 . . . . .	\$30.00	5 Semester Credit Hours . . . . .	\$30.00
FSMG 2401 . . . . .	\$30.00		
FSMG 2402 . . . . .	\$30.00		

#### FEES \*

LABORATORY FEE (All Lab courses unless otherwise specified): . . . . .	Min \$12.00 to Max \$24.00
GED Testing . . . . .	\$20.00
Graduation . . . . .	\$25.00
Transcript and Records(per copy) *** . . . . .	\$3.00
Institutional Challenge Exam . . . . .	\$30.00
Meal Card Replacement . . . . .	\$5.00
Pre-registration Fee . . . . .	\$10.00
FAA Exam (one) . . . . .	\$55.00
FAA Exam (two) . . . . .	\$80.00
RETURN CHECK FEE . . . . .	\$10.00
Student I.D. Replacement . . . . .	\$5.00
Schedule Change Fees (per drop action) . . . . .	\$5.00
Late Registration Fee . . . . .	\$10.00

## RENT, ROOM & BOARD, AND DEPOSITS ‡

General Property Deposit . . . . .	\$10.00
International Student Deposit (\$100.00 non-refundable) . . . . .	\$500.00
Dormitory Property Deposit . . . . .	\$100.00
College Housing Deposit . . . . .	\$150.00

### Campus Apartments (monthly rental)

One-Bedroom Apartment . . . . .	\$275.00
Two-Bedroom Apartment . . . . .	\$315.00
Daily Occupancy (per day with maid service) . . . . .	\$30.00

(There is an additional fee for electricity, billed monthly)

### STUDENT RESIDENT HALL ROOM & BOARD PLAN (per semester):

#### Fall & Spring Semester:

Seven-Day Meal Plan, including tax (21 meals) . . . . .	\$1300.00
Five-Day Meal Plan, including tax (15 meals, Mon–Thurs) . . . . .	\$1075.00
Four-Day Meal Plan, including tax (12 meals, Mon–Thurs) . . . . .	\$985.00
Five-Day Meal Plan, including tax (any 10 meals, Mon–Fri) . . . . .	\$1000.00

#### Summer Semester:

Seven-Day Meal Plan, including tax (21 meals) . . . . .	\$900.00
Five-Day Meal Plan, including tax (15 meals, Mon–Fri) . . . . .	\$740.00
Four-Day Meal Plan, including tax (12 meals, Mon–Thurs) . . . . .	\$680.00
Five-Day Meal Plan, including tax (any 10 meals, Mon–Fri) . . . . .	\$700.00

### SKILL CENTER STUDENTS ONLY ROOM & BOARD PLAN (per month):

Seven-Day Meal Plan, including tax (21 meals) . . . . .	\$361.00
Five-Day Meal Plan, including tax (15 meals per week, Mon–Fri) . . . . .	\$303.00
Daily Occupancy Rate (with board) . . . . .	\$16.00
With Linens . . . . .	\$20.00
Daily Occupancy Rate (without board) . . . . .	\$8.00
With Linens . . . . .	\$12.00

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

\*\* Additional Career Pilot individualized instruction tuition may be paid in three monthly payments, the first payment is due at time of registration.

\*\*\* Refund of overpayment of transcript and record fees will be made only upon written application of the student.

‡ Rent, room & board charges are subject to change as approved by the Board of Trustees.

— Room & board rates may be paid in four payments. A service charge will be added to all payment plans.

## REFUNDS OF RENT, ROOM & BOARD, AND DEPOSITS

RENT—Refunded on a pro rata basis after deductions for repair, cleaning, etc.

DEPOSITS—Refunded after deduction for repair, cleaning, etc.

ROOM CHARGES—Non-refundable.

BOARD CHARGES—Refundable on pro rata basis.

## REFUNDS OF TUITION AND FEES

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

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

1. Students who officially withdraw from the Institution shall have their tuition and mandatory fees refunded according to the following schedule:

**Fall and Spring Semesters**

Prior to the first class day . . . . .	100%
During the first five class days . . . . .	80%
During the second five class days . . . . .	70%
During the third five class days . . . . .	50%
During the fourth five class days . . . . .	25%
After the fourth five class days . . . . .	NONE

**Summer Semesters**

Prior to the first class day . . . . .	100%
During the first, second or third class day . . . . .	80%
During the fourth, fifth or sixth class day . . . . .	50%
After the sixth class day . . . . .	NONE

2. Students who reduce their semester credit hour load by officially dropping a course or courses and remain enrolled at the institution will have applicable tuition and fees refunded according to the following schedule:

**Regular Session**

During the first twelve class days . . . . .	100%
After the twelfth class day . . . . .	NONE

**Summer Session**

During the first four class days . . . . .	100%
After the fourth class days . . . . .	NONE

3. Tuition and fees paid directly to the Institution by a sponsor, donor, or scholarship shall be refunded to the source rather than directly to the student.
4. Adjusted tuition and fees schedules, based upon the above guidelines, will be utilized in determining refunds for students enrolled in courses which vary in length from the regular and summer sessions.
5. Emergency withdrawal will be considered to be filed as of the date of the emergency. Students must submit written proof of emergency such as military emergency leave orders or medical certification of family emergency. Refunds under emergency conditions will follow the tuition refund schedule listed above.
6. Class day count begins with the first day of instruction (the first calendar day of the term) and includes all weekdays, Monday through Friday, which are not designated College holidays.

## REFUND POLICY NON-CREDIT COURSES

No tuition refunds will be made except in the case of course cancellation or official withdrawal from a course. The refund policy for non-credit courses offered by Central Texas College will be as follows:

1. All refunds will be processed on the basis of the date the withdrawal form is filed with the Records Office.
2. For courses which meet for more than one class session, refunds of 100% of tuition and fees will be processed for students withdrawing prior to the second class meeting.
3. For courses which meet for only one class session, refunds of 100% will be made only if the application for refund withdrawal is filed with the Records Office prior to the beginning of the class.
4. Emergency withdrawal will be considered to be filed as of the date of emergency. Students must submit written proof of emergency, such as military emergency leave orders, or medical certification of family emergency. Refunds under emergency conditions will follow the schedule above.
5. Any exceptions to the above policy will require the approval of the appropriate Dean and the Director of Fiscal Management.



## RESIDENCY CLASSIFICATION

Residency for tuition purposes is determined by State Law for state-supported colleges and is subject to change by the Texas Legislature. Students are responsible for providing documentation, as required by the Coordinating Board to establish their proper residence classification. Questions concerning residency should be directed to the Director of Admissions and Records or Registrar prior to registering. A student who knowingly falsely registers as a resident student is subject to disciplinary action. Students must notify Central Texas College of any change in their residency status. Proof of residency must be provided after a break in attendance of one semester or more.

Copies of the Rules and Regulations for Determining Residence Status, Coordinating Board, Texas College and University System, may be obtained from the Director of Admissions and Records or the Registrar. Below is a summary of this publication.

Whenever a change in the student's status affecting his or her residency classification for tuition purposes occurs or there is a break of one semester or more in his or her attendance at Central Texas College, residency documentation must be provided.

### Individuals Over 18

Individuals 18 years of age or older who move into the state, who are gainfully employed within the state for a period of 12 months prior to enrolling in a public institution of higher education, and who demonstrate a clear intent to become a Texas resident, are entitled to classification as residents. Students enrolling in an institution of higher education prior to having resided in the state for 12 months immediately preceding time of enrollment will be classified as nonresidents for tuition purposes and will remain nonresidents until they have remained out of school for 12 consecutive months. A student classified as a nonresident retains that classification until he provides proof of residence to the Director of Admissions and Records or the Registrar.

### Dependents Over 18 and Minors

The legal residence of dependent children and minors is usually that of the parents, or that of the parent with whom the individual spends the principal amount of time. Upon divorce of parents, residency of a minor is based on the residence of the parent who has legal custody or has claimed the minor for federal income tax purposes both at the time of enrollment and for the tax year preceding enrollment. For dependents over 18, residency is determined by the residence of the parent who claims the student for federal income tax purposes both at the time of enrollment and for the tax year preceding enrollment.

### Citizens Of Other Countries

Aliens who are living in the United States under a visa permitting permanent residence have the same privilege of qualifying for Texas resident status for tuition purposes as a citizen of the United States. Aliens who are not permanent residents of the United States will be classified as foreign students.

### Reclassification

Persons classified as nonresident students upon first enrollment in a public institution of higher education are presumed to be nonresidents for the period during which they continue as students. The presumption of "nonresident" is not a conclusive presumption, however, and facts such as full time employment, purchase of a homestead, and demonstration of a fixed intention to reside permanently in the state may be considered. Application for reclassification must be submitted prior to the official census date of the relevant term.

### Exceptions

1. Persons in the military service and their dependents are classified as non-residents, but eligible to pay in-state tuition, provided they are assigned to a permanent duty station in Texas or maintain their official Home of Record in Texas with the military service. To be entitled to pay *resident* tuition, such military personnel and their dependents shall submit at the *time of each enrollment* a statement from their Commanding Officer or Personnel Officer certifying that they are currently assigned to duty in Texas. Verification forms will be available at all CTC registration locations and Education Centers.

**NOTE:** Military personnel who retire or separate from active duty in Texas, or who have been stationed in Texas for more than one year prior to separating, **ARE NOT** automatically considered residents for tuition purposes. Separated military personnel and their family members must have resided in Texas **OTHER THAN AS STUDENTS** for 12 months before their enrollment and after their discharge from the service, unless they have claimed Texas as their home of record for one year prior to their retirement or separation.

2. Individuals who purchase property in the state one year prior to enrollment are eligible for Texas residency status. Individuals who have owned property in the state for less than one year, but whose property is subject to the ad valorem tax by the college district, may receive a waiver permitting them to pay resident tuition from the date of purchase. Property ownership must be verified and proof from the tax office is required.

3. Nonresidents who receive an academic competitive scholarship of at least \$200 per academic year may pay resident tuition during the registration period in which the scholarship is in effect.

The Coordinating Board, Texas College and University System, has established residency verification requirements which affect all new students claiming Texas residency and all Texas resident students who are not continuously enrolled each semester (to include the summer term). The Coordinating Board requires that all students not connected with the military within the past year submit one or more of the following documents as proof of residency. Copies of these documents must remain on file in the student's record. **ALL DOCUMENTS MUST BE AT LEAST ONE YEAR OLD.**

- Texas High School Transcript
- Texas College or University Transcript
- Employer statement of date of employment
- Permanent Driver's License (at least one year old)
- Texas Voter Registration
- Verification of in-district purchase of property
- Lease agreement which includes student's name and period leased
- Property Tax Statement
- Cancelled checks from Texas Bank
- Utility bills
- Other third party documentation (notarized)

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**THOSE UNABLE TO PRODUCE DOCUMENTATION WILL NOT BE ELIGIBLE FOR IN-STATE TUITION RATES.**

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## **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 12th class day of Fall and Spring semesters, and the 4th day of summer semester.

#### **DIRECTORY INFORMATION**

Name  
Local address  
Home address  
Telephone number  
Birthdate  
Major field of study  
Dates of attendance  
Degrees and awards received  
Most recent previous educational agency or institution attended  
Classification  
Date of graduation

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 education records upon written request to the appropriate record custodian. For more information, contact the CTC Records Office.

## **STUDENT SERVICES**

### **COUNSELING**

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

The Career Guidance Center assists students in making decisions regarding their vocational, educational, and personal-social plans. As a part of this program, counselors assist in interpretation of tests, inventories, and occupational and educational information.

### **COURSE PLANNING**

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

### **CAREER PLACEMENT SERVICES**

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

Students interested in this service should register with the Placement Office and provide an individual credential file (application/resumes and reference letters) to be maintained by the Placement Office. These files will be forwarded to prospective employers when requested by the candidate for employment. A job match service and Career Placement Council Annuals are also available for graduates and job seekers. A free resume referral service is provided through the National College Placement Association through a national computer network.

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

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

### **INTERNATIONAL STUDENT ADVISEMENT**

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

Inquiries should be addressed to the Director of International Student Services at the Central Campus address listed in front of the catalogue.

## LEARNING RESOURCE CENTER

Free individualized, self-paced instruction by open entry or open exit registration is available all year round. Texts, modules, audio-visuals, and supplies are dispensed from the Learning Resource Center. Classes are provided in the areas listed below:

- Adult Basic Education (ABE)
- General Education Development (GED)
- English-as-a-Second Language (ESL)
- Mathematics and English preparation for College
- Mathematics and English instruction for nursing students
- API (American Preparatory Institute) high school completion (tuition fees required)

## PROJECT MAINSTREAM

Project Mainstream provides tutorial instruction for specific vocational classes to improve student scholastic performance. Reentering and first time students may attend an individualized orientation. Additionally, students are linked to off-campus resources designed to improve the student's opportunities for development and success. Services available include:

- Tutors for vocational courses and pre-vocational courses
- Orientation
- Campus and social service agency referral
- Monitoring of satisfactory progress
- Job-readiness instruction
- Individual and group study skills instruction
- Improving reading comprehension
- Time management
- Note-taking
- Test-taking
- Textbook Lending Library
- Peer Counseling
- Refresher math courses

## HANDICAPPED STUDENT SERVICES

The Handicapped Student Services Program provides individualized assistance to persons who are physically or sensorially impaired. Students are encouraged to explore and successfully pursue a wide range of educational or vocational training. Services offered are:

- Relevant legislative information
- State and local resource referral
- Special testing and classroom accommodation
- Notetaker, reader, interpreter and mobility aide services
- Assistance for disabled veterans
- Needs assessment and evaluation
- Assistive device loan (tape recorders, visual aids)
- Vocational Counseling
- Sponsorship of "We Can Do It" Club
- Emergency wheelchair service
- Direct liaison with the Commission for the Blind and the Texas Rehabilitation Commission

Handicapped parking is provided for those persons who qualify under the provisions of Vernon's Texas Civil Statutes.

## SINGLE PARENT/HOMEMAKER SUPPORT SERVICES

The Single Parent/Homemaker Support Services provides assistance, support, and encouragement for persons who are finding barriers to remaining in school or who are coming to college after a long absence from formal education. Some services are available campus wide while others are limited to those persons of limited income who are enrolled in vocational/technical degree programs. Services offered include:

- Individual and Group Counseling
- Career Guidance
- Qualified Day-Care Funding Assistance
- Community Referral
- Workshops
- Aptitude/Interest Testing

## TESTING SERVICES

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

**ENTRANCE EXAMINATIONS**—The ACT (American College Test) is administered by Central Texas College on five national test dates each year. It is recommended that all new students who have not previously taken the ACT or SAT (Scholastic Aptitude Test) take the ACT for guidance purposes.

**TEXAS ACADEMIC SKILLS PROGRAM EXAMINATION-TASP**—The "Certification Form" of the TASP Examination is uniformly administered state-wide five times each year. Students must submit applications for testing approximately one month prior to the date of administration. The cost of testing is \$24.00 which must be mailed with the application. Central Texas College serves as an official Texas Academic Skills Program Test site.

**PLACEMENT TESTS**—Those entering students who have not completed the Texas Academic Skills Program (TASP) examination will be required to take the Placement Test. The Placement Tests are offered year round by appointment and students are encouraged to complete testing prior to the published registration dates.

**ADVANCED STANDING EXAMINATIONS**—CLEP (College Level Examination Program) examinations, which are nationally prepared tests for students desiring to receive credit for knowledge already obtained, are administered by Central Texas College four days each month. By this means students may accelerate their college program and may take courses at the next higher level. To obtain credit, the student must pass the exam, apply for credit and have completed a minimum six semester hours of course work at Central Texas College with a minimum 2.0 G.P.A.

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

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

**INSTITUTIONAL CHALLENGE EXAMINATIONS**—Students may request, through the appropriate Department Manager, permission to take challenge examinations for certain courses. An application for challenging a course must be completed and returned to the Testing Office with the appropriate non-refundable fee. The student will then coordinate with the Testing Office or department for the time and place to take the examination. Failure to appear for the examination will result in the loss of the challenge fee. Students must not have previously enrolled in the course for college level credit. Those who do not make grade "A" or "B"

will not be permitted to repeat the challenge 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 six semester hours with a 2.0 grade point average, and submit an application for credit award.

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

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

## EVALUATION OF PREVIOUS EDUCATION

### Transfer Students

Transfer of credit from accredited colleges and universities may be accepted when the grade earned was "C" or better and the course work applies to the student's curriculum. Passing grades lower than "C" may be considered for transfer in accordance with current evaluation procedures and curriculum requirements. Grades other than "A," "B" or "C" 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 Departmental Managers when coursework was completed seven years or longer before the student entered the Central Texas College program of study.

### Non-Traditional Education

Central Texas College recognizes that each student's educational needs, goals, and experiences are unique and that individuals are proficient in many areas of college work that are not formally documented on transcripts. It is the policy of the College to recognize non-traditional learning experiences and to award College 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.
2. College Level Examination Program (CLEP)—both the General Examination and Subject Examination.
3. Institutional Course Challenge Examinations.
4. Credit for military schools attended as recommended by the American Council on Education and recognized by Central Texas College.
5. Credit for military service basic training.
6. MOS Training and Experience as recommended by the American Council on Education and recognized by Central Texas College.
7. American College Testing Program (ACT).
8. College Board Admission Testing Program.

9. Correspondence Extension Courses offered by accredited institutions which are members of the National University Extension Association.
10. Other—To include certain types of civilian training and specialized testing.

## Evaluation Procedures

Curriculum plans outlining accepted transfer and non-traditional credit 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 in the Central Texas College system. Students on financial hold will not be eligible for evaluation of non traditional educational experiences until the financial hold is cleared.

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

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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.

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**SERVICEMEMBERS OPPORTUNITY COLLEGE**—Because of its efforts to serve the educational needs of servicemembers and their dependents, 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 and their dependents share in the postsecondary educational opportunities available to other citizens.
- Servicemembers and their dependents are provided with appropriately accredited educational programs, courses, and services.
- Flexibility of programs and procedures, particularly in admissions, counseling, credit transfer, course articulations, recognition of non-traditional learning experiences, scheduling, course format, and residency requirements, are provided to enhance access of servicemembers and their dependents to undergraduate education programs.

## SOC Criteria

In support of SOC criteria and service to its military students and their dependents, 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' and their dependents' degree programs.
- Requires only 15 semester hours of Central Texas College coursework to meet residency requirements.
- 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 assess 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 EXPERIENCE 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 15 semester hours 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 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 catalogue.

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

American Educational Complex  
 Director SOCAD/SOCNAV  
 P.O. Box 1800  
 Killeen, Texas 76540-9990

## STUDENT ACTIVITIES

Social and cultural activities play an important part in the life of the college student. The Student Services Office and the Student Activities Office support and guide student development by providing opportunities for individual and group interaction.

The Student Government Association and several clubs which include religious, political, social and recreational organizations operate on the central campus. All student organizations and activities must conform to the educational objectives and administrative regulations of the college as stated in the "Student Organization Handbook." All activities should be cleared through the Office of Student Activities at least two weeks prior to the event. All funds for every organization must be deposited in and disbursed from their college student activity account.

The Roy J. Smith Student Center is the social center of the campus. It is the principal site for dances and parties. The Center also houses the bookstore, dining areas and a recreation center.

## CHILD DEVELOPMENT CENTER

Central Texas College has established a Child Development Center designed to train adults to work with young children through the Early Childhood Laboratory Associate Degree program. The Center, located on Clear Creek Road, is licensed to care for 60 children. Members of the community, college students, faculty and staff are welcome to enroll their children in this program.

Children 3-5 years of age experiment and explore in an environment conducive to learning. The developmental program allows each child to advance through stimulating activities. Central Texas College students assist in daily planning under qualified instructors.

Special activities are planned for the summer semester, including studies of other cultures and languages, crafts, gymnastics, water play and field trips. Children 3-7 years of age are accepted during this session.



## FOOD SERVICE

### Roy J. Smith Student Center (first floor)

Telephone:	817-526-1242 or 526-1272
Hours:	8:00 a.m. to 5:00 p.m.
Snack Bar:	As posted in the Snack Bar
Cafeteria:	As posted in the Cafeteria

### Dormitory Students

The dormitory student population is served well-balanced and nutritional meals by the Central Texas College Food Services Department. A food service menu advisory committee composed of Central Texas College students provides a means whereby students are offered the opportunity to recommend changes to the menu. Hot and cold food, full meals or snacks, and beverages are available from the cafeteria or the snack bar located in the Roy J. Smith Student Center. Students should be aware that the Board Plan does not include food services for the Spring Break (one week) and Thanksgiving Day.

Each residence hall student is required to purchase one (1) of the four (4) meal plans:

1. Seven-day: 21 meals per week
2. Five-day: 15 meals per week, no Saturday or Sunday
3. Five-day: 10 meals per week, no Saturday or Sunday
4. Four-day: 12 meals per week, Monday through Thursday

On Saturday and Sunday the dormitory students using the seven day plan will take all meals from the Snack Bar. All other meals must be taken from the Cafeteria.

The board plan is valid for use only by the purchaser. Each student will be issued a picture and color coded I.D. card (\$5.00 charge for replacement) to identify the type of board plan purchased. **THE MEAL CARD MUST BE PRESENTED TO THE CASHIER BEFORE EACH MEAL.** Students who leave their meal cards in the dorm will be required to either pay for meals or go back and get their card prior to eating.

### Commuter Meal Tickets

Commuter meal tickets are available for student purchase from the Food Service Office:

1. Ten (10) meals \$36.00 plus tax
2. Fifteen (15) meals \$49.00 plus tax
3. Thirty (30) meals \$91.00 plus tax

Students can save approximately 25 percent by using the commuter meal tickets.

## BOOKSTORE

The Campus Bookstore, located in the Student Center, carries new and used textbooks, supplies, tradebooks, and general merchandise. The Bookstore is owned and operated by the American Educational Complex for the convenience of students, faculty and staff.

## INTRAMURAL SPORTS

Intramural sports programs have been organized for both men and women. The CTC Intramural Sports Office conducts tournaments in basketball, flag football, soccer, volleyball, softball, tennis, golf, bowling, swimming, pool, table tennis, croquet, horseshoes, washers, and Frisbee golf. Students interested in participating in these sports are invited to contact the Intramural Sports Office in the CTC Gymnasium.

In addition to competitive play, the Intramural Sports Office offers leisure time pursuits and free play activities as an essential part of the CTC campus recreation non-competitive sports program. The Intramural Sports Office works closely with the Offices of Student Services and Student Activities in sponsoring interesting campus-wide special events such as tournaments, campus races, and sports skills competition. The track specials include a Turkey Trot at

Thanksgiving, the Christmas Relays at Yuletide, a New Year's Eve Fun Run, and the Easter Relays during rabbit season. Sports skills championships are decided by the Super Hoops in basketball, the Punt-Pass-Kick football, and the Super Stars Pentathlon.

Students enjoy opportunities to recreate with faculty and staff in exhibition contests in basketball, volleyball, softball, tennis, golf, bowling, and table tennis.

Awards to participants include CTC T-Shirts, Windbreakers, and CTC Golf Caps.

## **GYMNASIUM**

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

## **HOUSING POLICY**

The dormitory housing program at Central Texas College is part of the total educational plan of the College. All students who come from outside the College District and who desire to have housing within the College District while attending the College will be required to reside in the College dormitory.

Exception to this requirement will be made for students who come within any one of the following categories:

1. Students who live with parents or with blood relatives.
2. Married students who live with their spouses.
3. Students whose health conditions demand special attention which would not be available in the dormitories. A letter from a physician is required in such cases.
4. Students 25 years old as of September 1.

If College housing is not available, sophomore students may be permitted to live in off-campus housing until such time as they can be admitted to the dormitories. A student who gives false information concerning his place of residence will be subject to suspension from the College.

The Chancellor of the American Educational Complex will approve such operational rules and procedures as are necessary for implementation of this housing policy.

### **Dormitory**

Requests for dormitory rooms should be addressed to the Housing Office located in the Student Center. Central Texas College operates a modern air-conditioned dormitory for full-time male and female students. Room requests are honored on a first-come first-served basis. Private telephone and cable television are available in each room at student's expense.

A reservation deposit of \$100.00 is required for each room application. **THIS DEPOSIT IS NOT REFUNDABLE AFTER 30 DAYS PRIOR TO THE BEGINNING OF THE SEMESTER FOR WHICH IT WAS FIRST INTENDED.** Payments for dormitory and board may be made in equal installments. Dormitory policy and regulations will be supplied by the Housing Office upon request.

### **Married Student Housing**

Air-conditioned and carpeted student apartments located on campus are available for married couples. Private telephone and cable television are available in each apartment at the tenant's expense. Those interested may apply through the Married Student Housing Office to rent unfurnished or furnished, one or two bedroom apartments. The Housing Office is located in the Student Center.

## **DORMITORY POOL**

Located in the inside court of the Student Residence Hall is a large, inground swimming pool. The pool is 60' long with two 14' diving boards available to swimmers. The swimming pool is

open to residents of the Student Residence Hall and residents of Married Student Housing. Pool hours are posted at the pool area along with rules and regulations for the pool. Lifeguards are not available and individuals swim at their own risk.

## **PARKING FACILITIES**

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

## **LIBRARY**

The Oveta Culp Hobby Memorial Library is a beautifully appointed building dedicated to a native of Killeen who was the first Secretary of the Department of Health, Education and Welfare. This centrally located facility houses a collection of 71,000 hard-bound volumes, 80,000 volume equivalents on microfiche, 500 periodical subscriptions, and over 1000 audio-visual items. Library materials are arranged on open shelves interspersed with a variety of study facilities such as individual carrels, tables, and lounge furniture. Special facilities include group study rooms, photo reproduction of books and microformat, a learning center including microcomputers, automated periodical database systems and special equipment for blind and partially sighted students.

## **COPYING SERVICE**

Duplicating services may be purchased at the Library and Student Center, through coin-operated service.

## **CENTRAL TEXAS COLLEGE KILLEEN MALL CENTER**

The Central Texas College Killeen Mall Center, located in the Killeen Mall on W.S. Young Drive, operates six days a week. The center offers College credit and non-credit courses as well as counseling and full registration services.

A variety of college academic and vocational credit classes is offered each semester. Classes may be taken to satisfy degree or certificate requirements or for general self-improvement. Students can register at the Central Texas College Killeen Mall Center for classes they plan to take at the Mall, Central Campus, Fort Hood Campus, or any other Texas location where courses are conducted.

Non-credit classes are designed to improve an individual's knowledge and basic skills. Many courses are designed with the adult in mind, while others are specifically designed for the younger student. Continuing Education Units (CEU's) are awarded in recognition of satisfactory completion of Adult Vocational Courses or Selected Community Service Programs. One CEU is defined as ten contact hours of participation in an organized adult and continuing education experience under responsible sponsorship, capable direction, and qualified instruction. Students who successfully complete these courses are awarded Certificates of Completion.

Other services available at the Killeen Mall Center include Financial Aid and Veteran Services.

## **CENTRAL TEXAS COLLEGE FORT HOOD CAMPUS**

The Fort Hood Campus offers five eight-week evening cycles per year. Twelve-week Saturday classes are also available. All Fort Hood Campus classes are open for active duty personnel and,

on a space available basis, to dependents, retirees, and those receiving VA benefits. Veterans should contact the Veterans Services Office at Central Campus prior to enrolling at Fort Hood.

The Fort Hood Campus Student Services Office at Building 2844 has a full-time staff to provide academic counseling to meet the educational needs of the Fort Hood Community. Servicemembers can also register at Fort Hood for courses offered at Main Campus or the Killeen Mall.

CTC-Fort Hood Campus recognizes the unique nature of the military life-style and has committed itself to easing the transfer of credits, providing minimal residency requirements, and awarding credit for appropriate military training and experiences.

## SERVICE AREA CAMPUS

Service Area Campus operates satellite offices, strategically located in a fourteen county area, which provide college credit and non-credit courses to the citizens of Central Texas. In addition to the college courses offered to the community, the following services are provided by the Site Coordinator to facilitate the needs of the students: assistance with financial aid, career exploration, occupational and career testing, and other testing services as requested.

Central Texas College Personnel are located in each of the Service Area Campus offices located in Brady, Copperas Cove, Gatesville, Hamilton, Lampasas and San Saba.

## STUDENT FINANCIAL AID PROGRAMS

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

Central Texas College participates in the following financial assistance programs:

### 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 student's education while attending Central Texas College. Applications are available in the Office of Student Financial Aid.

### Supplemental Educational Opportunity Grant (SEOG)

This grant, authorized by the Higher Education Act Amendments of 1972, is available only to those students who demonstrate financial need. Grant awards and renewals are made on the basis of demonstrated financial need and satisfactory academic progress. To be considered for the SEOG, a student must complete the Family Financial Statement from the needs analysis services of one of the central processing agencies. This form is available in the Office of Student Financial Aid.

### Texas Public Educational Grant

The TPEG is a State of Texas grant program available to students who are Texas residents and who demonstrate financial need. The student must be enrolled half-time (6 semester hours or more) to be considered for this grant. Application for the TPEG is the Family Financial Statement from the needs analysis services of one of the central processing agencies. This form is available in the Office of Student Financial Aid.

### College Work-Study Program

This program provides part-time employment opportunities for students who are in need of employment in order to complete their educational goals. In arranging a job and determining how many hours per week a student may work, the Financial Aid officer will consider: (1)

financial need, (2) class schedule, and (3) student's health and academic progress. To be considered for the CWSP, a student must complete the family Financial Statement from the needs analysis services of one of the central processing agencies. This form is available in the Office of Student Financial Aid.

### **Perkins Loan Program**

Central Texas College participates in the Perkins Loan Program as authorized by the National Defense Education Act of 1958. Interest rate on the loan is 5% per annum; beginning six months after the date on which the borrower ceases to carry at least 6 semester hours of coursework. The minimum repayment is \$30 per month with a maximum repayment period of ten years. Awards are based on financial need and academic performance. Interested students must complete the Family Financial Statement from the needs analysis services of one of the central processing agencies.

### **Guaranteed Student Loan**

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 Office of Student Financial Aid.

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.

### **The Central Texas College Scholarship Fund**

Central Texas College annually awards several two-year \$2,000 scholastic scholarships to qualified high school students who reside within the fourteen county Central Texas College Service Area. Information regarding this scholarship program may be obtained from the Office of Student Financial Aid.

### **Scholarships**

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

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

### **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 student enrolled full-time (enrolled in twelve or more credit hours) shall be no more than six 12-week or 16-week semesters of full-time enrollment to complete a degree program.
- c. Three-quarter time students (enrolled in nine to eleven credit hours) shall have eight 12-week or 16-week semesters of three-quarter time enrollment to complete a degree program.

d. Half-time students (enrolled in six to eight credit hours) shall have twelve 12-week or 16-week semesters of half-time enrollment to complete a degree program.

Satisfactory Progress can be met with any combination of full-time or part-time enrollment, including attendance during summer sessions. Students may refer to their degree plan, college catalogue or see a counselor for further details regarding their specific academic program.

### **Selective Service Registration Compliance**

An amendment to the Military Selective Service Act (Pub. L. 97-252) requires that, beginning with 1983-84 award year, any student required to register with Selective Service who fails to do so is ineligible for Title IV student financial aid. Among Title IV financial aid applicants, men (citizens and eligible non-citizens except permanent residents of the Trust Territory of the Pacific Islands and the Northern Mariana Islands) who are at least 18 years old and born after December 21, 1939, and who are not currently on active duty with the armed forces must be registered.

The law specifically requires that, in order to receive Title IV aid, all aid applicants are required to file a Statement of Registration Compliance.

### **VETERAN BENEFITS**

Central Texas College's programs are approved for those who wish to attend and receive benefits under the Veterans Readjustment Benefits Act of 1966, Post-Vietnam Era Veterans Educational Assistance Program, the Veterans' Educational Assistance Act of 1984, Chapter 106-Reservists' Education Bill, Chapter 30, VA Education Bill of 1986, and dependents qualified for VA Educational Benefits.

Students attending with the aid of veteran benefits should inquire at the Office of Veterans Services, prior to registration, to obtain needed information relative to their enrollment and 'certification' of attendance to the Veterans Administration. All new students must furnish the Veterans Services Office an original copy of DD214 or a copy certified by the County Clerk. The veteran must also furnish certified copies of marriage certificates, divorce certificates, and dependents' birth certificates, if applicable.

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

Veterans should have military credit evaluated at the close of the first semester or upon the successful completion of 12 semester hours and furnish the Veterans Services Office with a copy of the updated degree plan. Also, any transfer credits from prior education need to be evaluated before the close of the first semester and a copy of updated degree plan furnished to the Veterans Services Offices.

**\* NOTE:** Students must advise the Veterans Services Office each semester of courses in which they are enrolled.

### **MILITARY EDUCATION BENEFITS**

Active duty military personnel may wish to attend Central Texas College under the military Tuition Assistance Program, which pays for 75% to 90% of tuition. Information and applications for military Tuition Assistance are available through Military Education Centers or Navy Campus offices.

### **VOCATIONAL REHABILITATION**

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

# **COLLEGE POLICIES AND REGULATIONS**

## **ACADEMIC POLICY**

### **Academic Load**

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

**PSYC 1101:** College orientation is required of all degree-seeking students prior to graduation. Students are strongly advised to take orientation their first semester. Transfer students who have completed an orientation and transient students will not be required to complete PSYC 1101.

**FULL-TIME:** Students registering for 12 or more semester hours during Fall or Spring semesters are considered to be full-time students. Students who register for 8 or more semester hours during the eleven week summer session or 4 or more semester hours during the first or second summer session are considered to be full-time students.

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

**MAXIMUM LOAD:** Except as stipulated in a program of study, no student will be permitted to enroll for six academic courses or for more than 18 semester hours without the approval of the Campus Dean. The maximum load for a six-week session is eight semester hours and the maximum credit that a student can earn during the entire summer session is fourteen semester hours. Students enrolled in an eight week session may take a maximum of nine semester hours. The College reserves the right to limit the course load carried by any student.

**MINIMUM LOAD:** No minimum load is required.

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

## **ATTENDANCE POLICY**

### **Absences and Tardiness**

Students are required to attend regularly all classes in which they have enrolled. Students are required to be in classrooms on time.

### **Absences**

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

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

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

The student who desires to be absent from classes for the observance of a religious holy day should submit a request to each instructor by the 15th calendar day after the first day of the semester. Although the student will be excused from classes, he/she will be responsible for make up of all work or tests missed. A "religious holy day" means a holy day observed by a religion whose place of worship is exempt from property taxation under Section 11.20, Tax Code.

### **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 a 16-week period normally meet 90 minutes each session for 32 session. Those students accumulating four (4) unexcused absences are subject to Administrative Withdrawal since the total unexcused absences equals 12.5% of class hours for the course.

The following specific rules apply to absences:

1. A class meeting of 50 minutes equals 1 absence.
2. Beginning the first scheduled day of class meeting, instructors are required to keep attendance records.
3. 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.
4. 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 recorded on your permanent record.

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

## RESIDENT CREDIT

### All Campuses

A student may earn an Associate Degree entirely through study at campuses outside the State of Texas or in combination with study at the Texas Campuses. At least 15 semester hours must be earned by formal study at Central Texas College, regardless of campus location. Courses offered at all Central Texas College campuses meet the same academic standards and carry the same resident credit.

## CREDIT TRANSFER

### To Other Colleges and Universities

Central Texas College is accredited by the Southern Association of Colleges and Schools. Credits earned at Central Texas College are transferable to other institutions in accordance with policies of the receiving 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 sixty-six (66) semester hours of transfer credit from junior colleges. A student should not take more than this number of hours with the objective of transfer of credit unless written permission is secured from the chosen senior college.



## HOW TO CHOOSE COURSES

### Course Numbers

The unit of credit for Central Texas College is the Semester Hour. Course numbers contain four digits. The first digit "1," reading from the left, indicates a freshman level course. If the first digit is a "2," it indicates a sophomore level course. If the first digit is a "0," it indicates a developmental course (see page 37.) The second digit indicates the semester hour value of the course. The third and fourth digits indicate the generally recommended sequence in which the courses are to be taken.

## WHAT TO DO ABOUT COURSE PREREQUISITES

### Courses Out Of Sequence

Students who, for scheduling reasons, find it desirable to take an advanced course prior to completing the prerequisite must secure, in writing, approval from the Department Advisor prior to registering for the course. Approval does not release the student from final responsibility for satisfactorily completing all course requirements.

## 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 mailed by the College to the student's address of record at the end of each term. This method of reporting grades permits students to judge their performance at the end of each term. Students are responsible for notifying the appropriate Central Texas College Records Office of change of address.
2. Transcripts are provided by the Records Office and are the official report of completed courses, grades and credit awarded by the College. For information on ordering transcripts, see page 34.

### Grades and Point Average

The grading system at Central Texas College is as follows:

Numerical Value	Grades	Quality Points
90-100	A—Superior	4
80-89	B—Above Average	3
70-79	C—Average	2
60-69	D—Passing, but Unsatisfactory	1
	F—Failure	0
	I—Incomplete	0
	N—No Credit	0
	P—Completed	0
	W—Withdrawal	0
	X—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 the student has completed the majority of the coursework, but because of personal illness, death in the immediate family, or military orders, the student is unable to complete all the requirements for a course. Notice of absence with supporting documentation may be required by the instructor. Students are requested to notify instructors in advance of absence whenever possible. The instructor makes the final decision concerning the granting of the Incomplete grade.

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

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

### **“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 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 the student's attendance and academic performance are satisfactory at the time of official withdrawal.

## **Grade Point Averaging**

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

## **Grades and Financial Aid**

The student attending college with Military Tuition Assistance, Financial Aid, or VA Benefits should be familiar with the requirements and possible obligations incurred, particularly upon receiving grade of "F," "I," "W" or "N." For additional information, contact the Director of Student Financial Aid or Veterans Services Office.

## **Change Of Grades**

Students who feel that there has been a computational error in grading must immediately contact the instructor for the course in question. 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. 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. To aid the student, scholastic probation or suspension will be printed on the semester grade report. Students who receive grades below "C" (2.0) for any course should seek academic counseling to determine the causes of unsatisfactory work and receive recommendations for improving grades in subsequent classes.

### **Testing and Evaluating Students**

The State of Texas mandates various testing programs for students attending public colleges; and the Commission on Colleges of The Southern Association of Colleges and Schools, the collegiate accrediting body for postsecondary degree granting institutions in Texas, requires that accredited institutions establish adequate procedures for evaluating the effectiveness of their instructional programs and the achievement of their educational goals. In carrying out these responsibilities, Central Texas College may require such testing of its students or conduct such other programs of evaluation as may be required by law or deemed necessary or appropriate at the sole discretion of the faculty and administration. Such tests or programs of evaluation may be initiated, implemented, or administered at any time without prior notice to or the approval of any student who is enrolled or who is planning to enroll in Central Texas College.

### **The Texas Academic Skills Program (TASP)**

The Texas Education Code, Sec. 51.306, requires that all students "...who enter public institutions of higher education in the fall 1989 and thereafter must be tested for reading, writing, and mathematical skills." This includes all "...full-time and part-time freshmen enrolled in a certificate or degree program....," any non-degree students prior to the "accumulation of nine or more (college) credit hours or the equivalent," and "...any transfer students with fewer than 60 semester credit hours or the equivalent who have not previously taken the tests."

A student may not "...enroll in any upper division course (the) completion of which would give the student 60 or more semester credit hours or the equivalent until the student's test results meet or exceed the minimum standard in all test scores."

The Texas Academic Skills Program (TASP) is required to ensure that students enrolled in Texas public colleges possess the academic skills needed to perform effectively in college-level course work. TASP includes a testing component designed to identify and provide diagnostic information about the reading, writing, and mathematics skills of each student.

Students required to take the TASP test must do so before accumulating nine or more college-level semester credit hours or the equivalent. However, students who enter Central Texas College and are tested in basic academic skills during the placement process will be required to take the TASP prior to the end of the semester in which they accumulate 15 or more college-level semester credit hours. Pre-collegiate courses, such as developmental or remedial English and mathematics, are not counted in calculating the semester credit hours for meeting the testing requirement.

Based on the level of the students' skills as reflected on the English and mathematics sections of the ACT or the verbal and quantitative sections of the SAT, students planning to enroll should seek advice from the College on the best time to take the TASP test, e.g., before or after an opportunity has been provided to review or obtain any necessary developmental or remediation courses in reading, writing, and mathematics.

For information on who must take the TASP test and to obtain a copy of the TASP Registration Bulletin, contact the Counseling Office at Central Texas College or the university you are currently attending or are planning to attend. The TASP test fee will be paid by the student.

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**PERFORMANCE ON THE TASP TEST WILL NOT BE USED AS A CONDITION OF ADMISSION.**

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## **HONOR ROLL**

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

## **HONOR SOCIETIES**

**Epsilon Delta Pi:** Students who have completed at least 15 semester hours, which includes at least 6 semester hours in computer science, and who meet the scholastic requirements may apply for membership in Epsilon Delta Pi, a national Honor Society in the Computer Sciences.

**Phi Theta Kappa:** Students who carry a minimum of 15 semester hours and who meet the scholastic requirements of the local chapter may be eligible for membership in Phi Theta Kappa, National Honor Fraternity of American Junior Colleges.

## **GRADE REQUIREMENTS**

### **Minimum For Satisfactory Progress**

**GRADUATION**—requires an overall grade point average of 2.0 to include a minimum 2.0 at Central Texas College. Associate Degree Nursing students must have no grades lower than a "C" (70) to receive the Applied Science Degree in Nursing and to be recommended by the Nursing Department Manager for eligibility to apply for the State Board Exam. Associate degrees in Arts, Science or Applied Science require a "C" for each course in the major.

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

## IF YOU DON'T MAKE THE GRADE

### During The First Seven Semester Hours

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

### After The First Seven Semester Hours

Students who fail to maintain a 2.0 cumulative grade point average after the first seven semester hours will be placed on PROBATION during the next term in which they register.

**PROBATION** will also be imposed for those students who fail to achieve a 1.0 grade point average during any term after the first seven semester hours if their overall grade point average is 2.0 or above.

Students who achieve a 2.0 or better grade point average during their term of probation, and whose cumulative grade point average is 2.0 or better, will be removed from probation. Students who achieve a 2.0 or better grade point average during their term of probation, but whose cumulative grade point average is below a 2.0, will remain on probation during the next term in which they register. Students who fail to achieve a 2.0 grade point average during their semester of probation will be placed on **SUSPENSION** and can not register for classes until completion of requirements for returning to class, which are listed below.

**SUSPENSION** will also be imposed for those students who fail to achieve a 1.0 grade point average during any term (except upon completion of the first seven semester hours, at which time probation will be imposed) if their cumulative grade point average is below a 2.0.

Students on suspension who achieve a 2.0 or better grade point average during their term of suspension, and whose cumulative grade point average is 2.0 or better, will be removed from suspension. Students on suspension who achieve a 2.0 or better grade point average during their term of suspension, but whose cumulative grade point average is below 2.0, will be placed on probation. Students on suspension who fail to achieve a 2.0 grade point average during their term of suspension will remain on suspension.

A student suspended for the first time may petition the college to re-enter the next semester. For a student who receives a second suspension, the mandatory suspension period is one sixteen-week semester or two eight-week terms. A third suspension requires the student to remain suspended from the college for two consecutive sixteen-week semesters or four eight-week terms.

**NOTE:** Suspended students who receive financial aid or VA benefits are reported to the Financial Aid Office or to the Veterans Administration, and must meet financial aid or VA requirements prior to the reinstatement of their 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 counseling.

### Return To Class After Suspension

Students who have been suspended may be permitted to re-enter the college on an individual petition basis. Students granted re-entry must complete a re-entry petition agreement, have three counseling sessions during the term, complete courses (including remedial or developmental courses) as directed by their counselor, and provide the counseling office with written proof that they are maintaining required academic standards on each visit.

# ARE CLASSROOM VISITS ALLOWED

## 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 care of their children during class meetings. College policy does not permit a student to audit courses.

## REGULATIONS GOVERNING STUDENT ACTIVITIES

### STUDENT RESPONSIBILITIES

#### Address Change

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

#### Falsification Of Records

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

#### Hazing, Disruptive Activities

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

#### Scholastic Honesty

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

1. *Plagiarism*—The taking of passages from 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 or 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.

### STUDENT DISCIPLINE

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.

These rights and responsibilities are outlined in the official Student Handbook.

Students who do not adhere to the college disciplinary policies outlined in the Student Handbook will be subject to disciplinary action by the Director of Student Services or a Disciplinary Committee.

Due process and the right to appeal will be provided to students subject to disciplinary action. Details can be found in the Student Handbook which is available at the Office of Student Services.

## **Summons**

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

## **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.

The transcript of College work is an official copy of the student's permanent record bearing the College seal and official signature. Copies of a student's transcript are available upon written request signed by the student from the transcript office.

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

The registrar may 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.

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

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

### **Official Withdrawal Policy**

Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file an Application for Withdrawal or an Application for Refund at the Records Office, or with a Central Texas College representative at the Military Education Center. The withdrawal form must be signed by the student. Application for Withdrawal or an Application for Refund will be accepted at any time prior to two weeks (Summer Term, one week) before the first day of final examinations. Students attending the Fort Hood eight-week classes may withdraw at any time before the Wednesday prior to the first day of finals. Also see Grade Notes: "W," page 29. The date is published each semester in the Schedule Bulletin.

Students using Financial Aid, Military Tuition Assistance, VA benefits or other than personal funds may be required to repay tuition and fees to the funding agency. For specific repayment requirements, students are referred to the Student Financial Aid Office or the Veterans Services Office. Military Tuition Assistance students are referred to the Military Education Center. Students must withdraw in person after receiving FA, MTA or VA approval.

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

Emergency withdrawal will be considered when documentary evidence is presented. For refund procedures, see pages 10 and 11.

# 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, a student must also complete the specific degree requirements in the curriculum plan for his/her major field of study as shown in the programs of study. Except for the Associate in General Studies Degree, a student may not use the minimum requirements listed below to "tailor" his/her own degree. It is the student's responsibility to make application for the degree. Each degree candidate must earn a minimum of 15 semester hours 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.

A person may normally be awarded one degree from Central Texas College. Students wishing to be awarded a second degree must satisfy all requirements for the second degree, including at least 12 additional semester hours of traditional courses in residence at Central Texas College 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

Complete a minimum of 65 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 2301, 2302, 2303, 2304, 2305 or 2306.
  - c. Three semester hours of speech.
2. Three semester hours of humanities or fine arts (see page 62).
3. Three semester hours of mathematics, MATH 1302 or higher.
4. HIST 1301 and 1302.
5. GOVT 2301 and 2302.
6. Eight semester hours of foreign language (1401, 1402 sequence).
7. Six semester hours of natural science.
8. Four semester hours of physical education from activity courses.
9. Four semester hours of computer science.
10. PSYC 1101.
11. A minimum of 18 semester hours of sophomore courses.
12. A minimum of 15 semester hours credit earned within the Central Texas College System.
13. All required courses in the major as listed in the college catalogue.
14. 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.
15. A passing grade on all sections of the "Certificate Form" of the TASP test.<sup>1\*</sup>
16. Meeting all other College and departmental requirements.

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<sup>1\*</sup> This does not apply to any student who has earned three or more semester credit hours of college credit prior to the Fall Semester of 1989.



## Associate In Science Degree

Complete a minimum of 65 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 2301, 2302, 2303, 2304, 2305 or 2306.
  - c. Three semester hours of speech.
2. Three semester hours of humanities or fine arts (see page 62.)
3. HIST 1301 and 1302.
4. GOVT 2301 and 2302.
5. Twelve semester hours of laboratory science (1401, 1402 sequence).
6. COSC 1403 or MISC 1451 (additional hours of computer science courses are recommended.)
7. Six semester hours of mathematics, MATH 1302 or higher, excluding MATH 1305, 1306 and 1309.
8. Four semester hours of physical education from activity courses.
9. PSYC 1101.
10. A minimum of 18 semester hours of sophomore courses.
11. A minimum of 15 semester hours credit earned within the Central Texas College system.
12. All required courses in the major as listed in the college catalogue.
13. 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.
14. A passing grade on all sections of the "Certificate Form" of the TASP test.<sup>2\*</sup>
15. Meeting all other College and departmental requirements.

## Associate In General Studies Degree

Complete a minimum of 65 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 62.)
3. Three semester hours of mathematics, MATH 1301 or higher.
4. HIST 1301 and 1302.
5. GOVT 2301 and 2302.
6. Three semester hours of computer science (excluding COSC 1302) or microcomputer technology selections.
7. Two semester hours of physical education from activity courses.
8. PSYC 1101.
9. A minimum of 18 semester hours of sophomore courses.
10. All required courses in the major as listed in the college catalogue.
11. A minimum of 15 semester hours earned within the Central Texas College system.
12. A minimum overall grade point of 2.0 ("C" average), to include a minimum 2.0 ("C" average) on all courses taken with Central Texas College.
13. A passing grade on all sections of the "Certificate Form" of the TASP test. \*
14. Meeting all other College and departmental requirements.

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<sup>2\*</sup> This does not apply to any student who has earned three or more semester credit hours of college credit prior to the Fall Semester of 1989.

## **ASSOCIATE IN APPLIED SCIENCE DEGREE**

Complete a minimum of 65 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 62.)
3. Three semester hours of mathematics, MATH 1301 or higher.
4. Three semester hours of social or behavioral science.
5. Three semester hours of computer science (excluding COSC 1302) or microcomputer technology selections.
6. PSYC 1101.
7. A minimum of 36 semester hours of technical courses in the major or a closely related field.
8. A minimum of 18 semester hours of sophomore courses.
9. A minimum of 15 semester hours earned within the Central Texas College system.
10. All required courses in the major as listed in the college catalogue.
11. 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.
12. A passing grade on all sections of the "Certificate Form" of the TASP test.<sup>3\*</sup>
13. Meeting all other College and departmental requirements.

### **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 is required.

### **Transferability Of Courses**

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

### **Developmental Studies**

The Developmental Studies courses offered by the College are designed to provide means for students to remove specific deficiencies or provide refresher coursework prior to attempting 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.

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**DEVELOPMENTAL STUDIES COURSES MAY NOT BE USED TO SATISFY DEGREE REQUIREMENTS AND CANNOT BE COUNTED IN THE GRADE POINT AVERAGE AT CENTRAL TEXAS COLLEGE.**

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## **WHEN ARE CERTIFICATES AND DEGREES AWARDED**

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

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<sup>3\*</sup> This does not apply to any student who has earned three or more semester credit hours of college credit prior to the Fall Semester of 1989.

## HOW TO APPLY FOR A CERTIFICATE OR DEGREE

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

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

**NOTE:** All College entrance and course requirements must be complete 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 meet 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 with the dates listed above.

### Replacing A Lost Certificate or Degree

If a certificate or degree has been lost, stolen or damaged, a Request For Replacement may be obtained at the Career Guidance Center or from the Dean of Student Services. An appropriate fee is required for the replacement of a certificate or degree.

## WHEN IS COMMENCEMENT HELD

### Graduation

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

### Graduation Exercises

All students applying for a degree or certificate which is to be awarded at the end of the Spring Semester are expected to measure for cap and gown and participate in practice for, and in, the actual graduation exercises. Students who do not participate in practice will not be permitted to participate in the graduation exercises and will not be recognized as graduating "in absentia." Excused graduates will be mailed their degrees after graduation exercises have been completed.

## HONORS

### Graduation With Honors

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

1. To graduate with HONORS a candidate must have a 3.5 grade point average on a 4.0 scale with no grades below "B" on all course work taken. In computing the candidate's grade point average for HONORS, the grades in all courses taken at Central Texas College, as well as courses transferred from other accredited institutions of higher learning, are included. 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 graduation with HONORS or HIGHEST HONORS is conferred only when the student participates in the formal commencement ceremonies.
4. To qualify for HONORS consideration, students must have earned a minimum of 30 semester hours of traditional study with Central Texas College.

# PROGRAMS OF STUDY

## Program Offerings

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

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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.

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## Program and Course Availability

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

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

## Prerequisite Courses

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

*Example:* 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 their Department Advisor or Counselor. Failure to obtain approval could result in loss of credit toward degree.

## Semester Credit Hours

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

## Technical Electives

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

## Approved Electives

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

## Special Electives

Many programs of study have Humanities/Fine Arts and Social/Behavioral Science elective courses that can be used to satisfy elective requirements. These electives are listed below.

### Humanities/Fine Arts Electives

- ANTH 2302 Cultural Anthropology
- ART. (all ART. courses except ART. 2305, 2306 and 2319)
- Foreign Language courses
- GEOG 2302 Cultural Geography
- Music courses
- Literature courses
- Philosophy courses to include Religion

### Social/Behavioral Electives

- ANTH 2301 Physical Anthropology
- ECON 2301 Macroeconomics
- ECON 2302 Microeconomics
- CRJ 1307 Crime in America
- Geography courses (except GEOG 2302 Cultural Geography)
- Government courses
- History courses
- Psychology courses
- Sociology courses

# ACCOUNTING TECHNOLOGY

## A Two-Year Associate in Applied Science Degree

(Offered only at selected locations)

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
ACCT 1301 Financial Accounting	3	ACCT 1302 Managerial Accounting and Control	3
BUSS 1301 Introduction to Business	3	ELCT † Approved Elective	3
MATH 1301 Intermediate Algebra		MGMT 1305 Introduction to Management	3
or		MGMT 1309 Income Tax	3
MATH 1308 Elementary Statistics	3	SPCH 2303 Business and Professional Speaking	3
ENGL 1301 Composition and Rhetoric I	3	PYED Physical Education	1
COSC 1300 Computer Info Processing			
or			
MISC 1450 Microcomputers for Business	3-4		
PYED Physical Education	1		
PSYC 1101 College Orientation	1		
	<b>17-18</b>		<b>16</b>

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
ACCT 2309 Fundamentals of Accounting III	3	ACCT 2310 Fundamentals of Accounting IV	3
MGMT 2305 Business Law I	3	MGMT 2306 Business Law II	3
ACCT 2305 Basics of Managerial Accounting	3	ACCT †† Accounting Elective	3
ACCT 2311 Accounting and Financial Information Systems I	3	ENGL 2309 Technical Writing	3
ELCT Humanities/Fine Arts Elect	3	ELCT Social/Behavioral Science Elective	3
PYED Physical Education	1	PYED Physical Education	1
	<b>16</b>		<b>16</b>

**TOTAL HOURS 65-66**

† Approved Electives ECON 2301, 2302; FIBA 2306; MGMT 1304, 1306, 1307, 2301, 2302; QADM 1309 or 2307.

†† Accounting Electives: ACCT 2306 or 2312.

# ADMINISTRATIVE SECRETARIAL

## A 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
ENGL 1301 Composition and Rhetoric I	3	WOPO 1307 Word Processing/Transcription	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
	<b>18</b>		<b>16</b>

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

— Student may apply for Certificate of Completion upon satisfactory completion of all courses listed above.

# ADMINISTRATIVE SECRETARIAL (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
MATH 1301 Intermediate Algebra	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 *** Speech Selections(s)	3
ELCT **** Humanities/Fine Arts Elect	3	ELCT **** Social/Behavioral Science Elective	3
ELCT Sophomore WOPO/MISC Elective	3		
	18		15
			TOTAL HOURS 65

\*\* Electives or selections approved by Department Manager. Courses may be chosen leading toward general, medical or legal secretarial programs upon department approval.

\*\*\* SPCH 1301 or 2303.

\*\*\*\* One selection must be sophomore level.

## AGRICULTURE

### A Two-Year Associate in General Studies Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
AGRI 1301 Animal Husbandry	3	ELCT † Approved Agriculture Elective	3
AGRI 1304 Introduction to Agriculture Economics	3	ELCT † Approved Agriculture Elective	3
BIOL 1401 General Biology I	4	BIOL 1402 General Biology II	4
ENGL 1301 Composition and Rhetoric I	3	ENGL 1302 Composition and Rhetoric II	3
HIST 1301 History of the U.S. to 1865	3	HIST 1302 History of the U.S. from 1865	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	18		17

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
AGRI 2301 Entomology	3	ELCT † Approved Sophomore Level Agriculture Elective	3
CHEM 1401 General Chemistry I	4	CHEM 1402 General Chemistry II	4
GOVT 2301 State and Federal Govt I	3	GOVT 2302 State and Federal Govt II	3
MATH 1302 College Algebra	3	MISC 1450 Microcomputers for Business	4
SPCH 2303 Business and Professional Speaking	3	PYED Physical Education	1
PYED Physical Education	1	ELCT Soph Level Humanities/ Fine Arts Elective	3
	17		18
			TOTAL HOURS 70

† Electives must be approved by the Department Manager.

— Students should check requirements of the institution to which they intend to transfer.

# AIR CONDITIONING & REFRIGERATION

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
INDU 1400 Industrial Fundamentals	4	AIRC 1403 Heating Systems	4
AIRC 1400 Basic Air Conditioning and 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
MATH 1301 Intermediate Algebra	3	ELCT * Computer Science/Microcomputer Technology Elective	3
PSYC 1101 College Orientation	1	ENGL 1309 Communications Skills	3
	16		18

### 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 and Refrigeration Theory	4	AIRC 2403 Commercial Air Conditioning Systems	4
AIRC 2404 Troubleshooting Air Conditioning & Refrigeration Systems	4	AIRC 2405 Heat Pumps	4
ELCT Humanities/Fine Arts Elect	3	SPCH 2303 Business and Professional Speaking	3
GOVT 2301 State and Federal Govt I			
or			
GOVT 2302 State and Federal Govt II	3		
	18		15
			<b>TOTAL HOURS 67</b>

- \* Computer Science selection (excluding COSC 1302) or microcomputer selections.
- Student may apply for Certificate of Completion upon satisfactory completion of PSYC 1101 and all AIRC and INDU prefix courses.

## ANIMAL PRODUCTION

### A One-Year Certificate of Completion

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



# APPLIED MANAGEMENT

## A Two-Year Associate in Applied Science Degree

(Offered only at selected locations)

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
BUSS	1301	Introduction to Business	3	BUSS	1302	Consumer Economics	3
ENGL	*	English Selection(s)	3	ENGL	*	English Selection(s)	3
MATH	**	Mathematics Selection(s)	3	MGMT	****	Management Selection(s)	3
MGMT	1305	Introduction to Management	3	SPCH	*	Speech Selection(s)	3
MGMT	1306	Human Relations	3	ELCT	***	Computer Science/Microcom- puter Technology Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				16
			17				

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
ACCO	2301	Financial Accounting	3	ELCT		Social/Behavioral Science Elective	3
MGMT	2302	Personal Management	3	MGMT	2303	Law and Legal Assistance	3
MGMT	2309	Supervision	3	MGMT	2310	Personnel Counseling	3
ELCT		Humanities/Fine Arts Elect	3	MGMT	****	Sophomore Management Selection(s)	3
MGMT	****	Management Selection(s)	3	MGMT	****	Sophomore Management Selection(s)	3
PYED		Physical Education	1	PYED		Physical Education	1
			16				16

TOTAL HOURS 65

\* ENGL 1301, 1302, 1309, 2309; SPCH 1301 and 2303.

\*\* MATH 1301 or higher.

\*\*\* Computer Science selection(excluding COSC 1302) or microcomputer selections.

\*\*\*\* MGMT 1158, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1301, 1302, 1303, 1304, 1307, 1308, 1309, 2101, 2102, 2151, 2152, 2161, 2162, 2164, 2201, 2202, 2203, 2204, 2205, 2206, 2260, 2300, 2301, 2304, 2305, 2306, 2307, 2312, 2314, 2315, 2351, 2354; BUSS 2306; COSC 1300, 1307, 1403, 1405; OADM 1308, 2307; PSYC 2301; REAE 1301, 2304 or 2305.

# APPLIED MANAGEMENT WITH TECHNICAL OPTIONS

A Two-Year Associate in Applied Science Degree

## OPTION 1. FOOD SERVICE OPERATIONS

(Offered only at selected locations)

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
FSMG 1302 Nutrition	3	FSMG 1304† Work Organization	3
FSOP 1303 Sanitation and Safety	3	FSOP 1305* Food Purchasing	3
ELCT Food Preparation Selection FSMG 1401, 1402 or 2355	3	FSOP 1306 Menu Planning	3
ENGL ENGL 1301 or ENGL 1309	3	ELCT ** Computer Science/Microcom- puter Technology Elective	3
MATH ‡ Mathematics Selection(s)	3	ELCT FSMG/FSOP/HMMG/ACCO Selection(s)	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		16
	17		

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
FSOP 2303 Cafeteria Management	3	FSMG Classical Preparation Selection FSMG 2401, 2356 or 2452	3
ELCT FSMG/FSOP/HMMG Selection	3	FSMG Exhibition Work Selection FSMG 2402, 2353 or 2306	3
ELCT Sophomore Level FSMG/ FSOP/ACCO/BUSS/ MGMT Selection(s)	3	ELCT MGMT/BUSS Selection(s)	3
ELCT Humanities/Fine Arts Elect	3	ELCT Sophomore Level FSMG/ FSOP/ACCO/BUSS/MGMT Selection(s)	3
SPCH 2303 Business and Professional Speaking	3	ELCT Social/Behavioral Science Elective	3
PYED Physical Education	1	PYED Physical Education	1
	16		16

TOTAL HOURS 65

‡ MATH 1301 or higher.

† MGMT 1304 may be substituted.

\* FSMG 1307 may be substituted.

\*\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

— Food Service Management Food Service Operations Selections:

FSMG 1300, 1301, 1307, 1308, 2304, 2305 or 2307.

— The appropriate FSMG courses will be accepted in place of the FSOP course.

## OPTION 2. COMPUTER SCIENCE

(Offered only at selected locations)

### 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 and Programming	4	MGMT 1304 Work Organization	3
COSC 1405 Computer Concepts and Analysis	4	COSC 1406 Computer Organization and Architecture	4
ENGL 1309 Communications Skills	3	COSC *** Computer Science/Microcomputer Technology Elective	4
MATH ** Mathematics Selection(s)	3	SPCH 1301 Public Speaking	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		
	19		18

### 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 1408 Interactive Programming	4
COSC 1404* COBOL Programming	4	ACCO 2302 Managerial Accounting and Control	3
COSC 2301 Computer Center Management	3	ELCT Social/Behavioral Science Elective	3
ACCO 2301 Financial Accounting	3	ELCT Humanities/Fine Arts Elect	3
	16		16
		TOTAL HOURS	69

\* COSC 2409 may be substituted.

\*\* MATH 1301, 1305 or 1308.

\*\*\* COSC 1401, 1407, 2404, 2405, 2407; MISC 1450, 1451, 1454 or 2453.

## OPTION 3. MICROCOMPUTER TECHNOLOGY

(Offered only at selected locations)

### 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 1309 Communications Skills	3	MISC 1451 Introduction to Microcomputer Programming	4
MATH † Mathematics Selection(s)	3	SPCH 2303 Business and Professional Speaking	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		
	19		18

† MATH 1301, 1302 or 1308.

## OPTION 3. MICROCOMPUTER TECHNOLOGY (CONT)

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
MGMT 2302 Personal Management	3	MGMT 1306 Human Relations	3
MGMT 2305 Business Law I	3	ELCT †† Computer Science/Microcomputer Technology Elective	3
ACCO 2301 Financial Accounting	3	ACCO 2302 Managerial Accounting and Control	3
MISC 1430 Spreadsheets for Microcomputers	4	ELCT Soph Level Humanities/Fine Arts Elective	3
MISC 1440 Database for Microcomputers	4	ELCT Social/Behavioral Science Elective	3
	17		15
		<b>TOTAL HOURS</b>	<b>69</b>

†† Any MISC or COSC course in which prerequisites are completed.

## ART

### A Two-Year Associate in Arts Degree

#### FIRST YEAR

First Semester	Credit	Second Semester	Credit
ART. Two courses from ART. 1301, 1303, 1305 or 1307	6	ART. Two courses from ART. 1302, 1304, 1306 or 1308	6
ENGL 1301 Composition and Rhetoric I	3	ENGL 1302 Composition and Rhetoric II	3
HIST 1301 History of the U.S. to 1865	3	HIST 1302 History of the U.S. from 1865	3
LANG 1401 Beginning Foreign Language	4	LANG 1402 Foreign Language	4
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	18		17

#### SECOND YEAR

First Semester	Credit	Second Semester	Credit
ART. One course, sophomore level	3	ART. One course, sophomore level	3
ELCT ENGL 2301, 2302, 2304, 2305 or 2306	3	ELCT SPCH 2303, 2304 or 2305	3
ELCT Natural Science Elective	3	ELCT ** Computer Science/Microcomputer Technology Elective	4
MATH * Mathematics Selection(s)	3	GOVT 2302 State and Federal Govt II	3
GOVT 2301 State and Federal Govt I	3	PYED Physical Education	1
PYED Physical Education	1		
	16		17
		<b>TOTAL HOURS</b>	<b>68</b>

\* MATH 1301 or higher.

\*\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

— Students should check the catalogue of the institution to which they plan to transfer for particular art courses. If German is taken the first year, Beginning French or Spanish may be taken the second year.

# AUTOMOTIVE BODY REPAIR

## A 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 Fundamentals	4
ATBR 1407 Auto Body Fundamentals	4	ATBR 1411 Automotive Glass	4
PSYC 1101 College Orientation	1	MATH 1301 Intermediate Algebra	3
	17		19

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
ATBR 2401 Panel Repair and Replacement	4	ATBR 2400 Major Vehicle Damage Repair	4
ATBR 2406 Frame Repair and Alignment	4	ATBR 2404 Advanced Auto Body Painting	4
AUTO 2405 Steering and Suspension Sys	4	ELCT * Computer Science/Microcomputer Technology Elective	3
ENGL 1309 Communications Skills	3	ELCT Humanities/Fine Arts Elect	3
GOVT 2301 State and Federal Govt I or GOVT 2302 State and Federal Govt II	3	SPCH 2303 Business and Professional Speaking	3
	18		17
		TOTAL HOURS	71

- \* Computer Science selection (excluding COSC 1302) or microcomputer selections.  
 — Students may apply for a Certificate of Completion upon satisfactory completion of PSYC 1101 and all ATBR, AUTO and INDU prefix courses.

# AUTOMOTIVE MECHANIC

## APPRENTICESHIP PROGRAM

### A Two-Year Associate in Applied Science Degree

(Offered only at selected locations)

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
INDU 1400 Industrial Fundamentals	4	AUTO 1402 Basic Electrical and Test Equipment	4
AUTO 1401 Basic Engines	4	AUTO 1407 Brake Systems	4
ENGL 1309 Communications Skills	3	AUTO 1408 Standard Transmissions and Transaxles	4
PHYS 1303 Survey of Physics	3	MATH 1301 Intermediate Algebra	3
PSYC 1101 College Orientation	1		15
	15		

Summer Semester	Credit
AUTO 2404 Ignition, Starting and Charging	4
AUTO 2408 Advanced Engine Service	4
AUTO 2410 Fuel Systems and Injection	4
	12

# AUTOMOTIVE MECHANIC APPRENTICESHIP PROGRAM (CONT)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
AUTO	2403	Automatic Transmissions and Transaxles	4	AUTO	2402	Shop Organization and Management	4
AUTO	2405	Steering & Suspension Sys	4	AUTO	2406	Engine Diagnosis and Emission	4
ELCT	†	Computer Science/Microcomputer Technology Elective	3	AUTO	2409	Automotive Internship	4
PSYC	2301	Introduction to Psychology	3	ELCT		Humanities/Fine Arts Elect	3
			14				15
							TOTAL HOURS 71

† Computer Science selection (excluding COSC 1302) or microcomputer selections.

# AUTOMOTIVE SERVICE AND REPAIR A Two-Year Associate in Applied Science Degree

## 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	1301	Intermediate Algebra	3	ENGL	1309	Communications Skills	3
PSYC	1101	College Orientation	1	ELCT	*	Computer Science/Microcomputer Technology Elective	3
			16				18

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
AUTO	2404	Ignition, Starting and Charging	4	AUTO	2403	Automatic Transmissions and Transaxles	4
AUTO	2405	Steering & Suspension Sys	4	AUTO	2406	Engine Diagnosis and Emission	4
AUTO	2408	Advanced Engine Service	4	AUTO	2411	Automotive Advanced Technology	4
AUTO	2410	Fuel Systems & Injection	4	ELCT		Humanities/Fine Arts Elect	3
GOVT	2301	State and Federal Govt I or		SPCH	2303	Business and Professional Speaking	3
GOVT	2302	State and Federal Govt II	3				18
			19				TOTAL HOURS 71

\* Computer Science selection (excluding, COSC 1302) or microcomputer selections.

— Students may apply for a Certificate of Completion upon satisfactory completion of PSYC 1101 and all AUTO and INDU prefix courses.

# AVIATION MAINTENANCE TECHNOLOGY

## A 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 Control-G	2
AVMT 1305 Basic Aircraft Electricity-G	3	AVMT 1306 Aircraft Finishes-A	3
ENGL 1309 Communications Skills	3	AVMT 1402 Sheet Metal Structures-A	4
PHYS 1303 Survey of Physics	3	AVMT 2303 Airframe Inspection-A	3
PSYC 1101 College Orientation	1	MATH 1301 Intermediate Algebra	3
	14		17
<b>Summer Session</b>			
	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 Sys-A	4	AVMT 2407 Powerplant Maintenance-Turbine Engines-P	4
	13		16
<b>Summer Semester</b>			
ELCT Social/Behavioral Science Elective	3		
ELCT Humanities/Fine Arts Elective	3		
	6		

TOTAL HOURS 73

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

# BARBER

## PROFESSIONAL BARBER-STYLIST SCIENCE

### A One-Year Certificate of Completion

#### FIRST YEAR

First Semester	Credit	Second Semester	Credit
BARB 1601 Introduction to Hair Design	6	BARB 1603 Intermediate Barber-Styling I	6
BARB 1602 Basic Barber-Styling	6	BARB 1604 Intermediate Barber-Styling II	6
	12		12

#### Third Semester

BARB 2601 Advanced Barber-Styling	6
BARB 2602 Advanced Barber-Styling, Barber Law and Shop Management	6
	12

TOTAL HOURS 36

— Certificate of Completion awarded upon satisfactory completion.

## BIOLOGY

### A Two-Year Associate in Science Degree

#### FIRST YEAR

First Semester	Credit	Second Semester	Credit
BIOL 1401 General Biology I	4	BIOL 1402 General Biology II	4
CHEM 1401 General Chemistry I	4	CHEM 1402 General Chemistry II	4
HIST 1301 History of the U.S. to 1865	3	HIST 1302 History of the U.S. from 1865	3
ENGL 1301 Composition and Rhetoric I	3	ENGL 1302 Composition and Rhetoric II	3
MATH 1302 College Algebra	3	MATH 1303 Trigonometry	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	19		18

#### SECOND YEAR

First Semester	Credit	Second Semester	Credit
BIOL 2401 Invertebrate Zoology	4	BIOL 2402 Vertebrate Zoology	4
CHEM 2401 Organic Chemistry I	4	CHEM 2402 Organic Chemistry II	4
GOVT 2301 State and Federal Govt I	3	GOVT 2302 State and Federal Govt II	3
ENGL 2301 English Literature I	3	PYED * Physical Education	1
PYED Physical Education	1	SPCH 1301 Public Speaking	3
COSC 1403 Introduction to Computer Science & Programming	4	ELCT Humanities/Fine Arts Elect	3
	19		18
			TOTAL HOURS 74

\* Sophomore level.

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



# BUSINESS ADMINISTRATION

## A Two-Year Associate in Arts Degree

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
SCIE	Biology, Chemistry, Physics or Geology	4	SCIE	Biology, Chemistry, Physics or Geology	4
HIST 1301	History of the U.S. to 1865	3	HIST 1302	History of the U.S. from 1865	3
ENGL 1301	Composition and Rhetoric I	3	ENGL 1302	Composition and Rhetoric II	3
MATH *	Mathematics Selection(s)		BUSS 1301	Introduction to Business	
PSYC 2301	Introduction to Psychology	3	or		
PYED	Physical Education	1	MGMT 1305	Introduction to Management	3
PSYC 1101	College Orientation	1	ELCT	Humanities/Fine Arts Elect	3
		18	PYED	Physical Education	1
					17

### SECOND YEAR

First Semester		Credit	Second Semester		Credit
ECON 2301	Macroeconomics	3	ACCO 2302	Managerial Accounting and Control	3
ACCO 2301	Financial Accounting	3	ACCO 2102	Managerial Accounting and Control Lab	1
ACCO 2101	Financial Accounting Lab	1	ELCT ****	Computer Science/Microcom- puter Technology Elective	4
ENGL **	English Selection(s)	3	GOVT 2302	State and Federal Govt II <sup>AT3</sup>	
GOVT 2301	State and Federal Govt I	3	ECON 2302	Microeconomics	3
ELCT ***	Approved Elective	3	SPCH	SPCH 1301 or 2303	3
PYED	Physical Education	1	PYED	Physical Education	1
		17			18

TOTAL HOURS 70

- Mathematics courses include MATH 1302, 1303, 1304, 1305, 1308, 1309, 2301, 2302 or 2303. Since senior college math requirements vary widely, it is the student's responsibility to consult with the four-year institution he/she is planning to attend.

\*\* English courses include ENGL 2301, 2302, 2303, 2304, 2305 or 2306.

\*\*\* Business, Management, Office Administration, Social Science or other related electives must be approved by the Business/Management Departments.

\*\*\*\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

# BUSINESS MANAGEMENT

## A 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 1301 Intermediate Algebra	3	OADM 1309 Business Math and Calculating Machines	3
SPCH 1301 or 2303	3	MISC 1450 Microcomputers for Business	4
ELCT BUSS 1301 or MGMT 1305	3	ELCT Elective	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		
	17		17

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
ELCT MGMT 1401 or MGMT 2316	3-4	ELCT MGMT 1402 or MGMT 2317	3-4
MGMT MGMT 2305 or MGMT 2306	3	MGMT 2309 Supervision	3
MGMT 2302 Personnel Management	3	ECON 2302 Microeconomics	3
ECON 2301 Macroeconomics	3	ACCO 2302 Managerial Accounting	3
ACCO 2301 Financial Accounting	3	ACCO 2102 Managerial Accounting Lab	1
ACCO 2101 Financial Accounting Lab	1	ELCT Humanities/Fine Arts Elect	3
	16-17		16-17
		TOTAL HOURS	66-68

# CAREER PILOT

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
CAPI 1200 Basic Flight	2	CAPI 1204 Intermediate Flight	2
CAPI 1301 Aircraft Science	3	CAPI 1302 Propulsion Systems	3
CAPI 1403 Air Navigation	4	CAPI 1306 Meteorology	3
ENGL 1301 Composition and Rhetoric I	3	PHYS 1303 Survey of Physics	3
MATH 1302 College Algebra	3	SPCH 1301 Public Speaking	3
PSYC 1101 College Orientation	1	ENGL 1302 Composition and Rhetoric II	3
	16		17

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
CAPI 2204 Advanced Flight	2	CAPI 2205 Commercial Flight	2
CAPI 2300 Commercial Aviation	3	CAPI 2303 Air Transportation	3
CAPI 2301 Aerodynamics	3	CAPI 2307 Instrument & Ground School	3
CAPI 2317 Advanced Air Navigation	3	MISC 1451 Intro to Microcomputer Programming	4
ELCT Humanities/Fine Arts Elect	3	ELCT Social/Behavioral Science	3
ELCT Approved Elective	3	Elective	3
	17		15
		TOTAL HOURS	65

— CAPI 2210 and CAPI 2211 are substitutes for CAPI 2204 and CAPI 2205 for Rotary Wing Transition students.

# CHEMISTRY

## A Two-Year Associate in Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
CHEM	1401	General Chemistry I	4	CHEM	1402	General Chemistry II	4
MATH	1303†	Trigonometry	3	MATH	1304	Analytic Geometry	3
HIST	1301	History of the U.S. to 1865	3	HIST	1302	History of the U.S. from 1865	3
ENGL	1301	Composition and Rhetoric I	3	ENGL	1302	Composition and Rhetoric II	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1	COSC	1403	Introduction to Computer	
SPCH	1301	Public Speaking	3			Science and Programming	4
			18				18

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
CHEM 2401	Organic Chemistry I		4	CHEM 2402	Organic Chemistry II		4
MATH 2301	Calculus I		3	PHYS 2402	Modern Physics II		4
GOVT 2301	State and Federal Govt I		3	GOVT 2302	State and Federal Govt II		3
ENGL 2301	English Literature I		3	ELCT	Humanities/Fine Arts Elect		3
PHYS 2401	Modern Physics I		4	MATH 2302	Calculus II		3
PYED	Physical Education		1	PYED	Physical Education		1
			18				18
							TOTAL HOURS 72

- † Students deficient in mathematics must take college algebra. This course should be taken during the summer term prior to the freshman year.
- Students should check requirements of the institution to which they intend to transfer as requirements may vary.

# CHILD DEVELOPMENT

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
CHDV	1303	Learning Programs	3	CHDV	1302	Infant and Toddler Care	3
CHDV	1308	Creative Expression	3	CHDV	1304	Developmental Language	3
CHDV	1310	Growth and Development of Children	3	CHDV	1305	Instructional Aids	3
ENGL	1309	Communications Skills	3	CHDV	1309	Child Guidance and Classroom Techniques	3
MISC		MISC 1420 or MISC 1450	4	MATH *		Mathematics Selection(s)	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
PYED		Physical Education	1				16
			18				

- \* MATH 1301 or higher.
- Students may apply for a Certificate of Completion upon satisfactory completion of all first year requirements.

# CHILD DEVELOPMENT (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
CHDV 2301 The Exceptional Child	3	CHDV 2302 Parent-Child Relationship	3
CHDV 2303 Managing Child Care Centers	3	CHDV 2305 Methods of Teaching Math & Science in Early Childhood	3
CHDV 2401 Learning Theories Seminar and Internship	4	CHDV 2402 Special Projects	4
SOCI 2301 Introduction to Sociology	3	ELCT Elective	3
ELCT ** Approved Elective	3	ELCT Humanities/Fine Arts Elective	3
	16		16
		TOTAL HOURS	66

\*\* CHDV 1301, 1306, 1307, 2101, 2304; BUSS 1301; FSMG 1302, 1306; MGMT 1305; SOCI 2306; PYED 2302 or other courses approved by the Department Manager.

## CHILD DEVELOPMENT SPECIAL CHILD OPTION A One-Year Certificate of Completion

First Semester	Credit	Second Semester	Credit
CHDV 1301 Introduction to Child Development	3	CHDV 1303 Learning Programs	3
CHDV 1304 Developmental Language	3	CHDV 1307 Techniques for Child Guidance for the Special Child	3
CHDV 1306 Physical Development and Disorders in Children	3	CHDV 1308 Creative Expression	3
CHDV 2301 The Exceptional Child	3	CHDV 1310 Growth and Development of Children	3
ENGL † English Selection(s)	3		
PSYC 1101 College Orientation	1		
	16		12
		TOTAL HOURS	28

† ENGL 1301 or ENGL 1309.

## CHILD DEVELOPMENT ADMINISTRATOR'S CREDENTIALS A One-Year Certificate of Completion

First Semester	Credit	Second Semester	Credit
CHDV 1301 Introduction to Child Development	3	CHDV 1310 Growth and Development of children	3
CHDV 1303 Learning Programs	3	CHDV 2304 Management Techniques for Directors	3
CHDV 1308 Creative Expression	3	CHDV 2402 Special Projects	4
CHDV 2303 Managing Child Care Centers	3	PYED Physical Education	1
PSYC 1101 College Orientation	1	ELCT ‡ Approved Elective	3
ENGL 1309 Communications Skills	3		
	16		14
		TOTAL HOURS	30

‡ COSC 1300 or PYED 2302.

# CHILD DEVELOPMENT ASSOCIATE (CDA)

## A One-Year Certificate of Completion

First Semester		Credit	Second Semester		Credit
CHDV 1301	Introduction to Child Development	3	CHDV 1303	Learning Programs	3
CHDV 2401	Learning Theories Seminar and Internship	4	CHDV 2402	Special Projects	4
		7			7
Summer Session		Credit			
CHDV 2101	Child Development Seminar	1			
PSYC 1101	College Orientation	1			
		2			

TOTAL HOURS 16

# COMMERCIAL ART

## A Two-Year Associate in General Studies Degree

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
ENGL 1301	Composition and Rhetoric I	3	SPCH	SPCH 1301 or 1303	3
ART. 1301	Drawing I	3	ART. 1302	Drawing II	3
ART. 1303	Creative Design I	3	ENGR 1301	Engineering Graphics	3
HIST 1301	History of the U.S. to 1865	3	HIST 1302	History of the U.S. from 1865	3
ELCT *	Approved Elective	3	MATH **	Mathematics Selection(s)	3
PSYC 1101	College Orientation	1	PYED	Physical Education	1
PYED	Physical Education	1			
		17			16

### SECOND YEAR

First Semester		Credit	Second Semester		Credit
ART. 1305	Figure Drawing I	3	ART. 2306	Illustration and Advertising Design II	3
ART. 2305	Illustration and Advertising Design I	3	GOVT 2302	State and Federal Govt II	3
GOVT 2301	State and Federal Govt I	3	ELCT	Computer Science/Microcomputer Technology Elective	4
ELCT	Elective	3	ELCT	Sophomore Level Art	3
ELCT ***	Sophomore Level Approved Elective	3	ELCT ***	Sophomore Level Approved Elective	3
PYED	Physical Education	1			
		16			16

TOTAL HOURS 65

\* PHOT 1301 or OPRT 1301 recommended.

\*\* MATH 1302 or higher.

\*\*\* ART. 2301, 2308, 2309 or 2313 recommended.

# COMMUNICATIONS ELECTRONICS TECHNOLOGY

A 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 & Operational Programming	4
CMET 1401 Digital Circuits	4	MATH 1303 Trigonometry	3
MATH 1301 Intermediate Algebra		ELTE 1402 Electrical Circuits II	4
or		ELTE 1403 Solid State Electronics	4
MATH 1302 College Algebra	3	ELCT Humanities/Fine Arts Elect	3
ELTE 1401 Electrical Circuits I	4		
ENGL 1309 Communications Skills	3		
PSYC 1101 College Orientation	1		
	19		18

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
CMET 1409 CRT Systems	4	ELTE 2407 Communications Circuits II	4
ELTE 1404 Communications Circuits I	4	CMET 2403* Interfacing Techniques	4
ELTE 2406 Integrated Devices	4	ELTE 2409 Electronic Systems Troubleshooting	4
CMET 2401 Microprocessors and Microcomputers	4	ELCT ** Computer Maintenance/ Electronics Selections(s)	4
ELCT Social/Behavioral Science Elective	3		
	19		16
			TOTAL HOURS 72

† The Department Manager may substitute ELTE 1303 for CMET 1400.

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

\*\* Selected course approved by Department Chairman or authorized Central Texas College personnel according to the student need: ELTE 2301, 2402, 2405, 2408, 2410, 2411, 2421; CMET 2407 or 2408.

# COMPUTER ELECTRONICS TECHNOLOGY (ROBOTICS OPTION)

A 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 and Operational Programming	4
CMET 1401 Digital Circuits	4	MATH 1303 Trigonometry	3
MATH 1301 Intermediate Algebra		ELTE 1402 Electrical Circuits II	4
or		ELTE 1403 Solid State Electronics	4
MATH 1302 College Algebra	3	ELCT Humanities/Fine Arts Elect	3
ELTE 1401 Electrical Circuits I	4		
ENGL 1309 Communications Skills	3		
PSYC 1101 College Orientation	1		
	19		18

# COMPUTER ELECTRONICS TECHNOLOGY (CONT) (ROBOTICS OPTION)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
CMET 1404 Fundamentals of Robotics	4	CMET 2403* Interfacing Techniques	4
CMET 1409 CRT Systems	4	CMET 2405 Tendon Control and Implementation	4
CMET 2401 Microprocessors and Microcomputers	4	ELTE 2409 Electronic Systems Troubleshooting	4
ELTE 2406 Integrated Devices	4	ELCT ** Approved Technical Elective	4
ELCT Social/Behavioral Science Elective	3		
	<b>19</b>		<b>16</b>
		<b>TOTAL HOURS</b>	<b>72</b>

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

\*\* Approved Technical Electives: ELTE 2402 and 2407, CMET 2406 and 2408.

# COMPUTER ELECTRONICS TECHNOLOGY A 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 Operational Programming	4
CMET 1401 Digital Circuits	4	MATH 1303 Trigonometry	3
MATH 1301 Intermediate Algebra or		ELTE 1402 Electrical Circuits II	4
MATH 1302 College Algebra	3	ELTE 1403 Solid State Electronics	4
ELTE 1401 Electrical Circuits I	4	ELCT Humanities/Fine Arts Elective	3
ENGL 1309 Communications Skills	3		
PSYC 1101 College Orientation	1		
	<b>19</b>		<b>18</b>

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
CMET 1409 CRT Systems	4	CMET 2403† Interfacing Techniques	4
CMET 2401 Microprocessors and Microcomputers	4	CMET 2404 Computer Sys Diagnosis and Maintenance	4
CMET 2402 Computer Circuit Analysis	4	ELTE 2409 Electronic Systems Troubleshooting	4
ELTE 2406 Integrated Devices	4	ELCT †† Technical Elective	4
ELCT Social/Behavioral Science Elective	3		
	<b>19</b>		<b>16</b>
		<b>TOTAL HOURS</b>	<b>72</b>

† If student desires, ELTE 2103 and 2303 may be substituted.

†† Approved Technical Electives: ELTE 2402, 2411, 2421; CMET 2407 or 2408.

## COMPUTER OPERATOR

### A One-Year Certification of Completion

First Semester	Credit	Second Semester	Credit
COSC 1401 Computer Operations and Library Management	4	COSC 1402* Advanced Operations Lab	4
COSC 1403 Introduction to Computer Science & Programming	4	COSC 1406 Computer Organization and Architecture	4
COSC 1405 Computer Concepts and Analysis	4	COSC 2403 Operating Systems and Job Control Language	4
OADM 1305 Records Management	3	COSC/MISC Programming Elective	4
ENGL 1309 Communications Skills	3		
PSYC 1101 College Orientation	1		
	19		16
			TOTAL HOURS 35

\* Computer Science course may be substituted.

## COMPUTER SCIENCE

### BUSINESS PROGRAMMER/ANALYST

### A Two-Year Associate in Applied Science Degree

#### FIRST YEAR

First Semester	Credit	Second Semester	Credit
COSC 1403 Introduction to Computer Science and Programming	4	COSC 1404 COBOL Programming	4
COSC 1405 Computer Concepts and Analysis	4	COSC 1406 Computer Organization and Architecture	4
ENGL 1301 Composition and Rhetoric I	3	COSC/MISC Technical Elective	4
MATH † Mathematics Selection(s)	3	MATH † Mathematics Selection(s)	3
PSYC 1101 College Orientation	1	ELCT Social/Behavioral Science Elective	3
	19		18

#### SECOND YEAR

First Semester	Credit	Second Semester	Credit
COSC 2403 Operating Systems & Job Control Language	4	COSC 2401 Advanced COBOL	4
COSC 2404 Assembler Language Programming	4	COSC 2402 Systems in the MIS Environment	4
COSC/MISC Technical Elective	4	COSC Sophomore Technical Elective	4
ACCO 2301 Financial Accounting	3	SPCH 2303 Business and Professional Speaking	3
ACCO 2101 Financial Accounting Lab	1	ACCO 2302 Managerial Accounting and Control	3
ELCT Humanities/Fine Arts Elect	3	ACCO 2102 Managerial Accounting and Control Lab	1
	19		19
			TOTAL HOURS 71

† MATH 1301, 1302, 1304, 1305, 1308, 2301, 2302 or 2303.



# CONSUMER ELECTRONICS TECHNOLOGY

## A Two-Year Associate in Applied Science Degree

(Offered only at selected locations)

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
CMET 1400† Electronics and Computer Skills	4	CMET 1403 Computer Systems and Operational Programming	4
CMET 1401 Digital Circuits	4	MATH 1303 Trigonometry	3
MATH 1301 Intermediate Algebra		ELTE 1402 Electrical Circuits II	4
or		ELTE 1403 Solid State Electronics	4
MATH 1302 College Algebra	3	ELCT Humanities/Fine Arts Elect	3
ELTE 1401 Electrical Circuits I	4		
ENGL 1309 Communications Skills	3		
PSYC 1101 College Orientation	1		
	<b>19</b>		<b>18</b>

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
CMET 1409 CRT Systems	4	COES 2409 Advanced TV Servicing	4
COES 2408 CATV & Audio Distribution Systems	4	CMET 2403* Interfacing Techniques	4
ELTE 2406 Integrated Devices	4	ELTE 2409 Electronic Systems Troubleshooting	4
CMET 2401 Microprocessors and Microcomputers	4	ELCT ** Computer Maintenance/ Electronics Selection(s)	4
ELCT Social/Behavioral Science Elective	3		
	<b>19</b>		<b>16</b>
		<b>TOTAL HOURS</b>	<b>72</b>

† The Department Manager may substitute ELTE 1303 for CMET 1400.

• If student desires, ELTE 2103 and 2303 may be substituted.

\*\* Selected course approved by Department Chairman or authorized Central Texas College personnel according to the student need; ELTE 2301, 2402, 2405, 2408; CMET 2407 or 2408.

# COSMETOLOGY

## A One-Year Certificate of Completion

First Semester		Credit	Second Semester		Credit
COSM 1601	Orientation and Introduction to Cosmetology	6	COSM 1603	Intermediate Cosmetology, Manicuring and Hair Removal	6
COSM 1602	Basic Cosmetology	6	COSM 1604	Intermediate Cosmetology and Skin Care	6
		12			12
Third Semester		Credit			
COSM 2605	Advanced Cosmetology	6			
COSM 2606	Preparation for the State Board and Advanced Cosmetology	6			
		12			
					TOTAL HOURS 36

## COSMETOLOGY INSTRUCTOR OPTION

### Certificate of Completion

COSM 2301	Instructor Orientation	3	
COSM 2801	Clinic Management	8	
COSM 2802	Classroom Teaching	8	
		19	
			TOTAL HOURS 19

## FACIAL SPECIALIST OPTION

### Certificate of Completion

COSM 1401	Facial Specialist I	4	
COSM 1402	Facial Specialist II	4	
COSM 1403	Facial Specialist III	4	
		12	
			TOTAL HOURS 12

## MANICURIST OPTION

### Certificate of Completion

COSM 1501 Manicurist	5	
	5	
		TOTAL HOURS 5

# CRIMINAL JUSTICE

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
CRIJ	1301 Introduction to Criminal Justice	3	CRIJ	1201 Defensive Tactics	2
CRIJ	1304 The Courts and Criminal Procedures	3	CRIJ	* Criminal Justice Selections (three courses)	9
CRIJ	1307 Crime in America	3	ENGL	** English Elective	3
CRIJ	1308 Fundamentals: Criminal Law	3	ELCT	Criminal Justice Elective	3
ENGL	1301 Composition and Rhetoric I	3			
PSYC	1101 College Orientation	1			
PYED	2108 Physical Conditioning	1			
		17			17

### 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 and Federal Govt I		SPCH	2303 Business and Professional Speaking	3
or			ELCT	Humanities/Fine Arts Elect	3
GOVT	2302 State and Federal Govt II	3	ELCT	† Computer Science/Microcomputer Technology Elective	3
SOCI	2301 Introduction to Sociology	3	ELCT	Elective	3
MATH	*** Mathematics Selection(s)	3			
PYED	Physical Education	1			
ELCT	Criminal Justice Elective	3			
		17			17
					TOTAL HOURS 68

\* Criminal Justice Selections:

Students planning to major in Law Enforcement may take the first three courses listed. Those planning to major in Corrections see the following curriculum on the next page. Those who prefer a more general Criminal Justice curriculum may take any three of the five courses listed.

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 and Practices
5. CRIJ 1314 Community Resources in Corrections

\*\* ENGL 1302 or 2309 (Technical Writing).

\*\*\* Three semester hours of computational skills from Mathematics 1301 level or higher excluding MATH 1307.

† Computer Science selection (excluding COSC 1302) or microcomputer selections.

— 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.

# CRIMINAL JUSTICE CORRECTIONS OPTION

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
CRIJ	1301	Introduction to Criminal Justice	3	CRIJ	1201	Defensive Tactics	2
CRIJ	1304	The Courts and Criminal Procedures	3	CRIJ	1306	Correctional Systems and Practices	3
CRIJ	1307	Crime in America	3	CRIJ	1314	Community Resources in Corrections	3
CRIJ	1308	Fundamentals: Criminal Law	3	CRIJ	*	Criminal Justice Selections (two courses)	6
ENGL	1301	Composition and Rhetoric I	3	ENGL	**	English Elective	3
PSYC	1101	College Orientation	1				
PYED	2108	Physical Conditioning	1				
			17				17

### 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 and Federal Govt I			SPCH	2303	Business and Professional Speaking		3
or					ELCT		Humanities/Fine Arts Elect		3
GOVT	2302	State and Federal Govt II		3	ELCT	†	Computer Science/ Microcomputer Technology Elective		3
SOCI	2301	Introduction to Sociology		3	ELCT		Elective		3
MATH	***	Mathematics Selection(s)		3					
PYED		Physical Education		1					
ELCT		Criminal Justice Elective		3	ELCT				
				17					17
TOTAL HOURS 68									

\* Criminal Justice Selections: any two from CRIJ 1302, 1303 and 1309

\*\* ENGL 1302 or 2309 (Technical Writing).

\*\*\* Three semester hours of computational skills from Mathematics 1301 level or higher

† Computer Science selection (excluding COSC 1302) or microcomputer selections.

— 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.

## DATA CONTROL SPECIALIST

### A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
COSC	1300	Computer Information Processing	3	MISC	1440	Database for Microcomputers	4
COSC	1302	Data Entry: Terminal		MISC	1450	Microcomputers for Business	4
or				MGMT	1306	Human Relations	3
WOPO	1303	Beginning Keyboarding/ Data Entry	3	OADM	1305	Records Management	3
COSC	1401	Computer Operations and Library Management	4	COSC/MISC†Technical Elective			4
MISC	1420	Word Processing for Microcomputers	4				
ENGL	1309	Communications Skills	3				
PSYC	1101	College Orientation	1				
			18				18
							TOTAL HOURS 36

† Computer Science or Microcomputer Technology course for which prerequisites have been completed.

# DIESEL MECHANICS

## A 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/Microcomputer Technology Elective	3	MATH	1301	Intermediate Algebra	3
ENGL	1309	Communications Skills	3				
PSYC	1101	College Orientation	1				
			19				15

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
DIEM	2400	Hydraulic Systems Fundamentals and Service	4	DIEM	2403	Diesel Engine Overhaul	4
DIEM	2406	Diesel Fuel Injection Systems	4	DIEM	2404	Automatic Power Trains	4
DIEM	2407	Diesel Engine Cylinder Head Service	4	DIEM	2405	Advanced Diesel Engine Service	4
SPCH	2303	Business & Professional Speaking	3	AUTO	2405	Steering and Suspension Systems	4
ELCT		Humanities/Fine Arts Elect	3	GOVT	2301	State and Federal Govt I	
			18	or			
				GOVT	2302	State and Federal Govt II	3
							19
							TOTAL HOURS 71

\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

— Students may apply for a Certificate of Completion upon satisfactory completion of PSYC 1101 and all DIEM, AUTO, and INDU prefix courses.

## DIESEL MECHANICS APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree  
(Offered only at selected locations)

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
DIEM	1401	Diesel Engine Fundamentals	4	DIEM	1405	Engine Auxiliary Systems	4
DIEM	1404	Standard Power Trains	4	DIEM	1406	Diesel Starting and Charging Systems	4
INDU	1400	Industrial Fundamentals	4	AUTO	1407	Brake Systems	4
ENGL	1309	Communications Skills	3	ELCT		Humanities/Fine Arts Elective	3
PSYC	1101	College Orientation	1	MATH	1301	Intermediate Algebra	3
			16				18

### Summer Semester

DIEM	2400	Hydraulic Systems Fundamentals and Service	4
DIEM	2406	Diesel Fuel Injection Systems	4
			8

# DIESEL MECHANICS APPRENTICESHIP PROGRAM (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
DIEM 2403 Diesel Engine Overhaul	4	DIEM 2404 Diesel Automatic Power Trains	4
DIEM 2407 Diesel Engine Cylinder Head Service	4	DIEM 2405 Advanced Diesel Engine Service	4
PHYS 1303 Survey of Physics	3	DIEM 2409 Diesel Internship	4
PSYC 2301 Introduction to Psychology	3	ELCT † Computer Science/Microcomputer Technology Elective	3
	14		15
			<b>TOTAL HOURS 71</b>

† Computer Science selection (excluding COSC 1302) or microcomputer selections.

## DRAFTING & DESIGN

### A Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
ENGR 1301* Engineering Graphics	3	ENGR 1302* Descriptive Geometry	3
DRDS 1401 Pictorial Drafting	4	DRDS 1403 Machine Drawing	4
DRDS 1402 Technical Illustration	4	DRDS 1404 Structural Drafting	4
MATH 1301 Intermediate Algebra	3	ENGL 1309 Communications Skills	3
PSYC 1101 College Orientation	1	TMTH 1301 Technical Mathematics	3
	15		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 Drafting I	4	DRDS 2411 Computer-Aided Drafting II	4
ELCT ** Approved Elective	3-4	ELCT Social/Behavioral Science Elective	3-4
ELCT Humanities/Fine Arts Elective	3		15-16
	18-19		<b>TOTAL HOURS 65-67</b>

\* DRDS 1405 may be substituted for ENGR 1301 and DRDS 1406 may be substituted for ENGR 1302.

\*\* Electives: DRDS 1301, 1303, 1400, 2404, 2406; MATH 1302, 1303; ART. 1301; OPRT 1301 or other elective approved by the Department Manager.

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

# EDUCATION

## A Two-Year Associate in Arts Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
ENGL	1301	Composition and Rhetoric I	3	ENGL	1302	Composition and Rhetoric II	3
HIST	1301	History of the U.S. to 1865	3	HIST	1302	History of the U.S. from 1865	3
SCIE		Biology, Chemistry, Physics or Geology	4	SCIE		Biology, Chemistry, Physics or Geology	4
LANG	1401	Beginning French I, German I or Spanish I	4	LANG	*	Beginning French II, German II or Spanish II	4
ELCT		Elective	3	SPCH	1301	Public Speaking	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				
			19				18

### SECOND YEAR

First Semester				Credit	Second Semester				Credit
ENGL	2301	English Literature I		3	ENGL	2302	English Literature II		3
GOVT	2301	State and Federal Govt I		3	GOVT	2302	State and Federal		
MATH	**	Mathematics Selection(s)		3			Govt II		3
PSYC	2301	Introduction to Psychology		3	ELCT	***	Computer Science/Microcom-		
SOCI	2301	Introduction to Sociology		3			puter Technology Elective		3
PYED		Physical Education		1	PSYC	2302	Personality Adjustment		3
					SOCI	2302	Contemporary Social		
							Problems		3
					PYED		Physical Education		1
				16					16
TOTAL HOURS 69									

- \* If German taken first year, Beginning French or Spanish may be taken second year.
- \*\* MATH 1301 or higher.
- \*\*\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

## ELECTRICIAN/LINEMAN APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree  
(Offered only at selected locations)

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
ELTE	1400†	Basic Electricity	4	ELEC	1301	Electrical Codes	3
ENGL	1301	Composition and Rhetoric I	3	ELEC	1401	Low Voltage & Appliance Circuits	4
DRDS	1303	Architectural Blueprint Reading	3	MTNT	1402	Electricity	4
TMTH	1301	Technical Mathematics	3	SPCH	1301	Public Speaking	3
MGMT	1302	Safety (OSHA)	3	ELEC	1402	Commercial Wiring	4
PSYC	1101	College Orientation	1				
			17				18

Summer Semester		Credit
ELTE	1403	Solid State Electronics
		4

† ELTE 1401 and ELTE 1402 may be substituted.

# ELECTRICIAN LINEMAN APPRENTICESHIP PROGRAM (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
ELEC 2401 Lineman Fundamentals I	4	ELEC 2402 Lineman Fundamentals II	4
ELEC 2403 Control Circuits	4	ELEC 2408 Lineman Internship	4
ELEC 2404 Single- and Three-Phase Transformers	4	ELCT Humanities/Fine Arts Elective	3
PHYS 1303 Survey of Physics	3	PSYC 2301 Introduction to Psychology	3
		ELCT †† Computer Science/Microcomputer Technology Elective	3
	15		17
		TOTAL HOURS	71

†† Computer Science selection (excluding COSC 1302) or microcomputer selections.

# ELECTRONIC COMMUNICATIONS OPERATIONS

## A Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
ELCO 1400 Beginning Electronics Communications	4	ELCO 1401 Advanced Electronics Communications	4
ELTE 1400 Basic Electricity	4	ELCO 1402 Specialized Communications Techniques	4
ELCO 1203 Electronic Operating Signals and Prosigns	2	ENGL 1301 Composition and Rhetoric I	3
PSYC 1101 College Orientation	1	ELCO 1404 Communications Systems	4
ELCT MATH 1301 or MATH 1302	3	ELCT SPCH 1301 or 2302	3
PYED Physical Education	1		
OADM 1131 Beginning Typing I	1		
	16		18

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
ELCO 2404 Advanced Satellite Operations	4	ELCO 2300 Communication Data Processing System	3
ELCT * Social/Behavioral Science Elective	3	ELCT Humanities/Fine Arts Elective	3
ELCO 2302 Advanced Station Operations	3	ELCT Computer Science/Microcomputer Technology Elective	3
ELCO 2311 Communication Internship I	3	ELCO 2306 Multi Access Data Communications	3
PYED Physical Education	1	ELCO 2312 Communication Internship II	3
ELCT ** Approved Elective	3		15
	17	TOTAL HOURS	66

\* Recommended Elective PSYC 2301.

\*\* Approved elective in Math, English, ELTE, ELCO, or Business Management by Department Manager or other authorized College personnel. Recommend students interested in pursuing a Bachelor's degree, complete ENGL 1302 and MATH 2302.



# EMERGENCY MEDICAL TECHNICIAN

**Certificate of Completion**  
(Offered only at selected locations)

## LEVEL I

First Semester	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

**A Two-Year Associate in Applied Science Degree**  
(Offered only at selected locations)

## 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 and Rhetoric I	3	ELCT †† Computer Science/Micro-computer Technology Elective	3
MGMT 1305 Introduction to Management	3	PYED Physical Education	1
MATH • Mathematics Selection(s)	3	ELCT Humanities/Fine Arts Elect	3
PYED Physical Education	1	ELCT ** Approved Elective	3
	17	PSYC 1101 College Orientation	1
			16

- Students may apply for a Certificate of Completion upon satisfactory completion of the first year requirements.

### 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
ACCO 2301† Financial Accounting	3	ENGL 2309 Technical Writing	3
MGMT 2302 Personnel Management	3	ACCO 2302† Managerial Accounting and Control	3
MGMT 2309 Supervision	3	ELCT Social/Behavioral Science Elective	3
SPCH SPCH 1301 or 2303	3	ELCT ** Approved Elective	3
	16		18

**TOTAL HOURS 67**

- MATH 1301, 1302, or 1305.
- \*\* EMET 1303, 1304, 1305, 1403, PSYC 2301, MGMT 1301 or BIOL 1405.
- † OADM 2304 and 2305 may be substituted.
- †† Computer Science selection (excluding COSC 1302) or microcomputer selections.
- ‡ Non-Military students may select an EMET elective.

# ENGINEERING

## A Two-Year Associate in Science Degree

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
ENGR 1301	Engineering Graphics	3	ENGR 1302	Descriptive Geometry	3
MATH 1304	Analytic Geometry	3	MATH 2302	Calculus II	3
MATH 2301	Calculus I	3	ENGL 1302	Composition and Rhetoric II	3
ENGL 1301	Composition and Rhetoric I	3	SCIE †	Biology, Chemistry, Physics or Geology	4
SCIE †	Biology, Chemistry, Physics or Geology	4	PYED	Physical Education	1
PYED	Physical Education	1	COSC/MISC	COSC 1403 or MISC 1451	4
PSYC 1101	College Orientation	1			
		18			18

### SECOND YEAR

First Semester		Credit	Second Semester		Credit
HIST 1301	History of the U.S. to 1865	3	HIST 1302	History of the U.S. from 1865	3
ENGL 2301*	English Literature I	3	SPCH	SPCH 1301 or 2303	3
GOVT 2301	State and Federal Govt I	3	GOVT 2302	State and Federal Govt II	3
ELCT	Humanities/Fine Arts Elective	3	PHYS 2402	Modern Physics II	4
PHYS 2401	Modern Physics I	4	ELCT	Elective	3
PYED	Physical Education	1	PYED	Physical Education	1
		17			17

TOTAL HOURS 70

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

# ENGLISH

## A Two-Year Associate in Arts or in Science Degree

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
ENGL 1301	Composition and Rhetoric I	3	ENGL 1302	Composition and Rhetoric II	3
MATH 1302	College Algebra	3	MATH 1301	Trigonometry	3
LANG 1401*	Beginning French I, German I or Spanish I	4	LANG 1402*	Beginning French II, German II or Spanish II	4
SCIE	Biology, Chemistry, Physics or Geology	4	SCIE	Biology, Chemistry, Physics or Geology	4
HIST 1301	History of the U.S. to 1865	3	HIST 1302	History of the U.S. from 1865	3
PYED	Physical Education	1	PYED	Physical Education	1
PSYC 1101	College Orientation	1			
		19			18

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

# ENGLISH (CONT)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
ENGL	2301	English Literature I		ENGL	2302	English Literature II	
	or				or		
ENGL	2303†	World Literature I	3	ENGL	2304†	World Literature II	3
LANG	2301	Intermediate French I, German I or Spanish I	3	LANG	2302	Intermediate French II, German II or Spanish II	3
SPCH	1301	Public Speaking	3	MISC	1450	Microcomputers for Business	4
GOVT	2301	State and Federal Govt I	3	GOVT	2302	State and Federal Govt II	3
ELCT		Humanities/Fine Arts Elect	3	ELCT		Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
			16				17
							TOTAL HOURS 70

- † Check sophomore literature requirements at senior institution where student wishes to transfer. Most senior institutions will grant only lower-level credit for these courses, ENGL 2301-2302. Though department majors may elect any pair of courses, in any order, they must take both courses in the pair to fulfill department degree requirements.

## EQUIPMENT MAINTENANCE MECHANIC APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science  
(Offered at only selected locations)

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
INDU	1400	Industrial Fundamentals	4	EQMT	1402	Machine Tools	4
EQMT	1401	Fundamentals of Machinery	4	MTNT	1402	Electricity	4
ENGL	1301	Composition and Rhetoric I	3	ELCT	*	Computer Science/Microcom- puter Technology Elective	3
SPCH		SPCH 1301 or 2303	3	WELD	1401	Beginning Gas Welding	4
MATH	1301	Intermediate Algebra	3				
PSYC	1101	College Orientation	1				
			18				15

Summer Session		Credit
EQMT	1403 Maintenance of Valves and Pumps	4
EQMT	1404 Maintenance of Galley Equipment and Fans	4
		8

- \* Computer Science selection (excluding COSC 1302) or microcomputer selection.

# EQUIPMENT MAINTENANCE MECHANIC APPRENTICESHIP PROGRAM (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
EQMT 2401 Maintenance of air Compressors	4	EQMT 2403 Maintenance of Power Plants Equipment II	4
EQMT 2402 Maintenance of Power Plant Equipment I	4	EQMT 2409 Equipment Maintenance Mechanic Internship	4
MTNT 2403 Plumbing I	4	ELCT Humanities/Fine Arts Elect	3
WELD 1402 Beginning Arc Welding	4	PSYC 2301 Introduction to Psychology	3
	16		14
		TOTAL HOURS	71

# EQUIPMENT MAINTENANCE ENGINEER OPTION APPRENTICESHIP PROGRAM

**A Two-Year Associate in Applied Science Degree**

(Offered only at selected locations)

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
INDU 1400 Industrial Fundamentals	4	EQMT 1402 Machine Tools	4
EQMT 1401 Fundamentals of Machinery	4	MTNT 1402 Electricity	4
ENGL 1309 Communications Skills	3	EQMT 1352 Trade Drawing IIA	2
EQMT 1250 Trade Drawing IA	2	APPH 1350 Applied Physics I	3
MATH 1301 Intermediate Algebra	3	MGMT 1306 Human Relations	3
PSYC 1101 College Orientation	1		
	17		16

Summer Session	Credit
EQMT 1403 Maintenance of Valves and Pumps	4
EQMT 1404 Maintenance of Galley Equipment and Fans	4
	8

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
EQMT 2401 Maintenance of Air Compressors	4	EQMT 2403 Maintenance of Power Plant Equipment II	4
EQMT 2402 Maintenance of Power Plant Equipment I	4	DRDS 2351 Applied Statics II	3
APPH 1351 Applied Physics II	3	ELCT Social/Behavioral Science Elective	3
DRDS 2350 Applied Statics I	3	ELCT Humanities/Fine Arts Elect	3
ELCT * Computer Science/Microcomputer Technology Elective	3		
	17		13
		TOTAL HOURS	71

\* Computer Science selection (excluding COSC 1302) or microcomputer selection.

# FARM AND RANCH MANAGEMENT

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
FRMG 1301	Wildlife Management	3	FRMG 1302	Range Management	3
FRMG 1304	Animal Health	3	FRMG 1303	Soil Science	3
FRMG 1308	Forage & Pasture Crops	3	FRMG 1305	Vegetable Production	3
AGRI 1301	Animal Husbandry	3	AGRI 1303	Poultry Science	3
BIOL 1401*	General Biology I	4	ELCT	Social/Behavioral Science	
PSYC 1101	College Orientation	1		Elective	3
		17			15

### SECOND YEAR

First Semester		Credit	Second Semester		Credit
FRMG 2301	Farm Mechanics I	3	FRMG 2302	Farm Mechanics II	3
FRMG 2303	Feeds and Feeding	3	FRMG 2306	Livestock Marketing	3
FRMG 2307	Livestock Production	3	ELCT **	Approved Elective	3
AGRI 2301	Entomology	3	AGRI 2302	Horticulture	3
ENGL 1309	Communications Skills	3	MATH 1308	Elementary statistics	3
MISC 1450	Microcomputers for Business	4	ELCT	Humanities/Fine Arts Elect	3
		19			18
					TOTAL HOURS 69

- \* If the student desires, BIOL 1402 may be substituted.
- \*\* Electives must be approved by the Department Manager.

# FARM AND RANCH PRODUCTION

## A Two-Year Certificate of Completion

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
FRMG 1301†	Wildlife Management	3	FRMG 1302	Range Management	3
FRMG 1304	Animal Health	3	FRMG 1303	Soil Science	3
FRMG 1308	Forage and Pasture Crops	3	FRMG 1305	Vegetable Production	3
AGRI 1301	Animal Husbandry	3	AGRI 1303	Poultry Science	3
PSYC 1101	College Orientation	1			
		13			12

### SECOND YEAR

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

- † AGRI 2303 may be selected in place of FRMG 1301.

# FINANCE AND BANKING

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
ENGL 1301 Composition and Rhetoric I	3	FIBA 1301 Banking Principles	3
MATH 1301 Intermediate Algebra	3	FIBA 1302 Money and Banking	3
SPCH 1301 or 2303	3	FIBA 1305 Law & Banking Principles	3
ELCT BUSS 1301 or MGMK 1311	3	MISC 1450 Microcomputers for Business	4
ELCT MGMT 1304 or 1306	3	ELCT FIBA Elective	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		
	<b>17</b>		<b>17</b>

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
FIBA 2303 Marketing for Bankers	3	FIBA 2304 Consumer Lending	3
ACCO 2301 Financial Accounting	3	ACCO 2302 Managerial Accounting and Control	3
ACCO 2101 Financial Accounting Lab	1	ACCO 2102 Managerial Accounting and Control Lab	1
MGMT MGMT 2305 or 2306	3	ECON ECON 2301 or 2302	3
ELCT FIBA 1401 or MGMT 2316	3-4	ELCT FIBA 1402 or MGMT 2317	3-4
ELCT FIBA/REAE Elective	3	ELCT Humanities/Fine Arts Elect	3
	<b>16-17</b>		<b>16-17</b>
		<b>TOTAL HOURS</b>	<b>66-68</b>

# FIRE PROTECTION TECHNOLOGY

## A Two-Year Associate in Applied Science Degree

(Offered only at selected locations)

### 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 1301 Intermediate Algebra	3
ENGL 1301 Composition and Rhetoric I	3	SPCH 1301 Public Speaking	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		
	<b>17</b>		<b>16</b>

# FIRE PROTECTION TECHNOLOGY (CONT)

## 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 Elective	3	ELCT * Computer Science/Microcomputer Technology Elective	3
GOVT 2301 State and Federal Govt I		FPRT ** Elective	3
or			
GOVT 2302 State and Federal Govt II	3		
ENGL 2309 Technical Writing	3		
	18		16
			<b>TOTAL HOURS 67</b>

\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

\*\* FPRT 2304, 2308, 2309, 2310, 2314; CHEM 1401 or 1402 may be substituted for FPRT 1307 and 1308.

## FOOD PRODUCTION

### A One-Year Certificate of Completion

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

## FOOD SERVICE MANAGEMENT

### A 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 1305 Food Purchasing	3
FSMG 1401 Food Preparation and Serving	4	FSMG 1306 Menu Planning	3
ELCT * MGMT, FSMG Selection(s)	3	MATH MATH 1301 or MATH 1308	3
ENGL 1301 Composition and Rhetoric I	3	ELCT * ACCO/FSMG/HMMG, MGMT Selection(s)	3
PSYC 1101 College Orientation	1	SPCH 1301 Public Speaking	3
	17		18

\* See next page for information.

# FOOD SERVICE MANAGEMENT (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
FSMG 2304 Hospitality Industry Sales Promotion	3	HMMG 2304 Financial Management	3
FSMG 2405 Management Practice I	4	FSMG 2406 Management Practice II	4
HMMG 2301 Hospitality Industry Law	3	HMMG 2309 Hospitality Industry Computer Systems	3
MISC 1450 Microcomputers for Business	4	ELCT Humanities/Fine Arts Elect	3
ELCT * Sophomore MGMT/FSMG/ACCO/HMMG Selection(s)	3	ELCT Social/Behavioral Science Elective	3
	17		16
		TOTAL HOURS	68

• Elective options:

Food Service Management Selections:

FSMG 1300, 1304, 1308, , 2150, 2151, 2201, 2250, 2251, 2252, 2306, 2353, 2355, 2356, 2401, 2402, 2452, or 2453.

Accounting, Hotel/Motel Management and Management Selections:

ACCO 2301, 2101, 2302, 2102, HMMG 1300, 1302, 1303, 1305, 1308, 2306, MGMT 1305, 1308, 2101, 2164, 2302, 2304 or 2309.

## FOOD SERVICE OPERATION OPTION

### A One-Year Certificate of Completion

(Offered only at selected locations)

First Semester	Credit	Second Semester	Credit
FSMG 1302 Nutrition	3	FSMG 1309 Short Order Food Production	3
FSMG 1303 Sanitation and Safety	3	FSMG 1402 Basic Baking and Pastry Production	4
FSMG 1401 Food Preparation & Serving	4	FSMG 2401 Classical Food Preparation	4
OADM 1309 Business Mathematics and Calculating Machines	3	ELCT Elective	3
ENGL 1309 Communications Skills	3		
PSYC 1101 College Orientation	1		
	17		14
		TOTAL HOURS	31

## FOREIGN LANGUAGE

### A Two-Year Associate in Arts Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
ENGL 1301 Composition and Rhetoric I	3	ENGL 1302 Composition and Rhetoric II	3
LANG 1401 Beginning French I, German I or Spanish I	4	HIST 1302 History of the U.S. from 1865	3
MATH 1302 College Algebra	3	LANG 1402 Beginning French II, German II or Spanish II	4
HIST 1301 History of the U.S. to 1865	3	ELCT Humanities/Fine Arts Elect	3
SCIE Biology, Chemistry, Physics or Geology	4	SCIE Biology, Chemistry, Physics or Geology	4
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	19		18



# FOREIGN LANGUAGE (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
ENGL 2301 English Literature I	3	ENGL 2302 English Literature II	3
LANG 2301 Intermediate French I, German I or Spanish I	3	LANG 2302 Intermediate French II, German II or Spanish II	3
GOVT 2301 State and Federal Govt I	3	GOVT 2302 State and Federal Govt II	3
SPCH 1301 Public Speaking	3	MISC 1450 Microcomputers for Business	4
LANG * Second Language	4	LANG * Second Language	4
PYED Physical Education	1	PYED Physical Education	1
	17		18
		TOTAL HOURS	72

\* Second language requirement varies with senior colleges. Check senior college catalogue carefully. Check senior college catalogue for specific math requirements.

## GENERAL SECRETARIAL A One-Year Certificate of Completion

First Semester	Credit	Second Semester	Credit
OADM 1301† Beginning Shorthand	3	OADM 1302† Intermediate Shorthand	3
OADM 1305 Records Management	3	OADM 1306 Office Functions	3
OADM 1309 Business Mathematics & Calculating Machines	3	OADM 1308 Business Correspondence	3
WOPO 1303† Beginning Keyboarding/ Data Entry	3	WOPO 1304† Intermediate Information Processing Applications	3
ENGL 1301 Composition and Rhetoric I	3	WOPO 1307 Word Processing/ Transcription	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
	16		16
		TOTAL HOURS	32

† Levels of keyboarding and shorthand will be determined by the student's previous training in these skills and/or by placement test.

## GENERAL STUDIES A Two-Year Associate in General Studies Degree. See Page 38

## GEOLOGY A Two-Year Associate in Science Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
GEOL 1401 Physical Geology	4	GEOL 1402 Historical Geology	4
MATH 1303‡ Trigonometry	3	MATH 1304 Analytic Geometry	3
HIST 1301 History of the U.S. to 1865	3	HIST 1302 History of the U.S. from 1865	3
CHEM 1401 General Chemistry I	4	CHEM 1402 General Chemistry II	4
ENGL 1301 Composition & Rhetoric I	3	ENGL 1302 Composition and Rhetoric II	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	19		18

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

# GEOLOGY (CONT)

## FIRST YEAR (CONT)

### Summer Session

GEOL 2403	Geologic Field Methods	4
		4

## SECOND YEAR

First Semester		Credit	Second Semester		Credit
BIOL 2401	Invertebrate Zoology	4	GEOL 2301	Geomorphology	3
GOVT 2301	State and Federal Govt I	3	GOVT 2302	State and Federal Govt II	3
MATH 2301	Calculus I	3	MATH 2302	Calculus II	3
ENGL 2301	English Literature I	3	SPCH 1301	Public Speaking	3
PYED	Physical Education	1	PYED	Physical Education	1
COSC 1403	Introduction to Computer Science and Programming	4	ELCT	Humanities/Fine Arts Elect	3
		18			16
					TOTAL HOURS 71

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

# HORSE MANAGEMENT

## A Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester		Credit	Second Semester		Credit
FRMG 1304	Animal Health	3	FRMG 1307	Intermediate Horsemanship	3
FRMG 1306	Elementary Horsemanship	3	AGRI 1302	Agronomy	3
AGRI 1301	Animal Husbandry	3	ELCT	Social/Behavioral Science	
BIOL 1401*	General Biology I	4		Elective	
		3			
ENGL 1309	Communication Skills	3	MATH 1308	Elementary Statistics	3
PSYC 1101	College Orientation	1	MISC 1450	Microcomputers for Business	4
		17			16

## SECOND YEAR

First Semester		Credit	Second Semester		Credit
FRMG 2304	Horse Production	3	FRMG 1302	Range Management	3
FRMG 2307	Livestock Production	3	FRMG 2302	Farm Mechanics II	3
FRMG 2308	Animal Breeding	3	FRMG 2303	Feeds and Feeding	3
AGRI 2301	Entomology	3	FRMG 2305	Advanced Equitation	3
ELCT	Humanities/Fine Arts Elective	3	ELCT **	Elective	3
ELCT **	Elective	3			
		18			15
					TOTAL HOURS 66

- \* If a student desires, BIOL 1402 may be substituted.  
 \*\* Electives: AGRI 1303, 2302, 2303; FRMG 1301, 1303, 1305, 2301, 2306, 2401, 2402 or other course approved by the Department Manager.

# HOTEL-MOTEL MANAGEMENT

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
HMMG 1305 Energy Management	3	HMMG 1300 Food and Beverage Mgmt.	3
HMMG HMMG 1302 or HMMG 1307	3	HMMG 1303 Front Office Procedures	3
FSMG 1401 Food Preparation & Serving	4	FSMG 1301 Supervising Kitchen Administration	3
ENGL 1301 Composition and Rhetoric I	3	FSMG 1303 Sanitation and Safety	3
MATH MATH 1301 or MATH 1308	3	FSMG 1305 Food Purchasing	3
PSYC 1101 College Orientation	1	ELCT * Hotel/Motel or Food Service Management Elective	3
	17		18

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
HMMG 2401 Hotel/Motel Internship I	4	HMMG 2301 Hospitality Industry Law	3
FSMG 2304 Hospitality Industry Sales Promotion	3	HMMG 2304 Financial Management	3
ELCT Humanities/Fine Arts Elective	3	HMMG 2309 Hospitality Industry Computer Systems	3
MISC 1450 Microcomputers for Business	3	HMMG 2402 Hotel/Motel Internship II	4
SPCH SPCH 1301 or 2303	4	ELCT Social/Behavioral Science Elective	3
	17		16

**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.
- Students pursuing emphasis in specific areas must take the electives shown below:
  - Front Office Procedures HMMG 1306.
  - Marketing and Sales Promotion HMMG 1306 and 2307.
  - Food and Beverage Management HMMG 2308.
  - Housekeeping HMMG 2302.
  - Engineering and Facility Mgmt HMMG 2305 and 2302.

## INFORMATION CENTER SPECIALIST

### A One-Year Certificate of Completion

First Semester	Credit	Second Semester	Credit
MISC 1420 Word Processing for Microcomputers	4	MISC 1440 Data Base For Microcomputers	4
MISC 1430 Spreadsheets for Microcomputers	4	MISC 1451 Introduction to Microcomputer Programming	4
MISC 1450 Microcomputers for Business	3	MISC/COSC† Technical Elective	4
ENGL 1301 Composition and Rhetoric	4	MGMT 1305 Introduction to Management	3
PSYC 1101 College Orientation	1	SPCH 2303 Business and Professional Speaking	3
	16		18

**TOTAL HOURS 34**

- † Computer Science of Microcomputer Technology course for which prerequisites have been completed.

# JOURNALISM

## A Two-Year Associate in General Studies Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
JOUR 1301 Communications Media	3	JOUR 1302 News Gathering & Reporting	3
ENGL 1301 Composition and Rhetoric I	3	ENGL 1302 Composition and Rhetoric II	3
HIST 1301 History of U.S. to 1865	3	HIST 1302 History of U.S. from 1865	3
SPCH 1301 Public Speaking	3	PSYC 2301 Introduction to Psychology	3
PSYC 1101 College Orientation	1	MISC 1450 Microcomputers for Business	4
ELCT Humanities/Fine Arts Elective	3	PYED Physical Education	1
PYED Physical Education	1		
	17		17

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
ENGL 2301 English Literature I	3	ENGL 2302 English Literature II	3
GOVT 2301 State and Federal Govt I	3	GOVT 2302 State and Federal Govt II	3
ECON 2301 Macroeconomics	3	ECON 2302 Microeconomics	3
SOCI 2301 Introduction to Sociology	3	SOCI 2302 Contemporary Social Problems	3
MATH 1301 Intermediate Algebra	3	ELCT Approved Elective	3
PYED Physical Education	1	PYED Physical Education	1
	16		16
		TOTAL HOURS	66

# LAW ENFORCEMENT

## A Two-Year Associate in Applied Science Degree

(Offered only at selected locations)

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
LAW 1301 Introduction to Criminal Justice	3	LAW 1201 Defensive Tactics	2
LAW 1304 The Courts and Criminal Procedures	3	LAW 1302 Criminal Investigation I	3
LAW 1307 Crime in America	3	LAW 1303 Legal Aspects of Law Enforcement	3
LAW 1308 Fundamentals of Criminal Law	3	LAW 1309 Police Systems & Practices	3
ENGL 1301 Composition and Rhetoric I	3	ENGL * English Selection(s)	3
PSYC 1101 College Orientation	1	ELCT Law Enforcement Elective	3
PYED 2108 Physical Conditioning	1		
	17		17

\* ENGL 1302 or 2309 (Technical Writing).

— Law Enforcement options:

Students majoring in corrections may substitute LAW 1306 and 1314 for any two of the following courses: LAW 1302, 1303 or 1309.

# LAW ENFORCEMENT (CONT)

## 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 and Federal Govt I		SPCH 2303 Business and Professional Speaking	3
or		ELCT Humanities/Fine Art Elective	3
GOVT 2302 State and Federal Govt II	3	ELCT Law Enforcement Elective	3
SOCI 2301 Introduction to Sociology	3	ELCT ‡ Computer Science/Microcomputer Technology Elective	3
MATH ** Mathematics Selection(s)	3		
PYED Physical Education	1		
ELCT Law Enforcement Elective	3		
	17		17

TOTAL HOURS 68

- \*\* Three semester hours of computational skilled from Mathematics, 1301 level or higher.
- ‡ Computer Science selection (excluding COSC 1302) or microcomputer selections.
- Law Enforcement options:  
Students majoring in corrections may substitute LAWE 1306 and 1314 for any two of the following courses: LAWE 1302, 1303 or 1309.
- EMET 1402 may be taken in place of a LAWE elective.
- Elective: Courses listed above not used in curriculum or LAWE 1305, 1310, 1315, 2301, 2303, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314 and 2315.
- 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

### A Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
LEGA 1301 Introduction to Legal Assistant	3	LEGA 1306 Criminal Law	3
LEGA 1304 Principles of Family Law	3	LEGA 1307 Civil Litigation	3
LEGA 1402 Legal Office Ethics and Management	4	MATH 1301 Intermediate Algebra	3
ENGL 1301 Composition and Rhetoric I	3	MISC 1420 Word Processing for Microcomputers	4
GOVT 2301 State and Federal Govt I	3	ENGL 1302 Composition and Rhetoric II	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		
	18		17

## 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
ACCO 2301 Financial Accounting	3	SPCH SPCH 1301 or 2303	3
ACCO 2101 Financial Accounting Lab	1	ELCT Humanities/Fine Arts Elect	3
GOVT 2302 State and Federal Govt II	3		
	16		16

TOTAL HOURS 67

- \* LEGA 1305, 1308, 2301, 2303, 2402, or 2404.

# MAINTENANCE TECHNOLOGY

## A 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 1309 Communications Skills	3
MATH 1301 Intermediate Algebra	3	WELD 1401 Beginning Gas Welding	4
PSYC 1101 College Orientation	1	ELCT Humanities/Fine Arts Elect	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/Microcomputer Technology Elective	3	WELD 1402 Beginning Arc Welding	4
GOVT 2301 State and Federal Govt I or GOVT 2302 State and Federal Govt II	3	SPCH 2303 Business and Professional Speaking	3
	18		18

TOTAL HOURS 70

- \* Computer Science selection (excluding COSC 1302) or microcomputer selections.
- Students may apply for a Certificate of Completion upon satisfactory completion of PSYC 1101 and all MTNT, AIRC, DRDS, WELD and INDU prefix courses.

# MANAGEMENT AND MARKETING

## A 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 1311 Retail Management	3
MATH 1301 Intermediate Algebra	3	ELCT MGMT/FASH/SMMG/BUSS Selection	3
SPCH 1301 or 2303	3	MISC 1450 Microcomputers for Business	4
BUSS 1301 Introduction to Business	3	ELCT Humanities/Fine Arts Elect	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		17
	17		17

# MANAGEMENT AND MARKETING (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
MGMT 2301 Marketing Principles	3	ELCT † MGMT 2317	3-4
ELCT † MGMT 2305 or 2306	3	ELCT MGMT/FASH/SMMG/BUSS Selection	3
MGMT MGMT/FASH/SMMG/BUSS		ELCT MGMT/FASH/SMMG/BUSS Selection	3
ACCO 2301 Financial Accounting	3	ECON ECON 2301 or 2302	3
ACCO 2101 Financial Accounting Lab	1	ACCO 2302 Managerial Accounting and Control	3
		ACCO 2102 Managerial Accounting and Control Lab	1
	16-17		16-17
		TOTAL HOURS	66-68

† If the requirement for 18 hours of sophomore level courses has not been met, students must take a three-hour sophomore level course from the electives.

## MATHEMATICS

### A Two-Year Associate in Arts or Science Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
MATH 1302 College Algebra	3	MATH 1304 Analytic Geometry	3
MATH 1303 Trigonometry	3	ELCT * Science or Language Elective Selected from 1401-1402 sequence	4
ELCT * Science or Language Elective Selected from 1401-1402 Sequence	4	COSC 1403 Introduction to Computer Science and Programming	4
ENGL 1301 Composition and Rhetoric I	3	ENGL 1302 Composition and Rhetoric II	3
HIST 1301 History of the U.S. to 1865	3	HIST 1302 History of U.S. from 1865	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	18		18

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
MATH 2301 Calculus I	3	MATH 2302 Calculus II	3
ENGL 2301 English Literature I	3	SPCH SPCH 1301 or 2303	3
GOVT 2301 State and Federal Govt I	3	GOVT 2302 State and Federal Govt II	3
SCIE * Science Elective	3-4	SCIE * Science Elective	3-4
ELCT Humanities/Fine Arts Elective	3	ELCT Elective	3
PYED Physical Education	1	PYED Physical Education	1
	16-17		16-17
		TOTAL HOURS	68-70

- To meet the requirement for 18 hours of sophomore courses, student must take a sophomore level speech or elective.
- 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 2301 (Calculus I) during the Fall semester with the permission of the Manager of the Mathematics Department.
- Students should consult the catalogue of the institution to which they plan to transfer for required or recommended courses.
- \* Choice of elective determines the degree.

# MEDICAL LABORATORY TECHNICIAN

## A Two-Year Associate in Applied Science Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
MELT 1601 Introduction to Medical Lab Techniques	6	MELT 1402 Hematology	4
BIOL 1405 Human Anatomy	4	BIOL 1406 Human Physiology	4
CHEM 1401 General Chemistry I	4	CHEM 1402 General Chemistry II	4
MATH 1302 College Algebra	3	ELCT * Computer Science/Microcomputer Technology Elective	3
PSYC 1101 College Orientation	1		
	18		15

### Summer Semester

MELT 2502 Clinical Practice I	5
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### SECOND YEAR

First Semester	Credit	Second Semester	Credit
MELT 2401 Clinical Practice II	4	MELT 2404 Medical Microbiology II	4
MELT 2402 Medical Microbiology I	4	MELT 2405 Clinical Chemistry	4
MELT 2403 Immunology/Immunohematology	4	MELT 2406 Clinical Practice III	4
ENGL 1309 Communications Skills	3	ELCT Humanities/Fine Arts Elect	3
ELCT ** Elective	3		
	18		15

TOTAL HOURS 71

\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

\*\* PSYC 2301-Introduction to Psychology or SOCI 2301-Introduction to Sociology.

# MEDICAL TECHNOLOGY

## A Two-Year Associate in General Studies Degree

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
BIOL 1405 Human Anatomy	4	BIOL 1406 Human Physiology	4
CHEM 1401 General Chemistry I	4	CHEM 1402 General Chemistry II	4
ENGL 1301 Composition and Rhetoric I	3	ELCT † Computer Science/Microcomputer Technology Elective	3
MATH 1301 Intermediate Algebra	3	MATH 1303 Trigonometry	3
HIST 1301 History of the U.S. to 1865	3	HIST 1302 History of the U.S. from 1865	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	19		18

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
BIOL 2401 Invertebrate Zoology	4	BIOL 2303 Genetics	3
BIOL 2404 Microbiology	4	CHEM 2402 Organic Chemistry II	4
CHEM 2401 Organic Chemistry I	4	ELCT Humanities/Fine Arts Elect	3
PHYS 1401 College Physics I	4	GOVT 2302 State and Federal Govt II	3
GOVT 2301 State and Federal Govt I	3	PHYS 1402 College Physics II	4
	19		17

TOTAL HOURS 73

† Computer Science Selection (excluding COSC 1302) or microcomputer selections.

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



# MICROCOMPUTER TECHNOLOGY INFORMATION MANAGEMENT OPTION

A Two-Year Associate in Applied Science Degree

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
MISC	1420	Word Processing for Microcomputers	4	MISC	1440	Database for Microcomputers	4
MISC	1430	Spreadsheets for Microcomputers	4	MISC	1451	Introduction to Micro-computer Programming	4
MISC	1450	Microcomputers for Business	4	MATH *		Mathematics Selection(s)	3
ENGL	1301	Composition and Rhetoric I	3	MGMT	1305	Introduction to Management	3
PSYC	1101	College Orientation	1	ELCT		Humanities/Fine Arts Elect	3
			16				17

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
MISC	2451	Operating Systems	4	MISC	2301	Information Center Management	3
MISC/COSC		Technical Elective	4	MISC	2402	Systems In The MIS Environment	4
ACCO	2301	Financial Accounting	3	MISC	2454	Data Communications and Networking	4
ACCO	2101	Financial Accounting Lab	1	MISC/COSC		Technical Elective	4
ELCT		Social/Behavioral Science Elective	3	SPCH	2303	Business and Professional Speaking	3
			15				18
							TOTAL HOURS 66

\* MATH 1301, 1302, 1304, 1305, 1308, 2301, 2302 or 2303.

# MICROCOMPUTER TECHNOLOGY PROGRAMMER/ANALYST

A 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 and Architecture	4
ENGL	1301	Composition and Rhetoric I	3	MISC	1454	PASCAL Programming	4
MATH †		Mathematics Selection(s)	3	MATH †		Mathematics Selection(s)	3
PSYC	1101	College Orientation	1	ELCT		Social/Behavioral Science Elective	3
			15				18

† MATH 1301, 1302, 1304, 1305, 1308, 2301, 2302, 2303.

# MICROCOMPUTER TECHNOLOGY PROGRAMMER/ANALYST (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
MISC 2451 Operating Systems	4	Misc 2402 Systems In The MIS Environment	4
MISC 2456 C Language Programming	4	MISC 2454 Data Communications and Networking	4
MISC Technical Elective	4	MISC/COSC Technical Elective	4
ELCT †† ACCO/BUSS/ECON Selection(s)	3-4	ELCT Humanities/Fine Arts Elect	3
		SPCH 2303 Business and Professional Speaking	3
	15-16		18
		TOTAL HOURS 66-67	

†† ACCO 2301, 2101, 2302, 2102; BUSS 1301; ECON 2301 or 2302.

## MUSIC

### A Two-year Associate in General Studies Degree

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
ENGL 1301 Composition and Rhetoric I	3	SPCH 1301 Public Speaking	3
MATH 1301 Intermediate Algebra	3	HIST 1302 History of the U.S. from 1865	3
HIST 1301 History of the U.S. to 1865	3	MUSI 1102 Class Piano II	
MUSI 1101 Class Piano I		or	
or		MUSI 1202 Private Piano II	1-2
MUSI 1201 Private Piano I	1-2	MUSI 1206 Ear Training II	2
MUSI 1205 Ear Training I	2	MUSI 1302 Music Theory	3
MUSI 1301 Music Fundamentals	3	MUSI 1305 Music Appreciation	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
	16-17		16-17

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
GOVT 2301 State and Federal Govt I	3	GOVT 2302 State and Federal Govt II	3
ELCT * Computer Science/Microcomputer Technology Elective	4	MUSI 1202 Private Piano II	
MUSI 1201 Private Piano I		or	
or		MUSI 2202 Private Piano IV	
MUSI 2201 Private Piano III		or	
or		MUSI 2302 Advanced Private Piano II	2-3
MUSI 2301 Advanced Private Piano I	2-3	MUSI 2305 Music Literature II	3
MUSI 2304 Music Literature I	3	MUSI 2307 Advanced Harmony	3
MUSI 2306 Intermediate Harmony	3	ELCT Humanities/Fine Arts Elect	3
		ELCT Elective	3
	15-16	PYED Physical Education	1
			18-19
		TOTAL HOURS 65-69	

- \* Computer Science selection (excluding COSC 1302) or microcomputer selections.

# NURSING

## ASSOCIATE DEGREE NURSING

### A Two-Year Associate in Applied Science Degree

#### FIRST YEAR

Summer Session	Credit
ENGL 1301† Composition and Rhetoric I	3
MATH 1301† Intermediate Algebra	3
PSYC 1101† College Orientation	1
PSYC 2301† Introduction to Psychology	3
	<b>10</b>

First Semester	Credit	Second Semester	Credit
NURI 1901 Fundamentals of Nursing	9	NURI 1101 Psychiatric Nursing I	1
BIOL 1405* Human Anatomy	4	NURI 1902 Medical-Surgical Nursing I	9
		BIOL 1406* Human Physiology	4
	<b>13</b>		<b>14</b>

#### SECOND YEAR

Summer Session	Credit
ELCT ** Computer Science/Microcomputer Technology Elective	3-4
PSYC 2303 Child Growth and Development	3
SPCH 1301 Public Speaking	3
	<b>9-10</b>

First Semester	Credit	Second Semester	Credit
NURI 2102 Psychiatric Nursing II	1	NURI 2101 Nursing Trends Seminar	1
NURI 2903 Maternal and Child Health Nursing	9	NURI 2103 Psychiatric Nursing III	1
BIOL 2404* Microbiology	4	NURI 2904 Medical-Surgical Nursing II	9
	<b>14</b>	ELCT Humanities/Fine Arts Elect	3
			<b>14</b>

**TOTAL HOURS 74-75**

† Prerequisites to NURI 1901.

• Credit in Science courses just have been received within five years prior to enrollment in NURI 1901.

\*\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

# NURSING ASSOCIATE DEGREE NURSING FOR LICENSED VOCATIONAL NURSES

## A Two-Year Associate in Applied Science Degree

A course, NURI 1401 Bridging Course, is available for Licensed Vocational Nurses to take. Upon successful completion of NURI 1401, Licensed Vocational Nurses will receive credit for NURI 1101, 1901 and 1902.

### FIRST YEAR

#### Prerequisites to NURI 1401

ENGL 1301	Composition and Rhetoric I	3
MATH 1301	Intermediate Algebra	3
BIOL 1405*	Human Anatomy	4
BIOL 1406*	Human Physiology	4
PSYC 1101	College Orientation	1
PSYC 2301	Introduction to Psychology	3
		<b>18</b>

#### Required Courses to be

completed before graduation		
ELCT **	Computer Science/Microcomputer Technology Elect	3-4
SPCH 1301	Public Speaking	3
		<b>6-7</b>

#### Summer Session

PSYC 2303	Child Growth and Development	3
NURI 1401	Bridging Course	4
	Credit hours for NURI 1101, 1901 and 1902 upon completion	15
		<b>22</b>

### SECOND YEAR

<b>First Semester</b>	<b>14</b>	<b>Second Semester</b>	<b>14</b>
Same as ASSOCIATE DEGREE NURSING on previous page.			
<b>TOTAL HOURS 74-76</b>			

- \* Credit in Science courses must have been received within five years prior to enrollment in NURI 1401.
- \*\* Any Computer Science course (except COSC 1302) or microcomputer selections.

## NURSING VOCATIONAL CLOCK HOUR PROGRAM

### Certificate of Completion

#### Non-Credit

		Clock Hours			Clock Hours
CEVN 0101	Vocational Nursing I	429	CEVN 0103	Vocational Nursing III	429
CEVN 0102	Vocational Nursing II	429	CEVN 0104	Vocational Nursing IV	438
		<b>858</b>			<b>867</b>
<b>TOTAL CLOCK HOURS 1725</b>					

- CEVN 0101, 0102, 0103, 0104; Vocational Nursing I, II, III, and IV 1725: Credit: 0
- This is a one-year non-credit Vocational Nursing Program that satisfies the requirements established by the Board of Vocational Nurse Examiners. After successful completion of this program, the graduate is eligible to take the licensing examination administered by Texas State Board of Vocational Nurse Examiners.

## OFFICE ASSISTANT

### A One-year Certificate of Completion

First Semester	Credit	Second Semester	Credit
WOPO 1303† Beginning Keyboarding/ Data Entry	3	WOPO 1304† Intermediate Information Processing Applications	3
OADM 1309 Business Mathematics and Calculating Machines	3	WOPO 1307 Word Processing and Transcription	3
MGMT 1304 Work Organization	3	OADM 1305 Records Management	3
MGMT 1305 Introduction to Management	3	OADM 1308 Business Correspondence	3
ENGL 1301 Composition and Rhetoric I	3	MATH 1301 Intermediate Algebra	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
	<b>16</b>		<b>16</b>
		<b>TOTAL HOURS 32</b>	

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

## OFFICE MANAGEMENT

### A 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
OADM 1309 Business Mathematics and Calculating Machines	3	WOPO 1307 Word Processing and Transcription	3
MGMT 1304 Work Organization	3	OADM 1305 Records Management	3
MGMT 1305 Introduction to Management	3	OADM 1308 Business Correspondence	3
ENGL 1301 Composition and Rhetoric I	3	MATH 1301 Intermediate Algebra	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
	<b>16</b>		<b>16</b>

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

#### SECOND YEAR

First Semester	Credit	Second semester	Credit
OADM 2304 Office Accounting I	3	OADM 2305 Office Accounting II	3
MGMT 2305 Business Law I	3	OADM 2307 Automated Office Administration	3
SPCH 2303 Business and Professional Speaking	3	MGMT 2302 Personnel Management	3
ELCT Social/Behavioral Science Elective	3	MGMT 2306 Business Law II	3
ELCT ** OADM/WOPO/MGMT Selection(s)	3	ELCT Humanities/Fine Arts Elect	3
PYED Physical Education	1	ELCT ** OADM/WOPO/MGMT Selection(s)	3
	<b>16</b>		<b>18</b>
		<b>TOTAL HOURS 66</b>	

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

\*\* Electives of selections approved by the Department Manager.

# OFFSET PRINTING

## A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
OPRT	1301	Introduction to Offset Printing	3	OPRT	1305	Copy Preparation & Layout	3
OPRT	1302	Camera and Darkroom Procedures, Stripping and Platemaking I	3	OPRT	1306	Camera and Darkroom Procedures, Stripping and Platemaking II	3
OPRT	1303	Offset Press Operation I	3	OPRT	1307	Offset Press Operation II	3
OPRT	1304	Bindery Operations, Cost Estimating and Pricing	3	OPRT	1308	Offset Printing Equipment Maintenance	3
OADM	1303	Beginning Typewriting	3	OADM	1309	Business Mathematics and Calculating Machines	3
PSYC	1101	College Orientation	1				15
			16				TOTAL HOURS 31

# PHOTOGRAPHY

## A One-year Certificate of Completion

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
TELE	1406	Television Film	4	PHOT	1405	Advanced Print Making	4
ENGL	1309	Communications Skills	3	PHOT	2406	Color Photography I	4
PSYC	1101	College Orientation	1				16
			16				TOTAL HOURS 32

# PHOTOGRAPHY

## A Two-Year Associate in Applied Science Degree

(Offered only at selected locations)

### 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	1309	Communications Skills	3	PHOT	1405	Advanced Print Making	4
MATH	1301	Intermediate Algebra	3	ELCT		Social/Behavioral Science	
PSYC	1101	College Orientation	1			Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
			16				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
JOUR	1301	Communications Media	3	OADM	2304	Office Accounting I	3
ELCT		Humanities/Fine Arts Elective	3	MISC	1450	Microcomputers for Business	4
BUSS	1301	Introduction to Business	3	ELCT	*	Approved Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
			18				19
							TOTAL HOURS 69

\* Approved electives: SPCH 1301; OPRT 1302; TELE 1406; MGMT 1305, 2302, 2305, 2309; or MISC 1405.

# PHYSICAL EDUCATION

## A Two-Year Associate in General Studies Degree

### FIRST YEAR

First Semester				Credit	Second Semester				Credit
ENGL	1301	Composition and Rhetoric I		3	ENGL	1302	Composition and Rhetoric II		3
BIOL	1401	General Biology I		4	BIOL	1402	General Biology II		4
HIST	1301	History of the U.S. to 1865		3	HIST	1302	History of the U.S. from 1865		3
PSYC	1101	College Orientation		1	SPCH	1301	Public Speaking		3
PYED	1301	Foundations of Physical Education		3	PYED	1302	Foundations of Health Physical Education		3
PYED		Physical Education		1					1
				15					17

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
ENGL	2301	English Literature I	3	ENGL	2302	English Literature II	3
BIOL	1405	Human Anatomy	4	MATH	1301	Intermediate Algebra	3
GOVT	2301	State and Federal Govt I	3	GOVT	2302	State and Federal Govt II	3
PYED	2301	Sports Officiating	3	PYED	2302	Safety and First Aid	3
COSC	1300	Computer Information Processing	3	ELCT		Humanities/Fine Arts Elect	3
PYED		Physical Education	1	PYED		Physical Education	1
			17				16
							TOTAL HOURS 65

# PLANT PRODUCTION

## A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
FRMG	1303	Soil Science	3	FRMG	1305	Vegetable Production	3
FRMG	2301	Farm Mechanics I	3	FRMG	2401	Food Preservation	4
AGRI	2301	Entomology	3	AGRI	1302	Agronomy	3
AGRI	2303	Natural Resource Conservation	3	AGRI	2302	Horticulture	3
PSYC	1101	College Orientation	1				
			13	13			
			TOTAL HOURS 26				

# PLUMBER APPRENTICESHIP PROGRAM

## A Two-Year in Applied Science Degree

(Offered only at selected locations)

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
INDU 1400 Industrial Fundamentals	4	PLUM 1402 Principles of Plumbing II	4
PLUM 1401 Principles of Plumbing I	4	PLUM 1403 Residential Plumbing I	4
DRDS 1303 Architectural Blueprint Reading	3	ENGL 1309 Communications Skills	3
MATH 1301 Intermediate Algebra	3	WELD 1401 Beginning Gas Welding	4
PSYC 1101 College Orientation	1		
	15		15

### Summer Semester

PLUM 1404 Residential Plumbing II	4
PLUM 1405 Commercial Plumbing	4
DRDS 1400 Fundamentals of Drafting	4
	12

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
PLUM 2401 Plumbing Layout, Codes and Estimating	4	PLUM 2403 Heating and Air Conditioning Plumbing	4
PLUM 2402 Plumbing Repair and Maintenance	4	PLUM 2409 Plumbing Internship	4
ELCT * Computer Science/Microcomputer Technology Elective	3	ELCT Humanities/Fine Arts Elect	3
PSYC 2301 Introduction to Psychology	3	SMTL 1401 Sheet Metal I	4
	14		15
			TOTAL HOURS 71

\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

# POLICE ACADEMY CLOCK HOUR PROGRAM

## BASIC PEACE OFFICER TRAINING

### A One-Semester Certificate of Completion

First Semester	Clock Hours
CEPO 0107 Basic Peace Officer Training	400

TOTAL CLOCK HOURS 400



# PRE-MED

## A Two-Year Associate in Science Degree

### FIRST YEAR

First Semester			Credit	Second Semester			Credit
BIOL	1401	General Biology I	4	BIOL	1402	General Biology II	4
CHEM	1401	General Chemistry I	4	CHEM	1402	General Chemistry II	4
MATH	1302	College Algebra	3	MATH	1303	Trigonometry	3
ENGL	1301	Composition and Rhetoric I	3	ENGL	1302	Composition and Rhetoric II	3
HIST	1301	History of the U.S. to 1865	3	HIST	1302	History of the U.S. from 1865	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				
			19				18

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
BIOL	2401	Invertebrate Zoology	4	BIOL	2402	Vertebrate Zoology	4
CHEM	2401	Organic Chemistry I	4	CHEM	2402	Organic Chemistry II	4
GOVT	2301	State and Federal Govt I	3	GOVT	2302	State and Federal Govt II	3
ENGL	2301	English Literature I	3	SPCH	1301	Public Speaking	3
COSC	1403	Introduction to Computer		ELCT		Humanities/Fine Arts Elect	3
		Science and Programming	4	PYED		Physical Education	1
PYED		Physical Education	1				
			19				18
							TOTAL HOURS 74

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

## RADIO BROADCASTING

### A One-Year Certificate of Completion

First Semester				Credit	Second Semester				Credit
TELE	1301	Introduction to Broadcasting		3	TELE	1305	Broadcast Writing		3
TELE	1402	Beginning Radio Production		4	TELE	1407	Advanced Radio Production		4
TELE	1405	Radio-TV Announcing		4	TELE	2408	Telecommunications Internship		4
JOUR	1302	News Gathering and Reporting		3	TELE	2409	Telecommunications Projects I		4
				14					15
									TOTAL HOURS 29

# REAL ESTATE

## A 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 1301	Composition and Rhetoric I	3	REAE 1302	Real Estate Marketing	3
MATH 1301	Intermediate Algebra	3	REAE	REAE Elective	3
SPCH	SPCH 1301 or 2303	3	REAE	REAE Elective	3
ELCT	BUSS 1301 or MGMK 1311	3	MISC 1450	Microcomputers for Business	4
PSYC 1101	College Orientation	1	PYED	Physical Education	1
PYED	Physical Education	1			
		17			17

### SECOND YEAR

First Semester			Credit	Second Semester			Credit
REAE	2300	Texas Real Estate Law: Earnest Money Contracts	3	REAE	2304	Real Estate Finance	3
REAE	2302	Residential Real Estate Appraisal	3	ELCT		REAE 2402 or MGMT 2317	3-4
ELCT		REAE 2401 or MGMT 2316	3-4	ECON		ECON 2301 or 2302	3
MGMT		MGMT 2305 or 2306	3	ACCO	2302	Managerial Accounting	3
ACCO	2301	Financial Accounting	3	ACCO	2102	Managerial Accounting Lab	1
ACCO	2101	Financial Accounting Lab	1	ELCT		Humanities/Fine Arts Elect	3
			16-17				16-17
							TOTAL HOURS 66-68

# RESIDENTIAL/COMMERCIAL ELECTRICIAN

## A Two-year Associate in Applied Science Degree

(Offered only at selected locations)

### FIRST YEAR

First Semester		Credit	Second Semester		Credit
ELTE 1400*	Basic Electricity	4	ELEC 1301	Electrical Codes	3
MTNT 1402	Electricity	4	ELEC 1401	Low Voltage and Appliance Circuits	4
MGMT 1302	Safety (OSHA)	3	ELTE 1403	Solid State Electronics	4
TMTH 1301	Technical Mathematics	3	ENGL 1301	Composition and Rhetoric I	3
PSYC 1101	College Orientation	1	SPCH 1301	Public Speaking	3
		15			17

#### Summer Semester

ELEC 1402	Commercial Wiring	4
ELEC 2403	Control Circuits	4
		8

\* ELTE 1401 and 1402 may be substituted.

# RESIDENTIAL/COMMERCIAL ELECTRICIAN (CONT)

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
ELEC 2404 Single and Three-Phase Transformers	4	ELEC 2406 Electrical Planning	4
ELEC 2405 Motors and Motor Codes	4	ELEC 2409 Electrician Internship	4
DRDS 1303 Architectural Blueprint Reading	3	ELCT Humanities/Fine Arts Elective	3
PHYS 1403 Survey of Physics	3	PSYC 2301 Introduction to Psychology	3
		ELCT ** Computer Science/Microcomputer Technology Elective	3
	14		17
		TOTAL HOURS	71

\*\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

## SHEET METAL APPRENTICESHIP PROGRAM

**A Two-Year Associate in Applied Science Degree**  
(Offered only at selected locations)

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
SMTL 1401 Sheet Metal I	4	SMTL 1303 Insulation and Sheet Metal Standards and Materials	3
DRDS 1302 Blueprint Reading	3	SMTL 1402 Plumbing and Heating Insulation	4
WELD 1401 Beginning Gas Welding	4	DRDS 1400 Fundamentals of Drafting	4
WELD 1402 Beginning Arc Welding	4	MATH 1301 Intermediate Algebra	3
PSYC 1101 College Orientation	1	MGMT 1302 Safety (OSHA)	3
	16		17

### Summer Semester

SMTL 2401 Sheet Metal II	4
FPRT 2305 Building Codes and Construction	3
	7

## SECOND YEAR

First Semester	Credit	Second Semester	Credit
SMTL 2302 Sheet Metal Layout and Planning	3	SMTL 2402 Duct Work	4
PHYS 1303 Survey of Physics	3	SMTL 2409 Sheet Metal Internship	4
PSYC 2301 Introduction to Psychology	3	ELCT Humanities/Fine Arts Elect	3
WELD 2408 GMAW Welding (MIG)	4	ENGL 1309 Communications Skills	3
		ELCT † Computer Science/Microcomputer Technology Elective	3
	13		17
		TOTAL HOURS	70

† Computer Science selection (excluding COSC 1302) or microcomputer selections.

# SMALL GAS ENGINE REPAIR

**A Two-Year Associate in Applied Science Degree**  
(Offered only at selected locations)

## 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 1301 Intermediate Algebra	3
ENGL 1309 Communications Skills	3	WELD 1402 Beginning Arc Welding	4
WELD 1401 Beginning Gas Welding	4	SGER * SGER Selection(s)	4
PSYC 1101 College Orientation	1	ELCT Humanities/Fine Arts Elect	3
	<b>16</b>		<b>18</b>

## 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 GOVT 2301 or GOVT 2302	3	ELCT ** Computer Science/Microcomputer Technology Elective	3
SPCH 2303 Business and Professional Speaking	3	ELCT Elective	3
	<b>18</b>		<b>16</b>
		<b>TOTAL HOURS</b>	<b>68</b>

\* SGER 1409, 2407 or 2409.

\*\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

— Students may apply for a Certificate of Completion upon satisfactory completion of all PSYC 1101 and SGER, OADM, WELD, and INDU prefix courses.

# SOCIAL SCIENCE

**A Two-Year Associate in Arts Degree**

## FIRST YEAR

First Semester	Credit	Second Semester	Credit
ENGL 1301 Composition and Rhetoric I	3	ENGL 1302 Composition and Rhetoric II	3
HIST 1301 History of the U.S. to 1865	3	HIST 1302 History of the U.S. from 1865	3
LANG 1401 Beginning French I, German I or Spanish I	4	LANG 1402 Beginning French II German II or Spanish II	4
SCIE Biology, Chemistry, Physics or Geology	4	SCIE Biology, Chemistry, Physics or Geology	4
MATH 1302 College Algebra	3	ELCT Humanities/Fine Arts Elect	3
PYED Physical Education	1	PYED Physical Education	1
PSYC 1101 College Orientation	1		
	<b>19</b>		<b>18</b>

# SOCIAL SCIENCE (CONT)

## SECOND YEAR

First Semester			Credit	Second Semester			Credit
ENGL	2301	English Literature I	3	SPCH		Speech Elective	3
GOVT	2301	State and Federal Govt I	3	GOVT	2302	State and Federal Govt II	3
PSYC	2301	Introduction to Psychology	3	SOCI	2301	Introduction to Sociology	3
COSC		Computer Science Elective	4	ELCT		Social Science Elective	3
ELCT		Sophomore Social Science		ELCT		Elective	3
		Course	3	PYED		Physical Education	1
PYED		Physical Education	1				
			17				16
							TOTAL HOURS 70

## SPEECH

### A Two-Year Associate in Arts Degree

## FIRST YEAR

First Semester			Credit	Second Semester			Credit
ENGL	1301	Composition and Rhetoric I	3	ENGL	1302	Composition and Rhetoric II	3
HIST	1301	History of the U.S. to 1865	3	HIST	1302	History of the U.S. from 1865	3
LANG	1401	Beginning French I, German I or Spanish I	4	LANG	1402	Beginning French II German II or Spanish II	4
SPCH	1301	Public Speaking	3	ELCT		Elective	3
ELCT		SPCH 1302 or 1303	3	MATH	1302	College Algebra	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				17
			18				

## SECOND YEAR

First Semester				Credit	Second Semester				Credit
ENGL	2301	English Literature I		3	ENGL	2302	English Literature II		3
GOVT	2301	State and Federal Govt I		3	GOVT	2302	State and Federal Govt II		3
SPCH	2304	Discussion		3	SPCH	2305	Interpersonal		
SCIE		Biology, Chemistry, Physics					Communications		3
		or Geology		4	MISC	1450	Microcomputers for Business		
ELCT		Humanities/Fine Arts Elective		3	SCIE		Biology, Chemistry, Physics		
PYED		Physical Education		1			or Geology		4
					PYED		Physical Education		1
				17					18
							TOTAL HOURS		70

# TELECOMMUNICATIONS

## A 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 Television Film	4
TELE 1403 Beginning Television Production	4	TELE 1407 Advanced Radio Production	4
ENGL 1301 Composition and Rhetoric I	3	TELE 1408 Advanced Television Production	4
SPCH 1301 Public Speaking	1	MATH * Mathematics Selection(s)	3
PSYC 1101 College Orientation	1		
	18		18

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
TELE 2304 Broadcast Sales	3	TELE 2306 Telecommunications Seminar	3
TELE 2407 Electronic Field Production	4	TELE 2408 Telecommunications Internship	4
TELE 2409 Telecommunications Projects I	4	JOUR 1301 Communications Media	3
ELCT Social/Behavioral Science Elective	3	MISC 1450 Microcomputers for Business	4
ELCT Humanities/Fine Arts Elective	3	ELCT ** Elective	3
	17		17
		TOTAL HOURS	70

\* MATH 1301 or higher.

\*\* TELE 1405, 2301, 2307, or 2410.

# TRAINING MANAGEMENT SYSTEMS

## A Two-Year Associate in Applied Science Degree

(Offered only at selected locations)

### FIRST YEAR

First Semester	Credit	Second Semester	Credit
MGMT 1201 Management of Performance Oriented Training	2	MGMT 1205 Analysis of Training Requirements	2
MGMT 1202 Briefing Techniques, Aids and Devices	2	MGMT 1206 Professional Resource Management	2
MGMT 1203 Evaluation of Instruction & Training	2	MGMT 1207 Professional Development of the Manager	2
MGMT 1204 Setting Objectives and Goals	2	MGMT 1208 The Training System Management	2
ENGL 1309 Communications Skills	3	MGMT 1209 Managerial Theories	2
MATH 1301 Intermediate Algebra	3	ELCT * Approved Elective	3
PSYC 1101 College Orientation	1	ELCT ** Computer Science/Microcomputer Technology Elective	3
PYED Physical Education	1	PYED Physical Education	1
	16		17

\* Approved electives: MGMT 2150, 2151, 2152, 2161, 2162, 2255, 2256, 2257, 2258, 2259, 2351 or 2358.

\*\* Computer Science selection (excluding COSC 1302) or microcomputer selections.

# TRAINING MANAGEMENT SYSTEMS (CONT)

## SECOND YEAR

First Semester		Credit	Second Semester		Credit
MGMT 2201	Job Performances & Motivation	2	MGMT 2204	Assessing of Training	
MGMT 2202	Individual Orientation Techniques	2		Standards, Goals and Objectives	2
MGMT 2203	Group Orientation Techniques	2	MGMT 2205	Management Training Theory	2
ELCT ***	Sophomore Management Elective	3	MGMT 2206	Management Learning Strategies	2
ELCT	Humanities/Fine Arts Elective	3	SPCH 2303	Business and Professional Speaking	3
ELCT *	Elective	3	HIST ****	History Selection(s)	3
PYED	Physical Education	1	ELCT *	Approved Electives	3
		16	PYED	Physical Education	1
					16
					TOTAL HOURS 65

\* Approved electives: MGMT 2150, 2151, 2152, 2161, 2162, 2255, 2256, 2257, 2258, 2259, 2351 or 2358.

\*\*\* MGMT 2302, 2310; or BUSS 2306.

\*\*\*\* HIST 1301, 1302, 2350 or HIST 2351.

## WELDING

### A 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 1301	Intermediate Algebra	3	ENGL 1309	Communications Skills	3
PSYC 1101	College Orientation	1			15
		16			

## 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 and Federal Govt I		ELCT	Humanities/Fine Arts Elective	3
or			SPCH 2303	Business and Professional Speaking	3
GOVT 2302	State and Federal Govt II	3			18
ELCT ††	Computer Science/Microcomputer Technology Elective	3			
		18			TOTAL HOURS 67

‡ WELD 1301 may be substituted.

† WELD 1302 may be substituted.

†† Computer Science selection (excluding COSC 1302) or microcomputer selections.

— Students may apply for a Certificate of Completion upon satisfactory completion of PSYC 1101 and all WELD and INDU prefix courses.

# WORD PROCESSING SPECIALIST

## A 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
ENGL 1301 Composition and Rhetoric I	3	WOPO 1307 Word Processing/ Transcription	3
MATH 1301 Intermediate Algebra	3	SPCH SPCH 1301 or 2303	3
OADM 1305 Records Management	3	COSC/MISC† Computer Science/Microcom- puter Technology Elective	4
COSC/MISC† Computer Science/Microcom- puter Technology Elective	4	OADM 1308 Business Correspondence	3
PSYC 1101 College Orientation	1		
	<b>17</b>		<b>16</b>

— Students may apply for a Certificate of Completion, Word Processing Operator, upon satisfactory completion of the courses listed above.

### SECOND YEAR

First Semester	Credit	Second Semester	Credit
WOPO 2302 Advanced Information Processing Applications	3	WOPO 2303‡ Office Automation	3
WOPO 2308 Information System Internship I	3	WOPO 2309 Information System Internship II	3
OADM 2304 Office Accounting I	3	OADM 2305 Office Accounting II	3
ELCT Humanities/Fine Arts Elect	3	OADM 2307 Automated Office Management	3
ELCT † Elective	3	ELCT Social/Behavioral Science Elective	3
PYED Physical Education	1	PYED Physical Education	1
	<b>16</b>		<b>16</b>

**TOTAL HOURS 65**

- \* Levels of keyboarding will be determined by the student's 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.
- † Electives or selections approved by the Department Manager.
- ‡ WOPO 2306 may be substituted.





# COURSE DESCRIPTIONS

## Accounting (ACCO)

- ACCO 2301 Financial Accounting** (3-0) Credit: 3  
Analysis of financial transactions during an accounting cycle for proprietorships, partnerships, and corporations. Topics include merchandise operations, manual and electronic systems, investments, accounts and notes receivable, inventory methods, plant assets and depreciation, payroll and other current liabilities, organization and operations of corporations, long-term investments, statement of cash flow in financial position, and analysis of financial statements.
- ACCO 2101 Financial Accounting Lab** (0-3) Credit: 1  
The laboratory course to accompany ACCO 2301.
- ACCO 2302 Managerial Accounting & Control** (3-0) Credit: 3  
The origination, processing, reporting, and use in business operations of accounting information for management purposes; integrates topics in cost and financial control, and behavioral science. Prerequisites: ACCO 2301 and MATH 1301 or equivalent.
- ACCO 2102 Managerial Accounting & Control Lab** (0-3) Credit: 1  
The laboratory course to accompany ACCO 2302.
- ACCO 2303 Principles of Accounting I** (3-0) Credit: 3  
Analysis and recording of financial transactions, use of journals and ledgers, internal control of cash transactions, income statement and balance sheet, payroll records and reports, depreciation systems, inventory methods, sale and exchange of assets, special journals and voucher systems, accounting for inflation, generally accepted accounting principles.
- ACCO 2103 Accounting I Lab** (0-3) Credit: 1
- ACCO 2304 Principles of Accounting II** (3-0) Credit: 3  
Continues Accounting I. Partnership and corporate accounting methods and procedures, statement of cash flow in financial position, consolidated financial statements, departments and branches, manufacturing systems, cost accounting systems, capital budgeting, break even analysis, financial statement analysis, income tax accounting and business decisions.
- ACCO 2104 Accounting II Lab** (0-3) Credit: 1

## Accounting Technology (ACCT)

- ACCT 1301 Financial Accounting** (3-0) Credit: 3  
Analysis of financial transactions during an accounting cycle for proprietorships, partnerships, and corporations. Topics include merchandise operations, manual and electronic systems, investments, accounts and notes receivable, inventory methods, plant assets and depreciation, payroll and other current liabilities, organization and operations of corporations, long-term investments, statement of changes in financial position, and analysis of financial statements.
- ACCT 1302 Managerial Accounting & Control** (3-0) Credit: 3  
The origination, processing, reporting, and use in business operations of accounting information for management purposes; integrates topics in cost and financial control, and behavioral science. Prerequisites: ACCT 1301 and MATH 1301 or equivalent.
- ACCT 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: ACCT 1302.
- ACCT 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 and methods of accounting for materials, direct labor, and the distribution of overhead expenses, as well as cost records, operating reports and budgetary control. Prerequisite: ACCT 1302.
- ACCT 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: ACCT 1302 with a minimum grade of C.

**ACCT 2310 Fundamentals of Accounting IV** (3-0) Credit: 3  
Continuation of ACCT 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: ACCT 2309.

**ACCT 2311 Accounting & Financial Information Systems I** (3-0) Credit: 3  
This course is a study of the overall flow systems emphasizing financial data and computerized systems. It covers flow and logic concepts, developing meaningful control concepts and data reporting techniques. Prerequisite: ACCT 1302.

**ACCT 2312 Accounting & Financial Information Systems II** (3-0) Credit: 3  
This course is a continuation of ACCT 2311. Prerequisite: ACCT 2311.

## **Agriculture (AGRI)**

**AGRI 1301 Animal Husbandry** (2-4) Credit: 3  
An introductory survey course. Farm animals as a source of food, clothing and labor. The place of livestock in farming and ranching. The value of heredity and breeding for improvement, importance of judging, pedigrees, and proper nutrition. The place and adaptation of each class of livestock: show ring classification, and market and slaughter classes.

**AGRI 1302 Agronomy** (2-4) Credit: 3  
Classification and distribution of farm crops, their use, production, and identification will be studied with emphasis being placed on those crops important in Texas. New crop improvement, value of rotation, use and need of fertilizer will be determined by soil testing. Meadow and pasture management will be practiced on the College farm. Weeds, plant diseases, and insect enemies will be discussed.

**AGRI 1303 Poultry Science** (2-2) Credit: 3  
A basic course in poultry production involving breed, breeding, selection, feeding care, and management. Marketing is emphasized because it is a specialized industry.

**AGRI 1304 Introduction to Agriculture Economics** (3-0) Credit: 3  
Fundamental economic principles, including assembly, food production and processing, distribution, and agribusiness industries and their application to the problems of the agriculture industry.

**AGRI 2301 Entomology** (2-4) Credit: 3  
Chemical control of insects which affect crops and livestock. Control of external and internal parasites affecting animals. Safety factors in dealing with insecticides.

**AGRI 2302 Horticulture** (3-2) Credit: 3  
Growth and structure of fruit, vegetable, and ornamental plants. Effect of environment on plant productions and principles and methods of propagation.

**AGRI 2303 Natural Resource Conservation** (3-0) Credit: 3  
An introduction to the conservation of renewable natural resources. Includes the development for multiple use of water, range, forests and wildlife.

## **Air Conditioning and Refrigeration (AIRC)**

**AIRC 1201 Air Conditioning & Refrigeration Theory & Application I** (1-2) Credit: 2  
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 & Application II** (1-2) Credit: 2  
This course is a continuation of Air Conditioning and Refrigeration Theory and Application 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 systems. 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, and micron gauges-is covered. Prerequisite or Corequisite: INDU 1400.

**AIRC 1401 Electricity for Air Conditioning and Refrigeration I** (3-3) Credit: 4  
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, measurement, alternating current fundamentals,

magnetism, electromagnetism, instruments, power, inductance, capacitance and transformers. Prerequisite or Corequisite: INDU 1400.

**AIRC 1403 Heating Systems** (3-3) Credit: 4  
This course introduces the student to residential heating systems, natural gas, liquefied 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. Prerequisite: AIRC 1401.

**AIRC 1406 Electricity for Air Conditioning & Refrigeration II** (3-3) Credit: 4  
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, the household refrigeration and air conditioning systems and refrigerant piping, the use of pressures in diagnosis of refrigeration circuit malfunctions are covered. Corequisites: AIRC 1400 and 1401.

**AIRC 2400 Electricity for Air Conditioning & Refrigeration III** (3-3) Credit: 4  
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 household refrigeration and air conditioning electrical systems. An overview of the single family residential wiring to include the construction of main and branch circuits is presented. Prerequisite: all AIRC 1400 courses.

**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 component 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 application, equipment selection, locating and piping procedures, and service procedures for different systems will be covered. Prerequisites: all AIRC 1400 courses.

**AIRC 2403 Commercial Air Conditioning Systems** (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** (3-3) Credit: 4  
This course will introduce the student to heat pumps; heating, cooling and defrost cycles, components, reversing valves, flow controls, accumulator piping, heat pump controls, system design, heat pump installation and troubleshooting. Prerequisite: all AIRC 1400 courses.

## **Animal Production** (See Farm & Ranch Mgmt.)

## **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 2302 Cultural Anthropology****(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 Management****(See Mgmt.)****Applied Music****(See Music)****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. Prerequisite: TMTH 1301 or equivalent.

**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 (ART.)****ART. 1301,1302 Drawing I & II****(2-4) Credit: 3, 3**

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

**ART. 1303,1304 Creative Design I & II****(2-4) Credit: 3, 3**

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

**ART. 1305,1306 Figure Drawing I & II****(2-4) Credit: 3, 3**

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

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

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

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

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

**ART. 2301 Printmaking****(2-4) Credit: 3**

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

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

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

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

This course is a continued exploration of the medium with emphasis on individual expression. Prerequisite: ART. 2302.

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

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

**ART. 2305 Illustration & Advertising Design I****(2-4) Credit: 3**

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

**ART. 2306 Illustration & Advertising Design II****(2-4) Credit: 3**

This course is an advanced study of commercial art production. It continues principles covered in Illustration and Advertising Design I. Prerequisite: ART. 2305.

- ART. 2307 Drawing & Painting Media** (2-4) Credit: 3  
This is an introduction to materials and techniques of drawing and painting for non-Art majors.
- ART. 2308 Acrylic Painting** (2-4) Credit: 3  
This course covers the properties of color, theory of color and form, and technical procedures of the medium.
- ART. 2309 Ceramics I** (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.
- ART. 2310 Ceramics II** (2-4) Credit: 3  
This course is a continuation of techniques of pottery making. Prerequisite: ART. 2309.
- ART. 2311 Fiberarts I** (2-4) Credit: 3  
This course involves a study of weaving, rug making, dying, and papermaking. Emphasis will vary from one semester to another.
- ART. 2312 Fiberarts II** (2-4) Credit: 3  
This course is a continuation of ART. 2311. Emphasis will vary from semester to semester.
- ART. 2313 Jewelry & Art Metals I** (2-4) Credit: 3  
This course is an introduction to jewelry making and metal working techniques. Basic fabrication techniques are stressed.
- ART. 2314 Jewelry & Art Metals II** (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: ART. 2313.
- ART. 2315 Problems In Contemporary Art I** (3-0) 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 examination of art and art production.
- ART. 2316 Problems in Contemporary Art II** (3-0) Credit: 3  
This course is a continuation of Contemporary Art I. Prerequisite: ART. 2315 or Departmental Approval.
- ART. 2317 Sculpture I** (2-4) Credit: 3  
This course is an introduction to sculpture making techniques including assemblage, carving and lost wax casting.
- ART. 2318 Sculpture II** (2-4) Credit: 3  
This course is a continuation of ART. 2317, with emphasis on personal expression. Prerequisite: ART. 2317.
- ART. 2319 Presentation and Exhibition of Art** (2-4) Credit: 3  
This is an applied art course. It provides an introduction to theories and practices of presenting two dimensional art through matting, framing and mounting. It also provides theory and practice in installing art exhibitions and in the conducting or managing public relations need connected with art exhibitions.

## **Astronomy (ASTR)**

- ASTR 1301 Survey of Astronomy** (3-0) Credit: 3  
A non mathematical approach to the solar system. Beginnings of astronomy, motions of celestial bodies, minor members of the solar system, atoms and light are studied. Planetarium and observatory used in class.
- ASTR 1302 Descriptive Astronomy** (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.

## **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. Prerequisites 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: 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, ATBR 1405, ATBR 1407 and ATBR 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, 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 the 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. Prerequisites 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 ATBR 2406.

**ATBR 2401 Panel Repair & 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. Prerequisites: ATBR 1407 and ATBR 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, ATBR 1407 and ATBR 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 (.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 operators proper operation of vehicles 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.
- 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 of 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 transmission, transaxles, clutches, drive lines and differentials. Prerequisite or Corequisite: INDU 1400.
- AUTO 2250 Operational Maintenance** (.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 Transmissions & 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. Prerequisites: 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 is included. Prerequisites: AUTO 1401, 1402, 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 2409 Automotive Internship** (1-20) Credit: 4  
This course consists of on-the-job automotive 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.

**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 systems as well as emission control devices. Prerequisite: AUTO 1401.

**AUTO 2411 Automotive Advanced Technology** (3-3) Credit: 4  
This course is designed to provide the student with the information and knowledge to perform service on the new and emerging technology 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 Department Manager.

## **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 & Balance-G** (2-2) Credit: 2  
Since weight and balance of an aircraft are critical areas in maintenance, the student will be instructed on the weighing and computation of weight and balance of an aircraft. This course will also include basic physics principles and basic ground operations and servicing of aircraft to include starting, moving, securing aircraft and other service procedures.

**AVMT 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 heat-breaking 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 of 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 specification 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 of both rotary and fixed wing aircraft. This course also covers the alignment check of structures, assembling aircraft, balancing and rigging moveable surfaces, and the jacking of aircraft. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.
- AVMT 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, and fluid pressure and temperature indicators. Heating, cooling, pressurization systems, and oxygen equipment are also covered. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.
- AVMT 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 and 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. Prerequisites: 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 1301.
- 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. Prerequisites: 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 1301.

**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 both involved with alternating and direct current circuits. Also covered is the inspection and repair of the aircraft position and warning systems. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

**AVMT 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**

This course is 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 Technology (See Career Pilot)**

## **Banking (See Finance and Banking)**

## **Professional Barber-Stylist Science (BARB)**

**BARB 1601 Introduction to Hair Design (4-12) Credit: 6**

This is an introductory course in the field of barber-styling. Emphasizing the fundamentals of haircutting and related barber skills, it provides the student with a general orientation on the barbering profession, to include implements, shaving, bacteriology, sanitization and sterilization, the anatomy and physiology of hair and body tissues, hair and scalp disorders, and professional ethics. This is a 256 contact hour course.

**BARB 1602 Barber-Styling (4-12) Credit: 6**

This course focuses on the basic development of techniques for cutting men's and boys' hair. It also introduces the student to the related skills of shampooing and rinsing, scalp and hair treatments, beards and mustaches, and cutting curly hair. This is a 256 contact hour course. Prerequisite: BARB 1601 or concurrent enrollment.

**BARB 1603 Intermediate Barber-Styling I (4-12) Credit: 6**

This course continues the development of haircutting techniques for men and boys, and introduces the student to the basics of haircutting and styling for women. This is a 256 contact hour course. Prerequisite: BARB 1602 or concurrent enrollment.

**BARB 1604 Intermediate Barber-Styling II (4-12) Credit: 6**

This course, while continuing to emphasize the haircutting and styling of both men's and women's hair, also covers the more technical aspects of cleansing, curling, dressing, shaping, straightening, waving and clipping. This is a 256 contact hour course. Prerequisite: BARB 1603 or concurrent enrollment.

**BARB 2601 Advanced Barber-Styling** (4-12) Credit: 6  
This course refines the student's barbering techniques in all areas of hair styling. It also teaches the related skills of massage, bleaching and dyeing, manicuring, and fitting hair pieces. This is a 256 contact hour course. Prerequisite: BARB 1604 or concurrent enrollment.

**BARB 2602 Advanced Barber-Styling, Barber Law, and Shop Management** (4-12) Credit: 6  
This course enables maximum application of the skills developed in BARB 1601 through BARB 2601. It covers Texas barber law, and places the student in a barbershop management role. This is a 256 contact hour course, and it completes the 1500 contact hour program required by the Texas Barbers State Board. Prerequisite: BARB 2601 or concurrent enrollment.

## **Behavioral Science** (See Psychology)

### **Biology (BIOL)**

**BIOL 1301 Biological Science** (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 1401 General Biology I** (3-3) Credit: 4  
Fundamental principles of living organisms, including chemical and physical properties of life, tissue organization and function, cellular processes, and genetics.

**BIOL 1402 General Biology II** (3-3) Credit: 4  
Fundamental concepts and mechanisms of the organ systems of both plants and animals. Includes ecology, adaptation, natural selection, and classification.

**BIOL 1405 Human Anatomy** (3-3) Credit: 4  
Basic human anatomy designed for nursing and pre-med students. Laboratory includes anatomical models and displays, audio-visual materials, experiments, and taped instructional material.

**BIOL 1406 Human Physiology** (3-3) Credit: 4  
Fundamental study of the chemical interrelationships of human systems. Digestion, respiration, excretion, muscular activities, reproduction, and metabolism are included. Basic physiological instruments and techniques are included in the lab. Prerequisite: BIOL 1405.

**BIOL 2303 Genetics** (3-0) Credit: 3  
The study of the physical basis of inheritance and the laws of heredity and variations. Genetic problems are emphasized. Human genetic dysfunctions and modern research in genetic control is discussed. Prerequisites: BIOL 1401 and 1402 or consent of instructor.

**BIOL 2401 Invertebrate Zoology** (3-3) Credit: 4  
Classification, anatomy, physiology and ecology of the invertebrates. Dissection and identification of structures are included in the laboratory. Field trips for the collection of invertebrates are required at minimal student expense. Prerequisite: BIOL 1401, 1402 or consent of the instructor.

**BIOL 2402 Vertebrate Zoology** (3-3) Credit: 4  
Structure, development, physiology, and natural history of the vertebrate animals; emphasis will be placed on North American forms; field trips are required at minimal student expense. Prerequisite: BIOL 1401, 1402 or consent of the instructor.

**BIOL 2404 Microbiology** (3-3) Credit: 4  
Fundamental principles of microbiology; includes study of morphology, physiology, and classification of microbes and their relations to soil, food, water, disease, and immunology. Designed for nursing and pre-med students.

### **Business (BUSS)**

**BUSS 1301 Introduction to Business** (3-0) Credit: 3  
Provides overall picture of business operations; includes analysis of specialized fields within business organizations; identifies role of business in modern society.

**BUSS 1302 Consumer Economics****(3-0) Credit: 3**

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

**BUSS 2301 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.

**BUSS 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; foreign economic policy.

**BUSS 2306 Personal Finance****(3-0) Credit: 3**

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

### **Career Pilot (CAPI)**

**CAPI 1200 Basic Flight****(1-3) Credit: 2**

Flight training for completion of the Private Pilot Certificate. A minimum of 64 hours of instruction is provided, including 25 hours of dual flight, of which two hours will be in the simulator, 20 hours of solo flight and 19 hours of oral instruction and briefings. The instruction in the course more than meets the requirements for a Private Pilot Certificate. Prerequisite: CAPI 1403 or concurrent enrollment.

**CAPI 1204 Intermediate Flight****(1-3) Credit: 2**

First phase of Commercial Pilot training. A minimum of 64 hours of instruction is provided, including 15 hours of dual flight of which 2 hours will be in the simulator. Thirty-five hours of solo flight and fourteen hours of oral instruction and briefings.

**CAPI 1301 Aircraft Science****(3-0) Credit: 3**

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

**CAPI 1302 Propulsion Systems****(3-0) Credit: 3**

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

**CAPI 1306 Meteorology****(3-0) Credit: 3**

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

**CAPI 1403 Air Navigation****(4-0) 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.

**CAPI 2204 Advanced Flight****(1-3) Credit: 2**

Commercial and instrument flight training. A minimum of 64 hours of instruction is provided, including 20 hours of dual flight with 4 hours in the simulator, 35 hours of solo, and 9 hours of oral briefings. Prerequisites: CAPI 1204 and CAPI 2300 or concurrent enrollment.

**CAPI 2205 Commercial Flight****(1-3) Credit: 2**

Commercial and instrument flight training to prepare the student for the FAA Commercial Pilot Certificate with Instrument Rating. A minimum of 64 hours of instruction is provided, including 30 hours of dual flight of which 5 hours will be in the simulator. Twenty hours of solo flight and fourteen hours of oral instruction and briefings. Prerequisite: CAPI 2204 and CAPI 2307 or concurrent enrollment.

**CAPI 2206 Multi-Engine Flight****(1-1) Credit: 2**

This course of flight training leads to 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 12 hours of dual flight, and 20 hours of oral instruction and briefings. Prerequisite: CAPI 2205 or a Commercial Pilot Certificate.

- CAPI 2208 Instructor Rating** (2-2) Credit: 2  
This flight course prepares the experienced pilot for FAA Certified Flight Instructors Certificate for airplane. Includes 25 hours of dual flight and 39 hours of oral instruction and briefings. Prerequisite: Commercial Pilot Certificate.
- CAPI 2209 Airline Transport Pilot** (1-2) Credit: 2  
The Airline Transport Pilot Rating is the most comprehensive rating issued by Federal Aviation Administration. Flight and ground training to qualify for the instruction is provided, which includes 25 hours of dual flight, two flight hours for the FAA Check Flight, and 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.
- CAPI 2210 Commercial Transition Flight I** (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 one hour in the simulator, 30 hours of solo flight, and 14 hours of oral instruction and briefings. Prerequisites: FAA Commercial Rotorcraft Helicopter Rating, Class II FAA Medical and CAPI 2300 or concurrent enrollment.
- CAPI 2211 Commercial Transition Flight II** (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 30 hours of dual flight, of which 5 will be in the simulator and 5 hours in a complex aircraft; 20 hours of solo flight with 5 hours in a complex aircraft; and 14 hours of oral instruction and briefings. Prerequisite: CAPI 2210.
- CAPI 2212 Instrument Flight Instructor** (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.
- CAPI 2213 Multi-Engine Flight Instructor** (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.
- CAPI 2214 Commercial Helicopter Rating** (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.
- CAPI 2215 Helicopter Instructor Rating** (2-2) Credit: 2  
This 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.
- CAPI 2300 Commercial Aviation** (3-0) Credit: 3  
This course covers air traffic control procedures pertaining to Commercial Pilot, aviation weather and advanced navigational procedures. Advanced flight maneuvers, low altitude enroute charts, approach plates, and Airmen's Information Manual. Also, airplane performance factors on a high performance aircraft with retractable gear and flaps and constant speed propeller. Prerequisite: CAPI 2317.
- CAPI 2301 Aerodynamics** (3-0) Credit: 3  
This course covers the physical properties of air, airflow, standard atmosphere, forces on solids moving through air, lift, drag, planeform, air foil selection, and performance factors.
- CAPI 2303 Air Transportation** (3-0) Credit: 3  
The development and present status of air transportation, federal legislation, characteristics and classification of air carrier; the organization and functions of the FAA and the Civil Aeronautics Board are reviewed.
- CAPI 2307 Instrument & Ground School** (3-0) Credit: 3  
Basic radio fundamentals as used by the pilot. A description and practical use of various radio aids to safe aerial navigation, including Very High Frequency Omni Direction Range (VOR), Instrument Landing System (ILS), Direction Finding (DF), and others. Charts and approach plates as adapted to the radio navigation, including the use of the Flight Information Manual and ATC procedures. Prerequisite: CAPI 2300.

**CAP1 2317 Advanced Air Navigation****(3-0) Credit: 3**

The Federal Aviation Regulations covering the privileges, limitations and operations of a commercial pilot. Basic Aerodynamics and the principles of flight which apply to airplanes. Inspection and certification requirements will be covered and operating limitations, high altitude operations, physiological considerations, weight and balance computations, significance of the use of airplane performance speeds, cruise control, the Airman's Information Manual will be emphasized. Prerequisite: CAP1 1403.

**Peace Officer Training (CEPO)****CEPO 0107 Basic Peace Officer Training****(300-100) Credit: 1**

This course provides the training for entry level peace officers that has been directed by the Texas Commission on Law Enforcement Officer Standards and Education.

**Child Development (CHDV)****CHDV 1301 Introduction to Child Development****(3-0) Credit: 3**

This course covers the history, philosophy, and ethics of child care, types of child care, facilities, laws and standards that are applicable to child care worker. Emphasis is placed on the responsibilities and duties of the child care worker. Experiences are gained in how to provide for the child's health needs and how to make the child care center a safe place for children.

**CHDV 1302 Infant and Toddler Care****(2-2) Credit: 3**

This course emphasizes the skills required to care for children from birth to three years of age. It shows how the relationship of the primary caregiver to the child influences the physical, emotional, social, and cognitive development of the child. It will also include a study of the infant during the neonatal period and birth, infant stimulation, and the years of the turbulent toddler.

**CHDV 1303 Learning Programs****(2-2) Credit: 3**

This course provides the student with knowledge of methods of planning a curriculum and daily schedule for young children by providing opportunities for young children to actively participate in experimental and problem solving activities and by using material to provide the greatest scope of experiences and learning.

**CHDV 1304 Developmental Language****(2-2) Credit: 3**

The objective of this course is to provide the student the knowledge and skills to develop the language ability of young children. Practical experiences are gained in teaching language activities in a child care center. Emphasis is placed on developing special materials and techniques for bilingual and multi-cultural children.

**CHDV 1305 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 & 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 1308 Creative Expression****(2-2) Credit: 3**

Creative activities, both structured and unstructured, in arts, crafts, music, dance, literature, storytelling, dramatic play and recreational play, are covered in this course. Practical experiences are gained by working with the young in a child care center.

**CHDV 1309 Child Guidance & Classroom Techniques****(2-2) Credit: 3**

This course provides a survey of current practices, techniques and innovations in child guidance (discipline), and classroom management as they apply to early childhood behavior. Direct and indirect methods of managing the individual child or group of children in a classroom setting includes behavior modification and other strategies of intervention and prevention.

**CHDV 1310 Growth & Development of Children****(3-0) Credit: 3**

The study of the relationship of the physical, emotional, social and mental factors of growth and development from birth to adolescence.

**CHDV 2101 Child Development Seminar** (1-0) Credit: 1  
A course that deals with trends and advancements in Child Development. When used in the Child Development Associate Program, this course will provide instruction on preparing a portfolio and preparing for assessment.

**CHDV 2301 The Exceptional Child** (2-2) Credit: 3  
This course is designed to provide a basic knowledge of the child with behavioral problems. The special problems of mental retardation and conditions such as autism are included. Practical experiences at a child care center will cover etiology, diagnosis, characteristics and the daily and long-term management of the exceptional child. Prerequisite: CHDV 1310 or approval of the Department Manager.

**CHDV 2302 Parent-Child Relationships** (3-0) Credit: 3  
This course is a study in parent-child experiences and responsibilities and how they affect child behavior and development. Emphasis placed on experiences to stimulate a positive identification for family and self-concept, through thinking and reasoning skills, and a positive attitude toward behavior management at each age and stage of development. Included is a study of the abused and neglected child.

**CHDV 2303 Managing Child Care Centers** (2-2) Credit: 3  
This course covers the practical aspects of managing a day care center. The main emphasis is placed on developing a management system of a child development center that would include budgeting, record keeping, planning for effective facility and equipment management, development of admission policies and procedures, assuring the health and safety of children in care, managing a center's food service and nutrition program, staffing for quality child care, understanding the legal aspects of child care; planning for staff development and evaluation and encouraging parent-staff relationships. Prerequisite: CHDV 1310 or approval of the Department Manager.

**CHDV 2304 Management Techniques for Directors** (2-2) Credit: 3  
This course covers the theoretical aspects of managing an early childhood program. The main emphasis is placed on formulating and implementing goals and objectives, problem solving, delegation and decentralization, leadership styles, time management, supervising change, increasing staff morale and motivation, preventing burnout, personnel counseling handling conflict, and theories and functions which are essential to running a child care center. Prerequisite: CHDV 2303 or approval of the Department Manager.

**CHDV 2305 Methods of Teaching Math & 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 man-made world. Prerequisite: CHDV 1303 or approval of the Department Manager.

**CHDV 2401 Learning Theories Seminar & Internship** (1-15) Credit: 4  
This course includes on-the-job experiences with opportunities for direct involvement in an approved program activity for the child development major. In addition to the practicum, seminar time is spent with community resource persons. Prerequisite: Sophomore standing in the Child Development program.

**CHDV 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 pre-school age children. The area of specialization would be selected and performed under the supervision of the instructor. Prerequisite: Sophomore standing in the Child Development program.

## **Chemistry (CHEM)**

**CHEM 1401 General Chemistry I** (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 to chemical problems. Prerequisite: MATH 1302 or consent of instructor.

**CHEM 1402 General Chemistry II** (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 1401 is a prerequisite.

**CHEM 1404 Introduction to General Chemistry** (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 2401, 2402 Organic Chemistry I & II** (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 of syntheses 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 1401, 1402 or consent of the instructor. CHEM 2402 has a prerequisite of CHEM 2401.

**CHEM 2404 Physiological Chemistry** (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 1404.

## **Communications**

(See English)

## **Computer Electronics Technology (CMET)**

**CMET 1400 Electronics & Computer Skills** (2-4) Credit: 4  
A study of modern electronic construction techniques, including the use of hand tools and fabrication equipment. The course will also include an introduction to basic computer hardware and programming.

**CMET 1401 Digital Circuits** (3-3) Credit: 4  
A study of basic gates and gating networks used in digital circuits, and an intensive study of Boolean Algebra, as well as the theory and operation of flip-flop, registers, and counter circuits. The course also covers numbering systems, arithmetical circuitry, and elements of control circuits.

**CMET 1403 Computer Systems & Operational Programming** (3-3) Credit: 4  
The study of the theory of the operation of several computer systems, to include instructions, an introduction to their logic diagrams, and circuit schematic, programming as a troubleshooting tool, and operational characteristics.

**CMET 1404 Fundamentals of Robotics** (3-3) Credit: 4  
An introduction to terminology, theories, and technology, involving all types of robotics and tendons, both general and industrial oriented. Prerequisites: ELTE 1401, CMET 1401, Corequisite: ELTE 1403.

**CMET 1409 CRT Systems** (3-3) Credit: 4  
A study of the vertical and horizontal scanning circuits, video amplifiers and other related circuits encountered in the most common video display systems. The course includes theory of circuit operations and practical laboratory exercises in troubleshooting. Prerequisite: ELTE 1403.

**CMET 2401 Microprocessors & Microcomputers** (3-3) Credit: 4  
A study of modern day microcomputer techniques includes eight and sixteen bit machines. Both the S-100 and 6800 bus structure will be studied as well as the use of emulation in the design and repair of a microcomputer system. Prerequisite: CMET 1401.

**CMET 2402 Computer Circuit Analysis** (3-3) Credit: 4  
A comprehensive study of the clock and pulse generation circuit, wave-shaping circuits, trigger and control circuits, and synchronization and counting circuits, as well as other circuits used in modern day computers. Prerequisite: CMET 1401 and CMET 1403.

**CMET 2403 Interfacing Techniques** (3-3) Credit: 4  
The study of selected machine interfacing techniques, to include CRT, printer and other electronic apparatus. Prerequisites: ELTE 1403 and ELTE 2406 and approval of the Department Manager.

**CMET 2404 Computer System Diagnosis & Maintenance** (3-3) Credit: 4  
The operation, preventive maintenance procedures, and troubleshooting of modern day computer equipment, to include the study of advanced diagnostic programming, including the finding, documenting, and repairing of computer malfunctions. The course gives the student the much needed practical experience that can only be gained in a live computer atmosphere. Prerequisite: CMET 2402 or equivalent.

**CMET 2405 Tendon Control & Implementation** (3-3) Credit: 4  
A study in the use of microprocessors to control both fluidic and pneumatic systems used in robotic and tendon type systems, as well as the study of DC and AC motors and motor control for movement, and positioning. Prerequisite: CMET 1404.

**CMET 2406 Robotic Implementation** (3-3) Credit: 4

A study in data acquisition, handling, and conversion for use in movement, detection, and voice synthesis in advanced robotic systems. Prerequisite: CMET 2405.

**CMET 2407 Data Communications** (3-3) Credit: 4

An introductory course dealing with all aspects of modern data communication including networking, interfacing (to include RS232-C, MIL standard 188-C 100/114, RS-449, RS-422, RS-423), data transmission (synchronous, asynchronous), modems and modulation techniques, data codes (EBCDIC, ASCII, BAU-DIOT), protocols, and multiplexer. Prerequisites: CMET 1401 and ELTE 1402, Prerequisite or Corequisite: ELTE 1403.

**CMET 2408 Digital Communications** (3-3) Credit: 4

This course is designed to allow the student to become proficient in all aspects of digital communications. It will begin with a concentrated investigation of digital modulation and digital 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 the numerous data communications concepts, including transmission methods, circuits, topologies, error control mechanisms, and data formats. Included is an in-depth study of local area networks, digital transmissions techniques, including PCM, sampling encoding and commanding. Time division multiplexing, adaptive delta modulation PCM, and differential PCM are covered in detail. The North American Digital Hierarchy for digital transmissions is outlined, including line encoding schemes, error detection/correction methods, and synchronization techniques. Prerequisite for this course is CMET 2407.

## **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 and Audio Distribution Systems** (3-3) Credit: 4

A two-part course consisting of a study of commercial P.A. or sound reinforcement systems, and a study of large scale TV cable systems and small scale antenna distribution systems. This course includes some on-the-job training with commercial companies. Prerequisite: ELTE 1403.

**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.

## **Computer Science (COSC)**

**COSC 1300 Computer Information Processing** (3-0) Credit: 3

An up-to-date survey of computer hardware and software systems and developments that will provide the basis for further advancements in information processing. Provides a comprehensive overview of the computer, what it is; what it can and cannot do; how it operates; and how it may be instructed to solve problems. Covers terminology and examines the application of a broad range of organizational settings and social environments. An overview of BASIC programming is provided. Prepares non-computer majors to understand and utilize computers in both their personal and professional lives.

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

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

**COSC 1306 Introduction to BASIC** (2-1) Credit: 3

Offers and introduction to the basic concepts and constructs of 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.

**COSC 1401 Computer Operations & Library Management** (3-3) Credit: 4

Provides the student with knowledge of duties and responsibilities of a computer operator and tape librarian. 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 Department Manager.
- COSC 1403 Introduction to Computer Science & Programming** (3-3) Credit: 4  
Introductory programming course for Computer Science major. No prior knowledge of computers or programming assumed. 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, control breaks, and an introduction to VSAM (Indexed) file handling. Prerequisite: COSC 1403.
- COSC 1405 Computer Concepts and Analysis** (3-3) Credit: 4  
Introduces the student to digital computer systems with emphasis on current technology and terminology. Historical development of computing machinery, number systems, data representation, hardware and software are discussed. Methods of identifying business problems best suited for computer solutions and the analysis techniques to develop systems which implement these applications are presented.
- COSC 1406 Computer Organization & Architecture** (3-3) Credit: 4  
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: data representation, machine instruction types, fetch and execution cycles, interrupt schemes, metaprograms, I/O handling, and assembler concepts. Prerequisites: COSC 1403 and COSC 1405.
- COSC 1407 RPG Programming** (3-3) Credit: 4  
Report Program Generator, a problem oriented language involving fixed program logic, file description, input calculation, output of practical business oriented problems on card, tape, and disk systems. Prerequisite: COSC 1403.
- COSC 1408 Interactive Programming** (3-3) Credit: 4  
Provides a general background in conversational computing and a detailed study of the BASIC language. Algorithm development, programming efficiencies, and file organization for the interactive/conversational environment are stressed. Prerequisite: COSC 1403.
- COSC 2110 Topics in Computer Science Laboratory** (0-3) Credit: 1  
Laboratory for COSC 2310 when topic has a laboratory requirement. Prerequisite: Concurrent enrollment in COSC 2310.
- COSC 2301 Computer Center Management** (3-0) Credit: 3  
Planning, organizing, and controlling data processing installations. Managerial aspects in the introduction and use of computer systems and management concepts. Prerequisite: 12 hours of Computer Science.
- 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 Department Manager.
- COSC 2401 Advanced COBOL** (3-3) Credit: 4  
Offers the student of COBOL programming an in-depth study of 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: 16 semester hours Computer Science including COSC 1405.
- COSC 2403 Operating Systems and Job Control Language** (3-3) Credit: 4  
A study of computer operating system concepts including major software components and their functions. An in-depth coverage of Job Control Language 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 1401 and concurrent enrollment in COSC 1406.

**COSC 2404 Assembler Language Programming** (3-3) Credit: 4  
Assembler Language programming for the current college system. Programming of business oriented problems. Emphasis on use of assembler tools forabend resolution. Prerequisites: 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 2407 PL/1 Programming** (3-3) Credit: 4  
Business and scientific computer applications are developed using PL/1. Emphasis is placed on advanced programming concepts. Prerequisite: 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 provides the student with an opportunity to utilize the knowledge acquired in his/her academic program by designing, planning, developing, and implementing an activity directly associated with a real computing/data processing environment. Prerequisite: Consent of Instructor.

**COSC 2410 Systems Analysis and Design** (3-3) Credit: 4  
Study of structured systems development. 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 2414 Data Communications and Networking** (3-3) Credit: 4  
A study of the methods and criteria used to define and implement data communications and networking of present day computer systems. Topics include data transfer, communications hardware and software, security, local area networks, micro to mainframe interfaces, current and future applications of data communications. Prerequisite: COSC 2403 and COSC 2404.

## **Cosmetology (COSM)**

**COSM 1401 Facial Specialist I** (2-4) Credit: 4  
This course introduces the student to theory of facial treatments and the techniques and methods of facial massage. It also includes anatomy of the face and neck, chemistry in facials, sanitation and safety measures and professional practices. This is a 96 contact hour course.

**COSM 1402 Facial Specialist II** (2-4) Credit: 4  
This is a continuation of COSM 1401. It will include instruction and practice on how to recognize skin conditions and disorders. This is a 96 contact hour course. Prerequisite: COSM 1401.

**COSM 1403 Facial Specialist III** (2-5) Credit: 4  
This is a continuation of COSM 1402. This is a 112 contact hour course. Prerequisite: COSM 1402.

**COSM 1501 Manicurist** (3-6.4) Credit: 5  
This course trains the student in all facets of manicuring. It covers the anatomy of the arms and hands, the chemistry involved in manicuring, sanitation and safety methods, professional practices, equipment and procedures and techniques used by the manicurists. This is a 150.4 contact hour course.

**COSM 1601 Orientation and Introduction to Cosmetology** (4-12) Credit: 6  
This is an introductory course in the field of cosmetology. The course includes an orientation to cosmetology and the development of related skills, knowledge and attitudes necessary for a cosmetologist. Manicures, shampoos, basic bacteriology and pH are covered. The course also covers methods of haircutting, permanent waving, blowdrying, and use of the curling iron. This is a 256 contact hour course.

**COSM 1602 Basic Cosmetology** (4-12) Credit: 6  
A continuation of COSM 1601. The course covers basic principles involved in the use of pincurls and rollers, and procedures used in performing fingerwaves and sets. The course also introduces the student to customer relations. This is a 256 contact hour course. Prerequisite: COSM 1601 or concurrent enrollment.

**COSM 1603 Intermediate Cosmetology, Manicuring and Hair Removal** (4-12) Credit: 6

A continuation of COSM 1602. The course covers intermediate permanent waving, intermediate manicuring, black hair care, and the study of skin cells and nail structure. The course also covers eyebrow arching,

lash and eyebrow tinting, eye tabbing and hair removal. This is a 256 contact hour course. Prerequisite: COSM 1602 or concurrent enrollment.

**COSM 1604 Intermediate Cosmetology and Skin Care** (4-12) Credit: 6  
This course will cover the theory and techniques and procedures involved in facial treatments. This course also covers color analysis, makeup and pedicures. The students practice the intermediate manipulative skills required for hairstyling, applying masks and makeup. This is a 256 contact hour course. Prerequisite: COSM 1603 or concurrent enrollment.

**COSM 2201 Advanced Operator Seminar** (1.5-0) Credit: 2  
This course is designed to keep licensed operators abreast of new developments, trends, current major issues and legal, professional and other important factors that have an impact upon the field of cosmetology. This is a 24 contact hour course. Prerequisite: Cosmetology Operators License.

**COSM 2301 Instructor Orientation** (3-0) Credit: 3  
This course is an introduction to teaching cosmetology. It covers the methods and techniques used by the training instructor, and the materials, equipment, various contracts, applications and examination forms used by the Texas Cosmetology Commission. The student will also learn the rules and regulations of the College, how to prepare lesson plans, how to plan class lectures and presentations, how to prepare examinations, and the student will observe class lectures presented by licensed instructors. This is a 48 contact hour course. Prerequisite: Cosmetology Operators License.

**COSM 2605 Advanced Cosmetology** (4-12) Credit: 6  
A continuation of COSM 1604. This course will cover hair coloring and advanced techniques involved in permanent waving, styling and hair cutting. This is a 256 contact hour course. Prerequisite: COSM 1604 or concurrent enrollment.

**COSM 2606 Preparation for the State Board & Advanced Cosmetology** (4-12) Credit: 6

A continuation of COSM 2605. This course will stress rules, regulations and preparation for the Texas Cosmetology Commission licensing examination. This is a 256 contact hour course, and it completes the 1500 contact hour program required by Texas Cosmetology Commission. Prerequisite: COSM 2605 or concurrent enrollment.

**COSM 2801 Clinic Management** (8-14) Credit: 8  
The student will observe all class lectures, demonstrations and practical exercises and will prepare for the first class lecture. The student is required to prepare a special cosmetology notebook with daily lesson plans. This is 352 contact hour course. Prerequisite: COSM 2301 or concurrent enrollment.

**COSM 2802 Classroom Teaching** (8-14) Credit: 8  
During this course the student instructor shall conduct theory and practical classes and will prepare daily lesson plans and examinations on each lesson taught. This is a 352 contact hour course. Prerequisite: COSM 2801 or concurrent enrollment.

## **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; interviewing and interrogation techniques, 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, 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 officer is taught the use of spot maps and charts, the techniques of enforcement, and the maintenance of good public relations. An analysis of the Model Motor Vehicle Code is given.
- CRIJ 1306 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; 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 definitions 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  
The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues.
- CRIJ 1310 Criminal Investigation II** (3-0) Credit: 3  
Modern methods and skills required for criminal investigation, to include discovery methods, development and lifting of latent fingerprints; criminal scene sketches; the use of plaster and silicone rubber for reproducing evidence at crime scene; use of modern investigation aids; and techniques of criminal interview. 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; pre-test 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, 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 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  
Course will provide the student with some understanding of the evolution of criminal corrections and explore with the student the many avenues which the corrections field branches into. Develop in each student a basic understanding of the various methods of corrections so that they can function efficiently in the field.
- CRIJ 2303 Criminal Justice Seminar** (3-0) Credit: 3  
A problems course dealing with current criminal justice trends, issues, and literature. Prerequisite: Approval of the Department Manager. This course may be repeated for credit.
- 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 engineering, education, and enforcement at the supervisory level.

- CRIJ 2307 Penology (Jail Operation and Management)** (3-0) Credit: 3  
Survey of basic concepts of penal and correctional rationale as employed by criminal justice administrator. An overview of operations 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 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 a 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.

## **Dance**

(See Physical Education)

## **Data Control Specialist**

(See Computer Science)

## **Developmental Studies (DS--)**

- DSCO 0300 Developmental Communications** (1-2) Credit: 3  
A course offered in a laboratory setting to improve reading comprehension and rate and word recognition. Specific areas of study include syllabication, phonetic analysis, context clues, word elements, sequence, setting, main ideas, drawing conclusions, and making inferences.
- DSED 0300 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).
- 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 0300 Developmental Mathematics I** (4-0) Credit: 3  
A remedial 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.

**DSMA 0301 Developmental Mathematics II** (4-0) 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, and selected stated problems. (Previously numbered MATH 0300)

**DSMA 0302 Developmental Mathematics III** (1-2) Credit: 3  
Developmental mathematics for technical fields, including algebra, integers, mathematical sentences, rational numbers, and polynomials.

**DSRE 0101 Developmental Reading** (1-1.5) Credit: 1  
This course helps prepare for college level academic work. It uses varied instructional techniques to help students improve their proficiency in reading comprehension and rate, word recognition and vocabulary development.

**DSRE 0300 Developmental Reading I** (1-2) Credit: 3  
Designed for students who have difficulty reading college texts, specifically those who score below 50% on the Pre-TASP reading section. Emphasizes word attack skills, vocabulary development, comprehension, fluency, and study and test-taking skills.

**DSRE 0301 Developmental Reading II** (1-2) Credit: 3  
Designed for students who have difficulty reading college texts, specifically those who score from 50% through 69% on the Pre-TASP reading section. 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 0101 Basic Developmental Writing** (1-1.5) Credit: 1  
This course helps a student prepare to pursue college-level academic work. It uses varied instructional techniques to identify deficiencies and improve basic writing skills.

**DSWR 0301 Developmental Writing I** (1-2) Credit: 3  
A study of basic composition skills. Designed for students who score below 50% on the Pre-TASP writing section. Emphasizes paragraph writing, with attention given to grammar problems as they occur in the context of the paragraphs. Intended for native English speakers or for those students who have made a score of 550 or more on the Test of English as a Foreign Language (TOEFL).

**DSWR 0302 Developmental Writing II** (1-2) Credit: 3  
A study of basic composition skills. Designed for students who score from 50% through 69% on the Pre-TASP writing section. Emphasizes essay writing, with attention given to grammar problems as they occur in the context of the essays. Intended for native English speakers or for those students who have made a score of 550 or more on the Test of English as a Foreign Language (TOEFL).

## **Diesel Maintenance** (See Diesel Mechanics)

### **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 or 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 designs, operating principles, components, test equipment, and service will be covered. Emphasis will be placed on turbochargers, blowers, troubleshooting, component removal and replacement 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, test equipment and systems testing. The student will troubleshoot, test remove repair and replace components of starting and charging systems. Prerequisites or corequisites: INDU 1400, DIEM 1401 and DIEM 1405.

**DIEM 2400 Hydraulic Systems Fundamentals and 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. Prerequisites: DIEM 1405, 1406, 2406 and 2407.

**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. Prerequisites: DIEM 2400, 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 diagnostic, 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. Prerequisites: All Diesel courses or approval of the Department Manager.

**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. Prerequisites: 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, components 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. Prerequisites: DIEM 1401.

**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 worksite 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, multiview 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 of shade and shadow application. Prerequisite: ENGR 1301 or DRDS 1405 or concurrent enrollment.
- DRDS 1402 Technical Illustration** (3-3) Credit: 4  
Introduction to pictorial drawings as used in industrial catalogues, assembly sheets, newspaper publications, and promotional literature. Work to be done in various media to include pencil, ink, transfer tapes, and air brush. Prerequisite: ENGR 1301 or DRDS 1401, DRDS 1405 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 1301 or DRDS 1405, ENGR 1302 or DRDS 1406, DRDS 1401.
- 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 1301, DRDS 1406 or ENGR 1302.
- 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 1301 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. Prerequisite: MATH 1301 or equivalent.
- 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 of material used and their strength and brief practices on designing equilibrium tools and mechanisms.
- DRDS 2401 Pipe Drafting** (2-4) Credit: 4  
Design and detailing of pipe systems making use of standard practices and symbols; includes single line, double line, plan profile and isometric drawings of pipe systems. Prerequisite: Sophomore Standing in the Drafting Program.
- DRDS 2402 Architectural Drafting** (2-4) Credit: 4  
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 connection 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. Prerequisites: 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 Department Manager.

**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 Department Manager.

**Science (EASC)****(See Biology, Chemistry, Geology)****EASC 1301 Earth Science****(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.

**Economics (ECON)****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.

**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; foreign economic policy.

**Electronic Communications Operations (ELCO)****ELCO 1203 Electronic Operating Signals and Prosigns****(1-2) Credit: 2**

An advanced course in communication methods which explores abbreviated or expeditious communication techniques. Emphasis is placed on the use of operating signals from the International Civil Q Code. The student will learn procedures in accordance with accepted international standards and recommended practices. Techniques for use of operating signals in a radio net will also be covered. (Replaces ATMC 0113)

**ELCO 1310 Communication Station Air Systems****(2-3) Credit: 3**

A course designed to provide students with basic knowledge of the operation and maintenance of chilled water cooling systems and/or refrigerated air systems.

**ELCO 1312 Station Power Generation****(2-3) Credit: 3**

A course designed to provide students with basic knowledge of the operation and maintenance of A.C. power generators and regulator systems, to include basic operation and maintenance of diesel engines used in power generator systems.

**ELCO 1320 Communication Transmission Internship****(1-12) Credit: 3**

A course designed to give the student practical exercises in the use and knowledge of communication techniques learned in prior course work. Students will increase proficiency and work with "live" transmission of messages in various formats. Prerequisite: ELCO 1203, ELCO 1400, ELCO 1401 and ELCO 1402.

**ELCO 1400 Beginning Electronic Communication** (2-5) Credit: 4  
Introduction to various forms of electronic communication with emphasis on use of Morse Code signals in commercial, domestic, and international communications. Computerized teaching systems will be used to insure minimum mastery of Morse Code transmitting and receiving. Corequisite: OADM 1131 (Replaces ATMC 0110).

**ELCO 1401 Advanced Electronic Communication** (2-5) Credit: 4  
A continuation of ELCO 1400. An advanced course designed to increase speed and accuracy of electronic transmission using a computerized teaching system. Practical exercises in receiving live transmissions of electronic communication via short wave radio. Students will also demonstrate knowledge of required preventive maintenance procedures on equipment used as well as minor troubleshooting techniques. Prerequisite: ELCO 1400 (Replaces ATMC 0111).

**ELCO 1402 Specialized Electronic Communication Techniques** (2-5) Credit: 4  
An intermediate course in specialized communication techniques with the use of a TRIAD system. The course will emphasize speed and accuracy using simplified systems for secure communication techniques. (Replaces ATMC 0112).

**ELCO 1404 Communication Systems** (3-3) Credit: 4  
An introduction to the principles of communication systems to include antennas, propagation, receivers, transmitters, and basic satellite systems. The course will emphasize the role of the various components and elements in a radio communication system. Theory of transmission lines, and antenna couplers as well as the fundamentals of superheterodyne receivers and transmitters will be covered. Prerequisite: ELTE 1400.

**ELCO 2300 Communication Data Processing System** (2-3) Credit: 3  
An advanced course in terminal data communication processing systems. The student will learn operation and maintenance techniques, the theory of controllers, and configuration of system. Preparation and message transmission will be covered. The student will study techniques for identification of system failure, fault isolation, and identification and replacement of faulty components. Prerequisites: ELTE 1400, ELCO 1404.

**ELCO 2302 Advanced Station Operation** (2-3) Credit: 3  
An advanced course in communication station installation and operation. The student will learn theories of signal flow, data identification, radio frequency, control elements, and data transmission. The student will perform practical exercises using system meters and various electronic test equipment, as well as preventive maintenance on defection equipment to the least replaceable unit. Prerequisites: ELTE 1400, ELCO 1404.

**ELCO 2306 Multi Access Data Communications** (2-4) Credit: 3  
An advanced course in time division multiple access communications, operation, and maintenance. Theory and techniques for operation, maintenance, and troubleshooting various types of time division multiple access communications equipment for earth and field stations. Operation and maintenance of video display units, power supplies, and relative circuit card assemblies will be included in practical exercises. Prerequisites: ELTE 1400, ELCO 1404, ELCO 2404.

**ELCO 2311 Communication Internship I** (1-5) Credit: 3  
This course consists of on-the-job communication training that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student will perform practical exercises at an approved work station under the supervision of an approved instructor. Prerequisite: ELCO 1203, ELCO 1400, ELCO 1402, ELCO 1404.

**ELCO 2312 Communication Internship II** (1-5) Credit: 3  
This course is a continuation of ELCO 2311. Prerequisite: ELCO 2311.

**ELCO 2404 Advanced Satellite Operations** (3-6) Credit: 4  
An advanced course in satellite terminal operation and maintenance. The student will learn system signal flow, proper terminal cold start-up procedures, satellite acquisition, teletype, alternate voice/data, and fast-cast operations. The course also includes troubleshooting techniques using various electronic test equipment and maintenance to the least replaceable unit. Prerequisites: ELTE 1400, ELCO 1404.

## **Electrical Construction and Maintenance (ELEC)**

**ELEC 1301 Electrical Codes** (2-2) Credit: 3  
A study of the national codes and local ordinances to residential and commercial wiring.

**ELEC 1401 Low Voltage and Appliance Circuits** (2-4) Credit: 4  
Wiring practices used in low voltage circuits such as bells, chimes and alarms and in appliance circuits, electric heating, central air conditioning, grounding practices and service layouts.

**ELEC 1402 Commercial Wiring** (2-4) Credit: 4  
Commercial wiring practices including materials, conduit work, wire pulling and circuit layouts.

- ELEC 2401 Lineman Fundamentals I** (2-4) Credit: 4  
An introduction to the equipment, skills, and techniques required of a lineman to include pole climbing and special equipment operation.
- ELEC 2402 Lineman Fundamentals II** (2-4) Credit: 4  
A continuation of ELEC 2401. This course will also include use of equipment and techniques involved in underground cable installation. Prerequisite: ELEC 2401.
- ELEC 2403 Control Circuits** (3-3) Credit: 4  
A study of terminology, symbols and the development of control circuit diagrams; magnetic starting and overload to include individual and multiple start-stop stations with overload protection; and connecting and testing, jogging and reversing motor controls and sequencing circuits. Prerequisite: ELEC 2401.
- ELEC 2404 Single- and Three-Phase Transformers** (3-3) Credit: 4  
A study of the basic transformer fundamentals, the types of transformers, and the selection connection and testing of single-phase and three-phase distribution transformers. Prerequisite: ELTE 1400.
- ELEC 2405 Motors and Motor Codes** (3-3) Credit: 4  
A study of the national electric code and local ordinances related to motors; characteristics, connection and testing of DC motors and generators and single-phase and three-phase motors.
- ELEC 2406 Electrical Planning** (3-3) Credit: 4  
Planning the placing of receptacles, switches, lights, appliances, and service entrances, and material estimating and pricing for residences. Planning the wiring for a commercial building working from blueprints and specification books.
- ELEC 2408 Lineman Internship** (1-20) Credit: 4  
This course consists of on-the-job lineman training that utilizes the principles, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved worksite under the supervision of a College instructor/coordinator.
- ELEC 2409 Electrician Internship** (1-20) Credit: 4  
This course consists of on-the-job electrician training that utilizes the principles, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved worksite under the supervision of a College instructor/coordinator.

## **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 1400 Basic Electricity** (3-3) Credit: 4  
Study of basic electrical circuits involving both resistive and reactive circuits and their solution through the use of Ohm's Law, Kirchoff's Law, Thevenin's, Norton's and the Superposition Theorems as well as the power formula.
- ELTE 1401 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 multimeters, power supplies, and an introduction to the oscilloscope and AC generator.
- ELTE 1402 Electrical Circuits II** (3-3) Credit: 4  
The second course in the study of electrical circuitry. This course includes alternating current 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, relaxation oscillators, 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 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 Department Manager required.
- 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. Prerequisites: ELTE 1404 and ELTE 2407 and the approval of the appropriate Department Manager.
- 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. Prerequisites: ELTE 2103 and the approval of the Department Manager.
- 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 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, receivers 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 hookup to a television set. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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 2411 Electronic Internship I** (1-20) Credit: 4  
This course consists of on-the-job electronic training that utilizes the principles, skills and knowledge gained in the theoretical setting of the classroom. The student is employed at an approved work station under the supervision of the College Electronics Coordinator. Prerequisites: CMET 1400, CMET 1401, ELTE 1401 and Prerequisite or Corequisite: ELTE 1402 and ELTE 1403.
- ELTE 2421 Electronic Internship II** (1-20) Credit: 4  
This course is a continuation of Electronic Internship I. Prerequisite: ELTE 2411 and Prerequisite or Corequisite: CMET 1409.

## **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 of all states.

- EMET 1302 Military Medicine** (2-2) Credit: 3  
This course increases the military medic's ability to provide prehospital 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 this 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 1401 Emergency Medical Technician** (2-4) Credit: 4  
The objective of this course is to provide emergency medical theory and skills training to enable the student to function as an emergency medical technician.
- 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 of injury in the prehospital phase of care are included.
- EMET 1403 Emergency Medical Technician-Recertification** (2-4) Credit: 4  
This course 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 requirements. Prerequisite: EMET 1402 or certification as an EMT.
- EMET 2101 Introduction to Paramedic** (1-0) Credit: 1  
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 earthquakes, floods, fires, nuclear attacks and other emergency situations. It includes elements of disaster preparation, organization of emergency operations 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.

## **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: Successful completion of ENGL 1301 or equivalent.

**ENGL 1308 College Reading****(2-1) Credit: 3**

Designed for students who wish to improve their abilities in analytical reading critical thinking. Development of inferential and interpretive comprehension skills as well as higher level skills in analysis, synthesis, and evaluation are stressed. Prerequisite: College level reading skills.

**ENGL 1309 Communications Skills****(3-0) Credit: 3**

Instruction in grammar and diction, writing expository papers, writing effective business correspondence and reports, and oral presentations.

**ENGL 2301 English Literature I****(3-0) Credit: 3**

A survey of English literature from Beowulf through the eighteenth century. Prerequisite: ENGL 1301, 1302 or equivalent.

**ENGL 2302 English Literature II****(3-0) Credit: 3**

A survey of English literature beginning with the pre-Romantic periods through the early twentieth century. Prerequisite: ENGL 1301, 1302 or equivalent.

**ENGL 2303 World Literature I****(3-0) Credit: 3**

A survey of Masterpieces of Western world literature from Homer through the Renaissance. Prerequisite: ENGL 1301, 1302 or equivalent.

**ENGL 2304 World Literature II****(3-0) Credit: 3**

A survey of masterpieces of Western world literature from the Renaissance to the twentieth century. Prerequisite: ENGL 1301, 1302 or equivalent.

**ENGL 2305 American Literature I****(3-0) Credit: 3**

A survey of the major American writers from the Colonial Period to Whitman. Prerequisite: ENGL 1301, 1302 or equivalent.

**ENGL 2306 American Literature II****(3-0) Credit: 3**

Survey of major American Writers from Whitman to the present. Prerequisite: ENGL 1301, 1302 or equivalent.

**ENGL 2309 Technical Writing****(3-0) Credit: 3**

Study of the principles of exposition as applied to the preparation of short written technical reports using various formats. Major formal technical report required. Prerequisite: ENGL 1301 or 1309 or equivalent.

## **Engineering (Civil and General) (ENGR)**

**ENGR 1101 Introduction to Engineering****(1-0) Credit: 1**

Introduces all the engineering fields and the opportunities within the scope of professional work.

**ENGR 1301 Engineering Graphics****(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 1302 Descriptive Geometry****(2-4) Credit: 3**

Involves point, line and plane relationships, auxiliary views, intersections, and flat pattern development. Emphasis is placed on practical solutions to realistic engineering problems relating to aerospace, mining, and geology. Prerequisite: ENGR 1301.

**ENGR 1303, 1304 Plane Surveying I and II****(2-3) Credit: 3, 3**

These courses cover the use and care of surveying instruments, note keeping distance measurements, traverse surveying areas, angles and elevations, legal principles, and elementary map making. They also cover plane table and transit methods of topographic map production, field problems related to highway surveying, circular and vertical curves, earthwork, volumes and cost estimates, triangulation and base lines. Prerequisite: MATH 1303 or equivalent.

## **Equipment Maintenance (EQMT)**

**EQMT 1250 Trade Drawing IA****(1-2) Credit: 2**

This is a basic course with emphasis on introduction and use of drawing equipment and instruments, geometric construction, lettering, freehand drawing and sketching and orthographic projection.



- EQMT 1252 Trade Drawing IIA** (1-2) Credit: 2  
This course is a study of dimensioning practices, sectional views, auxiliary views, secondary auxiliary views, conventional practices, and thread and fasteners.
- EQMT 1401 Fundamentals of Machinery** (3-2) Credit: 4  
A study of machines including levers, gears, inclined planes, chain falls, pulleys, wedges and cams. Students will calculate mechanical advantages and the practical work will include selecting and using proper mechanical aids.
- EQMT 1402 Machine Tools** (2-4) Credit: 4  
A course designed to provide an understanding of the theory of operation of lathes, milling machines, grinders, drill presses, power saws and shapers. The student will also have an understanding of the construction, operation, and maintenance of each type of machine. Safety practices for each type of machine will be stressed. Prerequisite: EQMT 1401.
- EQMT 1403 Maintenance of Valves and Pumps** (2-4) Credit: 4  
Provides an understanding of the theory of operation of valves and pumps. It covers both stop and check valves to include globe, gate, swing check, ball check, lift check, and safety valves. Students will learn to disassemble, repair, assemble, align and maintain both pumps and valves. Prerequisite: EQMT 1401.
- EQMT 1404 Maintenance of Galley Equipment and Fans** (2-4) Credit: 4  
This course provides the theory of operation, maintenance required, and practical work in repair of fans, blowers, and galley equipment. Ice machines, rotating ovens, dough mixers, scullery machines, meat cutting machines, pre-wash machines, roof exhaust fans, and fan static balance method will be covered. Prerequisite: MTNT 1402.
- EQMT 2401 Maintenance of Air Compressors** (2-4) Credit: 4  
This course provides the theory of operations, design, classification, application and maintenance of air compressors. It will include reciprocating and vane type compressors and will cover disassembly, repair, assembly and troubleshooting. Prerequisite: MTNT 1402.
- EQMT 2402 Maintenance of Power Plant Equipment I** (2-4) Credit: 4  
This course provides an understanding of the functioning of and maintenance required for selected power plant equipment. Steam and water pumps, traveling screens, and pressure boilers are covered. The course also covers the steam water and water cooling cycles. Prerequisites: INDU 1400, EQMT 1403, EQMT 1404.
- EQMT 2403 Maintenance of Power Plant Equipment II** (2-4) Credit: 4  
A continuation of EQMT 2402. This course covers turbines, generators and auxiliary equipment. Overhaul of selected equipment and proper lubrication will be included. Prerequisite: EQMT 2402.
- EQMT 2405 Principles of Machine Design** (3-3) Credit: 4  
A study in machine designs with emphasis on drawing and manufacturing processes. This course includes drawings for sand castings, forging and drawings of forging, fundamentals of machining, lathe drill press, shaper, planer parts machined from stock and other pertinent areas relative to machine practices.
- EQMT 2409 Equipment Maintenance Mechanic Internship** (1-20) Credit: 4  
This course consists of on-the-job equipment maintenance training that utilizes the principles, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved worksite under the supervision of College instructor/coordinator.

## **Fashion (FASH)**

- FASH 1302 Introduction to Fashion Merchandising** (3-0) Credit: 3  
Introduction to Fashion Merchandising provides an overview and history of the fashion and apparel industry, its principles and procedures. The course analyzes the production, distribution, and marketing of fashion and apparel merchandise in today's economy. In addition, subjects include the importance of fashion to the community, the marketing structure of the fashion apparel business, technology, economics, social values, culture and merchandising management. Instructional emphasis is placed on the mid-level manager's role in the industry.
- FASH 1303 Textiles, Colors and Design** (3-0) Credit: 3  
Textiles, Color and Design is a fashion and apparel course that focuses upon the rapidly changing technology of textiles and the ever increasing consumer markets. Other subjects include: the expanding home textile field, new generic fibers and finishes, new methods of computerized control of fabric construction, the new Federal Trade Commission's law on care labeling, and the Flammable Act. Emphasis is placed upon the manager's role in the textile merchandising function.

**FASH 2304 Fashion Sales and Promotion** (3-0) Credit: 3  
This course addresses those activities that promote and stimulate the sale of fashion goods. It identifies what those activities are, how they are conducted, by whom and most important why. Fashion Sales and Promotion is designed for the student whose career goals are in the field of management in the fashion apparel industry and retail marketing. Using demographics, psychographics, and attitudinal data, marketing is providing direction for both the merchandising and promotional division of today's retailers. These subjects are examined in the light of management's responsibility in the field. Prerequisite: FASH 1302.

**FASH 2305 Fashion Buying and Merchandising** (3-0) Credit: 3  
This course is intended to develop an understanding of the techniques of inventory control, elements of profit and pricing, terms of sale, and sources of information concerning buying. Other topics include: selection of merchandise, responsibilities of buying agents, and management control of the merchandising function. Prerequisite: FASH 1302.

## **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 (trust, 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 of interest to present and prospective financial institution management personnel. The practical application of the economics of money and banking to the individual financial institution is stressed. Some of the subjects covered include structure of the commercial banking system, the nature and functions of money, banks and the money supply, cash assets and liquidity management investments, loans, earnings, and capital, the Federal Reserve System and its policies and operations, Treasury Department operations, and the changing international monetary system.

**FIBA 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 persons, 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 laws, 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 1401 Finance and Banking Internship I** (1-20) Credit: 4  
This course consists of on-the-job financial training that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student is employed at an approved work station under the supervision of the College banking coordinator.

**FIBA 1402 Finance and Banking Internship II** (1-20) Credit: 4  
This course is a continuation of Finance and Banking Internship I. Prerequisite: FIBA 1401.

**FIBA 2302 Bank Management** (3-0) Credit: 3  
This course presents new trends which have emerged in the philosophy and practice of managements. The study and application of the principles of banking 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, 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, collecting 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 purposes 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: ACCO 2301 or ACCT 1301.
- FIBA 2401 Finance and Banking Internship III** (1-20) Credit: 4  
This course is a continuation of FIBA 1402. Prerequisite: FIBA 1402.
- FIBA 2402 Finance and Banking Internship IV** (1-20) Credit: 4  
This course is a continuation of FIBA 2401. Prerequisite: FIBA 2401.

## **Fine Arts (FINA)**

- FINA 1301 Introduction to Fine Arts** (3-0) Credit: 3  
This is an introductory course designed to give students 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.

## **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 standard for water supply; special hazards protection systems; automatic sprinklers and special extinguishing systems; automatic signaling and detection systems; rating organizations and underwriting agencies.
- FPRT 1304 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 communications 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 lay-out, 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 fighting and control. Prerequisite: FPRT 1307.

**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 laws, 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 Material II (3-0) Credit: 3**

Hazardous materials covering storage, handling laws, standards, and fire fighting techniques associated with chemicals, gases, flammable liquids, corrosives, poisons, explosives, rocket propellants and exotic fuel, and 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 Mutual Aid and large scale command problems. Prerequisite: Completion of, or registration therein of all other required fire courses.

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

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

**FREN 1402 Beginning French II****(3-3) Credit: 4**

Elementary grammar is completed. Pronunciation, drill, and conversation based on reading are continued. Stress is given to everyday conversational phrases. Prerequisite: FREN 1401.

**FREN 2301 Intermediate French I****(3-0) Credit: 3**

This course includes grammar review, composition, and reading of French masterpieces, with conversation based on material read. Prerequisite: FREN 1401, 1402 or two years of French in an accredited high school.

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

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

**Farm and Ranch Management (FRMG)****FRMG 1301 Wildlife Management****(3-0) Credit: 3**

An introduction to the wildlife and fishery resources of the United States, with special reference to Texas. The importance of plants and animals in our economic cultural life. An account of what has happened to North American wildlife, with considerations of specific plans and methods for its rehabilitation, maintenance, and increase.

**FRMG 1302 Range Management****(2-4) Credit: 3**

Range management for the southwestern part of the United States. Physical features affecting range conditions, problems in range management, administration and management of range lands, identification of major grasses and legumes.

**FRMG 1303 Soil Science****(2-4) Credit: 3**

A basic course in soils in which principles of the physical, chemical and biological properties of the soil are covered. Soil fertility and testing are emphasized.

**FRMG 1304 Animal Health****(2-4) Credit: 3**

Students will study the basics of internal and external parasites, principle diseases of livestock, identification and control of diseases and pests.

**FRMG 1305 Vegetable Production****(2-4) Credit: 3**

Principles and practices in producing vegetable crops, including organic gardening; soil management; composting; starting, transplanting and growing plants; insect control, fertilizing, and harvesting. Laboratory consists of application of the above practices.

**FRMG 1306 Elementary Horsemanship****(2-4) Credit: 3**

This course includes theoretical and laboratory instruction in the proper grooming, saddling, bridling, and mounting of the horse. Proper body posture and hand position of the rider is also covered. Additional topics of instruction include the anatomy of the horse and riding in western saddles.

**FRMG 1307 Intermediate Horsemanship****(2-4) Credit: 3**

This course is a continuation of Elementary Horsemanship and includes the development of the balanced seat, hands and posture at the natural gaits of the western stock horse. Additional topics of instruction include the use of cavalletti, jumping, methods of transportation and care of horses while in transit. Prerequisite: FRMG 1306 or approval of the Department Manager.

- FRMG 1308 Forage and Pasture Crops** (2-4) Credit: 3  
The production, management, and use of forage and pasture crops. The different crops used, their establishment and production will be included.
- FRMG 2301 Farm Mechanics I** (2-4) Credit: 3  
Basic farm skills in tool conditioning, sketching, carpentry, concrete, farm surveying, small engine repair, plumbing, and general farmstead maintenance.
- FRMG 2302 Farm Mechanics II** (2-4) Credit: 3  
A second course in farm shop skills for the agriculture student. Construction, repair and maintenance of farm machinery; covers metal work, including arc welding, oxy-acetylene welding, cutting, and soldering.
- FRMG 2303 Feeds and Feeding** (2-4) Credit: 3  
Chemical compositions of feeds, nutrients, requirements of farm animals, utilization of feeds, formulating and balancing rations.
- FRMG 2304 Horse Production** (2-4) Credit: 3  
This course includes theoretical and laboratory instruction in the history, evolution, breeding, and functions of the horse. Basic principles of equine nutrition, reproduction, inheritance, disease and parasite prevention and control, skeletal and muscular form, and function of the horse are also covered. Additional topics of instruction include the proper care and handling of horses for work and for pleasure.
- FRMG 2305 Advanced Equitation** (2-4) Credit: 3  
This course includes theoretical and laboratory instruction in stock seat equitation, western riding techniques, the judged arena and time events in horsemanship. Prerequisite: FRMG 1307 or approval by the Department Manager.
- FRMG 2306 Livestock Marketing** (2-4) Credit: 3  
Areas of livestock production and consumption, problems of producers and consumers, study of the agencies concerned with processing and distribution of meat and by-products, slaughtering of livestock, future marketing, use of farm and ranch records and accounts.
- FRMG 2307 Livestock Production** (2-4) Credit: 3  
The principles involved in and the practical application of breeding, feeding, care and management of cattle, swine, sheep, poultry, and rabbits. Fitting animals for livestock shows will also be included.
- FRMG 2308 Animal Breeding** (2-4) Credit: 3  
This course includes theoretical and laboratory instruction in principles of genetics, kinds of mating, horse selection, hybrid vigor, pedigree, artificial insemination, and pregnancy testing. Prerequisites: AGRI 1301, BIOL 1401 and BIOL 1402.
- FRMG 2401 Food Preservation** (3-3) Credit: 4  
The principles and practices involved in the processing and preservation of fruits, vegetables, and other food products. Units to be included are field selection, processing, freezing, canning, curing, and storing.
- FRMG 2402 Farm Equipment Maintenance and Repair** (3-3) Credit: 4  
This course covers the theory and practical laboratory experience in the proper maintenance, repair and operation of farm and ranch equipment and improvements. Emphasis is placed on preventive maintenance, trouble shooting, and the construction of farm fences, gates, and buildings.

## **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 operations.
- 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.

**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 the National Restaurant Association (N.R.A.) sanitation examination. 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.

**FSMG 1307 Meat Science****(3-0) Credit: 3**

An introductory course in raising, slaughtering, and packing meats, fish, and poultry, accompanied by an intensive study of wholesale and retail cuts of beef, veal, pork, and lamb. Emphasis is placed on the knowledge of grades, bone structure, muscle configuration, and appropriate cooking methods of hotel and restaurant meat cuts.

**FSMG 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****(3-3) Credit: 4**

An introduction to techniques of food preparation. Includes preparation of vegetables, pastries, oven dishes, soups, salads, meats, fish, and poultry. Techniques include experimental cookery, food marketing and preservation, serving and table service.

**FSMG 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.

**FSMG 2150 Food Purchasing and Financial Management****(1.3-1.3) Credit: 1**

Preparing financial statements, food pricing, quality and quantity, purchasing, and controlling food costs.

**FSMG 2151 Nutrition and Menu Planning****(1.5-1.5) Credit: 1**

Nutrition and menu planning in the food service industry.

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

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

**FSMG 2250 Advanced Culinary Skills****(1-3) Credit: 2**

This course is designed to give fine points of culinary skills and theory. Preparation of classical food menus and the arts of serving food.

**FSMG 2251 Culinary Skills****(2-2) Credit: 2**

Culinary Skills introduces the student to the methods, techniques, and terminology needed to effectively manage a quality food kitchen.

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\* Nationally certified courses.

- FSMG 2252 Nutrition and Physical Fitness** (2.5-0) Credit: 2  
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.
- FSMG 2303 Cafeteria Management \*** (3-0) Credit: 3  
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, MATH 1301 or MATH 1308.
- FSMG 2304 Hospitality Industry Sales Promotion \*** (3-0) Credit: 3  
A course designed to develop an understanding of what must be done in order to bring the wheels of production and consumption in the United States into mesh. The business activities that direct the flow of goods and services from the producer to the ultimate consumer are analyzed. Coordination of personal selling, advertising, product 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.
- FSMG 2306 Layout and Design** (3-0) Credit: 3  
Fundamentals of equipment layout for optimum production and operational efficiency. This course will include procedures to design and decorate remodeling projects.
- FSMG 2353 Creative Cooking** (2-3) Credit: 3  
Creative cooking is the art of combining creativity and design with superior food preparation and serving the art of "Garde Manger" is taught.
- FSMG 2355 Kitchen Management and Food Servicing** (2.5-2.5) Credit: 3  
This course introduces the students to the methods, techniques, and terminology needed to effectively manage a quality food kitchen.
- FSMG 2356 Gourmet Cooking** (2-3) Credit: 3  
Gourmet Cooking introduces the student to the art of cooking as practiced by professional master chefs.
- FSMG 2401 Classical Food Preparation** (3-3) Credit: 4  
This course emphasizes the fine points of culinary skills and theory. Concentration on the preparation of menus. Responsibility of the Chef and Sous-Chef.
- FSMG 2402 Exhibition Work** (3-3) Credit: 4  
Taught in conjunction with Classical Food Preparation. This course is designed to assist the student in professional employment. The essence of exhibitions, buffets, centerpieces, and the role of the Executive Chef will be emphasized. This course will include an exhibition planned and prepared by the student.
- FSMG 2405 Management Practice I \*** (1-20) Credit: 4  
This course consists of on-the-job management training that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student is employed in an approved work station in the food service industry under the supervision of a College coordinator. Prerequisite: Sophomore standing and consent of the Department Manager.
- FSMG 2406 Management Practice II \*** (1-20) Credit: 4  
This course consists of on-the-job management training that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student is employed in an approved work station in the food service industry under the supervision of a College coordinator. Students must pass the national certification examination to receive credit for this course. Prerequisite: FSMG 2405.
- FSMG 2452 The Chef's Course** (2.5-2.5) Credit: 4  
Course is designed to develop a combination of good management practices, food preparation expertise, artistic creativity in laboratory exercises in food preparation. Student will be required to prepare and serve a buffet meal.
- 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.

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\* Nationally certified courses.



## **Food Service Operations (FSOP)**

**FSOP 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.

**FSOP 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.

**FSOP 1306 Menu Planning** (3-0) Credit: 3

Basic factors of planning menus; variety and nutrition and menu planning; techniques of preparing attractive menus and maintaining budgetary controls; types of menus for various public and private institutions.

**FSOP 2303 Cafeteria Management** (3-0) Credit: 3

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.

**FSOP 2304 Hospitality Industry and Sales Promotion** (3-0) Credit: 3

A course designed to develop an understanding of what must be done in order to bring the wheels of production and consumption in the United States into mesh. The business activities that direct the flow of goods and services from the producer to the ultimate consumer are analyzed. Coordination of personal selling, advertising, produce design, market research and customer relations/services are the individual ingredients of sales promotion and each is examined in detail. Advertising is studied as the force that creates prospects, converts these prospects into customers and keeps customers returning and buying.

**FSOP 2305 Financial Management** (3-0) Credit: 3

Methods and application of financial management within the combined food service facility. Primary emphasis upon sales accountability and internal controls utilized within bar, food, dining room and hotel operation area. Secondary emphasis on budgeting and forecasting with application of effective labor/sales ratios. Prerequisite or Corequisite: FSMG 1301, MATH 1301 or 1308.

**FSOP 2307 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.

## **Foreign Language**

(See French, German, Japanese or Spanish)

## **General Secretarial**

(See Office Administration)

## **Geography (GEOG)**

**GEOG 1301 Introduction to Geography** (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 2301 Elements of Physical Geography** (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. Principal topics to be discussed are: the atmosphere and oceans, weather, climate, environments of earth materials and vegetation, land forms and their development.

**GEOG 2302 Cultural Geography** (3-0) Credit: 3

A survey of human geography and the ways mankind adapts and reacts to his environment. Culture 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.

## **Geology (GEOL)**

**GEOL 1401 Physical Geology** (3-3) Credit: 4  
An introductory course in the nature and properties of the materials which make up the earth. Topics included are processes of glaciation, volcanism, weathering, and erosion. Modern theories such as plate tectonics are also studied. Field work including the study of local rocks and minerals, is an integral part of the course.

**GEOL 1402 Historical Geology** (3-3) Credit: 4  
The course involves a study of the record of life forms that developed throughout geological time. It also covers the development of the earth from its cosmic beginning to current land forms. Principles of stratigraphy, paleontology, geologic time, plate tectonics, and hypotheses of earth origin are studied in the course. Field work includes the study of local fossil fauna is an integral part of the course.

## **German (GERM)**

**GERM 1401 Beginning German I** (3-3) Credit: 4  
For those who have had no previous work in German. The essential grammar expression. Requires three laboratory hours per week for the memorization and presentation of German dialogues by the students.

**GERM 1402 Beginning German II** (3-3) Credit: 4  
A continuation of Beginning German I. Prerequisite: GERM 1401 or its equivalent.

**GERM 2301 Intermediate German I** (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 1401, GERM 1402 or two years of German in an accredited high school.

**GERM 2302 Intermediate German II** (3-0) Credit: 3  
Continues the drill on syntax as needed for reading, composition and conversation. Prerequisite: GERM 2301.

## **Science (GESC)**

(See Biology, Chemistry, Geology)

**GESC 1301 General Physical Science** (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.

## **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  
An 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 2303 Introduction to Political Science** (3-0) Credit: 3  
This course is designed to introduce the student to the general area of political science and to provide knowledge and understanding of political fundamentals, public law, political dynamics, public policy, theory and organization of the modern state, and international relations.

## **Graphic Arts**

(See Drafting and Design)

## History (HIST)

**HIST 1301 History of the United States to 1865** (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 1865** (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 1303 Survey of Western Civilization I** (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 1304 Survey of Western Civilization II** (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 2301 International Relations and U.S. Foreign Policy** (3-0) Credit: 3  
A study of international relationships and problems in world affairs; organization and processes used to arrive at foreign policy decisions of the United States; the elements of international communist ideologies; and the evolution of American foreign policy since 1945.

**HIST 2302 Studies in American History** (3-0) Credit: 3  
This course is a survey of the major developments in United States history with special emphasis on the international developments since 1945 in which the American people have played dominant or decisive roles. The influence that Europe and Asia have had on the United States will also be examined. Other countries' foreign policies, the Cold War, the rise of the Third World and the American social and cultural revolution are major topics of instruction in this course. Prerequisites: HIST 1301 and HIST 1302 or consent of instructor.

**HIST 2303 History of Christian Religion** (3-0) Credit: 3  
A study of the origin, progress, and development of the Christian religion. Attention will be given to development of beliefs and the rise of denominations.

**HIST 2304 World Religions** (3-0) Credit: 3  
A survey course dealing with the origins, tenets, and development of the major world religions. Deductive method used to understand religion as a phenomenon in man's life. Discussion of Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam.

**HIST 2350, 2351 Military History I and II** (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.

## Horse Management

(See Farm and Ranch Management)

## 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 & 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. ‡

\* All courses certified by the American Hotel and Motel Association.

‡ Students must pass the National Certification examination to receive credit for this course.

- 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. ‡
- HMMG 1306 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. ‡
- HMMG 1307 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. ‡
- HMMG 1308 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.
- HMMG 2301 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. ‡
- HMMG 2302 Supervisory Housekeeping** (3-0) Credit: 3  
This course includes organization of a housekeeping department of a hotel, job schedules, job breakdown, floor care, stain removal, fire inspection, purchasing records, equipment records, linen inventory and care, carpeting and care, and basic interior design. ‡
- HMMG 2304 Financial Management** (3-0) Credit: 3  
Methods and application of financial management within the combined food service facility. Primary emphasis upon sales accountability and internal controls utilized within bar, food, dining room, and hotel operational area. Secondary emphasis on budgeting and forecasting with applications of effective labor/sales ratios. Prerequisite: FSMG 1302, MATH 1301 or MATH 1308. ‡
- HMMG 2305 Hotel/Motel Maintenance** (3-0) Credit: 3  
This course includes a study of the organization, terms and concepts common to building maintenance. Maintenance functions to be studied include heating, plumbing, electrical, refrigeration and air conditioning, communications and signal system, kitchen equipment, fire prevention and protection, and elevator systems. ‡
- HMMG 2306 Recreational Services** (3-0) Credit: 3  
This course includes the study of the needs of guest recreation and entertainment, space available for these activities, cost of operation and maintenance, layout and design and direct and indirect benefits. ‡
- HMMG 2307 Marketing of Hospitality Services** (3-0) Credit: 3  
This course is designed to provide students with basic knowledge and practical experience which enables them to develop strategic marketing plans for Hotel/Motel properties. ‡
- HMMG 2308 Food and Beverage Controls** (3-0) Credit: 3  
Covers 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. ‡
- HMMG 2309 Hospitality Industry Computer Systems** (3-0) Credit: 3  
This course provides an overview of the 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.
- HMMG 2401 Hotel/Motel Internship I** (1-20) Credit: 4  
This course consists of on-the-job hotel/motel training that utilizes the principles, skills and knowledge gained in the theoretical setting of the classroom. The student is employed at an approved work station un-

‡ Students must pass the National Certification examination to receive credit for this course.

der the supervision of the College hotel/motel intern coordinator. Student must have Department Manager's permission to enroll. ‡

#### **HMMG2402 Hotel/Motel Internship II**

(1-20) Credit: 4

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

### **Industrial Fundamentals (INDU)**

#### **INDU 1400 Industrial Fundamentals**

(3-3) Credit: 4

This is a required introductory course for students in all of the Industrial Technology curriculums. 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 curriculums.

### **Japanese (JAPN)**

#### **JAPN 1300 Introduction to Japanese**

(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 1301 Beginning Japanese I**

(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 1302 Beginning Japanese II**

(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 1301.

### **Journalism (JOUR)**

#### **JOUR 1301 Communications Media**

(3-0) Credit: 3

Instruction in the mass media of the modern world. A survey of all the mass media, their purposes, and their methods of operation.

#### **JOUR 1302 News Gathering and Reporting**

(3-0) Credit: 3

Instruction in the fundamental news gathering and writing techniques, interviewing techniques, and discussion of news sources and values.

### **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 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.

#### **LAW 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.

#### **LAW 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, sentencing.

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‡ Students must pass the National Certification examination to receive credit for this course.

- 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 officer is taught the use of spot maps and charts, the techniques of enforcement, and the maintenance of good public relations. An analysis of the Model Motor Vehicle code is given.
- 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; prevention of crime.
- 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  
The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues.
- 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 crime scene; use of modern investigation aids; and techniques of criminal interviews. 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, 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  
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 can 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 Department Manager. This course may be repeated for credit.
- 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 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 a 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 the student to utilize all the course material in "hands-on" hostage negotiation situations.
- LAWE 2312 Homicide** (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 Narcotics** (3-0) Credit: 3  
This course presents an in-depth approach to the medical and legal aspects on the topic of narcotics. Students will learn how to identify dangerous drugs by their distinct characteristics and explain their effects on the human body. Most importantly, students 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 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 1301 Introduction to Legal Assistant** (3-0) Credit: 3  
This course provides a general introduction to the law with emphasis on the role of the legal assistant. To give the 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 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 agreement, 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, requests 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 1402 Legal Office Ethics and Management** (3-3) Credit: 4  
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 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 1301.

**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 1301.

**LEGA 2306 Techniques of Legal Research** (2-2) 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 1301 and ACCO 2301 or 2303.

**LEGA 2404 Legal Assistance Internship** (1-20) Credit: 4  
This course consists of on-the-job training in the legal field. It utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student works at an approved work station under the supervision of a College coordinator. Only students who do not have a minimum of one year experience in the legal field are required to take this course. Prerequisite: Sophomore standing or consent of the Department Manager.

**LEGA 2405 Wills, Trust and Probate** (3-3) Credit: 4  
This course presents the basics of legal writing and legal documents with which a legal assistant will have to deal. The various kinds of legal writing will be considered. These are letters, instruments (e.g., contracts, deeds, wills, bonds, leases), pleading (e.g., complaint, answer) memoranda and briefs. Special attention will be given to the memoranda as documents which must be resolved before instruments, pleadings or briefs are sent out. 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. Prerequisites: LEGA 1301 and ENGL 1301.

## **Mathematics (MATH)**

**MATH 1101 Basic Concepts of Statistics** (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 1301 Intermediate Algebra** (3-0) Credit: 3  
This course includes algebraic fractions, functions, rectangular coordinate system, the straight line, exponents, radicals, complex numbers, quadratic equations and quadratic inequalities. Prerequisite: DSMA 0301 or acceptable placement test score.

**MATH 1302 College Algebra** (3-0) Credit: 3  
This course is a continuation of MATH 1301. 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. Prerequisite: MATH 1301 or acceptable placement test score. This course is recommended for students intending to enroll in advanced mathematics courses.

**MATH 1303 Trigonometry** (3-0) Credit: 3  
Wrapping function, circular functions, trigonometric functions, polar coordinates, use of tables, identities, applications to right triangles and oblique triangles, inverse functions, trigonometric equations. Prerequisite: MATH 1301 or equiv.

**MATH 1304 Analytic Geometry** (3-0) Credit: 3  
An algebraic treatment of straight lines, circles, parabolas, hyperbolas, ellipses. Transformation of coordinates, curve sketching, polar coordinates. Prerequisite: MATH 1303 or equivalent.

**MATH 1305 Finite Mathematics** (3-0) Credit: 3  
Symbolic logic, set theory, permutations, combinations, counting methods, probability. Prerequisite: MATH 1301 or equivalent.

**MATH 1308 Elementary Statistics** (3-0) Credit: 3  
Collection and tabulation of data, bar charts, graphs, sampling, averages, dispersion, correlation, index number, normal curve, probability, inferential statistics, applications. Prerequisite: DSMA 0301 or equivalent.

**MATH 2301 Calculus I (Fall)** (3-0) Credit: 3  
First course in differential calculus. Prerequisite: MATH 1304 or equivalent or concurrent enrollment in MATH 1304.

**MATH 2302 Calculus II (Spring)** (3-0) Credit: 3  
A first course in Integral Calculus. Prerequisite: MATH 2301 or equivalent.

**MATH 2303 Advance Calculus** (3-0) Credit: 3  
A further study of limits, functions, sequences, series, elementary differential equations, partial derivatives, multiple integrals, surface integrals. Prerequisite: MATH 2302 or equivalent.

## **Mathematics, Developmental**

(See Developmental Studies)

## **Mathematics, Electronics**

(See Electronics Technology)

### **Medical Laboratory Technician (MELT)**

**MELT 1402 Hematology** (3-3) Credit: 4

That branch of medical laboratory science involving the morphology of blood and blood forming tissues. Included will be studies of normal and abnormal hematological states and coagulation studies.

**MELT 1601 Introduction to Medical Laboratory Techniques** (4-6) Credit: 6

This course will be a general introduction to Medical Laboratory Technology. It will include the following: instrumentation, urinalysis, phlebotomy, immunology, blood bank and microbiology.

**MELT 2201 Medical Laboratory Seminar** (2-0) Credit: 2

This will be a discussion course involving special topics. Various guest speakers will be invited to participate. Special programs in new technology may be included.

**MELT 2401 Clinical Practice II** (1-10) Credit: 4

Clinical experience totaling 176 hours in an approved clinical facility and conference with instructor are required. Prerequisite: MELT 2502.

**MELT 2402 Medical Microbiology I** (3-3) Credit: 4

This course includes the morphology and relationship of pathogenic organisms in the human body. Primary emphasis will be placed on identification and isolation.

**MELT 2403 Immunology & Immunohematology** (3-3) Credit: 4

The science that deals with blood group antigens and antibodies. Included will be exercises involved in the detection of foreign antibodies in the patient. Blood grouping and Rh factor, cross matching blood for transfusions and illnesses associated with blood incompatibilities such as hemolytic diseases of the newborn. Suppression of antibody production with the use of products for preventive therapy will be studied. Prerequisite: MELT 1601.

**MELT 2404 Medical Microbiology II** (3-3) Credit: 4

Continuation of MELT 2402. It will also include parasitology and mycology. Primary emphasis will be placed on identification. Prerequisite: MELT 2402.

**MELT 2405 Clinical Chemistry** (3-3) Credit: 4

Designed to study blood chemistry covering vital organs of the body and their effect on blood chemistry. Deals with chemical analysis of body fluids.

**MELT 2406 Clinical Practice III** (1-10) Credit: 4

Clinical experience totaling 176 hours in an approved Clinical Laboratory, plus Clinical Conference with the Laboratory Director and/or Instructor. Prerequisite: MELT 2401.

**MELT 2502 Clinical Practice I** (1-13) Credit: 5

Clinical experience totaling 224 hours in an approved clinical facility and conference with instructor are required. Prerequisite: MELT 1402, MELT 1601, BIOL 1406 and CHEM 1402.

## **Medical Technology**

(See Biology, Chemistry)

### **Management And Marketing (MGMK)**

**MGMK 1101 Leadership Development I** (1-1) Credit: 1

The purpose of this course is to develop an awareness and respect for education in marketing and distribution which will contribute to occupational competence, and to promote understanding and appreciation for the responsibility of citizenship in our free, competitive enterprise system. It is intended for students who are preparing themselves for careers in middle management, sales, advertising, finance, retailing, wholesaling, insurance, real estate, fashion merchandising, food service management, hotel/motel management, and other marketing-oriented occupations. Students will be expected to participate in a student vocational leadership organization, Junior Collegiate Distributive Education Clubs of America (DECA). (Approval of a Management and Marketing Coordinator is required for admission)

**MGMK 1102 Leadership Development II****(1-1) Credit: 1**

This course is a continuation of MGMK 1101. Prerequisite: MGMK 1101 and consent of a Management and Marketing Coordinator.

**MGMK 1103 Leadership Development III****(1-1) Credit: 1**

This course is a continuation of MGMK 1102. Prerequisite: MGMK 1102 and consent of a Management and Marketing Coordinator.

**MGMK 1311 Retail Management****(3-0) Credit: 3**

This course is for persons intending to develop careers in retailing or marketing as well as for those seeking an introduction to the field of retailing. It contains an overview of retailing - from the development and growth of retailing to an analysis of the consumer. The impact of innovation and competition on retail institutions is studied, as well as the influence of fashion, computers, and consumerism in the industry. Other subjects include: types of ownership, types of merchandise sold, the human and physical sides of store management, merchandising, selling, advertising, sales promotion, profit and pricing techniques.

**MGMK 1401 Management and Marketing Internship I****(1-20) Credit: 4**

This course consists of on-the-job management training that utilizes the principles, skills and knowledge gained in the theoretical setting of the classroom. The student is employed at an approved work station under the supervision of the College Management and Marketing Coordinator.

**MGMK 1402 Management and Marketing Internship II****(1-20) Credit: 4**

This course is a continuation of Management and Marketing Internship I. Prerequisite: MGMK 1401.

**MGMK 2401 Management and Marketing Internship III****(1-20) Credit: 4**

This course is a continuation of Management and Marketing Internship II. Prerequisite: MGMK 1402.

**MGMK 2402 Management and Marketing Internship IV****(1-20) Credit: 4**

This course is a continuation of Management and Marketing Internship III. Prerequisite: MGMK 2401.

**Management, Applied (MGMT)**  
**Management, Business (MGMT)**  
**Management, Training (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 1201 Management of Performance Oriented Training****(2-0) Credit: 2**

A course designed to provide a performance oriented approach to managing training in which the manager learns to establish performance oriented objectives, tests, and follow-up evaluations.

**MGMT 1202 Briefing Techniques, Aids and Devices****(2-1) Credit: 2**

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, filmstrips, transparencies, opaques, and other media.

**MGMT 1203 Evaluation of Instruction and Training****(2-1) Credit: 2**

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 1204 Setting Objectives and Goals****(2-1) Credit: 2**

A course designed to provide managers with the processes involved in defining objectives, determining desired goals, and analyzing performance training to enhance achievement of those goals and objectives.

**MGMT 1205 Analysis of Training Requirements****(2-1) Credit: 2**

A course 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 in this course.

**MGMT 1206 Professional Resource Management****(2-0) Credit: 2**

A course designed to provide managers with the capability to assist subordinates in the screening, selection, evaluation, and application of employee training programs.

- MGMT 1207 Professional Development of the Manager** (2-0) Credit: 2  
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 1208 The Training System Management** (2-1) Credit: 2  
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 system objectives.
- MGMT 1209 Managerial Theories** (2-0) Credit: 2  
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.
- MGMT 1301 Organization and Management** (3-0) Credit: 3  
Organizational structure can have considerable impact on the manner in which an organization functions. The student studies the complex variables over which managers can exercise control to determine proper structure. While surveying management topics such as planning, decision making, organizing, staffing and controlling, this course deals, in specific terms, with how the organization must be structured to fit its environment and operation.
- MGMT 1302 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 to the unification of all areas from human factors to environmental factors are covered, along with the manner and methods through which work can be simplified, yet made more meaningful and satisfying.
- MGMT 1304 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.
- 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 changes 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 2101 Stress Management** (1-0) Credit: 1  
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.
- MGMT 2102 Management Seminar** (1-0) Credit: 1  
A course that deals with trends, issues, advancements and literature in the management field.

- MGMT 2103 Time Management** (1-0) Credit: 1  
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.
- MGMT 2104 Income Tax** (1-0) Credit: 1  
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 question, the student will be encouraged to seek professional assistance.
- MGMT 2105 Briefing Techniques, Aids and Devices** (1-0) Credit: 1  
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.
- MGMT 2150 Trainers Workshop (TW)** (1.5-0) Credit: 1
- MGMT 2151 Platoon Trainer's Workshop** (1.5-0) Credit: 1
- MGMT 2152 Training Supervisor's Workshop** (1.5-0) Credit: 1
- MGMT 2161 Unit and Organizational Supply** (2.5-0) Credit: 1  
To provide the students the skills and knowledge to accomplish the duties required of units and organizational supply personnel.
- MGMT 2162 Personal Finance Management** (1.3-0) Credit: 1  
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.
- MGMT 2164 Army Personnel** (1-0) Credit: 1  
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.
- MGMT 2201 Job Performance and Motivation** (2-0) Credit: 2  
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 2202 Individual Orientation Techniques** (2-0) Credit: 2  
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 2203 Group Orientation Techniques** (2-1) Credit: 2  
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 2202.
- MGMT 2204 Assessing of Training Standards, Goals and Objectives** (2-1) Credit: 2  
A course designed to provide managers with the ability to establish realistic and relevant training standards. The relationships 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 1204.
- MGMT 2205 Management Training Theory** (2-1) Credit: 2  
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 2206 Management Learning Strategies** (2-1) Credit: 2  
Provides 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.
- MGMT 2255 Platoon Trainer's Workshop** (2.5-0) Credit: 2
- MGMT 2256 Training Supervisor's Workshop** (2-0) Credit: 2  
Provide training management for the medium sized organization (battalion) to include long and short range plans, LRC and ARTEP.

- MGMT 2257 Trainer's Workshop (TW)** (2.3-0) Credit: 2
- MGMT 2258 Training Manager's Workshop** (2-0) Credit: 2  
Provide training management information for battalion sized units to include long and short range goals, training assets, money and allocations, and ARTEP standards.
- MGMT 2259 Platoon Trainer's Workshop** (2.3-0) Credit: 2  
Course provides management of training instruction at the platoon level, includes long and short range planning and ARTEP integrated training for small groups.
- MGMT 2261 Leadership and Communications Seminar** (2-0) Credit: 2  
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.
- MGMT 2300 Credit and Collections** (3-1) Credit: 3  
This course covers the elements of mercantile and consumer credit, organization of a credit department, sources of credit information collection tolls and procedures.
- MGMT 2301 Marketing Principles** (3-0) Credit: 3  
The study of marketing as an exchange relationship in public and private organizational concerns. Includes an orientation of the different prevailing thoughts in marketing today including the historical, economic, consumer, and systems approaches. Market research and market segmentation strategies are examined, as well as current government agency regulation concerning marketing practices.
- MGMT 2302 Personnel Management** (3-0) Credit: 3  
The dynamic role of management as it relates to personnel with emphasis on the management aspects important to the line executive or supervisor. Personnel functions and procedures are viewed in the light of management objectives while personnel management is treated as an active and dynamic process which is motivated by basic human drives.
- MGMT 2303 Law and Legal Assistance** (3-0) Credit: 3  
Nature and scope of the law, court systems, law of contracts, principal and agent as relates to the military. Explanation of bailments, carriers, mortgages, securities, negotiable instruments, banks and banking, wills and estates. The procedures of obtaining and acquiring legal assistance for both military and civilian cases in or out of the continental limits of the United States of America are addressed. Emphasis is given on the knowledge required by the supervisor to counsel subordinates in the areas of law and legal assistance.
- MGMT 2304 Labor-Management Relations** (3-0) Credit: 3  
Labor relations aspects of personnel management are emphasized; selection and placement, discipline and morale, promotions, lay-offs, job evaluation, incentive systems, profit sharing, and the influence of collective bargaining and legislation on personnel policies. Methods used by organized labor and employers in industrial conflicts.
- MGMT 2305 Business Law I** (3-0) Credit: 3  
Nature and scope of law; court system; law of contracts; principle and agent; business organizations, including partnerships and corporation; Texas community property laws.
- MGMT 2306 Business Law II** (3-0) Credit: 3  
Additional studies in law of business, dealing with bailments, carriers, mortgages, suretyships, negotiable instruments, banks and banking, wills and estates, sale, 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  
Systematic study of major theories of personnel counseling with supervised experience in role playing utilizing these approaches.
- 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 student 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: Departmental consent.
- 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 departmental consent.
- 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, marketplace 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 student wants to develop or expand.
- 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  
Course provides management of training for the small unit, individual SQT and small group performance oriented training.

## **Management, Food Service** (See Food Service)

## **Management, Hotel-Motel** (See Hotel-Motel)

## **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 1306 Introduction to BASIC** (2-1) Credit: 3  
Offers an introduction to the basic concepts and constructs of programming in BASIC for the student interested in using a computer at home, in a small business or as a tool in a subject area such as math or science. Applications will illustrate personal computing techniques.
- MISC 1403 Introduction to Computer Science & Programming** (3-3) Credit: 4  
Problem solving, algorithm development, pseudo code flow charting and a high level language are covered in depth. No prior knowledge of computers or programming is assumed.
- 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, control breaks, and an introduction to indexed file handling. Prerequisite: MISC 1403 or MISC 1451.
- MISC 1405 Computer Concepts and Analysis** (3-3) Credit: 4  
Introduces the student to digital computer systems with emphasis on current technology and terminology. Historical development of computing machinery, number systems, data representation, hardware and software. Methods of identifying business problems best suited for computer solutions and the analysis techniques to develop systems which implement these applications are presented.
- 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. Includes overview of currently available word processors, their similarities and differences, and the selection process of matching information requirements with word processor capabilities. Installation and tailoring of word processor software.
- MISC 1430 Spreadsheets for Microcomputers** (3-3) Credit: 4  
An entry level course that presents the design and use of typical spreadsheet software available. Selected state-of-the-art spreadsheet software packages will be used by the student for hands-on computer applications. Advantages and disadvantages of current spreadsheet software as well as installation of spreadsheet software will be covered.
- 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. It includes an overview of currently available data bases, their similarities and differences, and the selection process of matching information requirements with data base capabilities. Installation and tailoring 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, database, and BASIC programming 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. No prior knowledge of computers or programming is assumed. Problem solving, algorithm development, pseudo code and flow charting. A high level language is covered in depth through programming assignment.
- 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. An introduction to C language will also be provided. Prerequisite: MISC 1451 or COSC 1403.
- 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.



**MISC 2302 Hardware/Software Selection & 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 upgrade 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 ANS 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 database, 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 database project. Prerequisite: 16 hours in Microcomputer Technology including MISC 1405.

**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 processing, and subroutines. Programs will be written in a high-level language. Prerequisite: Eight semester hours of programming.

**MISC 2451 Operating Systems** (3-3) Credit: 4  
This course provides comprehensive coverage of major present-day operating systems. Topics include system configuration, batch files, directory and hard disk management, utilities, networking multi-user support, installing and customizing application software. Prerequisite: (MISC 1406 and 8 semester hours in programming) or (16 semester hours MISC courses including MISC 1451).

**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. Prerequisites: MISC 1451 and one other programming language.

**MISC 2454 Data Communications & Networking** (3-3) Credit: 4  
A study of the methods and criteria used to define and implement data communications and networking of present day computer systems. Topics include data transfer, communications hardware and software, security, Local Area Networks, micro to mainframe interfaces, current and future applications of data communications. Prerequisite: MISC 2451.

**MISC 2455 Microcomputer Field Projects** (1-9) Credit: 4  
This course consists of practical applications in the field of microcomputers, commercial and/or scientific programming, and is designed to fit the needs and career objectives of the student. Prerequisite: Consent of instructor.

**MISC 2456 C Language Programming** (3-3) Credit: 4  
The use of C in both systems and 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: MISC 1454.

**MISC 2457 Programming with ADA®** (3-3) Credit: 4  
An introduction to the basic syntax and semantics of ADA programming language. The design and use of the language will be 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.

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## **Maintenance Technology (MTNT)**

**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 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 will also cover modern methods of placement 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 trueing 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 sizing in accordance with established codes, cost estimating, and sprinkler systems. Also included are the procedures involved in cast iron pipe installation. Prerequisite: MTNT 2403.

## **Music (MUSI)**

### **Music, Applied (MUSI)**

#### **Music, Voice (MUSI)**

**MUSI 1101 Class Piano I** (1-1) Credit: 1  
Introduction to the keyboard, the study of Mikrokosmos Vol. 1 by Bartok, easy selections from the classic, romantic and contemporary piano literatures. Memory work is emphasized throughout. Scales up to two key signatures. One hour daily practice required. Prerequisite: credit or enrollment in MUSI 1301.

**MUSI 1102 Class Piano II** (1-1) Credit: 1  
A continuation of Class Piano I. Technique: scales and arpeggios through three key signatures. Literature: Little Dances by Bach, a classic Sonatina, selections from the easy romantic and contemporary piano litera-

ture. Memory work is emphasized throughout. One hour daily practice required. Prerequisite: MUSI 1101 or consent of the instructor; credit or enrollment in MUSI 1301 or 1302.

**MUSI 1103 Class Piano III** (1-1) Credit: 1  
For students with a considerable keyboard skill. Scales and arpeggios through four key signatures. Literature: short preludes by Bach, a classic Sonatina or sonata, romantic and Modern compositions. Memory work is emphasized throughout. One hour minimum daily practice required. Prerequisite: MUSI 1102 or consent of the instructor; credit or enrollment in MUSI 1301 or 1302.

**MUSI 1104 Class Piano IV** (1-1) Credit: 1  
A continuation of Class Piano III. All scales and arpeggios on four octaves in thirds, sixths, and the octave. Literature: short preludes by Bach, a classic Sonatina or sonata, romantic and Modern compositions. Memory work is emphasized. One hour minimum daily practice is required. This course is a preparation for private piano and may be repeated until the student is ready to meet the entrance requirements for MUSI 1201. Prerequisite: MUSI 1103 or consent of the instructor; credit or enrollment in MUSI 1302.

**MUSI 1105, 1106 Class Voice I & II** (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 1107 Choir** (1-2) Credit: 1  
This course is recommended to all students who enter music courses, but it is open to all students. Preparation for on-campus and public performances.

**MUSI 1201 Private Piano I** (0-2) Credit: 2  
Private piano technique: *Czerny's School of Velocity* and scales and arpeggios. Literature: two- or three-part inventions by Bach, a complete classic Sonata, works by composers from the 19th and 20th centuries. All work is to be memorized. One one-hour lesson per week. Two hours daily practice required. Prerequisite: MUSI 1103 or MUSI 1104 or audition; credit or enrollment in MUSI 1302.

**MUSI 1202 Private Piano II** (0-2) Credit: 2  
A continuation of Private Piano I. One one-hour lesson per week. Two hours daily practice required. Prerequisite: MUSI 1201 or audition; credit or enrollment in MUSI 1302.

**MUSI 1203, 1204 Private Voice I & II** (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 1106 and/or audition; credit or enrollment in MUSI 1301 or 1302.

**MUSI 1205 Ear Training I** (1-2) Credit: 2  
This course is designed to help the student develop the aural skills pertinent to proficiency in music theory. It includes the study and proper identification of melodic patterns, intervals and triads, and exercises in melodic dictation. Prerequisite: credit or enrollment in MUSI 1301.

**MUSI 1206 Ear Training II** (1-2) Credit: 2  
A continuation of Ear Training I. Sight singing, intervals, triads, and seventh chords, asymmetric and mixed meters. Exercises in melodic and harmonic dictation. Prerequisite: MUSI 1205 and credit or enrollment in MUSI 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. Ear training, sight singing, melodic dictation in simple and compound meters. 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, sequences. Analysis of short works. Ear training, sight singing, dictation. Relative solmization method employed throughout. Cadences, sequences on the keyboard. Prerequisite: MUSI 1301 or consent of instructor.

**MUSI 1305 Music Appreciation** (3-0) Credit: 3  
This course is designed for the music student as well as for the general college student. It emphasizes intelligent, directed listening to music with attention focused on the materials, the forms and the periods and styles of music. Course work will also cover the relation of music to other areas of cultural development.

**MUSI 2201, 2202 Private Piano III & IV** (0-2) Credit: 2, 2  
 Technique includes all scales and arpeggios on four octaves and Clementi or Czerny studies. Literature: WTC Preludes and Fugues by Bach, a Sonata by Haydn, Mozart or Beethoven; romantic, impressionistic and modern compositions; one movement of a standard Concerto. Student is required to memorize all material. One one-hour private lesson per week. Two hours daily practice required. Prerequisite: MUSI 1202 and credit or enrollment in MUSI 2306 or 2307.

**MUSI 2203, 2204 Private Voice III & IV** (0-2) Credit: 2, 2  
 A continuation of MUSI 1203 and 1204. 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 1204 and credit or enrollment in MUSI 2306 or 2307.

**MUSI 2301, 2302 Advanced Private Piano I & II** (0-2) Credit: 3, 3  
 Scales and arpeggios in all keys. Repertoire: Partitas, Suites or Preludes and Fugues by Bach. A Beethoven Sonata or a standard Concerto, romantic, impressionistic and modern compositions. Student is requested to memorize all material. One hour private lesson per week. Three hours of daily practice required. Prerequisite: MUSI 2202 and credit or enrollment in MUSI 2306 or 2307.

**MUSI 2303 Piano Pedagogy** (2-1) Credit: 3  
 Open to music majors only. The study of piano teaching methods from the beginning through the intermediate grades. The development of technique, memory, style and musicianship. The planning of a balanced repertoire, review and evaluation of piano literature. Laboratory includes supervised practice teaching. Prerequisites: credit or enrollment in MUSI 2201 and 1302, or consent of instructor.

**MUSI 2304 Music Literature I** (3-1) Credit: 3  
 A survey of the development of music from the end of the Ancient World to the present time, with an in-depth study of the music from the 15th century through the 19th century. Principle forms, periods and composers and the literature of each of the historical periods.

**MUSI 2305 Music Literature II** (3-1) Credit: 3  
 A continuation of Music Literature I with an in-depth study of music in the periods of late 19th and 20th centuries; the concurrent symphonic and concert literature of today; voice, choral, and instrumental organizations.

**MUSI 2306 Intermediate Harmony** (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, altered chords, nonharmonic tones. Melody harmonizations, dictation. Sequences with seventh chords on the keyboards. Prerequisite: MUSI 1302.

**MUSI 2307 Advanced Harmony** (3-2) Credit: 3  
 The study of harmony as an organizing element of the large-scale musical structure. Diatonic, chromatic and enharmonic modulations. Melody harmonizations, analysis of larger works, harmonic dictation. Modulation to related and distant keys on the keyboard. Prerequisite: MUSI 2306.

## Nursing (NURI)

**NURI 1101 Psychiatric Nursing I** (1-1) Credit: 1  
 This course introduces the student to the care of the emotionally ill person. Emphasis is upon the nurse-patient relationship; the role of the nurse in the provision of care in various settings, and therapeutic communication techniques. There is a one hour laboratory component in this course. Corequisite: NURI 1902, or another clinical nursing course and permission of Director.

**NURI 1401 Bridging Course** (3-4) Credit: 4  
 This course prepares LVNs for entry into the second year of the ADN program by meeting the knowledge and skill deficit needs of the individual. LVNs meeting the admission criteria will enhance their knowledge base and nursing skills through the study of the nursing process, therapeutic communications, conceptual framework of nursing practice, physical assessment, and selected needs of the psychiatric and medical-surgical adult client. Prerequisites: ENGL 1301, MATH 1301, BIOL 1405, BIOL 1406, PSYC 1101 and PSYC 2301.

**NURI 1901 Fundamentals of Nursing** (4-20) Credit: 9  
 This course provides an overview of the health care field and the role of the nurse as a member of the health care team. Instruction is designed to assist the student in developing knowledge in the areas of communication, interpersonal relations, growth and development, psychological aspects of patient care, health teaching, safety, asepsis technical skills, pharmacology, nursing math, nutrition nursing process, nursing history, trends, legal aspects and self evaluation. Area hospitals and health agencies and various community agencies

provide opportunity for clinical experience and/or observation. Corequisite: BIOL 1405. Prerequisites: ENGL 1301, MATH 1301, PSYC 1101 and PSYC 2301.

**NURI 1902 Medical-Surgical Nursing I (4-20) Credit: 9**

This course is a development of knowledge, skills and attitudes necessary for planning, implementing and evaluating the nursing care of adult patients with medical and surgical problems in non-critical care areas. Includes special emphasis on perioperative nursing care of surgical patients. Content focuses on disease processes involving all body systems, diet therapy, pharmacology, mental health concepts, culture, ethnicity, religious aspects, prevention and rehabilitation. Prerequisite: NURI 1901, BIOL 1405. Corequisite: BIOL 1406.

**NURI 2101 Nursing Trends Seminar (1-0) Credit: 1**

This course is designed to ease the transition from student to graduate status through exploration of patterns of patient care, areas of employment, legal and professional responsibilities, current issues and trends. The seminar method is used throughout. Prerequisite: NURI 2903 and Corequisite: NURI 2904.

**NURI 2102 Psychiatric Nursing II (1-1) Credit: 1**

Focus is on psychopathologies and the various nursing interventions appropriate for treatment. Emotional illness across all ages is included. There is a one hour laboratory component in this course. Prerequisites: NURI 1901, 1902, 1101. Corequisite: NURI 2903 or another clinical nursing course or permission of Director.

**NURI 2103 Psychiatric Nursing III (0-4) Credit: 1**

This course will center on clinical application of psychiatric nursing concepts in the care of persons seeking help for emotional/mental health problems. Students are guided in use of techniques of establishing, maintaining and terminating therapeutic nurse-patient/client relationships. A number of community facilities will be utilized for students' supervised clinical experience. Prerequisite: NURI 2102, NURI 2903 and Corequisite: NURI 2904.

**NURI 2903 Maternal & Child Health Nursing (4-20) Credit: 9**

The parents, child, family and/or significant others are considered a unit in this course. Nursing care experience includes maternity care (antepartum, intrapartum, and postpartum), neonatal care, and pediatric care. The different needs of children related to developmental stages and pathological conditions are emphasized. Family planning, health teaching, and family adaptation to problems of daily living are also discussed. Prerequisites: NURI 1902, BIOL 1406 and PSYC 2303. Corequisite: BIOL 2404 and NURI 2102.

**NURI 2904 Medical-Surgical Nursing II (4-20) Credit: 9**

The course aids the student in developing skills in caring for groups of patients with more complicated medical-surgical nursing problems. The patient and significant others are considered in the planning and administering of nursing care by use of the nursing process in the hospital, planning for discharge and continuing care in the home or with other agencies. Experiences in team nursing will provide the student with the opportunity to function as a team member and to develop beginning skills of team leading. Lectures, seminar discussions, group work audio-visual aids, simulated experiences projects, independent research projects, and nursing conferences may be utilized in addition to clinical practice. Prerequisites: NURI 2903, BIOL 2404.

## **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 OADM 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 to 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 procedure 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, 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, stencil cutting and mimeograph operation, legal forms, medical forms, special inter-office forms, and additional work on the arrangement of business letters with special features. 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 officer workers. The student is given an opportunity to relate knowledge, information and skills acquired in previous academic courses. Special emphasis is placed on the relationship of the various systems that affect the modern office. Prerequisite: Sophomore standing or consent of the instructor.
- OADM 2308 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.

## **Office Assistant** (See Office Administration)

### **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 & Darkroom Procedures, Stripping & Platemaking I** (2-4) Credit: 3

Basic camera operations and darkroom procedures including percentage size calculations, simple line shots, and film processing by the tray method. Basic techniques in the precise layout of simple line negative, halftones, and combinations. Selection of proper plates for specific jobs and the exposing and developing of plates.

**OPRT 1303 Offset Press Operation I** (2-4) Credit: 3  
Basic theory and techniques in the operation of the small (duplicator) offset press, including the "offset principle", feeding of all types of stock, image position, sheet delivery, and the maintaining of correct image density.

**OPRT 1304 Bindery Operations, Cost Estimating & Pricing** (2-4) Credit: 3  
Theory and operation of the paper cutter, paper drill, stitcher, collator and paper folder and basic binding techniques. The course includes actual print shop production-type activities utilizing this equipment. The course also contains a study of the basic characteristics of paper and ink, and the processes involved in the manufacture. Procedures for estimating the expenses of and determining the amount of customer charges for printing jobs are also taught.

**OPRT 1305 Copy Preparation & Layout** (2-4) Credit: 3  
A study of various methods of producing body and display type is conducted. Students are taught the operations for producing both body and display type and procedures for basic copy layout and pasteups. Prerequisite: OPRT 1301 or OPRT 1302.

**OPRT 1306 Camera & Darkroom Procedures, Stripping & Platemaking II** (2-4) Credit: 3

Advanced theory and techniques of line copy reproduction, with emphasis on halftone reproductions, including duotone color and multi-color stripping and plate processing of line copy. Prerequisite: OPRT 1302.

**OPRT 1307 Offset Press Operation II** (2-4) Credit: 3  
Advanced offset press operation including printing of large solids, duotone and multi-color line copy. Students will train on more advanced equipment and improve the skills acquired in the previous offset press operation course. Prerequisite: OPRT 1303.

**OPRT 1308 Offset Printing Equipment Maintenance** (2-4) Credit: 3  
A thorough study of the adjustments, preventive maintenance and simple repair of darkroom, composing room, press room, and bindery equipment. Prerequisite: OPRT 1301 or OPRT 1303.

## Philosophy (PHIL)

- PHIL 2301 Introduction to Philosophy** (3-0) Credit: 3  
A general introduction to critical and reflective thinking as applied to the basic problems of existence and the meaning of human life and institutions; study of methods and types of evidence utilized by authority, intuition, revelation, reason and scientific methods, and a study of the nature of philosophy, including its relation to religion, science, and art.
- PHIL 2302 Introduction to Ethics** (3-0) Credit: 3  
Study of basic principles of normal life, with critical examination of traditional and current theories of the nature of goodness, happiness, duty, and freedom.
- PHIL 2303 Logic** (3-0) Credit: 3  
Nature and methods of correct reasoning; deductive proof; inductive proof; fallacies; arguments.
- PHIL 2304 Old Testament History & Philosophy** (3-0) Credit: 3  
A general survey of the Old Testament as to origin, literature, and history with special study of the institutions, religions, and national life of the Hebrew people.
- PHIL 2305 New Testament History & Philosophy** (3-0) Credit: 3  
The course will consist of a survey of all the New Testament Literature. The Synoptic Gospels, the Johannean 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 story-telling photographs. Printing and composing photographs for publication 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 the fundamental differences between commercial and advertising photography. Although both are studied, emphasis will be on the commercial level such as products, houses, factories, weddings, and party photography. Emphasis on what a commercial photographer does, how business is set up, what equipment is needed, how clients are found, what prices are charged, and new trends in the field are reviewed. Prerequisites: PHOT 1401 and 1402 or consent of 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.

## **Physics (PHYS)**

- PHYS 1303 Survey of Physics** (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 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 1303 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 2401 Modern Physics I** (3-3) Credit: 4  
Mechanics and heat for science majors and minors, and engineering majors. Vector algebra and calculus are used. The course includes three hours of lecture, and three hours of laboratory per week. Prerequisite: MATH 2301 or registration therein.
- PHYS 2402 Modern Physics II** (3-3) Credit: 4  
Electricity, magnetism, wave-motion and light, an introduction to modern physics for science majors and minors, and engineering majors. Vector algebra and calculus are used. The course includes three hours of lecture and three hours of laboratory per week. Prerequisite: PHYS 2401 or equivalent.

## **Plant Production** (See Farm and Ranch Mgmt.)

## **Plumber (PLUM)**

- PLUM 1401 Principles of Plumbing I** (2-4) Credit: 4  
This course presents the theory and practice in measuring, cutting and threading steel pipe; cutting and caulking cast iron pipe; installation of hot and cold water lines and grading and laying of sewer lines.
- PLUM 1402 Principles of Plumbing II** (2-4) Credit: 4  
A course of the theory and practice in gas pipe work, copper sweating, plastic drain, waste and vent systems, soil cast iron fitting and their uses.
- PLUM 1403 Residential Plumbing I** (2-4) Credit: 4  
A study of the practices, procedures, and techniques employed by a plumber in the roughing-in of complete plumbing systems in new construction. The different plumbing stages, the "rough-in," "pulling of copper lines," and the "top-out" are covered in this course.
- PLUM 1404 Residential Plumbing II** (2-4) Credit: 4  
The setting of plumbing fixtures after they have been "roughed-in" is explained and practiced. The student will practice the installation of bathroom fixtures, kitchen fixtures, water heaters, dishwashers and garbage disposals. Heating units and controls are covered in the course.
- PLUM 1405 Commercial Plumbing** (2-4) Credit: 4  
Practices and procedures employed by a plumber in usual and unusual commercial-industrial plumbing, heating units, commercial water heaters and gas line installations are covered. Water pumping equipment, water conditioners, hot water circulation, double check valves, and backflow preventers are also emphasized.
- PLUM 2401 Plumbing Layout, Codes and Estimating** (3-3) Credit: 4  
The residential plumbing systems are planned and plotted. Graded specifications and schematics are developed and presented. Multistory plumbing systems are studied. Residential and commercial plumbing codes are analyzed. This course also introduces techniques, formulas and methods necessary for practical,

on-the-job plumbing estimates. Procedures for interpreting and reading building specifications and blueprint "take-offs" are explained and practiced. Prerequisite: DRDS 1400.

**PLUM 2402 Plumbing Repair and Maintenance** (2-4) Credit: 4  
This course consists of practices and procedures employed by a plumber in usual and unusual service work in the field. The repairing and maintaining various types of valves, faucets, fixtures, gas controls and safety practices are covered in this course. A basic study of mechanical skills as well as public relations necessary to be developed by a service man in the field are emphasized.

**PLUM 2403 Heating & Air Conditioning Plumbing** (2-4) Credit: 4  
This course is designed to provide the student with the basic knowledge required to install heating and air conditioning units to include the use of copper, galvanized, black and plastic pipe and fittings.

**PLUM 2409 Plumbing Internship** (1-20) Credit: 4  
This course consists of on-the-job plumbing 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 or coordinator.

## Pre-Med (See Biology, Chemistry)

## Psychology (PSYC)

**PSYC 1101 College Orientation** (1-0) Credit: 1  
This course is designed to assist the student in recognizing and developing aptitudes, interests, and abilities; to make adequate personal and social adjustments to college life; and to become acquainted with Central Texas College policies, services and activities. This course will familiarize students with the library and the use of references, texts and other materials contained in the library.

**PSYC 2201 Human Communications Seminar** (2-0) Credit: 2  
This course is designed to improve the supervisory communications skills of professional managers through improved interpersonal awareness, group interaction, communication skills, stress management and time management.

**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 2302 Personality Adjustment** (3-0) Credit: 3  
A study of psychological concepts and principles related to healthy personality and social adjustment.

**PSYC 2303 Child Growth and Development** (3-0) Credit: 3  
The purpose of this course is to develop an understanding of children and to engender a real interest in them. Consideration is given to the human organism as it develops physically, mentally, emotionally and socially; from birth through adolescence.

## Physical Education (PYED)

**PYED 1100 Football & Basketball** (1-2) Credit: 1  
**PYED 1101 Volleyball & Softball** (1-2) Credit: 1  
**PYED 1102 Beginning Badminton** (1-2) Credit: 1  
**PYED 1103 Beginning Bowling** (1-2) Credit: 1  
**PYED 1104 Soccer** (1-2) Credit: 1  
**PYED 1105 Folk & Square Dancing** (1-2) Credit: 1  
**PYED 1106 Beginning Swimming** (1-2) Credit: 1  
**PYED 1107 Beginning Tennis** (1-2) Credit: 1  
**PYED 1108 Beginning Golf** (1-2) Credit: 1  
**PYED 1109 Basketball & Soccer** (1-2) Credit: 1  
**PYED 1110 Karate** (1-2) Credit: 1  
**PYED 1111 Roller Skating** (1-2) Credit: 1  
**PYED 1112 Angling** (1-2) Credit: 1  
**PYED 1113 Country Western Dance** (1-2) Credit: 1  
**PYED 1114 Volleyball** (1-2) Credit: 1

PYED 1115 Basketball	(1-2)	Credit: 1
PYED 1116 Individual Physical Education Activity	(1-2)	Credit: 1
PYED 1117 Hunting	(1-2)	Credit: 1
PYED 1118 Jogging	(1-2)	Credit: 1
PYED 1119 Racquetball	(1-2)	Credit: 1
PYED 1120 Body Building	(1-2)	Credit: 1
PYED 2100 Advanced Bowling	(1-2)	Credit: 1
PYED 2101 Advanced Swimming	(1-2)	Credit: 1
PYED 2102 Intermediate Tennis	(1-2)	Credit: 1
PYED 2103 Advanced Golf	(1-2)	Credit: 1
PYED 2104 Tumbling	(1-2)	Credit: 1
PYED 2105 Figure Development	(1-2)	Credit: 1
PYED 2106 Advanced Badminton	(1-2)	Credit: 1
PYED 2107 Modern Dance	(1-2)	Credit: 1
PYED 2108 Physical Conditioning	(1-2)	Credit: 1
PYED 2109 Aerobics	(1-2)	Credit: 1
PYED 2110 Varsity Athletics	(1-2)	Credit: 1
PYED 2111 Weight Training	(1-2)	Credit: 1
PYED 2112 Water Safety	(1-2)	Credit: 1
PYED 2113 Cycling	(1-2)	Credit: 1
PYED 2114 Archery	(1-2)	Credit: 1
PYED 2115 Figure Control	(1-2)	Credit: 1
PYED 2116 Anaerobics	(1-2)	Credit: 1
PYED 2119 Rhythmic Aerobics	(1-2)	Credit: 1
PYED 1301 Foundations of Physical Education	(3-0)	Credit: 3
A course which introduces the student to the fields of health, physical education, and recreation. Emphasis on the scope and organization of professional activities, opportunities and qualifications of the professional physical educator.		
PYED 1302 Foundations of Health	(3-0)	Credit: 3
A fundamental course in principles and problems of healthful living. Emphasis on current information and thought to be applied to individual daily lives.		
PYED 2301 Sports Officiating	(3-0)	Credit: 3
Theory and practice in techniques of officiating. Officiating experience.		
PYED 2302 Safety & First Aid	(3-0)	Credit: 3
Health, knowledge and practice with regard to individual and group welfare; personal hygiene; community health problems; communicable disease control and health organizations. Instruction in American National Red Cross first aid methods for emergency treatments of injuries and sudden illness.		

## Real Estate (REAE)

REAE 1300 Real Estate Mathematics	(3-0)	Credit: 3
This course includes, but is not limited to a review of mathematical logic, 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 and 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 Department Manager.
- REAE 2302 Residential Real Estate Appraisal** (3-0) Credit: 3  
This course is an explanation of 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 Department Manager.
- 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; and 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 Department Manager.
- 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 Department Manager.
- 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; and 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 Management and Marketing Department 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 Department Manager.

**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-valued money, discounted and non discounted 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 1301 or REAE 1300 or equivalent, REAE 2304, or approval of the Department Manager.

**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 or 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 and extensive amount of "hands-on" training in qualification underwriting 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 Statement 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.

**REAE 2401 Real Estate Internship I****(1-20) Credit: 4**

On-the-job training in the real estate profession that utilizes the principles, skills, and knowledge gained in the theoretical setting of the classroom. The student works at an approved work station under the supervision of a College coordinator. Prerequisite: Sophomore standing or consent of the Department Manager.

**REAE 2402 Real Estate Internship II****(1-20) Credit: 4**

This course is a continuation of Real Estate Internship I. Prerequisite: REAE 2401 or consent of the Department Manager.

## **Recreation (RECR)**

**RECR 1302 Principles of Recreational Leadership****(3-0) Credit: 3**

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.

## **Small Gas Engine Repair (SGER)**

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

This course is 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 to 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" experiences in the repair and overhaul of small gas engines. Emphasis will be placed upon 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 layout, 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 and 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 oxy-gas and arc welding equipment when necessary. Prerequisites: SGER 1407, WELD 1401. Co-requisite: WELD 1402.

## **Supermarket Management (SMMG)**

**SMMG 1301 Warehousing and Transportation (3-0) Credit: 3**

A study of the purposes, daily activities and overall operations of the various departments in a food distribution center. The course will acquaint individual store officials with the total process of distributing food products through the wholesale and retail channels.

**SMMG 1302 Store Security (3-0) Credit: 3**

This course covers shoplifting, bad check detection and the forger, the check handling system, robbery and burglary prevention, and riot control.

**SMMG 2301 Inventory Procedures and Control (3-0) Credit: 3**

Designed for those in supermarket management or related fields concerned with inventory control. Emphasis is upon order quantity formulas and systems, classification of inventory, development of inventory policies, and inventory simulations. Prerequisite: A mathematics selection or departmental approval.

**SMMG 2305 Merchandising Non-Perishables (3-0) Credit: 3**

This course presents store layout, shelf allocation, inventory control, pricing, and in-store display of all non-perishable commodities. It examines effective principles and practices of the merchandising functions.

**SMMG 2306 Merchandising Perishables (3-0) Credit: 3**

This course extends the appreciation of merchandising principles and practices to the wide spectrum of offerings. Emphasis is upon operations of the meat department, produce, frozen foods, and dairy products.

## **Sheet Metal(SMTL)**

**SMTL 1303 Insulation & Sheet Metal Standards & Materials (2-2) Credit: 3**

A study of insulation and sheet metal standards and specifications. The course also includes the identification and uses of various materials, material take-off and estimating.

- SMTL 1401 Sheet Metal I** (2-4) Credit: 4  
This course is an introduction to the use of hand tools, power tools, flux, rivets, and fastening devices. Measurement and layout is stressed.
- SMTL 1402 Plumbing & Heating Insulation** (2-4) Credit: 4  
A study of the theory and application of insulating materials related to pipes, fittings, vessels, tanks, heaters, breechings and ducts. The student will practice roughing-in and finish work.
- SMTL 2302 Sheet Metal Layout & Planning** (2-2) Credit: 3  
This course presents the theory of the psychometrics of conditioned air and duct design and sizing. It is a course in practical pattern drafting and planning for industrial, commercial and residential use of sheet metal. Prerequisites: DRDS 1302, DRDS 1400.
- SMTL 2401 Sheet Metal II** (2-4) Credit: 4  
Practice in sheet metal fabrication and installation of skylights and ventilators. Prerequisites: SMTL 1401, WELD 1401 or WELD 1402.
- SMTL 2402 Duct Work** (2-4) Credit: 4  
This student will practice fabricating and installing ducts using the various fastening hardware and techniques. This course also presents the theory and practical application of carpentry as it applies to duct installation and sheet metal work. Prerequisite: SMTL 2302.
- SMTL 2409 Sheet Metal Internship** (1-20) Credit: 4  
This course consists of on-the-job sheet metal 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.

## Social Science

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

## Sociology (SOCI)

- SOCI 2301 Introduction to Sociology** (3-0) Credit: 3  
The study of human society; human behavior and personality as a product of group life; community organization; social change and current social problems.
- SOCI 2302 Contemporary Social Problems** (3-0) Credit: 3  
Identification and analysis of contemporary social problems, development of criteria for evaluating problems for social betterment.
- SOCI 2303 Criminology** (3-0) Credit: 3  
Causes and manifestations of delinquency; case studies of criminals and their social milieu; the offender and agencies of his adjustment; analysis and evaluation of penal methods.
- SOCI 2305 Social Psychology** (3-0) Credit: 3  
The origin and development of personal behavior in interpersonal situations.
- SOCI 2306 Marriage & The Family** (3-0) Credit: 3  
A study of problems in courtship, marriage, and family living as they relate to the social structure of American society.

## Spanish (SPAN)

- SPAN 1401 Beginning Spanish I** (3-3) Credit: 4  
The study of Spanish grammar and development of vocabulary. Stresses conversation in Spanish.
- SPAN 1402 Beginning Spanish II** (3-3) Credit: 4  
A continuation of Beginning Spanish I, with continued emphasis on conversation. Prerequisite: SPAN 1401.
- SPAN 2301 Intermediate Spanish I** (3-0) Credit: 3  
Continued emphasis on conversation, correct pronunciation, and correct writing. Reading from various Spanish-American authors. Prerequisites: SPAN 1401, 1402, or two years of Spanish at an accredited high school.
- SPAN 2302 Intermediate Spanish II** (3-0) Credit: 3  
Continues the readings from Spanish-American authors. Emphasizes grammar, composition, and conversation. Prerequisite: SPAN 2301 or equivalent.

## Speech (SPCH)

- SPCH 1301 Public Speaking** (3-0) Credit: 3  
Research, composition, organization, and delivery of speeches for various purposes and occasions, including informative, persuasive sales, and demonstration speeches. Studies of theories and principles of interpersonal, small group and public communication.
- SPCH 1302 Voice & Diction** (3-0) Credit: 3  
Physiology and mechanics of effective voice production with practice in articulation, pronunciation, enunciation. Introduction to the International Phonetic Alphabet and regional dialects (accents). Practice in achieving vocal variety through the oral interpretation of literature.
- SPCH 1303 Oral Interpretation** (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 group oral interpretation.
- SPCH 2303 Business & Professional Speaking** (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, an delivering speeches in public.
- SPCH 2304 Discussion** (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 2305 Interpersonal Communications** (3-0) Credit: 3  
Theory, examples and participation in exercises to improve effective one-to-one and small group communication.

## Telecommunications (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 Radio-Telephone Operator's Third Class 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, news editing, radio-television show formats, and individualistic creative writing for drama or documentaries. Practical experience will be available through 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 station. Production of various types of programs including interviews, documentaries, and basic news will be studied. Each student will be trained to competently operate a radio control board, turntables, and tape recorders.
- TELE 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 a daily live broadcast from a television station 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 actual radio and television stations.
- TELE 1406 Television Film** (3-3) Credit: 4  
This course is designed to introduce the student to the fundamentals of cinematography and its applications in the television industry. Basic filming techniques will be covered, and each student will learn to shoot 16 mm motion picture cameras, edit, story board, and process film. Laboratory exercises will provide for the shooting of at least 200 feet of film per student.



**TELE 1407 Advanced Radio Production****(3-3) Credit: 4**

Major emphasis in this course is advanced training in the production of radio commercials, promotion announcements, documentaries, newscasting and interviewing. An in-depth study of the programming formulas and different types of radio broadcasting is presented. Each student will be responsible for weekly programming to be aired over a radio station. Prerequisite: TELE 1402 or approval of the Department Manager.

**TELE 1408 Advanced Television Production****(3-3) Credit: 4**

This course offers advanced training in television production. Included will be experience as cameraman, floor director, talent, lighting director, technical director, producer, graphics, film director, video tape operator and audio engineer. Practical experience in weekly television program production will be available through the use of an actual television station. 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 Department Manager.

**TELE 2301 Technical Aspects of Broadcasting****(3-0) Credit: 3**

This course will help the student develop a broad technical vocabulary and a basic understanding of the technical aspects of Telecommunications. Emphasis is placed on the study of operating fundamentals and the technical limitations of telecommunications systems. Broadcast technical standards and their rationale are a major part of the course. Limited emergency maintenance techniques for production personnel are also taught.

**TELE 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 Department Manager.

**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 of his chosen industry. Prerequisite: Sophomore standing or approval of the Department Manager.

**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 Department Manager.

**TELE 2407 Electronic Field Production****(3-3) Credit: 4**

Electronic field production techniques are covered including mini-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 Department Manager.

**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 TELE 1403 or approval of the Department Manager.

**TELE 2409 Telecommunications Projects I****(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 radio and/or television. 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 TELE 1403 or approval of the Department Manager.

**TELE 2410 Telecommunications Projects II****(1-8) Credit: 4**

A continuation of TELE 2409, this course consists of on-the-job training as a production member of an actual television or radio station for on-air operations. Prerequisite: TELE 2409.

**Television Repair**  
(See Consumer Electronics Servicing)

**Theatre**  
(See Speech)

**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: MATH 1301 or permission of the Department Manager.

**Vocational Nursing**  
(See Nursing)

**Voice**  
(See Music)

**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.

**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.

**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, sizes, shapes and abbreviation.

**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. Prerequisites: WELD 1406 and WELD 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 WELD 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 1, 2, 3, and 4G positions using .035 wirefeed. Prerequisite: WELD 1402 or ATBR 1409.

**Word Processing (WOPO)****WOPO 1101 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.

**WOPO 1102 WordPerfect: An Introduction**

(1-5) Credit: 1  
A 24-hour course for professional personnel, word processing operator, 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.

**WOPO 1103 Microsoft Word: An Introduction**

(1-5) Credit: 1  
A 24-hour course for professional personnel, word processing operator, writers, editors, and publishers. Hands-on with lecture; includes demonstration, discussion/question/answer sessions. Topics covered: overview of word processing; structure of the Microsoft Word program; document formatting, text entry, retrieving, editing and printing document files; directory/files management; merging and printer/font selection and control.

**WOPO 1104 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.

**WOPO 1105 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.

**WOPO 1106 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.

**WOPO 1107 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.

**WOPO 1108 Wordprocessing 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 document files; directory/files management; merging and printer/font selection and control.

**WOPO 1109 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 the search criteria.

**WOPO 1303 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.

**WOPO 1304 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 Department Manager approval.

**WOPO 1307 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 skill of 40 WPM.

**WOPO 2302 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.

**WOPO 2303 Office Automation** (3-0) Credit: 3

The student 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.

**WOPO 2304 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.

**WOPO 2306 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.

## **CONTINUING EDUCATION**

The purpose of non-credit programs is to meet the continuing education requirements of the community at large. To achieve this purpose, organized programs are provided in response to anticipated and 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 of the area and to the changing requirements of local business and industry. There is no limit to the number or variety of courses available. Classes are offered in vocational areas, general interest, and the arts. Area employees and businessmen are periodically consulted for recommendations as to the types of vocational courses needed.

Additional information may be obtained by contacting the Mall Center at 699-1080 or Service Area Campus at 526-1227.

Typical courses are listed below:

**Animal & Plant Care**

Landscaping  
Gardening  
Dog Obedience

**Arts & Crafts**

Sewing  
Needlepoint  
Cake Decorating  
Flower Arranging  
Drawing Texas Wild  
Flowers

**Business & Management**

Bookkeeping  
Real Estate  
Tax Preparation  
Securities and  
Investments  
Women in Management  
Small Engine Repair

**Dance & Exercise**

Country and Western  
Dancing  
Ballroom Dancing  
Slinmnastics  
Racquet Ball

**Driver Education**

Under 18 Drivers  
Education  
Adult Drivers Education  
Remedial Drivers  
Education  
Defensive Driving  
Education

**Microcomputers**

Fundamentals  
Word Processing  
Database

**Personal Development**

Marriage and Family  
Seminar  
Preparation for ACT  
Preparation for TASP  
Stress Management  
Conversational Spanish  
Study Skills

**Recreation & Sports**

Sailing  
Summer Camping

**Special Interest**

Microwave Cooking  
Interior Decorating  
Babysitting Training  
Sign Language

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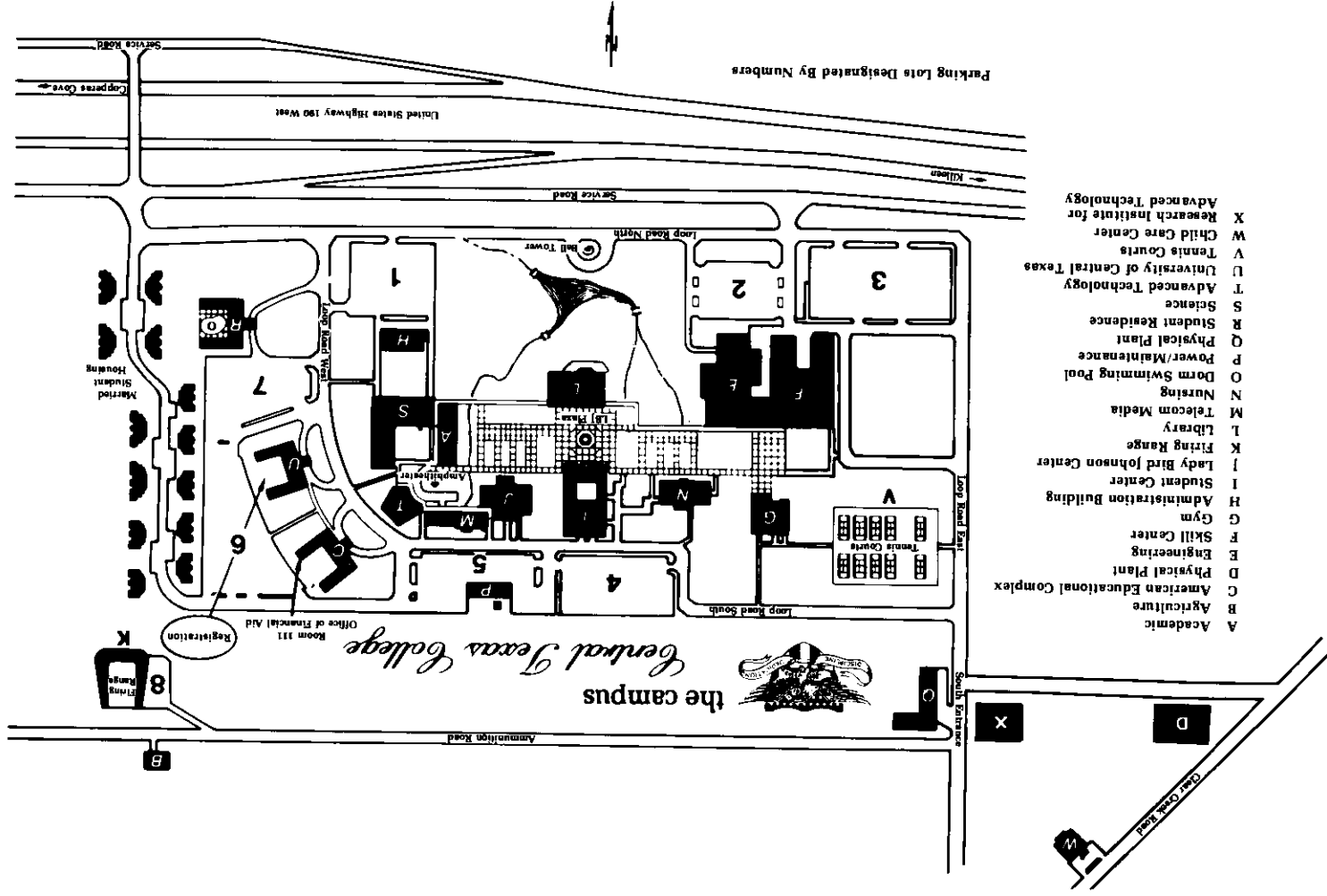
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- A Academic
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- U University of Central Texas
- V Tennis Courts
- W Child Care Center
- X Advanced Technology Research Institute for

Parking Lots Designated By Numbers

