

Education For The Individual



**CENTRAL  
TEXAS  
COLLEGE**

CONTINENTAL AND INTERNATIONAL CAMPUSES  
1999 - 2000

## Major Campus Addresses

### Central Campus

Central Texas College  
P.O. Box 1800  
Killeen, Texas 76540-1800  
(254) 526-7161  
(800) 792-3348

### Fort Hood Campus

Central Texas College  
Dean, Fort Hood and  
Service Area Campuses  
P.O. Box 1800  
Killeen, Texas 76540-1800  
(254) 526-1328

### Service Area Campus

Central Texas College  
Dean, Fort Hood and  
Service Area Campuses  
P.O. Box 1800  
Killeen, Texas 76540-1800  
(254) 526-1206

### Continental Campus

Central Texas College  
Office of the Dean, Continental Campus  
P.O. Box 1800  
Killeen, Texas 76540-1800  
(254) 526-1222/1228

### Navy Campus

Central Texas College  
Office of the Dean, Navy Campus  
P.O. Box 1800  
Killeen, Texas 76540-1800  
(254) 526-1356  
(800) 792-3348

### Navy Atlantic Campus

Central Texas College  
1301 East Little Creek Road, Suite 5  
Norfolk, Virginia 23518  
(757) 587-8873  
(800) 457-2619

### Navy Pacific Campus

Central Texas College  
4250 Pacific Highway, Suite 128  
San Diego, California 92110  
(619) 226-6626  
(800) 784-5470

### Pacific Far East Campus

Central Texas College  
Office of the Dean  
Office of Student Services  
Office of Support Services  
Office of Payroll/Personnel  
Campus Library  
Camp Market - Building S-1650  
Unit #15559  
APO AP 96283-0618  
(Civilian) 82-32-523-5110  
(Military) 722-3814/3833  
(Military) 722-3815 Student Services  
(Email) dean@ctc-pac.com

## Correspondence and Inquiries

Correspondence and inquiries should be addressed to the appropriate office (for example, Admissions, Records, Student Financial Assistance) as listed in this Catalog, at the location where you currently attend. The Pacific Far East Campus will provide these records and transcript service for students currently enrolled in the Pacific Far East. Students attending Continental, Air Force and Navy campus sites in locations other than Pacific Far East may request records and transcript services through the Central Campus Office.

Central Texas College District does not discriminate in admissions or access to, or treatment or employment in, its programs and activities on the basis of race, color, religion, national origin, gender, disability or age.

# CENTRAL TEXAS COLLEGE

## Central Texas College District Continental and International Campuses Catalog Thirteenth Edition • 1999-2000

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#### Accredited by

Central Texas College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia, 30033-4097; Telephone (404) 679-4501) to award associate degrees and certificates of completion.

#### Approved by

Texas Higher Education Coordinating Board; Texas Education Agency

#### Listed in

Report of Credit given by American Association of Collegiate Registrars and Admissions Officers  
Accredited Institutions of Postsecondary Education American Council On Education  
Directory of Postsecondary Institutions, Volume 1, U.S. Department of Education

#### Member of

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

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A.A.S., Central Texas College  
B.S., East Texas State University  
M.S., East Texas State University  
Additional Graduate Study: Sul Ross State University, Texas A&M University, University of Texas at Austin

## Term Calendar

### 1999-2000

Term 1	August 8, 1999	through	October 9, 1999
Term 2	October 10, 1999	through	December 18, 1999
Term 3	December 19, 1999	through	March 11, 2000
Term 4	March 12, 2000	through	May 13, 2000
Term 5	May 14, 2000	through	August 12, 2000

### 2000-2001

Term 1	August 13, 2000	through	October 6, 2000
Term 2	October 7, 2000	through	December 15, 2000
Term 3	December 16, 2000	through	March 10, 2001
Term 4	March 11, 2001	through	May 12, 2001
Term 5	May 13, 2001	through	August 11, 2001



# Statement of Purpose

## History

In 1965, the citizens of central Texas joined together to authorize the building of a community college that would serve Bell, Coryell, Lampasas, Mills, and seven other central Texas counties as well as Fort Hood and the correctional facilities in Gatesville. The campus was constructed on 560 acres of land donated by Fort Hood through the Department of Education and with funds supplied through a local \$2 million bond issue. Central Texas College, under Section 130.04 of the Texas Education Code, opened its doors with an initial enrollment of 2,068 students in the Fall of 1967. The number of students and the location of offerings has steadily increased since that time. Central Texas College has maintained its accredited status with the Southern Association of Colleges and Schools since first being awarded accreditation in 1968, and was reaffirmed most recently in December 1994.

CTC initiated on-site programs on Fort Hood in 1970 and in Europe in 1974. CTC's success at Fort Hood and Europe led to the explosive expansion of CTC's locations, including Fort Leonard Wood (Missouri), South Korea, and the Atlantic and Pacific Fleets in 1976. By the early 1980s, CTC offered programs to military personnel stationed in the Pacific Command, Alaska, and Panama as well as throughout the continental United States. This expansion occurred locally as well with the initiation of instructional programs and services for the Texas Department of Corrections in Gatesville in 1976.

Today, CTC consists of administrative units referred to as campuses: the Central Campus, the Continental Campus, the Fort Hood and Service Area Campus, the Navy Campus, and the Pacific Far East Campus. Of these, the Central, Fort Hood, and Service Area campuses operate within the state of Texas. While some campuses, like the Navy Campus, offer programs only for military personnel, others enroll military, civilian, and incarcerated students.

Students enrolled in CTC may select a degree plan from Associate of Arts degree programs, Associate of Science degree programs, Associate in Applied Science degree programs, or Associate in General Studies. In addition, students choosing to earn a certificate may enroll in any of the more than 40 certificate programs. Campuses within the Central Texas College District may offer the full range of degree programs and services or only those identified through local needs assessments. CTC also provides a wide range of education and training opportunities for those students who do not select a degree or certificate option.

## Vision

It is Central Texas College's vision to be the best possible community college in which to study and work. We want to offer each student and employee the opportunity to grow, learn, and succeed. We want our graduates to be able to compete in a global economy, make intelligent consumer choices, and exercise their rights and responsibilities as citizens. We want to celebrate our diversity while remaining united in our pursuit of excellence through continuous improvement. We want to meet the challenges of the future with students, employees, and community members working together toward the common goals of availability, accessibility, and quality in education.

## Mission and Purpose

Central Texas College is a two-year, open admissions institution which provides educational opportunities to students locally, nationally, and internationally. CTC offers vocational, technical, and academic courses leading to certification or associate degrees. CTC offers remedial and compensatory education, adult and continuing education, and workforce development training programs. CTC provides services and programs that facilitate student achievement and address the necessary needs of our military and civilian communities. CTC encourages institutional research and effective resource management. CTC insists upon excellence in all instructional, organizational, and operational areas.

The purpose of CTC is to provide:

- technical programs up to two years in length leading to associate degrees or certificates;
- vocational programs leading directly to employment in semi-skilled and skilled occupations;
- freshman and sophomore level courses in arts and sciences;
- adult, continuing, and community education programs for occupational or cultural upgrading;
- compensatory education programs designed to fulfill the commitment of an admissions policy allowing the enrollment of disadvantaged students;
- a continuing program of counseling and guidance designed to assist students in achieving their individual educational goals;
- workforce development programs designed to meet civilian and military community needs;
- adult literacy and other basic skills programs for adults;
- library services; and
- a wide variety of public service needs.



## **Philosophy**

Central Texas College, in meeting the educational and training needs of students in our key service populations and our civilian and military communities, is committed to:

- the belief in the worth and dignity of the individual.
- excellence in teaching and learning.
- open-door policies for meeting individual needs through a wide range of educational goals.
- a vision of community as a place to be served and a climate to be created.
- implementing the highest standards of ethical professional practice.
- effective stewardship of public trust and resources.
- offering programs that are student centered, reflect increases in the body of knowledge and changes in technology and economy, and are revised and improved continuously.
- addressing the cultural, racial, and ethnic diversity of students, employees, and community.

## **Goals**

### **Goal 1: To Provide Instruction**

Central Texas College shall provide quality instructional programs that will prepare students to fully participate in educational, occupational, economic, and social opportunities. These include certificate and/or degree programs in general education and occupational technology; university transfer; developmental education; adult and continuing education; skills training and workforce development programs; special and enrichment education; and adult literacy and basic skills education.

- Objective 1:** To provide and update curricula district-wide that foster student goal attainment, meet changing requirements, reflect changes in instructional technology, and incorporate development of SCANS and communication skills.
- Objective 2:** To employ and retain faculty who, at a minimum, meet the qualification requirements set by accrediting associations and regulatory bodies.
- Objective 3:** To meet the educational, occupational, and developmental needs of a diverse student population.

### **Goal 2: To Conduct Institutional Research**

Central Texas College shall improve instructional and administrative processes and outcomes through research, demonstration projects, creative local initiatives, and well-thought-out technological innovations.

- Objective 1:** To maintain institutional and program accreditation and approval.
- Objective 2:** To evaluate continuously programs, services, processes, and personnel and use the results of such evaluations to improve programs, services, processes, and activities.

### **Goal 3: To Provide Public Service**

Central Texas College shall assist its communities through instructional programs tailored to their needs; economic development, technical support, and proposal/grant development services; support of cultural activities; employee participation in community activities; and other related cooperative efforts.

- Objective 1:** To cooperate with communities in meeting their educational, economic, and cultural needs.
- Objective 2:** To promote the institution as a partner with the community it serves.

### **Goal 4: To Provide Institutional Support and Ancillary Operations**

Central Texas College shall provide the direction; control; educational support services (including student development services, library services, instructional services, etc.); resource management services; and other services and resources as may be required by the institution to accomplish its mission.

- Objective 1:** To use effectively and efficiently the human, fiscal, and physical resources of the institution.
- Objective 2:** To promote equal access and equal opportunity.
- Objective 3:** To provide employees educational and training opportunities that foster professional growth.
- Objective 4:** To maintain an organizational structure and culture that supports responsive decision making; creates a positive work environment; and assures compliance with regulations, laws, and mandates.



# General Information

## Continental and International Programs

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

## The Catalog

This Catalog is an official publication of Central Texas College containing policies, regulations, procedures, and fees in effect at the time it was published. Central Texas College reserves the right to make changes at any time to reflect current Board policies, administrative regulations and procedures, amendments to state or federal laws, and tuition or fee changes.

Study the contents of this Catalog carefully; as a student, you are responsible for observing the regulations contained herein.

## Program and Course Availability

Programs of study presented in this Catalog are offered when sufficient interest indicates the level of enrollment required for program continuation. To enter specific programs of study, seek confirmation of program availability before you register the first time.

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

## Equal Opportunity Policy

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

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

Existing administrative procedures of Central Texas College are used to handle student grievances. If you believe a condition or employee of Central Texas College is unfair or discriminatory, you can appeal to the administrator in charge of that area. If you need assistance pursuing a grievance matter, contact an official or the Campus Dean at your Central Texas College location.

## Statement on Harassment and Discrimination

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

Individuals who believe they have experienced harassment or discrimination are encouraged to contact the appropriate offices where they attend. Students should contact the appropriate Campus Dean, faculty should contact the Deputy Chancellor for Campus Operations at (254) 526-1781, and staff should contact the Human Resources Department at (254) 526-1157.



## Admissions and Registration

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

## General Admissions Information

Address requests for application materials or questions concerning admission to the Central Texas College personnel at each location.

Central Texas College is a comprehensive community college that maintains an open-door admissions policy to ensure that all persons who may benefit from postsecondary education have the opportunity to enroll. New students will be admitted to Central Texas College providing all admissions requirements are met. Admission to Central Texas College does not guarantee admission to specific programs and courses. In addition to the following criteria, students must complete an Application for Admission form before being considered for unconditional admission.

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

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

## Admissions Requirements

Students who hold diplomas from accredited secondary (high) schools or General Education Development (GED) equivalency certificates will be admitted to Central Texas College. Students transferring from another regionally 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 if recommended by an education specialist after providing official test scores from a list of approved tests authorized by the Department of Education.



An adult, for purposes of admission, is defined as an individual 18 years of age or older.

## Admission Requirements-International Students

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



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

## Re-admission Requirements

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





## Early Admissions

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

- An Early Admission Form with the signatures of the high school principal or counselor and parent or legal guardian must be submitted;
- Students must provide an official high school transcript showing classification; and
- Students will be expected to adhere to all policies of Central Texas College and the high school, including attendance.

Students who meet the above criteria will be accepted at Central Texas College on individual approval to take one course per term.



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

## Records Required

### Transcript and Test Scores

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

- **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 high school transcripts.
- **High School Equivalence Graduates:** Degree or certificate seekers 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.
- **College Transfer Students:** Transfer students who are seeking certificates or degrees from Central Texas College must provide official transcripts for all regionally accredited college study before official degree plans are provided.
- **Individual Admissions Students (except transient students):** These students must provide official transcripts for all previous college study from accredited colleges or universities they have attended. Non-high school/GED graduates must provide Department of Education approved test scores taken within the past year.



You are responsible for requesting that official records be forwarded directly from the issuing institution to the Central Texas College campus serving your location. To be acceptable, transcripts must bear original mark or seal and signature of the registrar. Under the provisions of the Family Education and Privacy Act, CTC will not release copies of transcripts received from other institutions.

Addresses are listed in the front of the Catalog. If transcripts of previous education are issued to Central Texas College in your former name, without a social security number, Central Texas College cannot be responsible for properly identifying the document. Admission requirements are not met until all necessary records are on file with the appropriate campus records office.

All transcripts must be received before the end of the first semester or second eight-week term of enrollment.

### Transient Students

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

### Transfer Students

Transfer of credit from regionally accredited colleges and universities may be accepted when the grade earned was "C" or higher and the coursework 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," "C," or "CR" will not be accepted in transfer in major degree requirements.



Because of the rapid changes taking place in technological fields, coursework taken in a major field of study or courses directly related to the 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 Central Texas College officials when coursework was completed five years ago or longer before the student entered the Central Texas College program of study.

## Uniform Application of Standards

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

## Registration

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

### Registration Periods

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

### Registration Requirements

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

1. Application for Admission/Class Registration (required each time you register);
2. Payment of fees and tuition.



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

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

### Late Registration

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

### Adding or Dropping Classes

To register for additional courses, or change course enrollments after registering, have the amendments made on the registration card. Complete and initial such changes before the announced end of the registration period.

### Official Enrollment

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. When you officially withdraw from a course, you are not entitled to remain in class on an unofficial basis. Only those students who are officially enrolled have the privilege of attending classes.



# College Costs

## Tuition

Tuition for classes at Central Texas College locations outside the Central Campus varies with the government contract or Memorandum of Understanding through which the institution operates. Therefore, both tuition and fees may be adjusted, based on government contracts and local conditions, during the period this Catalog is in effect.

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

Obtain information about current tuition, fees and costs of classes from the Education Officer, Navy Campus Representative, or the Central Texas College representative.

## Fees

**Institutional Challenge Examination Fee:** A \$50 fee for each challenge exam should accompany the Application for Exam.

**Degree Fee:** A non-refundable fee of \$25 is payable at the time you apply for a degree or certificate of completion.

**Certificate Fee:** A non-refundable fee of \$10 is payable at the time you apply for a 15 or 30 semester hour certificate.

**Transcript Fee:** The first transcript is issued free of charge. Subsequent transcripts are \$3 each.

**Returned Check Charge:** A charge of \$25 is made for all checks which have been returned for insufficient funds.



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

## Payment

Make checks or money orders payable to Central Texas College. Central Texas College requires payment of tuition and applicable fees before attendance at the first class meeting.

## Refunds

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

Refunds will be computed from the effective date and will be made according to the following schedule unless publicized differently at the local education center or local CTC office:

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

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

Emergency withdrawal will be considered to be filed on 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 refund of tuition schedule above.

## Pro Rata Refund

The 1992 Reauthorization of the Higher Education Act requires an institution to have a fair and equitable refund policy for students who received federal aid or whose parents borrowed under the Federal PLUS program. Equitable means that the policy must be consistent with the standards approved by the Department of Education.





A fair and equitable refund policy will provide a refund of at least the largest amount under:

- applicable state law;
- pro rata, for any student attending Central Texas College for the first time whose date of withdrawal is at or before the 60 percent (nine weeks into a 16 week semester) point in the period of enrollment for which the student has been charged. (Pro rata means a refund of the amount that was charged by the institution for the time that remains if a student withdraws on or before the ninth week of classes.)

According to the federal regulations, refunds must be credited to the federal program in the following order:

1. Federal Family Education Loan Programs (Stafford, Unsubsidized, PLUS);
2. Federal Pell Grant;
3. Federal SEOG;
4. Other Title IV Programs; and
5. Finally, the student.

## Textbooks

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

Students are expected to buy the textbooks designated for each course unless otherwise specified. Textbooks may be purchased from the Central Texas College Site Representative during the registration period. This period is normally two weeks before the class starts and during the first week of classes. After the registration period, students may obtain textbooks by contacting a Central Texas College representative.



# Student Services

## Transcripts

Students' records are confidential. Convenient forms for ordering transcripts are available at your location.

Upon graduation, graduates are provided an information transcript free of charge. The fee of \$3 for all transcripts must accompany the written request signed by the student. Transfer credits from other colleges are not listed on the Central Texas College transcript. Students should request transcripts directly from other colleges attended if the information is needed.

Requests for transcripts will be honored as soon as possible in the order of receipt. During peak periods, such as graduation, end of term and registration, additional time will be needed to process the request. Telephone requests will not be honored. CTC will send a facsimile (FAX) transcript if requested. It is the decision of the receiving institution to accept the transcript as official or unofficial.

Address requests for transcripts to the Overseas Campus Student Services Office if attending the Pacific Far East Campus. If attending at any other site, request your transcript directly from the Transcript Department in Killeen, Texas. Addresses are listed in the front of this Catalog. Transcript requests should include full name, social security number, date of birth, last month, year, and location of attendance, as well as the complete address to which the transcript is to be sent. Transcripts addressed to students will be stamped "Issued to Student." Transcripts addressed to official addresses will be official transcripts.

When departing Central Texas College locations in the Pacific Far East, notify the administrative office to ensure your records are transferred to the Central Campus Records Office. Student academic files and transcripts will be maintained in the Pacific Far East for five years after last attendance unless the college is otherwise notified of departure.

Requests for student transcript services will be denied if you have an outstanding obligation to Central Texas College. The obligation may be because of a library fine, parking ticket, returned check, non-repayment of financial aid, or failure to comply with admissions requirements.

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



Records of students attending Pacific Far East Campus are maintained in Korea until the branch campus is informed by the student in writing that the student has moved. Academic records are then transferred to the Central Campus office.

## Evaluation of Previous Education

### Non-traditional Education

Central Texas College recognizes that each student's educational needs, goals, and experiences are unique and that individuals are skilled in many areas of college work that are not formally documented on transcripts. It is the policy of Central Texas College to recognize non-traditional learning experiences and to award course credit in all cases where such credit is appropriate. In keeping with this policy, Central Texas College has established the Individualized Career Evaluation Process (ICEP).

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

All students, including military, former military and civilians, 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:

- The Defense Activity for Non-Traditional Educational Support (DANTES) courses and Subject Standardized Tests.
- College Level Examination Program (CLEP)—both the General Examinations and Subject Examinations.
- Institutional Course Challenge Examination—Students may request, through the appropriate Central Texas College official, permission to take challenge examinations for certain courses. Students must not have previously enrolled in the course for college level credit and must have completed a minimum of six semester hours in residence with Central Texas College with a minimum 2.0 grade point average. Those who do not make a grade of “A” or “B” will not be permitted to repeat the examination for that course at a later time. To obtain credit, the student must pass the examination with a grade of “A” or “B”, have completed a minimum of six semester hours of coursework at Central Texas College with a minimum 2.0 grade point average, and submit an application for credit award.
- Credit for military schools completed, as recommended by the American Council on Education (ACE) and recognized by Central Texas College.
- Credit for military service basic training.
- Military Job Training and Experience, as recommended by the American Council on Education and recognized by Central Texas College.
- American College Testing Program (ACT).
- College Board Admission Testing Program.
- Correspondence Extension Courses offered by regionally accredited institutions which are members of the National University Extension Association.
- Other, to include certain types of civilian training, specialized testing, and work experience.



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

## Evaluation Procedures

Curriculum plans outlining accepted transfer and non-traditional credits, as well as remaining requirements, are available from Central Texas College, military education centers, or the Navy Campus advisors upon the student’s written request and submission of evaluation documents.

Evaluation and final degree plans are provided upon receipt of all official transcripts and documents. Evaluated credit must be validated through successful completion (with a grade of “C” or better) of a minimum of six semester hours of traditional credit earned at CTC. Students on financial hold will not be eligible for evaluation of non-traditional educational experiences until the financial hold is cleared. Validated evaluated credit will be posted to the student’s transcript as part of the evaluation process.

Apply for a final degree plan by submitting an Evaluation Request form to the Evaluations Department, Central Texas College, at the administrative office serving you. Addresses are listed in the front of this Catalog.

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

## Servicemembers Opportunity College

Because of its efforts to serve the educational needs of servicemembers, Central Texas College has been designated a Servicemembers Opportunity College. As a member of the Servicemembers Opportunity College Associate Degree (SOCAD-2, SOCNAV-2, and SOCMAR-2) programs, Central Texas College has committed itself to fully support and comply with SOC Principles and Criteria. Through this commitment, Central Texas College ensures that:

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



## **SOC Criteria**

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

- has designed a transfer program that minimizes loss of credit and avoids duplication of credit, yet maintains program integrity;
- has established guidelines that follow the general principles of good practice outlined in the joint statement on transfer and award of academic credit;
- accepts transfer credit earned from regionally accredited institutions consistent with servicemembers degree programs;
- requires only 25 percent of degree requirements to satisfy Central Texas College residency;
- recognizes as study in residence all credit coursework offered by Central Texas College, regardless of location;
- allows students to satisfy residency requirements with courses taken at Central Texas 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 Experiences in the Armed Services; and
- provides the 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-2/SOCNAV-2/SOCMAR-2 Degree Completion Agreement**

All students can continue their Central Texas College certificate/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 certificate/degree requirements. Students must complete at least 25 percent of degree requirements with a minimum 2.0 GPA at Central Texas College. Courses taken at other institutions must satisfy the course requirements of the Central Texas College degree programs. SOCAD-2/SOCNAV-2/SOCMAR-2 agreements may be issued after the completion of at least six semester hours of coursework with a 2.0 GPA or six semester hours of "C," "P," or higher at Central Texas College. Request these agreements from the Administrative office serving your location. Addresses are listed in the front of this Catalog.

Students no longer at a Central Texas College location should contact the following:

Central Texas College  
Director, Evaluation Services  
P.O. Box 1800  
Killeen, TX 76540-1800  
(800) 792-3348, extension 1374

If completing certificate/degree requirements with credits from other institutions, contact the above address for approval of specific courses. Please allow at least four weeks for approval.



## Distance Learning

Central Texas College offers college-level distance learning courses in a variety of instructional formats. Distance learning courses may be telecourses, video conference courses, multimedia courses, or on-line courses. Students have direct and continuous access to their instructor, opportunities to collaborate with other students, and full access to library and support services.

**Voice mail** allows direct communication with the instructor and telephone conferencing with the instructor and classmates. Students may practice oral language skills or participate in structured discussions.

**E-mail** fosters direct, frequent and precise communication between the student, instructor, and other students. E-mail can be used to send completed assignments, for electronic discussions, and for seeking answers to questions.

The distant learner can use the library at CTC by visiting the Oveta Culp Hobby Library on the Central Campus, sending e-mail requests to the library, or submitting requests by phone or fax.

The distance education faculty provide their students with phone numbers and e-mail addresses during the orientation sessions.

### To Be Successful

Before enrolling in distance learning courses, students should consider their course needs, learning styles, and learning preferences. The distant learner must be self-motivated, goal-oriented, and able to work independently.

You can do well in distance learning courses if:

- you are self-disciplined, like to set your own schedule, and enjoy working on your own.
- you have a compelling reason to take the course, such as your work schedule preventing you from enrolling in a traditional course.
- you are comfortable with written instructions because most distance learning courses rely on printed materials and written directions rather than in-person explanations from the instructor.
- you don't need the continuous face-to-face interaction with your instructor and classmates to be successful.
- you need to save time in commuting because distance learning courses require just as much "learning time" and "study time" as campus courses.
- you are comfortable with technology because most distance learning courses use technology for teaching and communication (i.e., e-mail, voice mail, fax machines).

### Telecourses

A telecourse uses broadcast television or videotapes to enhance the course with images not easily conveyed in a printed format. Students view simulations, demonstrations, or artifacts to increase understanding of the subject. Students communicate with their instructor through voice mail and/or e-mail.

### Video Conference Courses

In a video conference course, the distant learner has two-way audio and two-way video interaction with the instructor and other students through a video conferencing system. This delivery system allows for instructor-delivered lectures, in-depth discussions, question/answer sessions, and demonstrations—just like in a traditional classroom. Students communicate with their instructor and peers directly in the class.

### Multimedia Courses

Multimedia courses use textbooks, CD-ROM, computer software, and/or videotapes along with curricular materials to guide the student in learning. Students choose the media most suitable for their learning styles and most accessible for their learning environments. Students communicate with their instructors using voice mail or e-mail and collaborate with other students using e-mail or discussion sessions.

### On-line Courses

On-line courses use the Internet as the primary delivery system for instruction. Course materials (guides, syllabi, reading lists, and lecture notes) are posted on the Internet for students use. Additionally, students communicate with faculty and students and access instructional resources through the Internet. Orientation and review sessions may be done in person or via the Internet.



## **Continuing Education Program**

The purpose of non-credit programs is to meet the current and changing educational requirements of a specific community. To achieve this purpose, instruction is provided in response to expressed needs. Classes generally provide training for the individual. However, special interest groups can also be accommodated within the scope and philosophy of the program. Classes are geared to the changing needs and requirements of the area being served. There are no limits to the number or variety of courses. Classes are offered in the vocational business fields as well as practical arts. Non-credit courses are offered in the following:

### **Business Education**

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

### **Self Development Education**

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

### **Special Requests**

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

# Student Financial Assistance

## Financial Aid Programs

Information and application forms for military tuition assistance and VA benefits are available at military education centers and Navy Campus offices. These two forms of student financial assistance are not part of the same program. Students interested in using such aid should be aware of the liabilities incurred.

## Satisfactory Progress Standards

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:

- 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.
- The time frame for students enrolled full-time (enrolled in six or more credit hours) shall be no more than 12 eight-week terms of full-time enrollment to complete a degree program.
- Half-time students (enrolled in three to five credit hours) shall have 24 eight-week terms of half-time enrollment to complete a degree program.

Satisfactory progress can be met with any combination of full-time or part-time enrollment. Refer to your degree plan, SOC agreement, Central Texas College Catalog, or see a CTC representative for further details regarding the specific academic program.

## Types of Aid

### PELL Grant

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

### Federal Stafford Loans

An undergraduate student at Central Texas College may borrow a limit of \$2,625 during the freshman standing (0-30 credit hours on the student's Central Texas College degree plan) and \$3,500 during the sophomore standing (31-60 hours on the student's Central Texas College degree plan). These are loans obtained by the student from a lending agency outside CTC such as a bank, savings and loan association or credit union, that are insured by the federal government. The government will pay the interest charge while the student is enrolled at least half-time. Repayment begins six months after the student leaves school.

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

Loans must be repaid. Students who are awarded Stafford Loans (GSL) must attend a pre-loan counseling session. This session provides additional information about the loan programs such as monthly repayments, deferments, grace period and cancellations. The applicant will be advised of the disbursement procedures during the counseling session. Students receiving loans must advise the Office of Student Aid when leaving Central Texas College. Each student must have an exit interview regarding their rights, responsibilities and loan payment scheduling. All programs are administered in compliance with section 504 of the Rehabilitation Act of 1993.

## **Veteran Benefits**

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

## **Military Tuition Assistance**

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

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

As a recipient, make sure that you are informed of all conditions of the Tuition Assistance Program. Information about such conditions may be obtained at the Military Education Center or Navy Campus office.

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

## **Department of Defense Civilian Tuition Assistance**

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

Provide one copy of the approved tuition assistance form to Central Texas College when you register.

# Academic Policies

## Academic Load

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

Half time	3 semester hours per term
Three quarter time	5 semester hours per term
Full time	6 semester hours per term

- For schedules other than eight weeks, consult with the Central Texas College representative.
- Final determination of academic load for purposes of VA benefits payments is the decision of the Department of Veteran Affairs, not the institution. Send questions about VA payments directly to the VA Office serving your campus.

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

## Attendance Policy

### Class Attendance

You are required to attend all classes in which you have enrolled. Attendance should be regular and on time.

Absences for any reason negatively affect the learning process, the individual student, and the class. When absence from class is necessary for any reason, you have the responsibility to arrange to make up assignments missed during the absence.

Notify instructors in advance of any absence to retain the privilege of submitting make-up work without grade penalty.

### Absences

The following specific rules apply to absences:

- Missing a class meeting of 50 minutes equals one absence.
- Beginning the first scheduled day of class meeting, instructors are required to keep attendance records.
- An administrative withdrawal may be initiated when you fail to meet Central Texas College attendance requirements. The course grade will be noted as "FN" on the roll and record book, with a final grade of "F" on the transcript.
- As a matter of policy, Central Texas College instructors are the only individuals who can authorize excused absences. Regardless of the reason for the absence, you are responsible for completing all coursework covered during any absence.

### Excessive Absences

Absence from classes for any reason must not exceed Central Texas College standards. In general, you may be administratively withdrawn from any class with the grade of "F" when your unexcused absences reach a total equal to 12.5 percent of the hours for the course. For example, an eight-week, 48-hour class normally meets for 180 minutes each session for 16 sessions. If you have two unexcused absences while taking this class, you will be subject to Administrative Withdrawal since the total unexcused absences (360 minutes) equals 12.5 percent of class hours for the course. If you attend a 96-hour class, you are subject to Administrative Withdrawal after you have accumulated 12 hours of unexcused absences.

## Official Withdrawal Policy

If you desire to, or must, withdraw from a course after the first scheduled class meeting, you must file an Application for Withdrawal with the instructor. In addition, you must file with the Education Services Officer or Navy Campus Representative. Applications for Withdrawal or Applications for Refund will not be accepted after the close of business on the last working day before the last week of class.



If you are using financial aid, military tuition assistance, VA benefits or other than personal funds, you may be required to repay tuition and fees to the funding agency, if you withdraw. For specific repayment requirements, consult with the Student Services office. Military tuition assistance students, consult with the Military Education Center or Navy Campus office. Students who are administratively withdrawn from classes without officially withdrawing will receive an "F" grade and are ineligible for refunds.

You may not withdraw from a class for which the instructor has previously issued you a grade of "F" for non-attendance. Emergency withdrawal will be considered when documentary evidence is presented. Also see the section in this Catalog on Refunds.

## Student Classification

**Freshman** thirty semester hours or less of college-level credit recorded on your permanent record.

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

## Resident Credit

You 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 16 semester hours or 25 percent of degree requirements must be earned through 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 Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees and certificates of completion. Credits earned at Central Texas College are transferable to other institutions in accordance with policies of the receiving institutions. Students who plan to transfer to other institutions for degree completion or to pursue a more advanced degree are advised to consult with officials of the receiving school for degree requirements and transfer policy.

### Maximum Hours for Transfer to Other Colleges

As a general rule, senior colleges will accept a maximum of 66 semester hours of transfer credit from junior colleges. Students who plan to transfer should not take more than this number of hours unless they have written permission from the chosen senior college.

## How to Choose Courses

### Common Course Numbers

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

The courses with common numbers in this Catalog have the course prefix and course number as shown below:

HIST 2311      Survey of Western Civilization I    (3.0)    Credit: 3

The first digit of the course number is the scholastic level:

O-Developmental; 1-Freshman; 2-Sophomore

The second digit indicates the amount of credit hours assigned to the course. In the example above, three credit hours will be awarded upon successful completion of the course. The last two digits are for department use only.

### Taking a Course Out of Sequence

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

# Grading Policy

## Reporting

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

Grades are reported by two methods:

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

## Grading System

The grading system at Central Texas College is as follows:

Grades		Grade Points
A	Superior	4
B	Above Average	3
C	Average	2
D	Passing, but Unsatisfactory	1
F	Failure	0
I	Incomplete (except developmental)	0
N	No Credit	0
P	Completed	0
W	Withdrawal	0
XN	Nonattendance (incomplete for developmental)	0
FN	Nonattendance	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 or "F" may be assigned for lack of academic progress or failure to attend. "F" grades may not be overridden 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 (for non-developmental coursework)

An incomplete grade may be given in those cases where a student has completed the majority of the coursework, but because of personal illness, death in the immediate family, or military orders, is unable to complete all the requirements for a course. Instructors may require notice of absence with supporting documentation. Notify instructors in advance of absences whenever possible. The instructor makes the final decision concerning the granting of the incomplete grade.

In assigning 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 your responsibility to arrange with the instructor for the assignment of work necessary to complete the course and to change the "I" grade within the time specified. An "I" grade cannot be replaced by the grade of "W." If you elect to repeat the course, register, pay full tuition and fees, and repeat the entire course.



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 replace 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 assigned to students who have made satisfactory progress, but lack the successful completion of certain modules required for course completion. The grade of "N" indicates that the student must enroll the following semester and complete those modules for a final grade in the course. Re-enrollment requires the payment of usual tuition and fees for the course.

### **"P"-Completed**

The grade of "P" is reserved for use with developmental and designated non-traditional modular courses and will be assigned 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 and Incomplete**

The grade of "X" is reserved for use with developmental and designated non-traditional modular courses and will be assigned to students who have failed to make satisfactory progress because of failure to attend or incomplete course requirements.

### **"W"-Withdrawal**

Students who officially withdraw will receive the grade of "W," provided attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a withdrawal application with Central Texas College before they may be considered for withdrawal.

## **Grade Point Averaging**

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

## **Grades and Financial Aid**

If you are attending Central Texas College with military tuition assistance, financial aid, or VA benefits, be familiar with the requirements and possible obligations incurred, particularly upon receiving a grade of "F," "I," "W," "N," or "X."

## **Change Of Grades**

Students who believe that a computational error occurred in grading must immediately contact the instructor of the course in question. Students must bring this matter to the attention of the instructor involved no later than 90 days after the end of the course in order for a grade change to be considered. Administrative personnel of Central Texas College are not authorized to change an instructor's grade.

## **Repeating a Course**

The total hours earned toward a certificate/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. When repeating a course, only the last grade earned is utilized in computing the grade point average. Other colleges may compute the GPA in a manner different from Central Texas College. Honors designation at graduation considers all grades, including repeated courses. A student who repeats a course should notify the Records Office for re-computation of cumulative grade point average.

## **Student Responsibility to Know GPA**

You are expected to be aware of your grade point average. The method of calculation of grade point average is explained above. You are encouraged to compute your grade point average frequently. You are responsible for knowing whether or not you are eligible to continue at Central Texas College. An ineligible student who nevertheless registers at Central Texas College shall be withdrawn, and the student shall not receive special consideration for lack of knowledge of scholastic status. If you receive grades below "C" (2.0) for any course, seek academic advisement to determine the causes of unsatisfactory work and receive recommendations for improving grades in subsequent classes.

## **Honor Roll**

Students completing 12 or more semester hours of college level credit during two consecutive eight-week terms with a grade point average of 3.5 or higher receive Honor Roll status. This recognition will be listed on the student transcript.



## Graduation Grade Requirements

To graduate from CTC, you are required to have an overall grade point average (GPA) of 2.0, to include a minimum 2.0 GPA with Central Texas College. Associate degrees in Arts, Science, or Applied Science require a "C" for each course in the major. Graduation GPA includes all Central Texas College grades and grades in transfer courses accepted toward the degree. Students at Central Texas College must achieve a 2.0 cumulative GPA to maintain satisfactory progress toward graduation.

## Probation and Suspension Policies

### Probation

Students who fail to maintain a 2.0 cumulative grade point average after the first seven semester hours will be placed on academic probation during the next term in which they register. Students who fail to achieve a 2.0 grade point average during any term after the first seven semester hours will be placed on academic probation if their cumulative grade point average is not 2.0 or above. Academic probation will be removed for 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. Students who fail to achieve a 2.0 grade point average during their semester of probation will be placed on suspension and cannot register for classes until completion of requirements for returning to class, which are listed below.

### Suspension

Suspension will also be imposed for those students who fail to achieve a 2.0 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 was below 2.0 prior to that semester.

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 higher, 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 Central Texas 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 Central Texas College for two consecutive sixteen-week semesters or four eight-week terms.



Suspension/probation students who receive financial aid or VA benefits are reported to the Office of Financial Assistance or to the Veterans Administration, and must meet financial aid or VA requirements prior to the reinstatement of their financial aid or VA benefits.

### Returning to Class

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

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

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

Students who have been suspended once may be re-admitted under petition and must meet academic standards required while on petition re-entry status. Re-entry petitions will be provided to each student at the time of suspension notification.

## Classroom Visitors

Permission to visit a class may be granted by the Campus Dean or designated CTC representative. 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 considered auditing on a full-time basis. Since permission will not be granted to allow small children in class, parents must make arrangements for care of their children during class meetings. CTC policy does not permit a student to audit courses.



# Student Responsibilities

## Address Changes

All correspondence from Central Texas College to the student will be to the address provided on the Application for Admission. Any address changes must be made in writing to the Student Services Records Office. Students are responsible for all communication mailed to the last address on file. The student's academic file will be maintained in the Pacific Far East for five years after last attendance unless an address change is sent to the appropriate Campus Records Office.

## Name Changes

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

## Records Access

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, before the 4th class day of each term. This statement of non-disclosure will be retained for one year after submission. Release of additional information pertaining to the student record must be authorized in writing by the student.

## Falsification of Records

Students who knowingly falsify Central Texas College records or who knowingly submit any falsified records to CTC are subject to disciplinary action which may include suspension or expulsion from CTC.

## 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:

- Plagiarism** Taking of passages from the writing of others without giving proper credit to the sources.
- Collusion** Using another's work as one's own or working together with another person in the preparation of work, unless such joint preparation is specifically approved in advance by the instructor.
- 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.

## Drug and Alcohol Abuse

You are admitted to Central Texas College for the purpose of educational, social, and personal enhancement. As a student, you have rights and privileges, as prescribed by State and Federal Constitutions, statutes, and policies of the Board of Trustees of the College District. With these rights and privileges, you also have certain duties and responsibilities essential for creating an environment where all students can learn how to live productive, fulfilling lives.

Substance and alcohol abuse disrupts this environment and threatens not only the lives and well being of students, faculty, and staff but also the potential for education, social, and personal enhancement. Therefore, it is important for all members of the Central Texas College community to take responsibility for preventing substance and alcohol abuse.

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

Possession, use, sale, or being under the influence of alcoholic beverages or having alcoholic beverage containers in any Central Texas College owned facility or at any CTC-sponsored event is prohibited except when specifically designated by the Board of Trustees of Central Texas College.

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

To ensure compliance with applicable institutional, state, and federal guidelines relating to the illegal use of illicit drugs and the abuse of alcohol, Central Texas College annually distributes an information flyer to all employees and students which addresses standards of conduct, counseling options, legal sanctions, disciplinary action, and health risks.

For further information, contact the Substance Abuse Resource Center or the Central Texas College Site Representative.

## **Class Behavior**

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

## **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 Board of Trustees of the Institution.

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

Disciplinary action may be an oral or written reprimand, disciplinary probation, suspension, or expulsion from Central Texas College. Students on disciplinary probation may receive no honors from Central Texas College. The probation status is permanent unless the student has earned the privilege of being released from disciplinary probation.

Request further information concerning disciplinary procedures from Central Texas College personnel.





# Degree and Certificate Requirements

## Graduation

### Application for Certificate or Degree

Central Texas College awards certificates and degrees each year in May, August and December. A request for certificate or degree must be accompanied by the appropriate non-refundable fee and submitted to the Central Texas College Site Director by the following dates:

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

All Central Texas College entrance and course requirements must be completed before certificate or degree award. Requests for certificates or degrees 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 and/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 available degree order time frame. No student will be denied a graduation application. The graduation date on the certificate or degree must conform with the dates listed above.

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

### Semester Hour Certificates of Award

Since the duties of military personnel and many other students normally prohibit them from achieving full-time student status, CTC provides indicators of progress toward the Associate Degree in the form of certificates. They may file for a Certificate of Award after both 15 and 30 semester hours have been completed. The certificate indicates skills obtained by the student through courses as outlined in the program chosen by the student.

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

### Replacing a Lost Certificate or Degree

If a certificate or degree has been lost, stolen, or damaged, a replacement may be obtained. An appropriate fee is required.

### Commencement

Central Texas College holds one consolidated graduation exercise annually at the end of the Spring semester at the Central Campus. Some sites also conduct an annual graduation ceremony in conjunction and coordination with the local military authorities and/or other local schools. Degrees and certificates will be awarded three times a year for students who are unable to attend the annual graduation exercise.

### Graduation with Honors

Candidates for degrees for Central Texas College may graduate with highest honors or honors based on the following criteria:

- 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 coursework taken. In computing the candidate's grade point average for honors, the grades in all college-level courses taken at Central Texas College as well as courses transferred from other regionally accredited institutions of higher learning are included. Students repeating a course at Central Texas College who earn a grade of "A" or "B" will be considered for honors if all other requirements are met.
- 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.



- Public recognition for graduating with honors or highest honors is conferred only when the student participates in the formal commencement ceremony.
- To qualify for honors, students must have earned a minimum of 30 semester hours of traditional study with Central Texas College. Grades of "P" will not be considered when determining the minimum 30 semester hour residency requirement.

## Degrees 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 follow. To earn a degree, you must also complete the specific degree requirements in the curriculum plan for your major field of study as shown in the programs of study. Except for the Associate in General Studies degree, you may not use the minimum requirements listed to "tailor" your own degree. It is your responsibility to apply for the degree and pay the appropriate fee by the application deadline. Each degree candidate must earn a minimum of 25 percent of coursework in traditional study at Central Texas College.

A person may initially be awarded one degree from Central Texas College. If you wish to be awarded a second degree, satisfy all requirements for the second degree, including at least 12 additional semester hours of coursework in residence at Central Texas College which were not required for the first degree and apply to the second degree. 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.

## Developmental Studies

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

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

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

## Certificates of Completion

A Certificate of Completion will be awarded to students who fulfill the curricular requirements of special courses and programs. Minimum residency requirement is 25 percent or 10 semester hours, whichever is greater. GPA requirements are the same as degree programs.

## Transferability of Courses

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

## Program and Course Availability

Courses are offered to students at military installations that have sufficient student interest. However, not all courses are available every term because of the specialized nature of the courses, equipment requirements, and/or faculty availability.

Student needs and interests are major factors considered in scheduling courses. Express your requirements to your local ESO or NCR. This will assist in scheduling courses that will help the majority of students pursuing a program of study. The Central Texas College representative can furnish convenient planning brochures for most programs.

## Prerequisite Courses

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.

For example, ENGL 1302 - Composition and Rhetoric II requires that ENGL 1301-Composition and Rhetoric I be successfully completed before registering for ENGL 1302.

If you cannot schedule prerequisites, obtain prior approval to enroll in these courses from a CTC official. Failure to obtain approval could result in loss of credit toward your degree.

## Semester Credit Hours

The three numbers following (to the right of) the course title indicate: (a) the hours per week the class meets for lectures, (b) the number of laboratory hours required per week and (c) the credit hours awarded for successful completion of the course. One semester hour of credit represents one hour of lecture time per week for 16 weeks; one semester hour of credit also represents two to four hours of laboratory time per week for 16 weeks. Lecture and lab proportions may vary depending on the nature of the course.

For example, COSC 1400 Computer Science Fundamentals, 3-3-4, has three hours of lecture per week conducted over 16 weeks and three hours of laboratory per week conducted over 16 weeks with four hours of credit awarded for successful completion. This weekly requirement is adjusted to compensate for terms/sessions/semesters with lengths other than 16 weeks. For instance, 3-0-3 for an eight-week term would require six hours of lecture per week, and 2-4-3 would require four hours of lecture and eight hours of lab per week.

## Core Curriculum

In the spirit of accomplishing Central Texas College's mission, the core curriculum experience will prepare students to learn effectively through their college years so that they carry these aptitudes for learning into their life careers. It is the goal of Central Texas College to graduate well-educated men and women who are articulate, interested in lifelong learning and capable to become creative citizens. The core curriculum design and implementation will also facilitate the transferability of lower division courses between Central Texas College and universities.



# Associate in Science and Associate in Arts Degree Requirements

Requirements for the Associate in Science (AS) and the Associate in Arts (AA) degrees

Core Area	Course Options	Semester Credit Hours
Communications (010) Speech (011)	ENGL 1301 and 1302 and 3 hours of Speech: SPCH 1144, 1145, 1315, 1318, 2144, 2145, 2341	6 3
Mathematics (020)	MATH 1314, 1316, 1324, 1342, 1348, 2413, 2414, 2415	3
Natural Science (030)	BIOL 1408, 1409, 1411, 1413, 1424, 2401, 2402, 2413, 2416, 2421, 2428. CHEM 1406, 1407, 1411, 1412, 2423, 2425. GEOL 1305, 1403, 1404. PHYS 1311, 1312, 1401, 1402, 1405, 1413, 1415, 2425, 2426.	8
Humanities (040)  (visual/performing arts)	ARTS 1303, 1304, 1311, 1312, 1313, 1316, 1317, 2311, 2313, 2314, 2316, 2317, 2323, 2324, 2326, 2327, 2333, 2336, 2337, 2341, 2342, 2346, 2347, 2356, 2366, 2367, 2376. DANC 2304. DRAM 1310, 1320, 1321, 1351, 2336. MUSI 1131, 1151, 1181, 1182, 1183, 1184, 1216, 1217, 1301, 1304, 1306, 1308, 1309, 1311, 1312, 2303, 2311, 2312. HUMA 1315.	3
(literature, philosophy, and cultural studies)	ANTH 2301, 2346, 2351. ENGL 2322, 2323, 2327, 2328, 2332, 2333. HUMA 1315. PHIL 1301, 1304, 1316, 1317, 2306, 2307.	3
Social/Behavioral Sciences (080)  (legislatively mandated U.S. History and political science)	HIST 1301, 1302. GOVT 2301, 2302.	12
(other social/behavioral science)	HIST 2301, 2311, 2312, 2381. GOVT 2304. PSYC 2301, 2306, 2308, 2314, 2315, 2316, 2319. SOCI 1301, 1306, 2301, 2319, 2336. ECON 1303, 2301, 2302. GEOG 1300, 1301, 1302, 1303.	3
Health, Wellness, Kinesiology (090)	PHED 1100-1110, 1113-1115, 1117-1120, 1123-1127, 1129-1136, 1138, 1140, 1151, 1152, 2155.	1
Total Core Requirements		42
Computer Technology Skills (CTS) (Must meet skills required for basic use of computers)	(Successfully completed by course or competency challenge exam.) COSC 1300. MISC 1420, 1430, 1440, 1450, 1460, 1461, 2454, 2460. WOPO 1305.	
Transfer Course Selections Required	Transfer courses may vary depending on the major the student wishes to pursue. Courses must be university parallel, Texas common course numbered (TCCN) courses which will meet the bachelor degree requirements of the university to which the student plans to transfer. See individual curriculum plans for specific courses.	24
Total Semester Credit Hours		66



A course cannot count toward more than one requirement of the degree.



General Information



Students planning to attend a senior college should coordinate with that senior college to ensure that the courses they take at Central Texas College will fulfill degree requirements there.

### **The requirements for a CTC Associate in Arts degree are:**

Complete Core .....	42 semester Credit Hours
Health/Wellness/Kinesiology Selection (PHED Activity Courses) .....	3 Semester Credit Hours
Computer Technology Selection (COSC/MISC) .....	3 Semester Credit Hours
Modern Languages Selection (FREN, GERM, SPAN, JAPN) .....	8 Semester Credit Hours
Specialization Selection - University Parallel .....	10 Semester Credit Hours
<b>Total 66 Semester Credit Hours</b>	

### **The requirements for a CTC Associate in Science degree are:**

Complete Core .....	42 semester Credit Hours
Health/Wellness/Kinesiology Selection (PHED Activity Courses) .....	3 Semester Credit Hours
Computer Technology Selection (COSC/MISC) .....	3 Semester Credit Hours
Mathematics Selection (MATH) .....	3 Semester Credit Hours
Natural Science Selection (BIOL, CHEM, PHYS, GEOL) .....	4 Semester Credit Hours
Specialization Selection - University Parallel .....	11 Semester Credit Hours
<b>Total 66 Semester Credit Hours</b>	

### **Additional Associate in Arts and Associate in Science Degree Requirements**

- A minimum of 25 percent of semester credit hours earned within the Central Texas College System
- All required courses in the major as listed in this Catalog;
- Satisfy:
  - A minimum overall grade point average of 2.0 ("C" average);
  - A minimum ("C") on each course in the major;
  - A minimum of 2.0 ("C") with Central Texas College; and
- Meeting all other Central Texas College and departmental requirements.

### **Associate in General Studies Degree**

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

- Communications to include either:
  - ENGL 1301 and three semester hours of oral communications, or
  - ENGL 1312;
- Three semester hours of humanities or fine arts (see page 30);
- Three semester hours of mathematics, MATH 1314 or higher;
- HIST 1301 and 1302;
- GOVT 2301 and 2302;
- Three semester hours of computer instruction (see page 30);
- Two semester hours of physical education from activity courses;
- If the major is music, journalism, or commercial art, all required courses in the major as listed in this Catalog must be completed;
- A minimum of 25 percent of semester hour credits earned within the Central Texas College System;
- 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;
- Meeting all other Central Texas College and departmental requirements.
- In cases where freshman and/or sophomore degree requirements of the receiving college for a bachelor's degree differ from those listed above, changes can be made in the Associate in General Studies degree requirements when approved by the appropriate Department Chair.

## Associate in Applied Science Degree

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

- Communications to include either:
  - ENGL 1301 and three semester hours of oral communications, or
  - ENGL 1312;
- Three semester hours of humanities or fine arts (see page 30 below);
- Three semester hours of mathematics, MATH 1314 or higher;
- Three semester hours of social or behavioral science (see page 30 below);
- Three semester hours of computer instruction (see page 30 below);
- A minimum of 50 percent of semester credit hours of technical courses in the major or a closely related field;
- A minimum of 25 percent of semester hours credit earned within the Central Texas College System;
- All required courses in the major as listed in this Catalog;
- Satisfy:
  - A minimum overall grade point average 2.0 ("C" average);
  - A minimum ("C") on each course in the major;
  - A minimum of 2.0 ("C") with Central Texas College; and
- Meeting all other Central Texas College and departmental requirements.

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

## 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. Some courses can be used as either a Humanities/Fine Arts or Social/Behavioral Science elective as stated below. In cases where freshman and/or sophomore degree requirements of the receiving college for a bachelor's degree differ, courses may be approved in addition to those listed.

### Humanities/Fine Arts

ANTH 2351	Cultural Anthropology
ARTS 1303, 1304	Art History I, II
DANC 2304	Dance Appreciation
DRAM 2366	Motion Picture Art
HUMA 1315	Introduction to Fine Arts
SPCH 2341	Oral Performance of Literature
MUSI 1306	Music Appreciation

Modern Language courses

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

Philosophy courses to include Religion (PHIL)

### Social/Behavioral Sciences

Anthropology courses (ANTH)  
Economics courses (ECON)  
Geography courses (GEOG)  
Government courses (GOVT)  
History courses (HIST)  
Psychology courses (PSYC)  
Sociology courses (SOCI)

### Computer Technology

Computer Science courses (COSC)  
Microcomputer courses (MISC)  
Word Processing courses (WOPO)



**Art (ART) 500402****Associate in Arts Degree****66 Total Semester Credit Hours**

Complete Core .....	42 Semester Credit Hours
Health/Wellness/ Kinesiology Selection (PHED Activity Courses) .....	3 Semester Credit Hours
Computer Technology Selection (COSC/MISC) .....	3 Semester Credit Hours
Modern Languages Selection (FREN, GERM, SPAN, JAPN) .....	8 Semester Credit Hours
Specialization Selection - University Parallel .....	10 Semester Credit Hours
ARTS 1303/04 Art History I & II, ARTS 1311 Design: 2-D, ARTS 1312 Design: 3-D, ARTS 1316/17 Drawing I & II, ARTS 2323/24 Figure Drawing I & II, ARTS 2311 Design: Computer-Aided Art, ARTS 2313/14 Computer Illustration and Advertising Art I & II, ARTS 2316/17 Oil Painting I & II, ARTS 2326/27 Sculpture I & II, ARTS 2333 Print Making, ARTS 2336/37 Fiberarts I & II, ARTS 2341/42 Jewelry and Art Metals I & II, ARTS 2346/47 Ceramics I & II, ARTS 2356/57 Photography I & II, ARTS 2366 Watercolor Painting, ARTS 2367 Acrylic Painting, ARTS 2376 Problems in Contemporary Arts	

**Business Administration (BUSS) 520101****Associate in Arts Degree****66 Semester Credit Hours**

Complete Core .....	42 Semester Credit Hours
Health/Wellness/Kinesiology Selection (PHED Activity Courses) .....	3 Semester Credit Hours
Computer Technology Selection (COSC/MISC) .....	3 Semester Credit Hours
Modern Languages Selection (FREN, GERM, SPAN, JAPN) .....	8 Semester Credit Hours
Specialization Selection - University Parallel, Texas Common Course (TCCN) .....	10 Semester Credit Hours
ACCT 2301 Principles of Accounting, ACCT 2302 Principles of Accounting II, BUSI 1301 Introduction to Business, ECON 2301 Macroeconomics, ECON 2302 Micro Economics	

**Geology (GEOL)****400601****Associate in Science Degree****66 Semester Credit Hours**

Complete Core .....	42 Semester Credit Hours
Health/Wellness/Kinesiology Selection (PHED Activity Courses) .....	3 Semester Credit Hours
Computer Technology Selection (COSC/MISC) .....	3 Semester Credit Hours
Mathematics Selection (MATH) .....	3 Semester Credit Hours
Natural Science Selection (BIOL, CHEM, PHYS, GEOL) .....	4 Semester Credit Hours
Specialization Selection - University Parallel .....	11 Semester Credit Hours
GEOL 1403 Physical Geology, GEOL 1404 Historical Geology, PHYS 1413 Environmental Science	

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

**Interdisciplinary Studies (IDST)****309999****Associate in Arts Degree****66 Semester Credit Hours**

Complete Core .....	42 Semester Credit Hours
Health/Wellness/Kinesiology Selection (PHED Activity Courses) .....	3 Semester Credit Hours
Computer Technology Selection (COSC/MISC) .....	3 Semester Credit Hours
Modern Languages Selection (FREN, GERM, SPAN, JAPN) .....	8 Semester Credit Hours
Specialization Selection - University Parallel .....	10 Semester Credit Hours

**Journalism/Communications (COMM)****090401****Associate in Arts Degree****66 Semester Credit Hours**

Complete Core .....	42 Semester Credit Hours
Health/Wellness/Kinesiology Selection (PHED Activity Courses) .....	3 Semester Credit Hours
Computer Technology Selection (COSC/MISC) .....	3 Semester Credit Hours
Modern Languages Selection (FREN, GERM, SPAN, JAPN) .....	8 Semester Credit Hours
Specialization Selection - University Parallel .....	10 Semester Credit Hours
COMM 1307 Communications Media, COMM 2311 News Gathering and Reporting I, COMM 2315 News Gathering and Reporting II, COMM 2305 Editing, Layout and Design	

In cases where lower division degree requirements of the receiving institution for a bachelor's degree differ from those listed above, changes can be made in the Associate in Arts/Science degree requirements when approved by the appropriate Department Chair, Campus Dean, Dean of Student Services/Dean of Guidance and Counseling, and/or receiving institution. It may be beneficial to complete additional coursework above the 66 semester credit hours with the appropriate approval.

## Social Science (SOCI)

450101

### Associate in Arts Degree

66 Semester Credit Hours

Complete Core .....	42 Semester Credit Hours
Health/Wellness/Kinesiology Selection (PHED Activity Courses) .....	3 Semester Credit Hours
Computer Technology Selection (COSC/MISC) .....	3 Semester Credit Hours
Modern Languages Selection (FREN, GERM, SPAN, JAPN) .....	8 Semester Credit Hours
Specialization Selection - University Parallel .....	10 Semester Credit Hours
ANTH, ECON, GEOG, GOVT, HIST, PSYC, SOCI	

In cases where lower division degree requirements of the receiving institution for a bachelor's degree differ from those listed above, changes can be made in the Associate in Arts/Science degree requirements when approved by the appropriate Department Chair, Campus Dean, Dean of Student Services/Dean of Guidance and Counseling, and/or receiving institution. It may be beneficial to complete additional coursework above the 66 semester credit hours with the appropriate approval.

## General Studies (GTSU) 309999

### Associate in General Studies Degree

This is a suggested curriculum.

Student must have a minimum of 16 semester credit hours within the Central Texas College System.

#### First Year

##### First Semester

ENGL*	1301	Composition and Rhetoric I	
or			
ENGL*	1312	Communications Skills	3
HIST	1301	History of the U.S. to 1877	3
PHED		Physical Education	1
ELCT		Electives	9

##### Second Semester

SPCH*		Speech Selection	
or			
ELCT*		Elective	3
HIST	1302	History of the U.S. from 1877	3
MATH		MATH 1324, 1342, 1314 or higher	3
ELCT		Electives	4
ELCT		Computer Science/Microcomputer Technology selection (see page 30)	3

#### Second Year

##### First Semester

GOVT	2301	State and Federal Government I	3
ELCT**		Electives	12
PHED		Physical Education	1

##### Second Semester

GOVT	2302	State and Federal Government II	3
ELCT		Humanities/Fine Arts Selection (see page 30)	3
ELCT		Electives	10

**Total Hours** 64

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

\* If ENGL 1301 is taken, student must complete SPCH requirement. If ENGL 1312 is taken, student may substitute an elective.

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



**Administrative Secretarial (ASEC) 520401****Associate in Applied Science Degree****First Year**

<b>First Semester</b>			<b>Credit</b>
ELCT		OADM/WOPO Selection	3
WOPO	1303	Beginning Keyboarding/Data Entry	3
OADM	1305	Information and Records Management	3
OADM	1309	Business Mathematics and Calculating Machines	3
ENGL		English Selection	3
WOPO	1101	MS-DOS: An Introduction	1

**Second Semester**

WOPO	1304	Intermediate Information Processing Applications	3
OADM	1306	Office Procedures and Applications	3
ELCT		OADM/WOPO Selection	3
OADM	1308	Business Correspondence	3
WOPO	1307	Word Processing/Transcription	3
PHED		Physical Education	1

**Second Year**

<b>First Semester</b>			
WOPO	1305	Applicational Software	3
MATH		MATH 1324, 1342, or 1314	3
ACNT	1325	Principles of Accounting I	3
ELCT		Approved Elective	3
ELCT		OADM/WOPO Selection	3

**Second Semester**

WOPO	2302	Advanced Information Processing Applications	3
ACNT	1326	Principles of Accounting II	3
OADM	2371	Office Procedures II	3
SPCH		SPCH 1315 or 1321	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Social/Behavioral Science Elective (see page 30)	3
<b>Total Hours</b>			<b>65</b>

Course electives or selections must be approved by the appropriate CTC official.

WOPO 1305, Applicational Software, may be substituted for the following courses: WOPO 1102, 1104, 1109, or WOPO 2303.



## Administrative and Secretarial Services

### General Secretarial (ASGS) 520401

#### Certificate of Completion

##### First Year

###### First Semester

			Credit
OADM		Elective	3
WOPO	1303	Beginning Keyboarding/Data Entry	3
OADM	1305	Information and Records Management	3
OADM	1309	Business Mathematics and Calculating Machines	3
ENGL		English Selection	3
WOPO	1101	MS-DOS: An Introduction	1

###### Second Semester

WOPO	1304	Intermediate Information Processing Applications	3
OADM	1306	Office Procedures and Applications	3
OADM		Elective	3
OADM	1308	Business Correspondence	3
WOPO	1307	Word Processing/Transcription	3
PHED		Physical Education	1
Total Hours			32

**Applied Management (MGMT) 520201****Associate in Applied Science Degree***(Not Offered in Texas)***First Year**

<b>First Semester</b>		<b>Credit</b>
BUSI 1301	Introduction to Business	3
ENGL	English Selection(s)	3
MATH	MATH 1324, 1342, 1314, or higher	3
BMGT 1303	Principles of Management	3
HRPO 1311	Human Relations	3
PHED	Physical Education	1

**Second Semester**

BUSI 1307	Personal Finance	3
ENGL	English Selection	3
ELCT	BMGT/HRPO/BUSG	3
SPCH	Speech Selection(s)	3
ELCT	Computer Science/Microcomputer Technology Elective (see page 30)	3
PHED	Physical Education	1

**Second Year**

<b>First Semester</b>		
ACCT 2301	Principles of Accounting I	3
HRPO 2301	Human Resource Management	3
BMGT 1301	Supervision	3
ELCT	Humanities/Fine Arts Elective (see page 30)	3
ELCT	BMGT/HRPO/BUSG	3
PHED	Physical Education	1

**Second Semester**

ELCT	Social/Behavioral Science Elective (see page 30)	3
BUSG 2305	Business Law/Contracts	3
MRKG 1311	Principles of Marketing	3
ELCT	BMGT/BUSG/HRPO or approved selection	3
ELCT	BMGT/BUSG/COSC/MISC	3
PHED	Physical Education	1
<b>Total Hours</b>		<b>64</b>

## Applied Management

# Applied Management with Computer Applications (MMRO) 110301

## Associate in Applied Science Degree

### First Year

First Semester			Credit
BMGT	1303	Principles of Management	3
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	4
MISC	1450	Microcomputers for Business	4
ENGL	1312	Communications Skills	3
MATH		MATH 1324 or 1342	3
PHED		Physical Education	1

### Second Semester

BMGT	1301	Supervision	3
BMGT	1325	Office Management	3
MISC	1430	Spreadsheets for Microcomputers	4
MISC	1440	Data Base for Microcomputers	4
SPCH	1321	Business and Professional Speaking	3
PHED		Physical Education	1

### Second Year

First Semester			
BUSG	2305	Business Law/Contracts	3
HRPO	2301	Human Resource Management	3
ACCT	2301	Principles of Accounting I	3
MISC	1461	Operating Systems	4
MISC	2402	Systems in the MIS Environment	4

### Second Semester

HRPO	1311	Human Relations	3
ELCT		Computer/Microcomputer Elective	4
ACCT	2302	Principles of Accounting II	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Social/Behavioral Science Elective (see page 30)	3
Total Hours			69



# Auto Collision Repair (ATCR) 470603

## Associate in Applied Science Degree

### First Year

First Semester			Credit
ABDR	1419	Basic Metal Repair	4
ABDR	1472	Auto Body Glass, Hardware and Trim	4
ABDR	1471	Advanced Auto Body Welding	4
ABDR	1431	Basic Refinishing	4
PHED		Physical Education	1

### Second Semester

ABDR	2449	Advanced Refinishing I	4
ABDR	1449	Automotive Plastic and Sheet Molding Compound	4
ABDR	1441	Structural Analysis and Damage Repair I	4
ABDR	1442	Structural Analysis and Damage Repair II	4
MATH		MATH 1324, 1342, 1314 or higher	3

### Second Year

First Semester			
ABDR	2435	Structural Analysis and Damage Repair IV	4
ABDR	2437	Structural Analysis and Damage Repair V	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ENGL	1312	Communications Skills	3
GOVT	2301/2302	State and Federal Government I/II	3

### Second Semester

ABDR	2402	Auto Body Mechanical and Electrical Service	4
AUMT	1416	Suspension and Steering	4
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	4
SPCH	1321	Business and Professional Speaking	3
AUMT	1410	Automotive Brake Systems	4
or			
ABDR	2488	Internship - Auto/Automotive Body Repairer	
<b>Total Hours</b>			<b>72</b>

**Automotive Mechanic/Technician(ATMT) 470604****Associate in Applied Science Degree****First Year**

<b>First Semester</b>			<b>Credit</b>
AUMT	1405	Introduction to Automotive Technology	4
AUMT	2305	Theory of Automotive Engines	3
AUMT	1407	Automotive Electrical Systems	4
AUMT	2437	Automotive Electronics	4
MATH		MATH 1324, 1342, 1314 or higher	3

**Second Semester**

AUMT	1472	Automotive Computer Systems	4
AUMT	1445	Automotive Heating and Air Conditioning	4
AUMT	1410	Automotive Brake Systems	4
AUMT	2413	Manual Drive Trains and Axles	4
ENGL	1312	Communications Skills	3

**Second Year**

<b>First Semester</b>			
SPCH	1321	Business and Professional Speaking	3
AUMT	1416	Suspension and Steering	4
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	3
AUMT	1471	Automotive Fuel Systems	4
GOVT	2301/2302	State and Federal Government I/II	3

**Second Semester**

AUMT	2425	Automatic Transmissions and Transaxles	4
AUMT	2434	Engine Performance Analysis II	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Approved Elective	3
AUMT	1419	Automotive Engine Repair	4
or			
AUMT	2488	Internship—Auto/Automotive Mechanic Technician	
<b>Total Hours</b>			<b>72</b>

# Aviation Maintenance Technology (AVMT) 470608

## Associate in Applied Science Degree

### First Year

First Semester			Credit
AERM	1208	Federal Aviation Regulations	2
AERM	1205	Weight and Balance	2
AERM	1314	Basic Electricity	3
ENGL	1312	Communications Skills	3
PHYS	1305	Survey of Physics	3

### Second Semester

AERM	1203	Shop Practices	2
AERM	1210	Ground Operations	2
AERM	1254	Airframe Composites	2
AERM	1452	Aircraft Sheet Metal	4
AERM	2231	Airframe Inspection	2
MATH		MATH 1324, 1342, 1314, or higher	3

### Third Semester

AERM	1449	Hydraulic, Pneumatic and Fuel Systems	4
AERM	2337	Landing Gear and Hydraulic Systems	3

### Second Year

#### First Semester

AERM	1243	Instruments and Navigation/Communications	2
AERM	2341	Power Plant and Auxiliary Power Units	3
AERM	1357	Fuel Metering and Induction System	3
AERM	1445	Airframe Electrical Systems	4

#### Second Semester

AERM	1444	Aircraft Reciprocating Engines	4
AERM	1340	Aircraft Propellers	3
AERM	2351	Aircraft Turbine Engine Overall	3
AERM	1456	Aircraft Power Plant Electrical	4

#### Third Semester

ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Social/Behavioral Science Elective (see page 30)	3
Total Hours			67



## Business Management

# Business Management (BMGT) 520201

## Associate in Applied Science Degree

### First Year

First Semester			Credit
HRPO	1311	Human Relations	3
ENGL	1301	Composition and Rhetoric I	3
ELCT		MISC 1450 or WOPO 1305	3-4
BUSI	1301	Introduction to Business	3
SPCH		SPCH 1315 or 1321	3
PHED		Physical Education	1

### Second Semester

BMGT	1325	Office Management	3
BMGT	1303	Principles of Management	3
OADM	1309	Business Math and Machine Applications	3
ELCT		BUSI/BMGT/MRKG/RELE/MISC/COSC	3-4
ELCT		BUSI/BMGT/MRKG/RELE	3
PHED		Physical Education	1

### Second Year

First Semester			
MATH		MATH 1324 or 1342	3
ACCT	2301	Principles of Accounting I	3
ELCT		BMGT 2370, BMGT 2488, or RELE 2488	3-4
HRPO	2301	Human Resource Management	3
BUSG	2305	Business Law/Contracts	3
ECON		ECON 2301 or 2302	3

### Second Semester

ELCT		BMGT 2371, BMGT 2489, or RELE 2489	3-4
BUSG	2309	Small Business Management	3
ACCT	2302	Principles of Accounting II	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
BMGT	1301	Supervision	3
ELCT		Approved Elective	3
Total Hours			68-72

**Business Management (BSMG) 520201****Certificate of Completion****First Year**

First Semester			Credit
BUSI	1301	Introduction to Business	3
BMGT	1303	Principles of Management	3
HRPO	1311	Human Relations	3
ELCT		MISC 1450 or WOPO 1305	3-4
ELCT		BUSI/BMGT/BUSG/MRKG/RELE	3

**Second Semester**

HRPO	2301	Human Resource Management	3
BMGT	1301	Supervision	3
ELCT		BMGT 2370, BMGT 2488, or RELE 2488	3-4
BUSG	2305	Business Law/Contracts	3
ELCT		BUSI/BMGT/BUSG/MRKG/RELE	3
<b>Total Hours</b>			<b>30-32</b>

**Entrepreneurship (BMEC) 520201****Certificate of Completion****First Year**

First Semester			Credit
BUSG	2309	Small Business Management	3
OADM	1309	Business Math and Calculating Machines	3
ELCT		MISC 1450 or WOPO 1305	3-4
MRKG	1311	Principles of Marketing	3
ACCT	2301	Principles of Accounting I	3

**Second Semester**

HRPO	2301	Human Resource Management	3
BUSG	2305	Business Law/Contracts	3
ELCT		BUSI/BMGT/BUSG/RELE	3
BUSG	1370	Small Business Accounting	3
BUSG	1371	Entrepreneurship and Business Plan Development	3
<b>Total Hours</b>			<b>30-31</b>

## Criminal Justice

### Criminal Justice (CRIJ) 430104

#### Associate in Applied Science Degree

##### First Year

###### First Semester

		Credit
CJSA 1322/CRIJ 1301	Introduction to Criminal Justice	3
CJSA 2300/CRIJ 2323	Legal Aspects of Law Enforcement	3
CJSA 1313/CRIJ 1306	Court Systems and Practices	3
CJSA 1312/CRIJ 1307	Crime in America	3
ENGL 1301	Composition and Rhetoric I	3
PHED 1130	Physical Conditioning	1

###### Second Semester

CJSA 1327/CRIJ 1310	Fundamentals of Criminal Law	3
CJSA 1317/CRIJ 1313	Juvenile Justice System	3
CJSA 1348	Ethics in Criminal Justice	3
ENGL	ENGL 1302 or 2311	3
MATH	MATH 1324, 1342, 1314 or higher	3
PHED	Physical Education	1

##### Second Year

###### First Semester

CJSA 1359/CRIJ 2328	Police Systems and Practices	3
CJSA 1342/CRIJ 2314	Criminal Investigation	3
CJSA 1351	Use of Force	3
ELCT	Criminal Justice Elective	3
SOCI 1301	Introduction to Sociology	3
GOVT 2301/2302	State and Federal Government I/II	3

###### Second Semester

CJSA 2331	Child Abuse, Prevention and Investigation	3
CJLE 1211	Basic Firearms	2
ELCT	Criminal Justice Elective	3
SPCH 1321	Business and Professional Speaking	3
ELCT	Humanities/Fine Arts Elective (see page 30)	3
ELCT	Computer Science/Microcomputer Technology Elective (see page 30)	3
<b>Total Hours</b>		<b>67</b>



# Criminal Justice - Corrections Specialty (CRJC) 430104

## Associate in Applied Science Degree

### First Year

First Semester		Credit
CJSA 1322/CRIJ 1301	Introduction to Criminal Justice	3
CJCR 2325	Legal Aspects of Corrections	3
CJSA 1313/CRIJ 1306	Court Systems and Practices	3
CJSA 1312/CRIJ 1307	Crime in America	3
ENGL 1301	Composition and Rhetoric I	3
PHED 1130	Physical Conditioning	1

### Second Semester

CJSA 1327/CRIJ 1310	Fundamentals of Criminal Law	3
CJCR 1304	Probation and Parole	3
CJSA 1348	Ethics in Criminal Justice	3
ENGL	ENGL 1302 or 2311	3
MATH	MATH 1324, 1342, 1314 or higher	3
PHED	Physical Education	1

### Second Year

#### First Semester

CJCR 1307/CRIJ 2313	Correctional Systems and Practices	3
CJCR 2324/CRIJ 2301	Community Resources in Corrections	3
CJSA 1351	Use of Force	3
ELCT	Criminal Justice Elective	3
SOCI 1301	Introduction to Sociology	3
GOVT 2301/2302	State and Federal Government I/II	3

#### Second Semester

CJLE 1358	Rights of Prisoners	3
CJLE 1211	Basic Firearms	2
ELCT	Criminal Justice Elective	3
SPCH 1321	Business and Professional Speaking	3
ELCT	Humanities/Fine Arts Elective (see page 30)	3
ELCT	Computer Science/Microcomputer Technology Elective (see page 30)	3
<b>Total Hours</b>		<b>67</b>

## Diesel

# Diesel Engine Mechanic and Repairer (DEMR) 470605

## Associate in Applied Science Degree

### First Year

First Semester			Credit
DEMR	1401	Shop Safety and Procedures	4
DEMR	1406	Diesel Engines I	4
AUMT	1445	Automotive heating and Air Conditioning	4
ENGL	1312	Communication Skills	3
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	3

### Second Semester

DEMR	1421	Power Trains I	4
DEMR	1405	Basic Electrical Systems	4
DEMR	1417	Basic Brake Systems	4
MATH		MATH 1324, 1342, 1314 or higher	3
SPCH	1321	Business and Professional Speaking	3

### Second Year

First Semester			
DEMR	1416	Basic Hydraulics	4
DEMR	1471	Basic Diesel Tune-Up and Troubleshooting	4
DEMR	1411	Diesel Engine Testing and Repair II	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Elective	3

### Second Semester

DEMR	1447	Power Trains II	4
DEMR	1330	Steering and Suspension I	3
DEMR	2434	Advanced Diesel Tune-Up and Troubleshooting	4
GOVT	2301/2302	State and Federal Government I/II	3
DEMR	1449	Diesel Engine II	4
or			
DEMR	2488	Internship-Diesel Engine Mechanic and Repairer	
Total Hours			72

**Computer-Aided Drafting and Design (DFTG) 480101****Associate in Applied Science Degree****First Year**

<b>First Semester</b>			<b>Credit</b>
ENGR*	1304	Engineering Graphics	3
DFTG	2412	Technical Illustration	4
DFTG	2410	Structural Drafting	4
MATH	1314	College Algebra	3

**Second Semester**

ENGR*	1305	Descriptive Geometry	3
DFTG	2402	Machine Drafting	4
DFTG	1409	Basic Computer-Aided Drafting	4
ENGL	1312	Communications Skills	3
ELCT**		General Academic Elective	3

**Second Year**

<b>First Semester</b>			
DFTG	1417	Architectural Drafting-Residential	4
DFTG	1458	Electrical/Electronics Drafting	4
DFTG	1452	Intermediate Computer-Aided Drafting	4
ELCT***		Approved Elective	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3

**Second Semester**

DFTG	1444	Pipe Drafting	4
DFTG	1448	Topographical Drafting	4
DFTG	1471	Industrial Practice	4
ELCT		Social/Behavioral Science Elective (see page 30)	3
<b>Total Hours</b>			<b>64</b>

\*Selected locations may substitute DFTG 1405 for ENGR 1304 and DFTG 1456 for ENGR 1305.

\*\* Natural Science/Mathematics, Humanities/Fine Arts or Social/Behavioral Science Elective.

\*\*\* Approved Electives: DFTG 1391; ARTS 1316; MISC 1450 or other elective approved by the appropriate CTC official.

**Computer-Aided Drafting and Design (DDCC) 480101****Certificate of Completion**

			<b>Credit</b>
ENGR	1304	Engineering Graphics	3
ENGR	1305	Descriptive Geometry	3
DFTG	1409	Basic Computer-Aided Drafting	4
DFTG	2402	Machine Drafting	4
DFTG	2410	Structural Drafting	4
DFTG	2412	Technical Illustration	4
TMTH	1301	Technical Math	3
<b>Total Hours</b>			<b>25</b>

## Early Childhood Professions

### Early Childhood Professions (CDEC) 200201

#### Associate in Applied Science Degree

##### First Year

First Semester			Credit
CDEC	1311	Introduction to Early Childhood Education	3
CDEC	1313	Curriculum Resources for Early Childhood Professions	3
CDEC	1319	Child Guidance	3
ENGL		ENGL 1301 or 1312	3
CDEC*	1359	Child with Special Needs	3
PHED		Physical Education	1

##### Second Semester

CDEC	1358	Creative Arts for Early Childhood	3
CDEC	1354	Child Growth and Development	3
CDEC	1318	Nutrition, Safety and Health	3
CDEC	1303	Family and the Community	3
CDEC	1356	Emergent Literacy for Early Childhood	3

##### Second Year

###### First Semester

CDEC	2321	The Infant and Toddler	3
CDEC	2326	Administration of Programs for Children I	
or			
CDEC	2328	Administration of Programs for Children II	3
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	4
SPCH		SPCH 1315 or 1321	3
MATH		MATH 1324, 1342, 1314 or higher	3
CDEC	1374	Preschool Age	3

###### Second Semester

CDEC	1357	Math and Science for Early Childhood	3
CDEC	2384	Cooperative Education in Child Development	3
CDEC	2341	The School Age Child	3
CDEC	1195	Special Topics in Child Care	1
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Social/Behavioral Science Elective (see page 30)	3

**Total Hours** 66

\* May substitute CDEC 1371 or 1372

### Early Childhood Professions (ECTC) 200201

#### Certificate of Completion

			Credit
CDEC	1311	Introduction to Early Childhood Education	3
CDEC	1313	Curriculum Resources for Early Childhood Professions	3
CDEC	1319	Child Guidance	3
CDEC	1359	Child with Special Needs	3
CDEC	1358	Creative Arts for Early Childhood	3
CDEC	1354	Child Growth and Development	3
CDEC	1318	Nutrition, Safety and Health	3
CDEC	1303	Family and the Community	3
CDEC	1356	Emergent Literacy for Early Childhood	3
CDEC	2321	The Infant and Toddler	3
CDEC	1374	Preschool Age	3
<b>Total Hours</b>			<b>33</b>



# Communications Electronics Technology (CMET) 150303

## Associate in Applied Science Degree

### First Year

First Semester			Credit
CETT	1421	Electronics Fabrications	4
CETT	1425	Digital Fundamentals	4
CETT	1403	DC Circuits	4
CPMT	1403	Introduction to Computer Technology	4

### Second Semester

CPMT	2437	Microcomputer Interfacing	4
MATH	1314	College Algebra	3
CETT	1405	AC Circuits	4
CETT	1429	Solid State Devices	4
ENGL	1312	Communications Skills	3

### Second Year

First Semester			Credit
CETT	2445	Color Television Repair	4
EECT	1474	Basic Communications Circuits	4
CETT	1449	Digital Systems	4
ELCT		Social/Behavioral Sciences Elective (see page 30)	3
ELCT		Approved Technical Elective	4

### Second Semester

EECT	2439	Communications Circuits	4
CETT	2447	Advanced Color Television Repair	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3
EECT	1476	Digital Communications	4
ELCT		Academic Elective from Humanities/Fine Arts, Social/Behavioral Science, Natural Science/Mathematics	3

<b>Total Hours</b>			<b>71</b>
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## Electronics

### Computer Electronics (CELT) 150402

#### Associate in Applied Science Degree

##### First Year

###### First Semester

			Credit
CETT	1421	Electronics Fabrication	4
CETT	1425	Digital Fundamentals	4
CETT	1403	DC Circuits	4
CPMT	1403	Introduction to Computer Technology	4

###### Second Semester

CPMT	2437	Microcomputer Interfacing	4
MATH	1314	College Algebra	3
CETT	1405	AC Circuits	4
CETT	1429	Solid State Devices	4
ENGL	1312	Communications Skills	3

##### Second Year

###### First Semester

CETT	2445	Color Television Repair	4
CPMT	1445	Computer System Maintenance	4
CPMT	1449	Computer Networking Technology	4
CETT	1449	Digital Systems	4
ELCT		Social/Behavioral Science Elective (see page 30)	3

###### Second Semester

CPMT	2445	Computer System Troubleshooting	4
CETT	2447	Advanced Color Television	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Approved Technical Elective	4
ELCT		Academic Elective from Humanities/Fine Arts, Social/Behavioral Science, Natural Science/Mathematics	3

**Total Hours** 71

### Computer Electronics Technology (COEC) 150402

#### Certificate of Completion

###### First Semester

			Credit
CETT	1421	Electronics Fabrication	4
CETT	1425	Digital Fundamentals	4
CETT	1403	DC Circuits	4
CPMT	2437	Microcomputer Interfacing	4

###### Second Semester

CETT	1405	AC Circuits	4
CETT	1429	Solid State Devices	4
ELCT		Approved Elective	3
ENGL	1312	Communications Skills	3

**Total Hours** 30

# Emergency Medical Technician (EMET)

## Associate in Applied Science Degree

510904

**First Year**

<b>First Semester</b>			<b>Credit</b>
EMET	1402	Emergency Medical Technician-Ambulance	4
ENGL	1301	Composition and Rhetoric I	3
BMGT	1303	Principles of Management	3
MATH		MATH 1324, 1342, 1314 or higher	3
PHED		Physical Education	1

**Second Semester**

HRPO	1311	Human Relations	3
EMET		Technical Elective	3
ELCT		Computer Science/Microcomputer Technology	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT*		Approved Elective	3
PHED		Physical Education	1

**Second Year**

<b>First Semester</b>			
EMET	2101	Introduction to Paramedic	1
EMET	2301	Disaster Planning	3
ACCT**	2301	Principles of Accounting I	3
HRPO	2301	Human Resource Management	3
BMGT	1301	Supervision	3
SPCH		SPCH 1315 or 1321	3

**Second Semester**

EMET	2302	Emergency Medical Center Management	3
EMET	2303	Psychology of Emergencies	3
ENGL	2311	Technical Writing	3
ACCT**	2302	Principles of Accounting II	3
ELCT		Social/Behavioral Science Elective (see page 30)	3
ELCT*		Approved Elective	3
<b>Total Hours</b>			<b>64</b>

\* Approved Electives: EMET 1303, 1304, 1305, 1403, PSYC 2301 or BIOL 2401.

\*\* ACNT 1325 and 1326 may be substituted.

**National Registry EMT-Basic exam requirements:**

1. Applicant must be 18 years of age or older.
2. Successfully complete, within the last two years, a state approved National standard EMT-Basic training program, as developed and promulgated by the US Department of Transportation.

## Fire Protection

### Fire Protection (FIRT) 430201

#### Associate in Applied Science Degree

##### First Year

First Semester			Credit
FIRT	1301	Fundamentals of Fire Protection	3
FIRT	1338	Fire Protection Systems	3
FIRT	1309	Fire Administration I	3
FIRT	1333	Fire Chemistry I	3
ENGL	1301	Composition and Rhetoric I	3
PHED	1130	Physical Conditioning	1

##### Second Semester

FIRT	1307	Fire Prevention Codes and Inspection	3
FIRT	1349	Fire Administration II	3
FIRT	1334	Fire Chemistry II	3
ENGL		ENGL 1302 or 2311	3
MATH		MATH 1324, 1342, 1314 or higher	3
PHED		Physical Education	1

##### Second Year

First Semester			
FIRT	1315	Hazardous Materials I	3
FIRT	1329	Building Codes and Construction	3
FIRT	1331	Firefighting Strategies and Tactics I	3
ELCT		Technical Elective	3
SOCI	1301	Introduction to Sociology	3
GOVT	2301/2302	State and Federal Government I/II	3

##### Second Semester

FIRT	1347	Industrial Fire Protection	3
FIRT	1303	Fire and Arson Investigations I	3
ELCT		Technical Elective	3
SPCH	1321	Business and Professional Speaking	3
ELCT		Humanities/Fine Arts Selection (see page 30)	3
ELCT		Computer Science /Microcomputer Technology Elective (see page 30)	3
Total Hours			68



# Heating, Air Conditioning and Refrigeration Mechanic and Repairer (HART) 470201

## Associate in Applied Science Degree

### First Year

First Semester			Credit
HART	1407	Refrigeration Principles	4
HART	1401	Electrical Principles	4
HART	1445	Gas and Electric Heating	4
MATH		MATH 1324, 1342, 1314 or higher	3
PHED		Physical Education	1

### Second Semester

HART	1403	A/C Control Principles	4
HART	1441	Residential Air Conditioning	4
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	4
ENGL	1312	Communications Skills	3
GOVT	2301/2302	State and Federal Government I/II	3

### Second Year

#### First Semester

HART	1449	Heat Pumps	4
HART	2431	Advanced Electricity	4
HART	2445	Air Conditioning System Design	4
HART	1442	Commercial Refrigeration	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3

#### Second Semester

HART	2436	Troubleshooting	4
HART	2471	Advanced Heat Pumps	4
SPCH	1321	Business and Professional Speaking	3
HART	2441	Commercial Air Conditioning	4
or			
HART	2488	Internship - Heating, A/C and Refrigeration Mechanic and Repairer	
<b>Total Hours</b>			<b>68</b>

## Hospitality Management

### Food Service (MMFS) 521401

#### Associate in Applied Science Degree

##### First Year

First Semester		Credit
HAMG 1311	Sanitation and Safety	3
HAMG 1340	Hospitality Legal Issues	3
HMCA 1306	Hospitality Supervision	3
HMCA 1309	Introduction to Hospitality Industry	3
SPCH 1315	Public Speaking	3
ELCT	Humanities/Fine Arts Elective (see page 30)	3

##### Second Semester

HMCA 2304	Nutrition Food Service Profession	3
HAMG 2307	Hospitality Marketing and Sales	3
HMCA 1207	Menu Management	2
HMCA 1303	Purchasing for Hospitality Industry	3
MRKG 1311	Principles of Marketing	3
MATH 1342	Elementary Statistics	3

##### Second Year

First Semester		
HRPO 2301	Human Resource Management	3
BUSI 1301	Introduction to Business	3
BUSG 2309	Small Business Management	3
ELCT	Technical Elective	3
GOVT 2301/2302	State and Federal Government I/II	3
PHED	Physical Education	1

##### Second Semester

BMGT 1303	Principles of Management	3
BMGT 1325	Office Management	3
HAMG 1319	Computers in Hospitality	3
ELCT	Technical Elective	3
ELCT	Academic Elective	3
ENGL 1301	Composition and Rhetoric I	3
<b>Total Hours</b>		<b>69</b>



**Restaurant and Culinary Management (HMRI) 520902****Associate in Applied Science Degree****First Year**

<b>First Semester</b>			<b>Credit</b>
HAMG	1311	Sanitation and Safety	3
HMCA	1309	Introduction to Hospitality Industry	3
HMCA	1331	Basic Food Preparation	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
HAMG	2307	Hospitality Marketing and Sales	3
HMCA	1207	Menu Management	2
PHED		Physical Education	1

**Second Semester**

GOVT	2301	State and Federal Government I	3
HAMG	1319	Computers in Hospitality	3
SPCH	1315	Public Speaking	3
HMCA	1333	Intermediate Food Preparation	3
ELCT		Technical Elective	3
HAMG	2301	Principles of Food and Beverage Operations	3

**Second Year**

<b>First Semester</b>			
HMCA	1303	Purchasing for Hospitality Industry	3
HAMG	2371	Hospitality Management Cases	3
MATH	1342	Elementary Statistics	3
HAMG	1340	Hospitality Legal Issues	3
HMCA	1306	Hospitality Supervision	3
ELCT		Academic Elective	3

**Second Semester**

HMCA	2305	Facilities Layout and Design	3
HAMG	2332	Hospitality Financial Management	3
HMCA	2304	Nutrition Food Service Profession	3
ENGL	1301	Composition and Rhetoric I	3
ELCT		Technical Elective	3
HAMG	2388	Internship - Hospitality Administration and Management	3
<b>Total Hours</b>			<b>72</b>

## Hospitality Management

# Lodging Management Specialization (HMLT) 520902

## Associate in Applied Science Degree

### First Year

First Semester			Credit
HAMG	1311	Sanitation and Safety	3
HMCA	1309	Introduction to Hospitality Industry	3
HAMG	1313	Front Office Procedures	3
HMCA	1331	Basic Food Preparation	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Academic Elective	3

### Second Semester

HAMG	2337	Hospitality Facilities Management	3
HAMG	2307	Hospitality Marketing and Sales	3
GOVT	2301	State and Federal Government I	3
HAMG	2301	Principles of Food and Beverage Operations	3
HAMG	1319	Computers in Hospitality	3
SPCH	1315	Public Speaking	3

### Second Year

First Semester			
HMCA	1234	Dining Room Service	2
HAMG	2371	Hospitality Management Cases	3
HMCA	1306	Hospitality Supervision	3
MATH	1342	Elementary Statistics	3
HAMG	1340	Hospitality Legal Issues	3
HMCA	1303	Purchasing for Hospitality Industry	3
PHED		Physical Education	1

### Second Semester

HMCA	2305	Facilities Layout and Design	3
HAMG	2332	Hospitality Financial Management	3
HAMG	2388	Internship - Hospitality Administration and Management	3
ENGL	1301	Composition and Rhetoric I	3
ELCT		Technical Elective	3
ELCT		Technical Elective	3
Total Hours			72



# Culinary Arts Specialization (HMCA) 520902

## Associate in Applied Science Degree

### First Year

First Semester			Credit
HAMG	1311	Sanitation and Safety	3
HMCA	1309	Introduction to Hospitality Industry	3
HMCA	1331	Basic Food Preparation	3
HMCA	1234	Dining Room Services	2
HMCA	1207	Menu Management	2
ELCT		Humanities/Fine Arts Elective (see page 30)	3
PHED		Physical Education	1

### Second Semester

HAMG	2301	Principles of Food and Beverage Operations	3
HAMG	1319	Computers in Hospitality	3
SPCH	1315	Public Speaking	3
ELCT		Technical Elective	3
HMCA	2356	Fundamentals of Baking	3
HMCA	1333	Intermediate Food Preparation	3

### Second Year

First Semester			
HAMG	2371	Hospitality Management Cases	3
HAMG	1340	Hospitality Legal Issues	3
HMCA	1306	Hospitality Supervision	3
HMCA	2335	Advanced Food Preparation	3
ELCT		Technical Elective	3
MATH	1342	Elementary Statistics	3

### Second Semester

HMCA	2304	Nutrition Food Service Profession	3
GOVT	2301	State and Federal Government I	3
HAMG	2388	Internship - Hospitality Administration and Management	3
HMCA	1303	Purchasing for Hospitality Industry	3
ENGL	1301	Composition and Rhetoric	3
ELCT		Academic Elective	3
<b>Total Hours</b>			<b>71</b>

## Legal Assistant

# Legal Assistant (PLLA) 220103

## Associate in Applied Science Degree

### First Year

#### First Semester

			Credit
LGLA	1407	Introduction to Law and the Legal Profession	4
LGLA	1355	Family Law	3
LGLA	1417	Law Office Technology	4
ENGL	1312	Communications Skills	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
WOPO	1303	Beginning Keyboarding	3

#### Second Semester

LGLA	1353	Wills, Trusts, and Probate Administration	3
LGLA	1345	Civil Litigation	3
LGLA	1351	Contracts	3
MATH		MATH 1324 or 1342	3
MISC	1420	Word Processing for Microcomputers	4
PHED		Physical Education	1

### Second Year

#### First Semester

LGLA	2313	Criminal Law and Procedures	3
LGLA		Elective	3
LGLA	2303	Torts and Personal Injury Law	3
ELCT		ACCT 2301 or OADM 2304	3
GOVT	2301	State and Federal Government I	3
PHED		Physical Education	1

#### Second Semester

GOVT	2302	State and Federal Government II	3
LGLA	1401	Legal Research and Writing	4
LGLA		Elective	3
LGLA		Elective	3
LGLA	2433	Advanced Legal Document Preparation	4
or			
LGLA	2488	Internship - Paralegal/Legal Assistant	
Total Hours			70

**Maintenance Technology (MTNT) 460401****Associate in Applied Science Degree****First Year**

<b>First Semester</b>			<b>Credit</b>
INDU	1400	Industrial Fundamentals	4
HART	1407	Refrigeration Principles	4
MTNT	1401	Carpentry I	4
MATH		MATH 1324, 1342, 1314 or higher	3
PHED		Physical Education	1

**Second Semester**

HART	1401	Electricity Principles	4
MTNT	1402	Electricity	4
ENGL	1312	Communications Skills	3
WLDG	1425	Introduction to Oxy-Fuel Welding and Cutting	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3

**Second Year**

<b>First Semester</b>			
MTNT	2402	Carpentry II	4
MTNT	2403	Plumbing I	4
HART	1445	Gas and Electric Heating	4
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	4
GOVT	2301/2302	State and Federal Government I/II	3

**Second Semester**

MTNT	2404	Painting and Refinishing	4
MTNT	2410	Plumbing II	4
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
SPCH	1321	Business and Professional Speaking	3
DFTG	1391	Architectural Blue Print Reading	3
or			
MTNT	2419	Maintenance Technology Internship	4
<b>Total Hours</b>			<b>71-72</b>

## Marketing

### Marketing and Sales Management (MGSM) 521401

#### Associate in Applied Science Degree

##### First Year

First Semester			Credit
HRPO	1311	Human Relations	3
ENGL	1301	Composition and Rhetoric I	3
BUSI	1301	Introduction to Business	3
ELCT		MISC 1450 or WOPO 1305	3-4
SPCH		SPCH 1315 or 1321	3
PHED		Physical Education	1

##### Second Semester

MATH		MATH 1324 or 1342	3
MRKG	1311	Principles of Marketing	3
BMGT	1325	Office Management	3
BMGT	1302	Principles of Retailing	3
ELCT		BUSI/BMGT/MRKG/RELE/MISC/COSC	3-4
PHED		Physical Education	1

##### Second Year

###### First Semester

ELCT		BMGT 2370, 2488, or RELE 2488	3-4
ECON		ECON 2301 or 2302	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		BMGT/BUSI/BUSG/MRKG/RELE	3
ELCT		BMGT/BUSI/BUSG/MRKG/RELE	3
ACCT	2301	Principles of Accounting I	3

###### Second Semester

ELCT		BMGT 2371, BMGT 2489, or RELE 2489	3-4
ACCT	2302	Principles of Accounting II	3
BUSG	2305	Business Law/Contracts	3
BMGT	1333	Principles of Selling	3
ELCT		Approved Elective	3
ELCT		BMGT/BUSI/BUSG/MRKG/RELE	3

Total Hours

68-72

### Marketing and Sales Management (MKSM) 521401

#### Certificate of Completion

##### First Year

First Semester			Credit
HRPO	1311	Human Relations	3
BUSI	1301	Introduction to Business	3
ELCT		MISC 1450 or WOPO 1305	3-4
ELCT		BMGT/BUSI/BUSG/MRKG/RELE	3

##### Second Semester

ELCT		BMGT 2370, BMGT 2488, RELE 2488	3-4
MRKG	1311	Principles of Marketing	3
BMGT	1333	Principles of Selling	3
ELCT		BUSI/BMGT/BUSG/MRKG/RELE	3

Total Hours

24-26



## Microcomputer Technology-Information Management (MISC) 110101

### Associate in Applied Science Degree

#### First Year

First Semester			Credit
MISC	1400	Microcomputer Fundamentals	4
MISC	1420	Word Processing for Microcomputers	4
MISC	1430	Spreadsheets for Microcomputers	4
MISC	1450	Microcomputers for Business	4
PHED		Physical Education	1

#### Second Semester

MISC	1440	Data Base for Microcomputers	4
MISC	1451	Introduction to Microcomputer Programming	4
MISC	1461	Operating Systems	4
MGMT	1305	Introduction to Management	3
ENGL	1301	Composition and Rhetoric I	3

#### Second Year

First Semester			
ELCT		COSC/MISC Technical Elective	4
MATH		MATH 1324, 1342, 1314 or higher	3
ELCT*		ACCT Elective Selection	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		Social/Behavioral Science Elective (see page 30)	3

#### Second Semester

MISC	2301	Information Center Management	3
MISC	2402	Systems in the MIS Environment	4
MISC	2454	Basic Communications, Networking and Internet	4
ELCT		COSC/MISC Technical Elective	4
SPCH	1321	Business and Professional Speaking	3
<b>Total Hours</b>			<b>69</b>

\* ACCT Elective selection includes ACNT 1325, ACCT 2301

## Microcomputer Technology

# Microcomputer Technology-Programmer Analyst (MTPA) 110101

## Associate in Applied Science Degree

### First Year

#### First Semester

			Credit
MISC	1405	Computer Concepts and Analysis	4
MISC	1451	Introduction to Microcomputer Programming	4
ENGL	1301	Composition and Rhetoric I	3
MATH		MATH 1324, 1342, 1314 or higher	3
PHED		Physical Education	1

#### Second Semester

MISC	1404	COBOL Programming	4
MISC	1406	Computer Organization and Architecture	4
MISC	1454	PASCAL Programming	4
MISC	1461	Operating Systems	4

### Second Year

#### First Semester

MISC	2456	C Language Programming I	4
ELCT		COSC/MISC Technical Elective	4
ELCT		COSC/MISC Technical Elective	4
ELCT*		ACCT Selection	3

#### Second Semester

MISC	2402	Systems in the MIS Environment	4
MISC	2454	Basic Communications, Networking and Internet	4
ELCT		COSC/MISC Technical Elective	4
SPCH	1321	Business and Professional Speaking	3
ELCT		Social/Behavioral Science Elective (see page 30)	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
<b>Total Hours</b>			<b>67</b>

\* ACCT Elective selection includes ACNT 1325, ACCT 2301.



**Office Management (OFFM) 520204****Associate in Applied Science Degree****First Year**

<b>First Semester</b>			<b>Credit</b>
WOPO	1303	Beginning Keyboarding/Data Entry	3
OADM	1309	Business Mathematics and Calculating Machines	3
BMGT	1325	Office Management	3
BMGT	1303	Principles of Management	3
ENGL	1301	Composition and Rhetoric I	3
WOPO	1101	MS-DOS: An Introduction	1

**Second Semester**

WOPO	1304	Intermediate Information Processing Applications	3
WOPO	1307	Word Processing and Transcription	3
OADM	1305	Information and Records Management	3
OADM	1308	Business Correspondence	3
WOPO	1305	Applicational Software	3
PHED		Physical Education	1

**Second Year**

<b>First Semester</b>			
ACNT	1325	Principles of Accounting I	3
ELCT		OADM/WOPO Elective	3
SPCH	1321	Business and Professional Speaking	3
ELCT		Social/Behavioral Science Elective (see page 30)	3
MATH		MATH 1324, 1342, 1314 or higher	3
PHED		Physical Education	1

**Second Semester**

ACNT	1326	Principles of Accounting II	3
OADM	2371	Office Procedures II	3
HRPO	2301	Human Resource Management	3
WOPO	2302	Advanced Information Processing Applications	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		OADM/WOPO Selection	3
<b>Total Hours</b>			<b>66</b>

## Office Management

# General Office Assistant (OFMC) 520204

## Certificate of Completion

First Semester			Credit
WOPO	1303	Beginning Keyboarding/Data Entry	3
OADM	1309	Business Mathematics and Calculating Machines	3
BMGT	1325	Office Management	3
BMGT	1303	Principles of Management	3
ENGL	1301	Composition and Rhetoric I	3
WOPO	1101	MS-DOS: An Introduction	1
Second Semester			
WOPO	1304	Intermediate Information Processing Applications	3
WOPO	1307	Word Processing and Transcription	3
OADM	1305	Information and Records Management	3
OADM	1308	Business Correspondence	3
WOPO	1305	Applicational Software	3
PHED		Physical Education	1
Total Hours			32





## Real Estate Sales Agent (REAA) 521501

### Basic Certificate of Completion

First Semester			Credit
RELE	1301	Principles of Real Estate	3
RELE	2301	Law of Agency	3
RELE	1311	Law of Contracts	3
Second Semester			
ELCT		RELE (except 2488/2489) or approved selection	3
RELE	2488	Internship - Real Estate	4
or			
MISC	1450	Microcomputers for Business	
Total Hours			16

## Small Engine

# Small Engine Mechanic and Repairer (SEMR) 470606

## Associate in Applied Science Degree

### First Year

#### First Semester

			Credit
DEMR	1401	Shop Safety and Procedures	4
SMER	1471	Small Gas Engine Fundamentals	4
ENGL	1312	Communications Skills	3
WLDG	1425	Introduction to Oxy-Fuel Welding and Cutting	4
SMER	1372	Shop Organization and Management	3

#### Second Semester

SMER	1428	Small Engine Service Principles	4
MATH		MATH 1324, 1342, 1314 or higher	3
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3
SMER	1431	Small Engine Tune-Up	4

### Second Year

#### First Semester

WLDG	1430	Introduction to Gas Metal Arc (MIG) Welding	4
SMER	1404	Outboard Service Principles	4
SMER	1437	Small Engine Four Stroke Overhaul	4
GOVT	2301/2302	State and Federal Government I/II	3
ELCT		Elective	3

#### Second Semester

SMER	1434	Small Engine Two Stroke Overhaul	4
SMER	1473	Large Air Cooled Engines	4
BUSG	2309	Small Business Management	3
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	3
SPCH	1321	Business and Professional Speaking	3
PHED		Physical Education	1
<b>Total Hours</b>			<b>72</b>

**Welding (WLDG) 480508****Associate in Applied Science Degree****First Year**

<b>First Semester</b>			<b>Credit</b>
WLDG	2403	Welding Safety Tools and Equipment	4
WLDG	1425	Introduction to Oxy-Fuel Welding and Cutting	4
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
MATH		MATH 1324, 1342, 1314 or higher	3
ELCT		Elective	3

**Second Semester**

WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
WLDG	2439	Advanced Oxy-Fuel Welding and Cutting	4
WLDG	1413	Introduction to Blueprint Reading for Welders	4
ENGL	1312	Communications Skills	3
PHED		Physical Education	1

**Second Year**

<b>First Semester</b>			
WLDG	2443	Advanced Shielded Metal Arc Welding (SMAW)	4
WLDG	1435	Introduction to Pipe Welding	4
WLDG	1434	Introduction to Gas Tungsten Arc (TIG) Welding	4
ELCT		Computer Science/Microcomputer Technology Elective (see page 30)	3-4
GOVT	2301/2302	State and Federal Government I/II	3

**Second Semester**

WLDG	2453	Advanced Pipe Welding	4
SPCH	1321	Business and Professional Speaking	3
WLDG	1430	Introduction to Gas Metal Arc (MIG) Welding	4
ELCT		Humanities/Fine Arts Elective (see page 30)	3
WLDG	2435	Advanced Layout and Fabrication	4
or			
WLDG	2488	Internship-Welder/Welding Technologist	

**Total Hours** **70-71**

## Word Processing

### Word Processing Specialist (WOPO) 520401

#### Associate in Applied Science Degree

##### First Year

First Semester			Credit
WOPO	1101	MS-DOS: An Introduction	1
WOPO	1303	Beginning Keyboarding/Data Entry	3
ACNT	1325	Principles of Accounting I	3
ENGL		English Selection	3
OADM	1305	Information and Records Management	3
ELCT		OADM/WOPO Selection	3

##### Second Semester

SPCH		SPCH 1315 or 1321	3
WOPO	1305	Applicational Software	3
WOPO	1304	Intermediate Information Processing Applications	3
WOPO	1307	Word Processing/Transcription	3
OADM	1308	Business Correspondence	3

##### Second Year

First Semester			
MATH		MATH 1324, 1342, 1314 or higher	3
OADM		Elective	3
WOPO	2308	Information System Internship I	3
ELCT		Humanities/Fine Arts Elective (see page 30)	3
ELCT		OADM/WOPO Selection	3
PHED		Physical Education	1

##### Second Semester

ACNT	1326	Principles of Accounting II	3
OADM	2371	Office Procedures II	3
WOPO	2302	Advanced Information Processing Applications	3
WOPO	2309	Information Systems Internship II	3
ELCT		Social/Behavioral Science Elective (see page 30)	3
PHED		Physical Education	1

**Total Hours** 63

### Word Processing Operator (WPOC) 520401

#### Certificate of Completion

##### First Year

First Semester			Credit
WOPO	1101	MS-DOS: An Introduction	1
WOPO	1303	Beginning Keyboarding/Data Entry	3
ACNT	1325	Principles of Accounting I	3
ENGL		English Selection	3
OADM	1305	Information and Records Management	3
ELCT		OADM/WOPO Selection	3

##### Second Semester

SPCH		SPCH 1315 or 1321	3
WOPO	1305	Applicational Software	3
WOPO	1304	Intermediate Information Processing Applications	3
WOPO	1307	Word Processing/Transcription	3
OADM	1308	Business Correspondence	3

**Total Hours** 31





## ABDR Auto Body Repair

### **ABDR 1419 Basic Metal Repair (ATBR 1407, TIAB 1400) 2-7-4**

Basic current metal working techniques, shop safety, proper tool usage, product application, and skill development utilizing various body features including metal principles.

### **ABDR 1431 Basic Refinishing (ATBR 1410, TIAB 1404) 2-6-4**

An introduction to terms, trade practices, hand tools, power tools, current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Painting of trim and replacement parts included. Emphasis on surface preparation. Introduction to masking techniques. Prerequisite or co-requisite: ABDR 1419 or consent of Department Chair.

### **ABDR 1441 Structural Analysis and Damage Repair I (ATBR 1403, TIAB 1405) 2-7-4**

Skill development in the roughing and shaping procedures on automotive sheet metal necessary to make satisfactory minor body repairs. Emphasis on the alignment of component parts such as doors, hoods, front-end assemblies, and deck lids. Prerequisite or co-requisite: ABDR 1419 and 1471 or consent of Department Chair.

### **ABDR 1442 Structural Analysis and Damage Repair II (ATBR 1408) 3-3-4**

Continuation of general repair and replacement procedures for damaged structural parts and collision damaged. Prerequisites: ABDR 1419, 1441, and 1471 or consent of the Department Chair.

### **ABDR 1449 Automotive Plastic and Sheet Molding Compound Repair (TIAB 2406) 2-6-4**

A comprehensive course in repair of interior and exterior plastics including the use of various types of adhesives and state of the art plastic welding. Prerequisite or co-requisite: ABDR 1419 or consent of Department Chair.

### **ABDR 1471 Advanced Auto Body Welding (ATBR 1409, TIAB 1403) 2-7-4**

This course is designed to provide the student with instruction in the use of those gas and electrical welding and cutting processes required in Auto Collision Repair. Basic gas welding and cutting, GMAW (MIG), resistance spot welding, and plasma arc cutting will be covered. Emphasis will be placed on safety; equipment selection and set up; the design, preparation, and fitting of weld joints; and the application of correct welding procedures to specific repair requirements. Prerequisites or co-requisites: ABDR 1419 or consent of Department Chair.

### **ABDR 1472 Auto Body Glass, Hardware and Trim (ATBR 1411, TIAB 1401) 2-7-4**

This course is designed to provide the student with instruction in the removal, replacement, and service of both stationary and moveable automotive glass as well as related interior and exterior hardware such as manual and power lock mechanisms and regulators. The removal and replacement/repair of exterior and interior trim is also covered. Prerequisite or co-requisite: ABDR 1419 or consent of Department Chair.

### **ABDR 2402 Auto Body Mechanical and Electrical Service (TIAB 2408) 2-7-4**

Instruction in the repair, replacement, and/or service of those mechanical or electrical systems that are subject to damage from a collision. Topics include drive train removal, reinstallation and service; cooling system service and repair; exhaust system service; and emission control systems. Additional topics include wire and connector repair, reading wiring diagrams, and troubleshooting. Prerequisite: ABDR 1419 or consent of Department Chair.

### **ABDR 2435 Structural Analysis and Damage Repair IV (ATBR 2400) 2-6-4**

Extension of Structural Analysis and Damage Repair II providing skill development in the auto body application of theories to the repair and replacement of complete body panels. Prerequisites: ABDR 1419, 1442 and 1471 or consent of the Department Chair.

### **ABDR 2437 Structural Analysis and Damage Repair V (ATBR 2406, TIAB 2407) 2-7-4**

Skill development in the operation of equipment and the procedures involved in making satisfactory repairs of supporting structures on both conventional and unitized constructed vehicles. Special emphasis on conducting a thorough damage analysis as well as demonstrating proper holding, blocking, and pulling. Prerequisites: ABDR 1419, 1471, and 2435 or consent of Department Chair.

### **ABDR 2449 Advanced Refinishing I (ATBR 2404, TIAB 2407) 2-7-4**

Skill development in multi-stage refinishing including base coat/clear coat techniques. Further development in identification of problems and solutions in color matching and partial panel refinishing. Prerequisite: ABDR 1419 and 1431 or consent of the Department Chair.

## ACCT Accounting

### **ACCT 2301 Principles of Accounting I 3-0-3**

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

### **ACCT 2302 Principles of Accounting II 3-0-3**

A continuation of ACCT 2301 including accounting for partnerships, corporations, and introductory managerial accounting concepts. Topics will include stockholders' equity, bonds, statement of cash flows, cost behavior, budgeting, responsibility accounting, cost control and product costing.

## ACNT Accounting

### **ACNT 1311 Introduction to Computerized Accounting (TIOA 1320, WOPO 1311) 1-5-3**

Introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger package.

### **ACNT 1325 Principles of Accounting I (OADM 2304, ACTE 1301) 2-4-3**

A study of accounting concepts and their application in transaction analysis and financial statement preparation and asset and equity accounting in proprietorships and corporations. Emphasis on accounting cycle for service and merchandising enterprises.

### **ACNT 1326 Principles of Accounting II (OADM 2305, ACTE 1302) 2-4-3**

A study of the fundamentals of managerial accounting. Emphasis on accounting for a manufacturing concern, budgeting, planning, management decision making, and analysis of financial reports.

### **ACNT 1331 Federal Income Tax: Individual (MGMT 1309) 3-0-3**

Basic instruction in the tax laws as currently implemented by the Internal Revenue Service providing a working knowledge of preparing taxes for the individual.

## AERM Aviation Maintenance Technology

### **AERM 1203 Shop Practices (AVMT 1203) 2-2-2**

An introduction to the correct use of hand tools and equipment and precision measurement; identification of aircraft hardware; and the fabrication of fluid lines and tubing. Emphasis on procedures for testing, heat treating, and inspection of aircraft structures.

### **AERM 1205 Weight and Balance (AVMT 1202) 2-2-2**

An introduction to Federal Aviation Administration (FAA) required subjects relating to the weighing of aircraft, the performance of weight and balance calculations, and appropriate maintenance record entries.

### **AERM 1208 Federal Aviation Regulations (AVMT 1201) 2-2-2**

A course in the use and understanding of the Federal Aviation Administration and aircraft manufacturers' publications, forms, and records; and the exercise of mechanic privileges within prescribed limitations.

### **AERM 1210 Ground Operations (AVMT 1204) 2-2-2**

An introductory course in fuels, servicing methods and procedures, aircraft movement, securing and operations of aircraft, external power equipment, aircraft cleaning, and corrosion control.

### **AERM 1243 Instruments and Navigation/Communications (AVMT 2305) 2-1-2**

A study of aircraft instruments and electronic flight instrument systems including testing and installing instruments; inspecting, checking, and troubleshooting navigation and communication systems; and inspecting and repairing antennas and electronic equipment installations.

### **AERM 1254 Airframe Composites (AVMT 1306) 2-2-2**

A study of the inspection and repair of composite, fiberglass, honeycomb, and laminated structural materials including doors, windows, bonded structures, and interior furnishings.

### **AERM 1314 Basic Electricity (AVMT 1305) 2-4-3**

A study of aircraft electrical systems and their requirements including the use of ammeter, voltmeter, and ohmmeter; series and parallel circuits; inductance and capacitance; magnetism; converting alternating current (AC) to direct current (DC); controlling devices; maintenance and servicing of aircraft batteries; and reading and interpreting aircraft electrical diagrams to include solid state devices and logic functions.

### **AERM 1340 Aircraft Propellers (AVMT 2406) 2-4-3**

Fundamentals of construction of propellers. Skill development in inspection, servicing, and repair of fixed-pitch, constant-speed, and feathering propellers and governing systems. Instruction in removal, balancing, and installation of propellers.

### **AERM 1357 Fuel Metering and Induction System (AVMT 2307, AVMT 2405) 2-4-3**

A study of fuel metering and induction systems used on reciprocating and turbine engines including fuel metering systems, carburetors, induction systems, heat exchangers, and cooling systems.

### **AERM 1444 Aircraft Reciprocating Engines (AVMT 2404) 3-4-4**

A study of reciprocating engines and their development, operating principles, and theory. Instruction in engine instruments, lubricating, and exhaust systems.

### **AERM 1445 Airframe Electrical Systems (AVMT 2403) 3-4-4**

A study of airframe electrical systems including installation, removal, disassembly, and repair of electrical components and related wiring.

### **AERM 1449 Hydraulic, Pneumatic, and Fuel System (AVMT 2304) 3-4-4**

Skill development in inspecting, servicing, and maintaining aircraft fluid systems including hydraulics, pneumatics, and fuel. Application of basic concepts through detailed maintenance procedures.

### **AERM 1452 Aircraft Sheet Metal (AVMT 1402) 2-6-4**

A course in inspection and repair of sheet metal structures including forming, lay out, and bending of sheet metal and identification, selection, and installation of rivets and fasteners.

### **AERM 1456 Aircraft Power Plant Electricity 3-4-4**

Theory, operation, and maintenance of powerplants including electrical, ignition, starting, and fire protection systems.

### **AERM 2231 Airframe Inspection (AVMT 2303) 2-2-2**

A study of the materials and procedures for completing a One Hundred Hour Inspection as per Federal Aviation Regulations and manufacturers' service information.

### **AERM 2337 Landing Gear and Hydraulic Systems (AVMT 2402) 2-3-3**

General principles of commercial fuel and hydraulic systems, landing gear, pneumatic systems, and water/waste systems.

### **AERM 2341 Power Plant Auxiliary Power Units (AVMT 2306) 2-3-3**

General principles of auxiliary power unit (APU) and powerplant systems and components.

### **AERM 2351 Aircraft Turbine Engine Overhaul (AVMT 2407) 2-4-3**

Topics address inspection, disassembly, reassembly, and replacement of gas turbine engines, sections, and components and operational troubleshooting and analysis.

### **AERM 2370 A&P Mechanic General Course (AVMT 1320) 3-0-3**

A course intended to prepare experienced aircraft mechanics to successfully complete the written, oral and practical exams for certification by the Federal Aviation Administration as Aviation Maintenance Technician. In-depth coverage of topics for A&P certification will include maintenance publications, FAA Regulations, weight & balance determination, blueprints, diagrams, corrosion control, basic electricity, aircraft materials and hardware, basic math and physics, basic aerodynamics and aircraft inspection fundamentals.

### **AERM 2371 Aircraft Airframe Course (AVMT 2308) 3-0-3**

A course intended to prepare experienced aircraft mechanics to successfully complete the written, oral and practical exams for certification by the Federal Aviation Administration as an Airframe Maintenance Technician. An in-depth coverage of topics pertaining to Airframe certification to include inspection, fabrication and repair of aircraft structures and components; application of aircraft finishes; sheet metal and composite structures; fuel systems; instrumentation; hydraulics; pneumatics and airframe electrical systems.



## **AERM 2372 Aircraft Power Plants and Systems (AVMT 2309) 3-0-3**

A course intended to prepare experienced aircraft mechanics to successfully complete the written, oral and practical exams for certification by the Federal Aviation Administration as a Power Plant Maintenance Technician. An in-depth coverage of topics pertaining to Power Plant certification to include proper technique and procedures for maintaining, servicing, overhaul and inspections of both reciprocating and turbine engines. Other subjects to be covered include engine electrical, fuel, oil, cooling and propeller subsystems.

## **ANTH Anthropology**

### **ANTH 2301 Physical Anthropology 3-0-3**

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

### **ANTH 2346 General Anthropology 3-0-3**

Study of human beings, their antecedents and related primates, and their cultural behavior and institutions. Introduces the major sub-fields: physical and cultural anthropology, archeology, linguistics, and ethnology.

### **ANTH 2351 Cultural Anthropology 3-0-3**

Study of 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 emerging Third World nations. A study is also made of the relationship of Cultural Anthropology to the other social sciences (Psychology, Sociology, History, etc.).

## **ARTS Arts**

### **ARTS 1303 Art History I 3-0-3**

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

### **ARTS 1304 Art History II 3-0-3**

This course is a survey of the major and minor arts from the 14th century to the present. No prerequisite.

### **ARTS 1311 Design: 2-D 2-4-3**

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

### **ARTS 1312 Design: 3-D 2-4-3**

This course gives basic instruction in the principles and elements of design as applicable to three-dimensional design problems. No prerequisite.

### **ARTS 1316 Drawing I 2-4-3**

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

### **ARTS 1317 Drawing II 2-4-3**

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

## **AUMT Automotive Service and Repair**

### **AUMT 1405 Introduction to Automotive Technology (AUTO 1400, TIAM 1400) 3-3-4**

An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance.

### **AUMT 1407 Automotive Electrical Systems (AUTO 2404, TIAM 1502) 2-7-4**

An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of batteries, charging and starting systems, and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. Prerequisites or Co-requisite: AUMT 1405 and 2305 or consent of Department Chair.

### **AUMT 1410 Automotive Brake Systems (AUTO 1407, TIAM 1406) 2-6-4**

Operation and repair of drum/disc type brake systems. Emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, anti-lock brake systems, and parking brakes. Prerequisite or co-requisite: AUMT 1405 or consent of Department Chair.

### **AUMT 1416 Suspension and Steering (AUTO 2405, TIAM 2407) 2-6-4**

Theory and operation of automotive suspension and steering systems including tire and wheel problem diagnosis, component repair, and alignment procedures. Prerequisite or co-requisite: AUMT 1405 or consent of Department Chair.

### **AUMT 1419 Automotive Engine Repair (AUTO 2408, TIAM 2410) 3-3-4**

Fundamentals of engine operation, diagnosis and repair including lubrication systems and cooling systems. Emphasis on overhaul of selected engines, identification and inspection, measurements, and disassembly, repair, and reassembly of the engine. Prerequisites: AUMT 1405, 2305 and 2434 or consent of Department Chair.

### **AUMT 1445 Automotive Heating and Air Conditioning (AUTO 1405, TIAM 1405) 2-6-4**

Theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. Covers EPA guidelines for refrigerant handling and new refrigerant replacements. Prerequisites: AUMT 1405, 1407, 1472 and 2437 or consent of the Department Chair.

### **AUMT 1471 Automotive Fuel Systems (AUTO 2410) 2-7-4**

This course provides the student with a working knowledge of automotive fuel systems. Carburetors, fuel pumps, filter systems, air fuel ratios, electronic fuel injection and computer controlled systems, and exhaust emission systems will be covered. The student will troubleshoot, diagnose, repair and adjust these systems. Prerequisites: AUMT 1405, 1407, 1472, 2305 and 2437 or consent of Department Chair.

### **AUMT 1472 Automotive Computer Systems (AUTO 1411, TIAM 2511) 2-7-4**

This course provides the student with a working knowledge of automotive computer systems. It includes principles of operation, components and function, tools and test equipment, diagnosis, and service and repair of automotive computerized systems. Prerequisites: AUMT 1405, 1407, 2437 or consent of Department Chair.

**AUMT 2301 Automotive Management (AUTO 2402) 2-2-3**

Instruction in Human relations, customer relations, and customer satisfaction. Emphasis on management techniques and building relationships between the service department and the customer. Prerequisite: Sophomore standing or consent of Department Chair.

**AUMT 2305 Theory of Automotive Engines (AUTO 1301, TIAM 1401) 2-2-3**

Fundamentals of engine operation and diagnosis including lubrication and cooling systems. Emphasis on identification of components, measurements, inspections, and repair methods. Prerequisite or co-requisite: AUMT 1405 or consent of Department Chair.

**AUMT 2413 Manual Drive Trains and Axles (AUTO 1408, TIAM 2408) 2-6-4**

A study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials with emphasis on the diagnosis and repair of transmissions and drive lines. Prerequisite or co-requisite: AUMT 1405 or consent of Department Chair.

**AUMT 2425 Automatic Transmissions and Transaxles (AUTO 2403, TIAM 2409) 2-6-4**

A study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and proper repair techniques. Prerequisite or co-requisite: AUMT 2413 or consent of Department Chair.

**AUMT 2434 Engine Performance Analysis II (AUTO 2406, TIAM 2515) 2-7-4**

Diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems; and proper use of advanced engine performance diagnostic equipment. Prerequisite: AUMT 1407, 1471, 1472, 2305, and 2437 or consent of Department Chair.

**AUMT 2437 Automotive Electronics (AUTO 1402) 3-3-4**

Topics address electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. Prerequisite: AUMT 1405 and 1407 or consent of Department Chair.

**BIOL Biology**

**BIOL 1308 Biological Science 3-0-3**

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.

**BIOL 1408 General Biology I 3-3-4**

Fundamental principles of living organisms at the cellular level. Includes cell structure and function, photosynthesis/cellular respiration, mitosis/meiosis, DNA, Mendelian and modern genetics, bacterial structure and gene control, population genetics.

**BIOL 1409 General Biology II 3-3-4**

Aspects of systematics, survey of plant kingdom (structure/functioning/life cycles), survey of the animal kingdom, structure and functioning of animal systems, aspects of ecology.

**BIOL 2401 Human Anatomy 3-3-4**

Principles of human anatomy designed for students interested in medical careers. Laboratory includes anatomical models and displays, audio-visual materials, microscopy, and specimen dissection in the lab. A one-semester course in Biology is a preferred prerequisite.

**BIOL 2402 Human Physiology 3-3-4**

Fundamental study of the chemical interrelationships of human systems. Digestion, respiration, excretion, muscular activities, reproduction, and metabolism are included. Basic physiological instruments and techniques are included in the lab. Prerequisite: BIOL 2401 and an introduction to chemistry.

**BIOL 2421 Microbiology 3-3-4**

Fundamental principles of microbiology; includes study of morphology, physiology, and classification of microbes and their relationships with soil, food, water, disease, and immunology. Designed for nursing and all health-related majors. Prerequisite: Any college-level Biology course.

**BIOM Computer Electronics Technology**  
See also CETT, CPMT and EECT

**BIOM 1205 Soldering Skills and Shop Safety (CMET 2200) 1-3-2**

Preparation for selection of soldering equipment and application of safety practices at work. Laboratory development of proficiency in soldering and desoldering electronic components.

**BMGT Business Administration and Management**  
See also BUSG, HRPO and MRKG

**BMGT 1301 Supervision (MGMT 2309) 3-0-3**

A study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined.

**BMGT 1302 Principles of Retailing (MGMT 1311) 3-0-3**

Introduction to the retailing environment and its relationship to consumer demographics, trends, and traditional/nontraditional retailing markets. The employment of retailing techniques and the factors that influence modern retailing.

**BMGT 1303 Principles of Management (MGMT 1305) 3-0-3**

Concepts, terminology, principles, theory, and issues that are the substance of the practice of management.

**BMGT 1325 Office Management (MGMT 1304) 3-0-3**

Systems, procedures, and practices related to organizing and planning office work, controlling employees' performance, and exercising leadership skills.

**BMGT 1333 Principles of Selling (MGMT 2322) 3-0-3**

Introduction to the selling process and its application to all forms of sales. Identification of the elements of the communication process between buyers and sellers in business and examination of the legal regulations and ethical issues of business which affect salespeople.

**BMGT 2370 Management Applications I (MGMT 2316) 1-5-3**

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 the work place and career field. The course is designed for students desiring to further their management training by applied learning techniques utilizing decision making case studies, computer-assisted models, or other instructional techniques. It serves as the program capstone for those students whose situation precludes an internship. The course may be repeated if topics and learning outcomes vary. Prerequisite: consent of the Department Chair.



**BMGT 2371 Management Applications II** 1-5-3  
(MGMT 2317)

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 the work place and career field. The course is designed for students desiring to further their management training by applied learning techniques utilizing decision making case studies, computer-assisted models, or other instructional techniques. It serves as the program capstone for those students whose situation precludes an internship. The course may be repeated if topics and learning outcomes vary. Prerequisite: BMGT 2370 and consent of the Department Chair.

**BUSG Business Administration and Management**  
See also BMGT, HRPO and MRKG

**BUSG 1315 Small Business Operations** 3-0-3  
(MGMT 2320)

A course in the unique aspects of managing a small business. Topics address management functions including how managers plan, exercise leadership, organize, and control the operations. Members of the Students in Free Enterprise (SIFE) organization that participate during the entire training program can be awarded credit for this course with the approval of the SIFE Faculty Advisor.

**BUSG 1370 Small Business Accounting** 3-0-3  
(MGMT 2319)

A course designed to introduce small business owners to basic accounting/financial information necessary to the successful operation of a business. Topics covered include, but are not limited to, cost behavior, cost-volume-profit relationships, budgeting, relevant cost, pricing decisions, payroll accounting and taxes.

**BUSG 1371 Entrepreneurship and Business Plan** 3-0-3  
**Development (MGMT 2321)**

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 plan, and the development of a business financial plan. Students will prepare a business plan for a business that they want to develop or expand.

**BUSG 2305 Business Law/Contracts** 3-0-3  
(MGMT 2305)

Principles of law which form the legal framework for business activity including applicable statutes, contracts, and agency.

**BUSG 2309 Small Business Management** 3-0-3  
(MGMT 1308)

A course on how to start and operate a small business. Topics include facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues.

**BUSI Business Administration and Management**

**BUSI 1301 Introduction to Business** 3-0-3

Provides overall picture of business operations. Includes analysis of specialized fields within business organizations and identifies the role of business in modern society.

**BUSI 1307 Personal Finance** 3-0-3

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

**BUSI 1372 Consumer Economics** 3-0-3

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

**CDEC Child Development**

All CDEC courses require a lab except CDEC 1195.

**CDEC 1195 Special Topics in Child Care** 1-0-1

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**CDEC 1303 Family and the Community** 2-2-3

A study of the relationship between the child, the family, the community, and early childhood educators, including a study of parent education, family and community lifestyles, child abuse, and current issues.

**CDEC 1311 Introduction To Early Childhood** 2-2-3  
**Education**

An introduction to the profession of early childhood education, focusing on developmentally appropriate practices, types of programs, historical perspectives, ethics, and current issues.

**CDEC 1313 Curriculum Resources for Early Childhood** 2-2-3  
**Programs**

Fundamentals of curriculum design and implementation in developmentally appropriate programs for young children.

**CDEC 1318 Nutrition, Health, and Safety** 2-2-3

A study of nutrition, health, safety, and related activities, including skill development in management of issues, guidelines, and practices in nutrition, as well as community health, hygiene, safety, and legal implications. Integration of these principles applied to a variety of settings.

**CDEC 1319 Child Guidance** 2-2-3

An exploration of common behavior problems of young children in an early childhood setting. Emphasis on positive guidance techniques for effective behavior management. Practical application through direct participation in an early childhood setting.

**CDEC 1354 Child Growth and Development** 2-2-3

A study of the principles of normal child growth and development from conception to adolescence. Focus on physical, cognitive, social, and emotional domains of development.

**CDEC 1356 Emergent Literacy for Early** 2-2-3  
**Childhood**

An exploration of principles, methods, and materials for teaching young children language and literacy through a play-based, integrated curriculum.

**CDEC 1357 Math and Science for Early Childhood** 2-2-3

An exploration of principles, methods, and materials for teaching young children math and science concepts through discovery and play.

**CDEC 1358 Creative Arts for Early Childhood** 2-2-3

An exploration of principles, methods, and materials for teaching young children music, movement, visual arts, and dramatic play through process-oriented experiences to support divergent thinking.

**CDEC 1359 Children with Special Needs 2-2-3**

A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, educational intervention, available resources, referral processes, and the advocacy role and legislative issues.

**CDEC 1371 Physical Development and Disorder in Children 2-2-3**

This course is designed for the paraprofessional working in integrated early childhood settings. Roles and responsibility of the paraprofessional, including IEP and ISFP lesson plan teaching strategies, and hands-on training in physical management and care skills of the child with special needs are emphasized. Instruction in basic sign language, and an overview of current learning technologies to assist the child with disabilities, is included. Emphasis is placed on methods and materials for promoting activities of daily living.

**CDEC 1372 Techniques for Child Guidance for the Special Child 2-2-3**

This course provides an examination of theoretical approaches to guidance strategies applicable to the integrated early childhood setting; emphasis is placed on strategies for facilitating emotional growth in individual children and social integration of all children in inclusive settings; includes activity planning to achieve IEP and ISFP goals for a variety of children with disabilities and children without disabilities. Features experiences in mastering observation techniques and assisting in assessment procedures; ethical problem solving; and teamwork skills in group management.

**CDEC 1374 Preschool Age 2-2-3**

This course centers on developmentally appropriate practice during the play years (ages 3-5). It includes developing and designing interest centers and environments for discovery learning; scheduling and planning age appropriate activities; and writing daily and weekly activities and objectives. Staff team building and ethical problem solving are embedded in course objects.

**CDEC 1391 Special Topics in Family Day Care Homes 2-2-3**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**CDEC 1393 Special Topics in Family Living and Parenthood 2-2-3**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**CDEC 2321 The Infant and Toddler 2-2-3**

A study of appropriate infant and toddler (birth to 3 years) programs, including an overview of development, quality caregiving routines, appropriate environments, materials and activities, and teaching/guidance techniques.

**CDEC 2326 Administration of Programs for Children I 2-2-3**

A practical application of management procedures for early care and education programs, including a study of operating, supervising, and evaluating programs. Topics on philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation, and communication.

**CDEC 2328 Administration of Programs for Children II 2-2-3**

An in-depth study of the skills and techniques in managing early care and education programs, including legal and ethical issues, personnel management, team building, leadership, conflict resolution, stress management advocacy, professionalism, fiscal analysis and planning parent education/partnerships, and technical applications in programs.

**CDEC 2341 The School Age Child 2-2-3**

A study of appropriate age (5 to 13 years) programs, including an overview of development, appropriate environments, materials and activities, and teaching/guidance techniques.

**CETT Computer Electronics Technology  
See also BIOM, CPMT and EECT****CETT 1403 DC Circuits (ELTE 1401) 3-3-4**

A study of the fundamentals of direct current including Ohm's law, Kirchoff's laws and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements.

**CETT 1405 AC Circuits (ELTE 1402) 3-3-4**

A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance.

**CETT 1421 Electronics Fabrication (CMET 1400) 3-3-4**

A study of electronic circuit fabrication techniques including printed circuit boards, wire wrapping, bread boarding, and various soldering techniques.

**CETT 1425 Digital Fundamentals (CMET 1401) 3-3-4**

An entry level course in digital electronics covering number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combinational logic. Emphasis on circuit logic analysis and troubleshooting digital circuits.

**CETT 1429 Solid State Devices (ELTE 1403) 3-3-4**

A study of diodes and bipolar semiconductor devices, including analysis of static and dynamic characteristics, bi techniques, and thermal considerations of solid state devices.

**CETT 1449 Digital Systems (ELTE 2406) 3-3-4**

A course in electronics covering digital systems. Emphasis on application and troubleshooting digital systems using counters, registers, code converters, multiplexers, analog-to-digital-to-analog circuits, and large-scale integrated circuits.

**CETT 1491 Special Topics in Computer Engineering Technology/Technician (ELTE 2408) 3-3-4**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**CETT 1509 DC-AC Circuits (ELTE 1405) 4-3-5**

Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchoff's laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques.

**CETT 2248/2249 Research and Project Design (ELTE 2103, ELTE 2303) 2-0-2**

Principles of electrical/electronic design encompassing schematics wiring diagrams, materials lists, operating characteristics, completion schedules, and cost estimates.

**CETT 2445 Color Television Repair (CMET 1409) 3-3-4**

An advanced study of television theory and basic repair including television receiver tuning system, remote control, I-F amplifiers, automatic gain control and video amplifiers, television power supplies, and deflection circuits.



**CETT 2447 Advanced Color Television Repair**  
**(ELTE 2409, ELTE 2412) 3-3-4**

A study of advanced troubleshooting techniques including the use of television servicing instruments for diagnosis and repair of television receivers. Designed to provide the student with advanced hands-on troubleshooting techniques.

**CHEM Chemistry**

**CHEM 1406 Introduction to General Chemistry 3-3-4**

This course is designed primarily to satisfy the requirements of nursing students seeking a B.S. Degree or background for physiology. The course covers the fundamentals of general and descriptive chemistry with applications from medicine, modern living, agriculture, etc. It is also suitable for non-science majors who need a laboratory science credit. It also serves as background for those who have no chemical background.

**CHEM 1407 Physiological Chemistry 3-3-4**

A study of organic and physiological chemistry for nursing students interested in the processes of life. Basic principles, nomenclature, principal reactions and methods of synthesis, and the major classes of physiologically important compounds are studied. Prerequisite: CHEM 1406.

**CHEM 1411 General Chemistry I 3-4-4**

The first of two courses for science-related majors, this course covers the basics of atomic and molecular structure, bonding, states of matter, solutions, and some descriptive chemistry. Emphasis is placed on solutions of chemical problems. Prerequisite: MATH 1314 or consent of the Department Chair.

**CHEM 1412 General Chemistry II 3-4-4**

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. Prerequisite: CHEM 1411.

**CHEM 2423, 2425 Organic Chemistry I and II 3-4-4**

A mechanistic approach is used to provide a thorough foundation in organic chemistry. The student is introduced to planning a synthesis in lecture. The laboratory introduces students to basic techniques, synthesis of compounds and instrumental analysis. Designed for science majors and minors. Prerequisites for CHEM 2423: CHEM 1411 and 1412 or the consent of the Department Chair. Prerequisite for CHEM 2425: CHEM 2423.

**CJCR Criminal Justice**  
**See also CJLE and CJSA**

**CJCR 1304 Probation and Parole**  
**(CRIJ/LAWE 2301) 3-0-3**

A survey of the structure, organization, and operation of probation and parole services. Emphasis on applicable state statutes and administrative guidelines.

**CJCR 1307/CRIJ 2313 Correctional Systems and**  
**Practices (CRIJ/LAWE 1306) 3-0-3**

A study of the role of corrections in the criminal justice system. Topics include organization and theory of correctional systems, institutional operations, management, alternatives to institutionalization, treatments and rehabilitation, and current and future issues.

**CJCR 1391 Special Topics in Corrections 3-0-3**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**CJCR 2324/CRIJ 2301 Community Resources in**  
**Corrections (CRIJ 1314) 3-0-3**

An overview of diversionary practices and treatment programs available to offenders in a local context. Topics include selected recognized models and future trends in community treatment.

**CJCR 2325 Legal Aspects of Corrections 3-0-3**

A study of the operation, management, and legal issues affecting corrections. Analysis of constitutional issues involving rights of the convicted, as well as civil liability of correctional agencies and staff.

**CJLE Criminal Justice**  
**See also CJCR and CJSA**

**CJLE 1211 Basic Firearms (CRIJ/LAWE 2201) 1-2-2**

Instruction in firearm safety, cleaning and care techniques, proper shooting principles, and proficiency with a handgun and shotgun.

**CJLE 1333 Traffic Law and Investigation**  
**(CRIJ 1305) 3-0-3**

Instruction in the basic principles of traffic control, traffic law enforcement, court procedures, and traffic law. Emphasis on the need for a professional approach in dealing with traffic law violators and the police role in accident investigation and traffic supervision.

**CJLE 1345 Intermediate Crime Scene**  
**Investigation 3-0-3**

Topics include objectives, preparations, procedures, and methods of crime scene search; value of crime scene sketches and their relationship to crime scene photographs; fingerprints as physical evidence, fingerprint identification and classification, types of impressions and techniques for locating and developing impressions.

**CJLE 1358 Rights of Prisoners 3-0-3**

Analysis of the legal rights of the convicted offender incarcerated in state and federal penal institutions. Emphasis on constitutional principles, case law, and federal and state statutes concerning prisoner rights.

**CJLE 2345 Vice & Narcotics Investigation**  
**(LAWE 2313) 3-0-3**

Study of various classifications of commonly used narcotics, dangerous drugs, gambling, sex crimes, fraud, gangs, and investigative techniques; and identify proper interdiction procedures and techniques.

**CJSA Criminal Justice**  
**See also CJCR and CJLE**

**CJSA 1302 Private Security Officer Training**  
**(CRIJ/LAWE 1312) 3-0-3**

A critical study of the provisions of the Texas Private Investigators and Private Security Agencies Act. Topics include the impact of the code on procedures and policies, judicial interpretation of statutes and related procedures, and rules and regulations. Satisfies the requirements for Commissioned Security Officer Skill Certification.

**CJSA 1308 Criminalistics I 3-0-3**

Introduction to the field of criminalistics. Topics include the application of scientific and technical methods in the investigation of crime including location, identification, and handling of evidence for scientific analysis.

**CJSA 1312/CRIJ 1307 Crime in America  
(CRIJ/LAW 1307) 3-0-3**

The study of crime problems in historical perspective, social and public policy factors affecting crime, impact and crime trends, social characteristics of specific crimes, and crime prevention.

**CJSA 1313/CRIJ 1306 Court Systems and Practices  
(CRIJ/LAW 1304) 3-0-3**

Examination of the role of the judiciary in the criminal justice system. Topics include the structure of the American court system, prosecution, right to counsel, pretrial release, grand jury process, adjudication process, types and rules of evidence, and sentencing concepts.

**CJSA 1317/CRIJ 1313 Juvenile Justice System  
(CRIJ/LAW 2304) 3-0-3**

A study of the juvenile justice process. Topics include specialized juvenile law, role of the juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency.

**CJSA 1318 Court Management 3-0-3**

Exploration of operational issues in the administration of American courts. Topics include responsibilities of court personnel, records management, and organizational management topics.

**CJSA 1322/CRIJ 1301 Introduction to Criminal Justice  
(CRIJ/LAW 1301) 3-0-3**

An overview of the criminal justice system. Topics include the history and philosophy of criminal justice, the definition of crime, and its nature and impact.

**CJSA 1327/CRIJ 1310 Fundamentals of Criminal Law  
(CRIJ/LAW 1308) 3-0-3**

A study of the nature of criminal law. Topics include philosophical and historical development, major definitions and concepts, classification of crime, elements of crimes and penalties, and individual criminal responsibilities.

**CJSA 1342/CRIJ 2314 Criminal Investigation  
(CRIJ/LAW 1302) 3-0-3**

Study of investigative theory, the collection and preservation of evidence, sources of information, concepts of interviewing and interrogation, the use of forensic sciences, and trial preparation.

**CJSA 1348 Ethics in Criminal Justice 3-0-3**

A study of ethical thought and issues facing the criminal justice professional. Topics include constitutional ethics, codes of conduct, and standards of conduct.

**CJSA 1351 Use of Force (CRIJ/LAW 1201) 3-0-3**

A study of the use of force including introduction to and statutory authority for the use of force, force options, deadly force, and related legal issues. Fulfills the TCLEOSE Use of Force Intermediate Certificate requirement.

**CJSA 1359/CRIJ 2328 Police Systems and Practices  
(CRIJ/LAW 1309) 3-0-3**

Exploration of the profession of police officer. Topics include organization of law enforcement systems, the police role, police discretion, ethics, police-community interaction, and current and future issues.

**CJSA 1393/Special Topics in Criminal Justice Studies  
(CRIJ/LAW 2303) 3-0-3**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**CJSA 2300/CRIJ 2323 Legal Aspects of Law  
Enforcement (CRIJ/LAW 1303) 3-0-3**

Exploration of police authority. Topics include responsibilities and constitutional restraints, law of arrest, search and seizure, and police liability.

**CJSA 2302 Police Management, Supervision, and  
Related Topics 3-0-3**

Techniques and theories regarding dealing with people, their performance and problems. Topics include basic supervision, leadership, time management, first-line supervision, and management by objectives.

**CJSA 2323 Criminalistics II 3-0-3**

Theory and practice of crime scene investigation. Topics include report writing, blood and other body fluids, document examination, etchings, casts and molds, glass fractures, use of microscope, and firearms identification.

**CJSA 2331 Child Abuse, Prevention and  
Investigation 3-0-3**

Topics include forms of child abuse and neglect, the traits of typical abusers, and investigative strategies.

**CJSA 2332 Criminalistics III 2-4-3**

A study of the practical aspects of criminalistics procedures. Topics include crime scene investigation, collecting and preserving evidence, and testifying in court.

**CJSA 2334 Contemporary Issues in Criminal  
Justice 3-0-3**

A series of lectures and class participation exercises presenting selected topics currently confronting criminal justice personnel and the public they serve.

## CNBT Maintenance Technology

**CNBT 1446 Construction Estimating I  
(MTNT 2406) 3-3-4**

Fundamentals of estimating materials and labor costs in construction. Prerequisite or co-requisite: MTNT 1401 or consent of the Department Chair.

## COMM Communications

**COMM 1307 Communications Media 3-0-3**

Instruction in mass media of the modern world. A survey of all mass media, their purposes, and their methods of operation.

**COMM 2305 Editing, Layout & Design, and Headline  
Writing 3-2-3**

Enables students to develop an understanding of the newsroom organization and the entire news/editorial process. Students perform copy editing for errors of fact, interpretation, and grammar. Emphasis is on developing a regard for accuracy and fairness in the editing and design process. Prerequisite: COMM 2311. Working on the staff of the school newspaper is a requirement for this course.

**COMM 2311 News Gathering and Reporting I 3-2-3**

Instruction in the fundamental news gathering and writing techniques, interviewing techniques, and discussion of news sources and values. Typing required. Working on the staff of the school newspaper is a requirement for this course.



**COMM 2315 News Gathering and Reporting II 3-2-3**

Emphasizes advanced reporting techniques and styles, such as writing interpretive and specialized news stories, features, and opinion pieces. Lectures in specialized areas by professional reporters. Prerequisite: COMM 2311. Working on the staff of the school newspaper is a requirement for this course.

## COSC Computer Science

**COSC 1100 Special Topics 0-3-1**

Recent developments and topics of current interest. May be repeated when topics vary.

**COSC 1300 Computer Information Processing 2-1-3**

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 computers in a broad range of organizational settings and social environments. An overview of BASIC programming is provided. Basic use of computers for non-computer majors.

**COSC 1400 Computer Science Fundamentals 3-3-4**

Provides the student with fundamental skills needed in designing computer programs. Focus will be on problem analysis and developing algorithms for the step-by-step solution to problems. Students will learn to use an on-line editor to enter programs via a terminal in a hands-on environment. A high-level language will be used for programming and debugging.

**COSC 1401 Computer Operations 3-3-4**

Provides the student with knowledge of duties and responsibilities of a computer operator. Training is provided to develop the student's ability to work in a computer center.

**COSC 1402 Advanced Operations Lab 1-12-4**

This course consists of supervised work in a computer center. The students learn to operate the computer and peripheral equipment. Prerequisite: COSC 1401. Co-requisite: COSC 2403 and consent of the Department Chair.

**COSC 1403 Introduction to Computer Science and Programming 3-3-4**

Introductory programming course for Computer Science majors. Problem solving, algorithm development, pseudocode, and flowcharting. In-depth coverage of a high-level language through programming assignments.

**COSC 1404 COBOL Programming 3-3-4**

Provides the student with skills and fundamentals in solving business data processing problems using COBOL. The student becomes effective in COBOL programming techniques involving sequential files, single- and double-dimension table handling, and control breaks. Prerequisite: COSC 1403.

**COSC 1405 Computer Concepts and Analysis 3-3-4**

Provides the essential foundation for Computer Science majors in computer concepts, terminology, and business computer systems. Students will be introduced to word processor and spreadsheet software.

**COSC 1406 Computer Organization and Architecture 3-3-4**

A study of hardware and software characteristics of digital computers. Designed to give the student an understanding of how the fundamental principles by which computers work affect and govern programming techniques. Topics include data representation, machine instruction types, fetch and execution cycles, interrupt schemes, metaprograms, I/O handling, and assembler concepts. Prerequisites: COSC 1403 or MISC 1451 or COSC 1401.

**COSC 1407 RPG/400 Programming 3-3-4**

Report Program Generator (RPG)—a problem-oriented language involving fixed program logic, file description, input calculation, and output for practical business oriented problems. Prerequisite: COSC 1403.

**COSC 1408 AS/400 Concepts & Operations 3-3-4**

An introduction to the concepts and operations of AS/400 hardware and software. Prerequisite: 8 semester hours in Computer Science courses.

**COSC 1409 Computer Operations Internship 1-18-4**

This course consists of on-the-job computer operations 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 coordinator. Prerequisite: 12 semester hours in Computer Science courses, including COSC 1401, and consent of the Department Chair.

**COSC 2110 Topics in Computer Science Laboratory 0-3-1**

Laboratory for COSC 2310 when topic has a required laboratory.

**COSC 2310 Topics in Computer Science 3-0-3**

Study of recent developments and topics of current interest in computer science. Prerequisite: 12 semester hours in Computer Science courses or the consent of the Department Chair.

**COSC 2401 Advanced COBOL 3-3-4**

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. File design and the special features of ANSI COBOL language are thoroughly covered. 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 and 2403.

**COSC 2402 Systems in the MIS Environment 3-3-4**

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: 12 semester hours in Computer Science courses.

**COSC 2403 JCL/Machine Language Programming 3-3-4**

An in-depth coverage of Job Control Language and/or command language as used in an MVS/ESA environment. Use of utilities for data set maintenance. Assembly and machine language concepts. Emphasis onabend resolution and dump reading. Prerequisites: COSC 1404 and 1406 or COSC 1400, 1401 and concurrent enrollment in COSC 1406.

**COSC 2406 Database Programming 3-3-4**

A study of a relational database management system. Topics include the creation of users, tables, table definition, sharing of data, SQL, data manipulation, report generation, and data definitions. Prerequisite: 12 semester hours of Computer Science courses to include a minimum of one programming class and one microcomputer application class (MISC 1420, MISC 1430, MISC 1440 or MISC 1450).

**COSC 2408 CICS Programming 3-3-4**

An introduction to programming for the teleprocessing environment under CICS. Applications will be written and tested on-line. Prerequisite: COSC 1404.

**COSC 2409 Field Projects 1-9-4**

This course consists of practical applications in the field of computer science. It is designed to fit the career objectives of the student. Prerequisite: consent of the Department Chair.

**COSC 2410 Systems Analysis and Design 3-3-4**

Study of structured systems development using a Computer-Aided Systems Engineering (CASE) tool. Emphasis on tools and techniques of systems analysis and design for producing logical methodologies for dealing with complexity in the development of information systems. Prerequisite: 8 semester hours of Computer Science programming.

**COSC 2490 Computer Resource Management 3-3-4**

This course covers the procurement, use and evaluation of computer resources including hardware, software, and people. Topics include capacity planning, upgrades, downsizing, choosing the correct hardware and software, compatibility, connectivity, and vendor vs. in-house support. Prerequisite: MISC 1461.

## CPMT Computer Electronics Technology

See also BIOM, CETT and EECT

**CPMT 1403 Introduction to Computer Technology (CMET 1402) 3-3-4**

A fundamental computer course that provides in-depth explanation of the procedures to utilize hardware and software. Emphasis on terminology, acronyms, and hands-on activities.

**CPMT 1449 Computer Networking Technology (CMET 1405) 3-3-4**

A beginning course in computer networks with focus on networking fundamentals, terminology, hardware, software, and network architecture. A study of local/wide area networking concepts and networking installations and operations.

**CPMT 1445 Computer System Maintenance (CMET 2402) 3-3-4**

Examination of the functions of the components within a computer system. Development of skills in the use of test equipment and maintenance aids.

**CPMT 2437 Microcomputer Interfacing (CMET 1403) 3-3-4**

An interfacing course exploring the concepts and terminology involved in interfacing the internal architecture of the microcomputer with commonly used external devices.

**CPMT 2445 Computer System Troubleshooting (CMET 2404) 3-3-4**

Principles and practices involved in computer system troubleshooting techniques and repair procedures including advanced diagnostic test programs and the use of specialized test equipment.

## DEMR Diesel

**DEMR 1330 Steering and Suspension I (TIDM 2412, AUTO 2405) 2-4-3**

A study of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components. Prerequisite or co-requisite: DEMR 1401 or consent of Department Chair.

**DEMR 1401 Shop Safety and Procedures (INDU 1400, TIDM 1401) 3-3-4**

A study of shop safety, rules, basic shop tools, and test equipment.

**DEMR 1405 Basic Electrical Systems (DIEM 1406, TIDM 1405) 2-7-4**

An introduction to the basic principles of electrical systems of diesel powered equipment with emphasis on starters, alternators, batteries, and regulators. Prerequisite or co-requisite: DEMR 1401 and 1406 or consent of Department Chair.

**DEMR 1406 Diesel Engine I (DIEM 1301, DIEM 1405, TIDM 1302, TIDM 1404) 3-3-4**

An introduction to the basic principles of diesel engines and systems. Prerequisite or co-requisite: DEMR 1401 or consent of Department Chair.

**DEMR 1411 Diesel Engine Testing and Repair II (DIEM 2407, TIDM 2307) 2-7-4**

Coverage of testing and repairing diesel engines including related systems and specialized tools. Prerequisites: DEMR 1401 and 1406 or consent of Department Chair.

**DEMR 1416 Basic Hydraulics (DIEM 2400, TIDM 2408) 2-7-4**

Fundamentals of hydraulics including components and related systems. Prerequisite or co-requisite: DEMR 1401 or consent of Department Chair.

**DEMR 1417 Basic Brake Systems (TIDM 2411, AUTO 1407) 2-6-4**

An introduction to the basic principles of brake systems of diesel powered equipment. Emphasis on maintenance, repairs, and troubleshooting. Prerequisite or co-requisite: DEMR 1401 or consent of Department Chair.

**DEMR 1421 Power Train I (DIEM 1404, TIDM 2409) 2-6-4**

Introduction to fundamentals, repair, and theory of power trains including clutches, transmissions, drive shafts, and differentials. Emphasis on inspection and repair. Prerequisite or co-requisite: DEMR 1401 or consent of Department Chair.

**DEMR 1447 Power Train II (DIEM 2404, TIDM 2410) 3-3-4**

Continuation of fundamentals and theory of power train systems. Emphasis on disassembly, inspection, and repair of power train components. Prerequisite: DEMR 1401, 1416 and 1421, or consent of Department Chair.

**DEMR 1449 Diesel Engine II (DIEM 2403, TIDM 2413) 2-7-4**

An in-depth coverage of disassembly, repair, identification, evaluation, and reassembly of diesel engines. Prerequisites: DEMR 1401, 1406, 1471 and 2434 or consent of Department Chair.



**DEMR 1471 Basic Diesel Engine Tune-Up and Troubleshooting**  
(DIEM 2406, TIDM 1406) 2-7-4

This course covers basic theories, concepts, and skills for tune-up and troubleshooting procedures for diesel engines equipped with mechanical or hydraulic actuated fuel systems. Emphasis is placed on diagnostics and repair. Prerequisite: DEMR 1401 and 1406 or consent of Department Chair.

**DEMR 2434 Advanced Diesel Tune-Up and Troubleshooting**  
(DIEM 2405, TIDM 2407) 3-3-4

Advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach. Prerequisites: DEMR 1401, 1405, 1406, and 1471 or consent of Department Chair.

**DFTG Computer Aided Drafting & Design**

**DFTG 1391 Architectural Blueprint Reading** 2-2-3  
The fundamentals of blueprint reading for the construction trades. This course includes familiarization with standard terms, sizes, estimations, and commercial practice.

**DFTG 1405 Technical Drafting** 3-3-4  
Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes.

**DFTG 1409 Basic Computer-Aided Drafting** 3-3-4  
An introduction to basic computer-aided drafting. Emphasis is placed on drawing setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinating systems; as well as input and output devices. Prerequisites: Second-semester Freshman standing in the Drafting Program and consent of the Department Chair.

**DFTG 1417 Architectural Drafting - Residential** 3-3-4  
Architectural drafting procedures, practices, and symbols, including preparation of detailed working drawings for a residential structure with emphasis on light frame construction methods. All drawing assignments will be computer generated. Prerequisite: Sophomore standing in the Drafting Program.

**DFTG 1444 Pipe Drafting** 3-3-4  
A study of pipe fittings, symbols, specifications and their applications to a piping process system. This application will be demonstrated through the creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics. All drawing assignments will be computer generated. Prerequisite: Sophomore standing in the Drafting Program.

**DFTG 1448 Topographical** 3-3-4  
A course in map drafting. Emphasis is given to plotting of surveyors field notes, plotting elevations, contour drawings, plan and profiles, and laying out traverses. All drawing assignments will be computer generated. Prerequisite: Second semester Sophomore standing in the Drafting Program.

**DFTG 1452 Intermediate Computer-Aided Drafting** 3-3-4  
A continuation of practices and techniques used in basic computer-aided drafting emphasizing batched files, scripted files, customized program menus, and extracted attributes. Introduced to three-dimensional drafting. Prerequisite: DFTG 1409 and consent of the Department Chair.

**DFTG 1456 Descriptive Geometry** 3-3-4  
Examination of the graphical solution to problems involving points, lines, and planes in space. Prerequisite: ENGR 1304 or DFTG 1405.

**DFTG 1458 Electrical/Electronics Drafting** 3-3-4  
A study of the principles of layout of electrical and electronic drawings, stressing modern representation used for block diagrams, schematic diagrams, logic diagrams, wiring/assembly drawings, printed circuit board layouts, motor control diagrams, power distribution diagrams, and electrical one-line diagrams. All drawing assignments will be computer generated. Prerequisite: Sophomore standing in the Drafting Program.

**DFTG 1471 Industrial Practice** 3-3-4  
This course is designed to give specialized practice to the student in his major field of interest. All work done in this class will typify actual industrial projects. The student will also complete an employment resume, cover letter, and portfolio. All projects will be completed with the use of Computer-Aided Drafting (AutoCAD). Prerequisites: Second semester sophomore standing in the Drafting Program.

**DFTG 2402 Machine Drawing** 3-3-4  
Production of detail and assembly drawings of machines, threads, gears, cams, tolerances and limit dimensioning, surface finishes, and precision drawings. Prerequisites: ENGR 1304 or DFTG 1405, ENGR 1305 or DFTG 1456, or concurrent enrollment.

**DFTG 2410 Structural Drafting** 3-3-4  
Discussion of detail drawings of structural shapes for fabrication with emphasis on framed and sealed connectors and beam and column detailing. Designed to meet the standards of American Institute of Steel Construction, including units on concrete detailing conforming to American Concrete Institute standards. Prerequisite: ENGR 1304 or DFTG 1405, or concurrent enrollment.

**DFTG 2412 Technical Illustration** 3-3-4  
Topics include pictorial drawing including isometrics, oblique, perspectives, charts, and graphs, shading, transfer lettering, and use of different media including pencil and ink. Prerequisite: ENGR 1304, DFTG 1405, or concurrent enrollment.

**DS-- Developmental Studies**

*The credit received from these courses is not transferable and cannot be applied towards degree completion.*

**DSED 0100 College Orientation for International Students** 1-0-1

This 16-hour course, designed primarily for students on F-1 visas, covers fundamentals of attending school in the United States and, specifically, at CTC. Getting a driver's license, obeying U.S. laws, safety, hazardous weather, taboo language, and immigration requirements are some of the topics covered. This course is mandatory for all first-semester international students.

**DSED 0300 College Study Skills** 3-0-3

This course is designed to provide an opportunity for students to develop, select, and use strategies necessary in becoming prepared and successful in school and life. Emphases are placed on the transference of high-level study skills to practical classroom situations and include the areas of time management, effective listening and note taking, concentration, learning through media, reading, retention of information, taking examinations, creativity, and leadership.

**DSED 0302 College Study Skills for Foreign Students 3-0-3**

This elective for DSLA students at Levels 2-3 prepares students for the Test of English as a Foreign Language TOEFL, the test required for entry into most college-level institutions. Advanced reading, listening, grammar, test-taking, and research techniques are taught.

**DSLA 0310 Reading and Vocabulary I ESL 3-2-3**

This course is designed for beginning non-native speakers who need to develop vocabulary and basic reading skills such as identifying the main idea, using context clues, and locating details.

**DSLA 0314 Writing I ESL 3-2-3**

This course, designed for intermediate non-native speakers, is a continuation of Grammar I. It covers grammatical structures, beginning with clauses in complex sentences, and the simple process paragraph.

**DSLA 0315 Grammar I ESL 3-1-3**

This course is for beginning-intermediate non-native speakers. It covers basic elements of English sentence structure and linguistic problem areas such as countable/uncountable nouns, articles, prepositions, verb phrases, and word order.

**DSLA 0316 Listening Comprehension I ESL 3-2-3**

This course, for beginning non-native speakers, develops aural comprehension of simple conversations, short radio announcements, brief stories, and American language reductions such as "won't cha" and "would ja."

**DSLA 0317 Speaking I ESL 3-1-3**

This course, for beginning non-native speakers, moves students from language recognition to oral production through the use of dictation and conversational dialogues.

**DSLA 0318 English for Foreign Students I 3-2-3**

These courses offer an integrated approach to speaking, listening, reading, and writing. Though primarily conversational in nature, grammatical concepts, reading, and writing are covered. These courses may be substituted for Listening I and Speaking I.

**DSLA 0320 Reading and Vocabulary II ESL 3-2-3**

This course, for intermediate non-native speakers, provides instruction in vocabulary, reading comprehension, structural analysis, and organizational patterns.

**DSLA 0321 Writing II ESL 3-2-3**

This course is a continuation of Grammar I and Writing I. Students continue their study of grammar while learning to write narrative, comparison/contrast, and persuasive paragraphs.

**DSLA 0322 Academic Listening and Speaking II ESL 3-2-3**

In this course, designed for intermediate non-native speakers, students develop beginning note-taking and speaking skills to prepare them for academic environments.

**DSLA 0330 Reading and Vocabulary III ESL 3-2-3**

This course, a continuation of DSLA 0320, provides further study in vocabulary, comprehension skills, and organizational patterns as they apply to reading and writing. Prerequisite: DSLA 0320.

**DSLA 0332 Academic Listening and Speaking III ESL 3-2-3**

In this course for advanced non-native speakers, students improve note taking, and oral reporting skills to prepare for college-level courses.

**DSMA 0101 Basic Developmental Mathematics 1-1.5-1**

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 0-3-1**

This course provides a setting for students to develop and expand mathematical problem solving skills in a structured environment under the guidance of an instructor.

**DSMA 0300 Developmental Mathematics I 5-1-3**

This developmental course includes adding, subtracting, multiplying, and dividing fractions, decimals, and integers; order of operations; percentages; line, bar, and pie graphs; pictographs; areas of plane figures; exponents; and an introduction to signed numbers and algebra. A laboratory is required.

**DSMA 0301 Developmental Mathematics II 5-1-3**

Designed for students who need a review of fundamental algebraic operations. Topics include operations on real numbers, polynomials, linear equations, linear inequalities, factoring, graphing, and selected stated problems. A laboratory is required. Prerequisite: DSMA 0300 or appropriate test scores.

**DSMA 0302 Fundamentals of Mathematics I 3-0-3**

This course includes operations with common fractions, decimals and positive integers; order of operations; prime factorization; greatest common factors; least common multiples; percentages; and basic equations. An introduction to consumer and business applications, statistical graphing, and basic geometry is also included.

**DSMA 0303 Developmental Mathematics IV 5-1-3**

Topics include operations with rational expressions, linear equations, systems of linear equations, radical expressions, complex numbers, quadratics, and functions. A laboratory is required. Prerequisite: DSMA 0301 or appropriate test scores.

**DSMA 0304 Fundamentals of Mathematics II 3-0-3**

This course includes operations with real numbers, variable expressions, simple equations, polynomials, algebraic applications, factoring polynomials, and an introduction to graphs and linear equations. Prerequisite: DSMA 0302 or appropriate test scores.

**DSMA 0306 Intermediate Algebra I 3-0-3**

Topics include a review of factoring, rational and radical expressions, complex numbers, radical equations, quadratics and the study of the parabola. Prerequisite: DSMA 0304 or appropriate test scores.

**DSMA 0307 Intermediate Algebra II 3-0-3**

Topics include the straight line, systems of equations and inequalities, determinants, functions and relations, inverses and composite functions, and an introduction to exponential and logarithmic functions. Prerequisite: DSMA 0306.

**DSMA 0308 Pre-College Math 3-0-3**

This developmental course includes arithmetic operations, basic algebraic concepts and notations, geometry, and real and complex number systems. The course also covers relations and functions; inequalities; factoring; polynomials; rational expressions; and quadratics. It also provides an introduction to complex numbers; exponential and logarithmic function; determinants, matrices, sequences, and series.

**DSMA 0312 Fundamentals of Mathematics I 3-1-3**

This course includes operations with common fractions, decimals and positive integers; order of operations; prime factorization; greatest common factors; least common multiples; percentages; and basic equations. An introduction to consumer and business applications, statistical graphing, and basic geometry is also included. A laboratory is required.



**DSMA 0314 Fundamentals of Mathematics II 3-1-3**

This course includes operations with real numbers, variable expressions, simple equations, polynomials, algebraic applications, factoring polynomials, and an introduction to graphs and linear equations. A laboratory is required. Prerequisite: DSMA 0312 or appropriate test scores.

**DSMA 0316 Intermediate Algebra I 3-1-3**

Topics include a review of factoring, rational expression, radical expressions, complex numbers, radical equations, quadratics and the study of the parabola. A laboratory is required. Prerequisite: DSMA 0314 or appropriate test scores.

**DSMA 0317 Intermediate Algebra II 3-1-3**

Topics include the straight line, systems of equations and inequalities, determinants, functions and relations, inverses and composite functions, and an introduction to exponential and logarithmic functions. A laboratory is required. Prerequisite: DSMA 0316.

**DSRE 0101 Developmental Reading Laboratory 0-1-1**

This course helps prepare for college-level academic work using varied instructional techniques to help students improve their proficiency in reading comprehension/rate, word recognition, and vocabulary development.

**DSRE 0300 Developmental Reading I 2-2-3**

Designed for students who have difficulty reading college texts; specifically those who scored below 50 percent 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 2-2-3**

Designed for students who have difficulty reading college texts; specifically those who scored between 50-69 percent on the Pre-TASP reading section or passed DSRE 0300. Emphasizes vocabulary development, comprehension, fluency, and study and test-taking skills.

**DSRE 0302 Fundamentals of Reading I 3-0-3**

Designed to aid students in acquiring basic skills needed for reading college-level materials. Emphasizes word attack skills, vocabulary development, comprehension, fluency, and study and test-taking skills. Includes all of the objectives of DSRE 0300 without the additional laboratory reinforcement.

**DSRE 0303 Fundamentals of Reading II 3-0-3**

Designed to aid students in developing and reinforcing the basic skills needed for reading college-level materials. Emphasis will be on vocabulary development, literal and critical comprehension skills, fluency, and study and test-taking skills. Includes all of the objectives of DSRE 0301 without the additional laboratory reinforcement.

**DSWR 0111 Basic Writing I 1-0-1**

This course covers basic composition skills such as idea generation, organization, style, use of standard English, and revision.

**DSWR 0112 Basic Writing II 1-0-1**

This course is a continuation of DSWR 0111 and emphasizes the correct use of grammar, organization, and style.

**DSWR 0301 Developmental Writing I 3-1-3**

A study of basic composition designed to aid the student in acquiring the writing skills needed for college-level writing. Includes an intensive study of basic composition skills. Designed for students who scored 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 paragraph. Intended for native English speakers or for those students who have scored 550 or above on the Test of English as a Foreign Language TOEFL.

**DSWR 0302 Developmental Writing II 3-1-3**

A study of basic composition designed to aid the student in acquiring the writing skills needed for college-level writing. Designed for students who scored between 50-69% on the Pre-TASP writing section or passed DSWR 0301. Emphasizes essay writing, with attention given to grammar problems as they occur in the context of the essay. Intended for native English speakers or for those students who scored 550 or above on the Test of English as a Foreign Language TOEFL.

**DSWR 0303 Fundamentals of Writing I 3-0-3**

Fundamentals of Writing I is a course in basic writing skills at the sentence and paragraph levels. The course includes instruction in basic grammar, sentence structure, punctuation, and other necessary skills leading to the proper construction of a paragraph.

**DSWR 0304 Fundamentals of Writing II 3-0-3**

This course is a continuation of DSWR 0303 and emphasizes composition skills at the paragraph and essay levels. The course includes a study of sentence-level grammar and punctuation and presents the organizational skills needed to write a basic essay.

**ECON Economics****ECON 1303 Consumer Economics 3-0-3**

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

**ECON 2301 Macroeconomics 3-0-3**

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

**ECON 2302 Microeconomics 3-0-3**

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.

**EECT Communications Electronics  
See also BIOM, CETT and CPMT****EECT 1474 Basic Communications Circuits (ELTE 1404) 3-3-4**

An introduction to Communications Circuits used in both the two way and broadcast medium of transmission and reception with heavy emphasis on reception.

**EECT 1476 Digital Communications (CMET 2408) 3-3-4**

A broad coverage of digital communications including telephone data communications and voice synthesis.

**EECT 1491 Special Topics in Electrical, Electronic and Communications Engineering (ELTE 2405) 3-3-4**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**EECT 2439 Communications Circuits  
(ELTE 2407)**

**3-3-4**

A study of communications systems with emphasis on amplitude modulation, frequency modulation, phase modulation, and digital pulse modulation. Discussion of several types of modulators, demodulators, receivers, transmitters, and transceivers.

**EMET Emergency Medical Technician**

**EMET 1101 Basic Life Support and Emergency  
Care**

**1.5-0-1**

Basic instruction in emergency first aid, including CPR training. Students successfully completing the course receive CPR/BLS certification.

**EMET 1102 Cardiopulmonary Resuscitation**

**1-0-1**

Recognition and management of acute cardiorespiratory emergencies and upper airway obstructions using basic life support techniques from either the American Heart Association or the American Red Cross.

**EMET 1103 EMT Cardiac Pathophysiology and  
ECG Interpretation**

**1-0-1**

The anatomy and physiology of the cardiovascular and respiratory systems. Includes pathophysiology of heart disease, ECG theory, and interpretation of dysrhythmias. § Prerequisite: EMET 1402 or other medical training.

**EMET 1104 Introduction to Basic Science for the  
Paramedic**

**1-0-1**

Prepares the student to take the basic science portion of EMET 2304. Reviews human gross anatomy and physiology of various human systems; human cellular anatomy and function; human homeostasis; physiology of the heart, lungs, and blood vessels; acid-base balance; and blood as a tissue.

**EMET 1105 EMT Pre-hospital Care of Poisoning**

**1-0-1**

Pre-hospital treatment for victims of alcohol and drug overdose, poisonous bites of reptiles, spiders, and bees. Antidotes, adsorbants, anaphylactic shock, tissue response, epidemiology, indications and contraindications for emetics.

**EMET 1106 EMT Pre-hospital Care of Trauma**

**1-0-1**

Pre-hospital assessment and management of trauma. Includes pathophysiology of soft tissue injuries; fractures; intrathoracic, abdominal, and head injuries; and the healing mechanisms of tissue systems. § Prerequisite: EMET 1402 or other medical training.

**EMET 1107 Shock: Concepts and Treatment  
(MAST and IV Infusion)**

**1-0-1**

Pathologic and clinical levels of the shock syndrome. Theory and applications of shock management, intravenous transfusions and infusions and Military Anti-Shock Trousers (MAST). Includes indications and contraindications. § Prerequisite: EMET 1402 or other medical training.

**EMET 1108 Laboratory Techniques and  
IV Therapy**

**1-0-1**

Uses of and indications for IV therapy. Types of solution and equipment needed; techniques for starting IVs and for venipuncture. § Prerequisite: EMET 1402 or other medical training.

**EMET 1109 Basic Auto Extrication**

**1-0-1**

Emphasizes spinal immobilization, lifting, and moving techniques of the motor vehicle accident patient. Discusses the pathophysiology of spinal and head injuries, facial trauma, and airway management. § Prerequisite: EMET 1402 or other medical training.

**EMET 1110 Emergency Airway Management**

**1-0-1**

Anatomy of upper and lower respiratory airways, cervical spine and spinal cord control. Indications and use of adjunct airways, esophageal obturator airway, esophageal gastric-tube airway, endotracheal intubation techniques, and oxygen delivery devices. § Prerequisite: EMET 1402 or other medical training.

**EMET 1111 EMT Medical and Environmental  
Emergencies**

**1-0-1**

The pathophysiology, diagnosis, and pre-hospital management of common environmental and medical emergencies including burn, diabetic, cerebrovascular accidents, drowning, heart attack, hypothermia, heat stroke, smoke inhalation, abdominal, and thoracic emergencies. § Prerequisite: EMET 1402 or other medical training.

**EMET 1112 EMT Obstetrical and Pediatric  
Emergencies**

**1-0-1**

Stages of fetal development, labor, and delivery for normal and abnormal pregnancies. Management of emergency delivery and postpartum stages. Basic life support techniques for the pediatric patient including other medical emergencies.

**EMET 1113 EMT Patient Psychology**

**1-0-1**

Prepares prospective EMT personnel to deal with patients' emotions as they affect the EMT's ability to treat physical injuries.

**EMET 1114 EMT Triage**

**1-0-1**

Methods of prioritizing and handling multiple-trauma victims. Emphasis on proper primary and secondary patient surveys, civilian and military emergency medical triage, CPR, shock management, hemorrhage control and use of life support equipment. § Prerequisite: EMET 1402 or other medical training.

**EMET 1115 AIDS and Infectious Diseases for  
Emergency Responder**

**1-0-1**

The study of infectious diseases with emphasis on pathophysiology transmission modes (routes) and preventive measures used in the control of those diseases most likely to be encountered by and which represent a serious health threat to EMS personnel, namely: Infectious Hepatitis, Acquired Immune Deficiency Syndrome (AIDS), Meningitis, Tuberculosis, and Herpetic Whitlow. § Prerequisite: EMET 1402 or other rescue training.

**EMET 1116 Crisis Intervention and Management**

**1.5-0-1**

Focus on general techniques for management of individuals in crisis including intervention models, general intervention techniques, and interventions for selected specific responses.

**EMET 1117 Crisis Intervention: Drug/Alcohol  
Overdoses**

**1-0-1**

Management techniques and emergency treatment of individuals who have overdosed on drugs or alcohol.

**EMET 1118 Crisis Intervention: Victims of  
Violence**

**1-0-1**

Management techniques and emergency treatment of victims of violence.

**EMET 1119 Crisis Intervention: Rape**

**1-0-1**

Management techniques and emergency treatment of rape victims.

**EMET 1120 Crisis Intervention: Spouse Abuse**

**1-0-1**

Management techniques and emergency treatment of victims of spouse abuse.

**EMET 1121 Crisis Intervention: Child Abuse**

**1-0-1**

Management techniques and emergency treatment of victims of child abuse.



**EMET 1122 Crisis Intervention: Eating and Food-Related Emergencies 1-0-1**

Management techniques and emergency treatment of individuals requiring assistance related to eating and/or food.

**EMET 1123 Crisis Intervention: Military Field Training Injuries/Disorders 1-0-1**

A military-specific course covering management techniques and emergency treatment of common injuries/ disorders occurring during military field training exercises.

**EMET 1124 Sports Injuries 1.5-0-1**

Consideration of acute injury and illness caused by recreational physical exercise.

**EMET 1125 EMT Crisis Intervention: Abuse, Rape, and Suicide 1-0-1**

The psychological aspects of child and spouse abuse, rape and suicide. Includes epidemiology, pre-hospital care, and crisis intervention techniques.

**EMET 1200 Emergency Medical Technician-Basic Refresher Course 2-1-2**

Reviews the knowledge and skills necessary for recognition and proper treatment of patients requiring emergency care. This course conforms to the Department of Transportation guidelines for EMT Refresher training. This course is required by the National Registry every two years to maintain certification at the EMT-Basic level. Prerequisite: Current or recently lapsed (less than 2 years) National Registry EMT-Basic Certification.

**EMET 1202 Combat Lifesaver Course 2-1-2**

Trains combat soldiers to supplement military medics in a variety of lifesaving tasks and related medical care.

**EMET 1303 First Responder 2-2-3**

This course prepares the first responder, or medically untrained, to be proficient in not only providing basic life support to victims of emergencies, but also in taking any actions necessary to minimize the patient's discomfort and prevent further injury. This course has been designed to meet the specifications of the Department of Transportation's First Responder Training Course.

**EMET 1304 Drug and Alcohol Abuse 3-0-3**

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 3-0-3**

This course is designed to keep the Emergency Medical Technician abreast of new developments, trends, current major issues, legal professional concerns, and other important factors that have an impact upon the emergency medical field. This course may be repeated for credit.

**EMET 1402 Emergency Medical Technician—Ambulance 3-4-4**

This course exposes the student to the didactic and practical experiences outlined in the 1994 Department of Transportation's NHTSA curriculum. All of the skills and knowledge elements necessary to deal with the broad spectrum of illness or injury in the pre-hospital phase of care are included. Upon successful completion of the program, students are eligible to take the exam to be certified as an EMT-Basic by the National Registry of EMTs.

**EMET 2101 Introduction to Paramedic 1-0-1**

This course provides an overview of the paramedic's role in both civilian and military environments, the paramedic's function, legal responsibilities, and career opportunities. Prerequisite: EMET 1402.

**EMET 2301 Disaster Planning 3-0-3**

This course is designed to help administrators prepare emergency operation plans and 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 3-0-3**

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: BMGT 1303.

**EMET 2303 Psychology of Emergencies 3-0-3**

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.

**EMET 2304 Introduction to Paramedic Medicine 3-0-3**

Emphasizes the role of the paramedic; pharmacology and fluid/electrolyte balance; in-depth coverage of anatomy and physiology, respiratory and cardiovascular systems, and recognition and treatment of respiratory and cardiac problems including dysrhythmia. Lecture and demonstration. Prerequisite: EMET 1402.

§ Other acceptable medical training is that which is received through military medical basic training programs or civilian medical programs which goes beyond first aid.

## ENGL English

**ENGL 1301 Composition and Rhetoric I 3-0-3**

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 3-0-3**

A continuation of ENGL 1301, emphasizing in more depth the principles and techniques of written compositions. Focus of compositions is on the development of critical thinking as it relates to the textual analysis of literary genres: the short story, poetry, drama, and the novel. Formal research paper is required. Prerequisite: Completion of ENGL 1301 with a grade of "C" or above, or equivalent.

**ENGL 1312 Communications Skills 3-0-3**

Instruction in grammar and diction, writing expository papers, writing effective business correspondence and reports, and oral presentations.

**ENGL 2311 Technical Writing 3-0-3**

Study of technical, scientific, and business writing including reports, proposals, and other papers. The course also includes presentation of oral reports. Prerequisite: ENGL 1301 or ENGL 1312.

**ENGL 2322 English Literature I 3-0-3**

A survey of English literature from Beowulf through the 18th century. Prerequisites: ENGL 1301 and 1302, or equivalent.

- ENGL 2323 English Literature II** 3-0-3  
A survey of English literature beginning with the pre-Romantic periods through the early 20th century. Prerequisites: ENGL 1301 and 1302, or equivalent.
- ENGL 2327 American Literature I** 3-0-3  
A survey of the major American writers from the Colonial period to Whitman. Prerequisites: ENGL 1301 and 1302, or equivalent.
- ENGL 2328 American Literature II** 3-0-3  
Survey of major American writers from Whitman to the present. Prerequisites: ENGL 1301 and 1302, or equivalent.
- ENGL 2332 World Literature I** 3-0-3  
A survey of masterpieces of western world literature from Homer through the Renaissance. Prerequisites: ENGL 1301 and 1302, or equivalent.
- ENGL 2333 World Literature II** 3-0-3  
A survey of masterpieces of western world literature from the Renaissance to the twentieth century. Prerequisites: ENGL 1301 and 1302, or equivalent.

### ENGR Engineering

- ENGR 1101 Introduction to Engineering** 1-0-1  
Introduction to all engineering fields and the opportunities within the scope of professional work.
- ENGR 1304 Engineering Graphics** 2-4-3  
Freehand and instrument drawing, dimensioning, fastening, pictorial methods, charts and graphs, projections drawing, geometry of graphical construction. Required for beginning engineering students.
- ENGR 1305 Descriptive Geometry** 2-4-3  
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 1304.

### FIRT Fire Protection

- FIRT 1255 Methods of Teaching** 2-0-2  
Preparation of public safety personnel to effectively teach technical skills, techniques, and information.
- FIRT 1301 Fundamentals of Fire Protection (FPRT 1301)** 3-0-3  
Study of the philosophy, history and fundamentals of public and private fire protection. Topics include statistics of fire and property loss, agencies involved in public and private protection, legislative development, departmental organization, training, and staffing.
- FIRT 1303 Fire and Arson Investigation I (FPRT 2306)** 3-0-3  
In-depth study of basic fire and arson investigation practices. Emphasis on fire behavior principles related to fire cause and origin determination.
- FIRT 1305 Public Education Programs (FPRT 2309)** 3-0-3  
Preparation of firefighters and fire officers to develop public fire safety awareness. Emphasis on implementation of fire and public safety programs in an effort to reduce the loss of life.

- FIRT 1307 Fire Prevention Codes and Inspection (FPRT 1302)** 3-0-3  
Study of local building and fire prevention codes. Emphasis on fire prevention inspections, practices, and procedures.
- FIRT 1309 Fire Administration I (FPRT 1304)** 3-0-3  
Introduction to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis on fire service leadership from the perspective of the company officer.
- FIRT 1311 Fire Service Hydraulics (FPRT 2314)** 3-0-3  
Study of water distribution systems and fire stream development as related to fire protection and suppression.
- FIRT 1315 Hazardous Materials I (FPRT 2303)** 3-0-3  
Study of the chemical characteristics and behavior of various materials. Topics include storage, transportation, handling hazardous emergency situations, and the most effective methods of hazard mitigation.
- FIRT 1319 Firefighter Health and Safety** 3-0-3  
Study of firefighter occupational safety and health in emergency and non-emergency situations.
- FIRT 1327 Building Construction in Fire Service** 3-0-3  
Exploration of building construction and design related to fire spread and suppression in various structures. Examination of potential hazards resulting from construction practices and materials.
- FIRT 1329 Building Codes and Construction (FPRT 2305)** 3-0-3  
Examination of building codes and requirements, construction types, and building materials. Topics include walls, floorings, foundations, and various roof types and the associated dangers of each.
- FIRT 1331 Firefighting Strategies and Tactics I (FPRT 2404)** 3-0-3  
Analysis of the nature of fire problems and selection of initial strategies and tactics including an in-depth study of efficient and effective use of manpower and equipment to mitigate the emergency.
- FIRT 1333 Fire Chemistry I (FPRT 1307)** 3-0-3  
Introduction to the chemical nature and properties of inorganic compounds as related to the fire service. Topics include fundamental laws of chemistry, states of matter, gas laws, chemical bonding, and thermodynamics with applications to various industrial processes.
- FIRT 1334 Fire Chemistry II (FPRT 1308)** 3-0-3  
Introduction to the chemistry of carbon compounds as related to the fire service with primary emphasis on the hydrocarbons. Topics include alcohols, phenols, halogen compounds, and ethers with application to various industrial processes.
- FIRT 1336 Fire Insurance Fundamentals** 3-0-3  
Examination of the relationship between fire defenses, fire losses, and insurance rates. In-depth study of the insurance grading system.
- FIRT 1338 Fire Protection Systems (FPRT 1303)** 3-0-3  
Study of fire detection, alarm, and extinguishing systems.
- FIRT 1345 Hazardous Materials II (FPRT 2308)** 3-0-3  
In-depth study of mitigation practices and techniques to effectively control hazardous material spills and leaks.
- FIRT 1347 Industrial Fire Protection (FPRT 2301)** 3-0-3  
Study of industrial emergency response teams and specific concerns related to business and industrial facilities.



**FIRT 1349 Fire Administration II (FPRT 1305) 3-0-3**

In-depth study of fire service management as pertaining to budgetary requirements, administration, organization of divisions within the fire service, and relationships between the fire service and outside agencies.

**FIRT 1353 Legal Aspects of Fire Protection (FPRT 2304) 3-0-3**

Study of the rights, duties, liability concerns, and responsibilities of public fire protection agencies while performing assigned duties.

**FIRT 2331 Firefighting Strategies and Tactics II 3-0-3**

Continuation of Firefighting Strategies and Tactics I. Emphasis on use of incident command in large scale command problems and other specialized fire problems.

**FIRT 2333 Fire and Arson Investigations II 3-0-3**

Continuation of Fire and Arson Investigation I. Topics include reports, courtroom demeanor, and expert witnesses.

**FIRT 2345 Hazardous Materials III 3-0-3**

Continuation of Hazardous Materials II. Topics include radioactive materials and radiation; poisons and toxicology; cryogenics; oxidizers; corrosives; flammable solids; hazards of Class A fuels, plastics, and organic and inorganic peroxides and water reactivity; and polymerization and polymerizing substances.

**FREN French****FREN 1411 Beginning French I 4-2-4**

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

**FREN 1412 Beginning French II 4-2-4**

Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: FREN 1411.

**FREN 2311 Intermediate French I 3-0-3**

This course includes grammar review, composition, and reading of French masterpieces, with conversation based on material read. Prerequisite: FREN 1411 and 1412 or two years of French in an accredited high school.

**FREN 2312 Intermediate French II 3-0-3**

This course continues reading of French masterpieces; drill on syntax as needed for reading, composition, and conversation. Prerequisite: FREN 2311.

**GEOG Geography****GEOG 1300 Introduction to Geography 3-0-3**

This is an introductory-level course that combines physical and cultural geography using a regional approach. The course examines the physical environment of the earth and explains maps, covers man's adaptation to environmental extremes, and explores man's use of his environment ranging from adaptation within a tribal culture to the highly modernized urban world.

**GEOG 1301 Elements of Physical Geography 3-0-3**

A course which examines the physical characteristics of the Earth's environment using maps as a tool for expressing location and interrelationships. Principle discussion topics are the atmosphere and oceans, weather, climate, environments of earth materials and vegetation, land forms and their development.

**GEOG 1302 Cultural Geography 3-0-3**

A survey of human geography and the ways mankind adapts and reacts to his environment. Culture is defined and its various aspects are described and compared. Important topics to be discussed are population, health, livelihoods, communities, urbanization, organizational interaction including economics and politics, present and future global problems.

**GEOG 1303 World Regional Geography 3-0-3**

The study of major developing and developed regions of the world stressing their similarities and differences and their physical and cultural interrelationships. An additional emphasis is the diversity of ideas and practices to be found in those regions.

**GEOL Geology****GEOL 1301 Earth Science 3-0-3**

A course designed for Education majors. This course covers the nature of the Earth as revealed by geology, astronomy, meteorology, and other related physical sciences.

**GEOL 1305 Environmental Geology 3-0-3**

An interdisciplinary course which includes an overview of Earth materials and processes, which then goes on to focus upon specific geologic problems and possible solutions. A major emphasis of this course is that of the relationship of geology with other academic and practical matters and studies.

**GEOL 1403 Physical Geology 3-3-4**

An introductory course about the materials and processes of the Earth. Topics included are: minerals, rocks, plate tectonics, weathering, running water, ground water, glaciers, deserts, and others. The study of local rocks and minerals and the opportunity for field observation and collection are provided.

**GEOL 1404 Historical Geology 3-3-4**

The course involves a study of the record of life forms that have 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 the Earth's origin are studied in the course. Field work, including the study of local fossil fauna, is an integral part of the course.

**GERM German****GERM 1411 Beginning German I 4-2-4**

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

**GERM 1412 Beginning German II 4-2-4**

Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: GERM 1411.

**GERM 2311 Intermediate German I 3-0-3**

This course includes grammar review, composition and practice in conversation, with readings in contemporary German writings. Includes short stories and some longer works, providing a conversational basis. Prerequisite: GERM 1411 and 1412, or two years of German in an accredited high school.

**GERM 2312 Intermediate German II 3-0-3**

This course continues reading in contemporary German writings; drill on syntax as needed for reading, composition, and conversation. Prerequisite: GERM 2311.

## GOVT Government

### GOVT 2301 State and Federal Government I 3-0-3

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, national elections (state and local), civil liberties, and interest groups.

### GOVT 2302 State and Federal Government II 3-0-3

An introductory, survey course on various United States, Texas, and local government topics. This course includes studying institutions of national and Texas governments including the executive, legislative, and judicial branches; the bureaucracy; and the public policy including defense and foreign relations as examples.

### GOVT 2304 Introduction to Political Science 3-0-3

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.

## HAMG Hospitality Management See also HMCA

### HAMG 1311 Sanitation and Safety (HMCA 1202) 3-0-3

The fundamentals of sanitation practices, laws, methods, and techniques of food handling for protection, safety, and accident prevention. Upon completion of this course, the student will have sufficient knowledge to pass the Educational Institute of National Restaurant Association (NRA) certification sanitation examination.

### HAMG 1313 Front Office Procedures (HMCA 1308) 2-4-3

A study of the flow of activities and functions in today's lodging operation. Topics include a comparison of manual, machine assisted, and computer based methods for each front file function. Completion of computer simulation is required. (Computer Workshop.)

### HAMG 1319 Computers in Hospitality (HMCA 2302) 2-4-3

An introduction to computers and their relationship as an information system to the hospitality industry. This course addresses essential aspects of computer systems, such as hardware and generic applications; focuses on computer-based property management systems for both front and back office functions; and on computer-based restaurant management.

### HAMG 1340 Hospitality Legal Issues (HMCA 1304) 3-0-3

A course in legal and regulatory requirements that impact the hospitality industry. Topics include Occupational Safety and Health Administration (OSHA), labor regulations, tax laws, tip reporting, franchise regulations, and product liability laws. Successful completion of the National Restaurant Association certification exam is required.

### HAMG 2301 Principles of Food and Beverage Operations (HMCA 1332) 3-0-3

An introduction to food, beverage, and labor cost controls with an overview of the hospitality industry from procurement to marketing. Examination of cost components including forecasting, menu planning and pricing, logistical support, production, purchasing, and quality assurance.

### HAMG 2307 Hospitality Marketing and Sales (HMCA 2308) 3-0-3

Identification of the core principles of marketing and their impact on the hospitality industry. Successful completion of the National Restaurant Association certification exam is required.

### HAMG 2332 Hospitality Financial Management (HAMG 2332) 3-0-3

Methods and application of financial management within the hospitality industry. Primary emphasis on sales accountability, internal controls, and report analysis.

### HAMG 2337 Hospitality Facilities Management (HMCA 2310) 1-5-3

Identification of building systems, facilities management, security and safety procedures.

### HAMG 2371 Hospitality Management Cases (HMCA 2301) 1-8-3

This course is designed as a real-time management lab where students will be expected to form a management team and operate an operational area for a semester. Teamwork and organizational skills are developed. Case analysis and project papers are required.

### HAMG 2388 Internship - Hospitality Administration and Management (HMCA 2303, 2309, 2311) 1-16-3

An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary.

## HART Heating, Air Conditioning and Refrigeration

### HART 1401 Electrical Principles (AIRC 1401) 3-3-4

Principles of electricity as required by HVAC technicians including proper use of test equipment, A/C and D/C circuits, and component theory and operation. Prerequisite or co-requisite: HART 1407 or consent of Department Chair.

### HART 1403 A/C Control Principles (AIRC 1406) 3-3-4

A basic study of electrical, pressure, and temperature controls including motor starting devices, operating relays, and troubleshooting safety controls and devices. Emphasis on use of wiring diagrams to analyze high and low voltage circuits. A review of Ohm's law as applied to A/C controls and circuits. Prerequisite: HART 1401 or consent of Department Chair.

### HART 1407 Refrigeration Principles (AIRC 1400) 3-3-4

An introduction to the refrigeration cycle, basic thermodynamics, heat transfer, temperature/pressure relationship, safety, refrigeration containment, and refrigeration components.

### HART 1441 Residential Air Conditioning (AIRC 1407) 3-3-4

A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems. Prerequisite or co-requisite: HART 1407 or consent of Department Chair.



**HART 1442 Commercial Refrigeration (AIRC 2402) 3-3-4**

Theory of and practical application in the maintenance of commercial refrigeration; high, medium, and low temperature applications and ice machines. Prerequisites: HART 1401 and HART 1407 or consent of Department Chair.

**HART 1445 Gas and Electric Heating (AIRC 1403) 3-3-4**

A study of the procedures and principles used in servicing heating systems including gas fired and electric furnaces. Prerequisite or co-requisite: HART 1401 or consent of Department Chair.

**HART 1449 Heat Pumps (AIRC 2405) 3-3-4**

A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems. Prerequisites: HART 1403 and HART 1441 or consent of Department Chair.

**HART 2431 Advanced Electricity (AIRC 2400) 3-3-4**

Advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment including detailed instruction in motors and power distribution and introduction to solid state devices. Prerequisites: HART 1401 and HART 1403 or consent of Department Chair.

**HART 2436 Troubleshooting (AIRC 2404) 3-3-4**

An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests. Prerequisites: HART 1401, 1403, 1407, 1441, and 1442 or consent of Department Chair.

**HART 2441 Commercial Air Conditioning (AIRC 2403) 3-3-4**

A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less. Prerequisite: HART 1401 and 1407 or consent of Department Chair.

**HART 2445 Air Conditioning System Design (AIRC 2401) 3-3-4**

A study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system. Prerequisite: HART 1407 or consent of Department Chair.

**HART 2471 Advanced Heat Pumps (AIRC 2407) 3-3-4**

An introduction to geothermal heat pumps, polyethylene butt and socket fusion, geothermal applications, ground heat exchangers (vertical, horizontal and slinky loops), flow controls, system design, troubleshooting, repair and system service. Prerequisite: HART 1449 and 2431 or consent of Department Chair.

**HIST History**

**HIST 1301 History of the United States to 1877 3-0-3**

English colonization, the Revolution, adoption of the Constitution, growth of nationalism, cotton and the slavery problem, civil war, and reconstruction.

**HIST 1302 History of the United States from 1877 3-0-3**

New social and industrial problems, rise of the progressive movement, United States' emergence as a world power, World War I, reaction and the New Deal, World War II, and contemporary America.

**HIST 2301 Texas History 3-0-3**

A survey of Texas from the Spanish exploration to the present.

**HIST 2311 Survey of Western Civilization I 3-0-3**

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, Reformation, establishment of West-European leadership, Transformation of Eastern Europe, the Enlightenment, Scientific Revolution, and the French Revolution.

**HIST 2312 Survey of Western Civilization II 3-0-3**

An introductory survey course from 1815 to the present with particular emphasis upon the 20th century. Topics covered include the international impact of the French Revolution, Reaction vs. Progress, the Industrial Revolution, the Revolution 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, and the Contemporary World.

**HIST 2381 African-American History 3-0-3**

The purpose of this course is to familiarize students with the general study of African-American history from the early days of West Africa to American slavery and freedom and ending with the modern civil-rights movement of the 1950's and 1960's.

**HMCA Hospitality Management**  
See also HAMG

**HMCA 1207 Menu Management 2-0-2**

Basic factors of planning menus including variety and nutrition, techniques of preparing attractive menus while maintaining budgetary control, and types of menus for various public and private institutions. Successful completion of the National Restaurant Association certification exam is required.

**HMCA 1234 Dining Room Service 1-3-2**

This course focuses on the excellent service that is vital to the success of every food service operation. Serving food and beverage is a significant part of any food and beverage operation.

**HMCA 1303 Purchasing for Hospitality Industry 3-0-3**

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. Successful completion of the National Restaurant Association certification exam is required.

**HMCA 1306 Hospitality Supervision 3-0-3**

This course provides the student with the practical instructions and skills to supervise in hotel or restaurant business, or in any type of food service operation. Successful completion of the National Restaurant Association certification exam is required.

**HMCA 1309 Introduction to Hospitality 3-0-3**

Introduction to Hospitality is a survey course designed to provide general information about the career fields within the hospitality industry. The course also offers a program in Quality Customer Service. Successful completion of the National Restaurant Association certification exam is required.

**HMCA 1331 Basic Food Preparation 2-7-3**

Lab fee, uniforms, and professional tools are required. Basic menu items such as soup and sauces are prepared. Other areas of concentration are beverage service, table service, plate and table presentation, accountability of food stores. Co-requisite: HAMG 1311.

**HMCA 1333 Intermediate Food Preparation 2-7-3**

This course emphasizes the fine points of culinary skills and theory. concentration is on menu preparation and responsibilities of the Chef and Sous Chef. Lab fees, uniforms, and professional tools are required. Prerequisite: HMCA 1331

**HMCA 2262 Sugar Art 1-3-2**

Lab fee, uniforms, and professional tools are required. A course in practical instruction skill development in sugar work, Marzipan, chocolate, holiday confections and advanced cake decoration.

**HMCA 2304 Nutrition for the Food Service Professional 3-0-3**

This course is 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. Successful completion of the National Restaurant Association certification exam is required.

**HMCA 2305 Facility Layout and Design 3-0-3**

Fundamentals of equipment layout for optimum production and operational efficiency. This course will include procedures to design and decorate remodeling projects.

**HMCA 2335 Advanced Food Preparation 2-7-3**

Lab fee, uniforms, and professional tools are required. The course will concentrate on: buffets, exhibition work, Garde Manger and baking. Prerequisite: HMCA 1333.

**HMCA 2352 Catering 2-2-3**

This course provides the student with a comprehensive resource-addressing menu planning and merchandising of catering business. It provides an overview of various other aspects of the catering business, to include both on-premise and off-premise catering. This course also provides a computer workshop.

**HMCA 2356 Fundamentals of Baking 1-5-3**

Lab fee, uniforms, and professional tools are required. A course designed to add to commercial baking skills of the student. Co-requisite: HMCA 1331.

**HMCA 2358 Dietary Operations 3-0-3**

This course looks at the food service operation through dietary and clinical needs of the patients.

**HMCA 2359 Diet Therapy 3-0-3**

A practical "how-to" course tailored to the unique needs of current and future dietary managers.

**HMCA 2362 Advanced Pastry 2-6-3**

Lab fee, uniforms, and professional tools required. This course is a practical instruction and skills development in cakes, birthday, special occasion, wedding, and pastry decoration.

**HMCA 2364 Advanced Culinary Competition 1-5-3**

This course focuses on the artistry and creativity that are such important components of a chef's function. This course is based on the fundamentals liked to classical exhibition work, Grande Mange, classical baking.

**HMCA 2451 Management of Production & Service 3-3-4**

This course points out the specific differences between an industrial cafeteria and a conventional restaurant and explains how to cope with the unusual problems of industrial and institutional feeding.

**HMCA 2555 Internship - Diet Manager 2-15-5**

Lab fee, uniforms, and professional tools are required. Field experience in diet therapy under the supervision of a registered dietician. Prerequisite: HMCA 2358 and 2359.

**HRPO Management**

See also BMGT, BUSG and MRKG

**HRPO 1311 Human Relations (MGMT 1306) 3-0-3**

Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment.

**HRPO 2301 Human Resource Management (MGMT 2302) 3-0-3**

Behavioral and legal approaches to the management of human resources in organizations.

**HUMA Humanities****HUMA 1315 Introduction to Fine Arts 3-0-3**

This is an introductory course designed to give the student a fundamental understanding of the creation and appreciation of diverse modes of expression through the visual arts, within the context of Fine and Applied Arts.

**INDU Industrial Technology****INDU 1400 Industrial Fundamentals 3-3-4**

This 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 co-requisite for the Maintenance Technology AAS Degree Programs.

**JAPN Japanese****JAPN 1311 Elementary Japanese I 3-0-3**

Introduction to Japanese with emphasis on conversation, grammar, and the written forms. There will also be readings of simple texts dealing with Japanese life and culture.

**JAPN 1312 Elementary Japanese II 3-0-3**

Continuation of Japanese conversation, grammar and the written forms. Emphasis is on reading texts dealing with Japanese life and culture. Prerequisite: JAPN 1311.

**JAPN 1370 Introduction to Japanese 3-0-3**

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 1411 Beginning Japanese I 4-2-4**

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

**JAPN 1412 Beginning Japanese II 4-2-4**

Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: JAPN 1411.

**JAPN 2311 Intermediate Japanese 3-0-3**

Review and application of skills in listening, comprehension, and speaking; introduction to advanced grammar patterns; and acquisition of additional Japanese characters.



## LGLA Paralegal/Legal Assistance

### **LGLA 1321 Military Law I (LEGA 1309) 3-0-3**

This course presents an overview of the military legal system including an introduction to the Uniform Code of Military Justice, military regulations, and procedures involved in military law. A breakdown of the organization and personnel of the Judge Advocate General's Corps is also included.

### **LGLA 1343 Bankruptcy (LEGA 1308) 3-0-3**

This course presents fundamental concepts of bankruptcy law and procedure with emphasis on the paralegal's role. Topics include individual and business liquidation and reorganization.

### **LGLA 1345 Civil Litigation (LEGA 1307) 3-0-3**

This course presents fundamental concepts and procedures of civil litigation with emphasis on the paralegal's role. Topics include pretrial, trial, and post trial phases of litigation.

### **LGLA 1351 Contracts (LEGA 2302) 3-0-3**

This course presents fundamental concepts of contract law with emphasis on the paralegals' role. Topics include formation, performance, and enforcement of contracts under the common law and the Uniform Commercial Code.

### **LGLA 1353 Wills, Trust and Probate Administration (LEGA 2405) 3-0-3**

This course presents fundamental concepts of the law of wills, trusts, and probate administration with emphasis on the paralegal's role.

### **LGLA 1355 Family Law (LEGA 1304) 3-0-3**

This course presents fundamental concepts of family law with emphasis on the paralegal's role. Topics include formal and informal marriages, divorce, annulment, marital property, and the parent-child relationship.

### **LGLA 1357 Juvenile Law (LEGA 2307) 3-0-3**

This course presents fundamental concepts of juvenile law with emphasis on the paralegal's role. Topics include differences between the criminal and juvenile justice systems, detention, adjudication and certification procedures, and related issues within the public education system.

### **LGLA 1391 Special Topics in Paralegal/Legal Assistance (LEGA 2101, LEGA 2308) 3-0-3**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

### **LGLA 1401 Legal Research and Writing 3-3-4**

This course provides a working knowledge of fundamentals of effective legal research and writing. Topics include law library techniques, computer assisted legal research, briefs, and legal memoranda.

### **LGLA 1407 Introduction to Law and the Legal Profession (LEGA 1401) 4-0-4**

This course provides an overview of the law and the legal professions. Topics include legal concepts, systems, and terminology; ethical obligations and regulations; professional trends and issues with particular emphasis on the paralegal.

### **LGLA 1417 Law Office Technology 3-3-4**

This course introduces computer technology and its applications within the law office. Topics include the use of computer technology in the delivery of legal services with particular emphasis on the paralegal's role.

### **LGLA 2303 Tort and Personal Injury Law (LEGA 2301) 3-0-3**

This course presents fundamental concepts of tort law with emphasis on the paralegal's role. Topics include intentional torts, negligence, and strict liability.

### **LGLA 2307 Law Office Management (LEGA 1302) 3-0-3**

This course presents the fundamentals of law office management and organization including basic principles and structure of management, administrative and substantive systems in the law office, and law practice technology.

### **LGLA 2309 Real Property (LEGA 1305) 3-0-3**

This course presents fundamental concepts of real property law with emphasis on the paralegal's role. Topics include the nature of real property, rights and duties of ownership, land use, voluntary and involuntary conveyances, and the recording of and searching for real estate documents.

### **LGLA 2311 Business Organizations (LEGA 2303) 3-0-3**

This course presents basic concepts of business organizations with emphasis on the paralegal's role. Topics include law of agency, sole proprietorships, forms of partnerships, corporations, and other emerging business entities.

### **LGLA 2313 Criminal Law and Procedure (LEGA 1306) 3-0-3**

This course introduces the criminal justice system including procedures from arrest to final disposition, principles of federal and state law, and the preparation of pleadings and motions.

### **LGLA 2321 Military Law II (LEGA 1403) 3-0-3**

This course presents an in-depth look at the operation and management of military law. Topics include detailed coverage of criminal law, claims, military administrative law, legal assistance, and civil law as it applies to the military.

### **LGLA 2433 Advanced Legal Document Preparation (LEGA 2401) 3-3-4**

Preparation of legal documents based on hypothetical fact situations drawn from various areas including real estate, family law, contracts, litigation, and business organizations.

## MATH Mathematics

### **MATH 1314 College Algebra 3-0-3**

Topics include theory of equations, exponential and logarithmic functions, systems of linear equations, matrices and determinants, arithmetic and geometric sequences, binomial theorem, permutations and combinations. This course is recommended for students intending to enroll in advanced mathematics courses. Prerequisite: DSMA 0303 or equivalent, or acceptable placement test score.

### **MATH 1316 Trigonometry 3-0-3**

Wrapping, circular, and trigonometric functions; polar coordinates; identities; applications to oblique and right triangles; inverse functions; and trigonometric equations. Prerequisite: DSMA 0303 or equivalent.

### **MATH 1324 Finite Mathematics I 3-0-3**

Topics include linear systems, matrices, linear programming, set theory, counting theory, probability, statistics. Prerequisite: DSMA 0303 or equivalent.

**MATH 1342 Elementary Statistics 3-0-3**

Collection and tabulation of data, bar charts, graphs, sampling, averages, dispersion, correlation, index numbers, normal curve, probability, inferential statistics, applications. Prerequisite: DSMA 0303 or equivalent.

**MATH 1348 Analytic Geometry 3-0-3**

An algebraic treatment of straight lines, circles, parabolas, hyperbolas, ellipses. Transformation of coordinates, curve sketching, polar coordinates. Prerequisite: MATH 1316 or equivalent and MATH 1314.

**MATH 1376 Finite Mathematics II 3-0-3**

A continuation of Finite Mathematics I. Introduction to statistics, graphing, vectors, matrices, and linear programming. Prerequisite: MATH 1324.

**MATH 2320 Differential Equations 3-0-3**

Fourier series, linear differential equations, Laplace transforms, and series solution, all with applications. Prerequisite: MATH 2415.

**MATH 2413 Calculus I (Fall) 3-1-4**

A first course in differential and integral calculus. Topics include rectangular coordinates and functions, limits, continuity, derivatives, the Mean Value Theorem, integrals, the Fundamental Theorem of Calculus, and applications of integrals. This course meets four hours per week—three in lecture and one in lab activities to include the use of computers, graphing calculators, and/or problem solving discussions. Prerequisite: MATH 1348 or equivalent, or concurrent enrollment in MATH 1348.

**MATH 2414 Calculus II (Spring) 3-1-4**

A second course in differential and integral calculus. Topics include derivatives and integrals of transcendental functions, techniques of integration, improper integrals, infinite series, parametric equations, and polar coordinates. This course meets four hours per week—three in lecture and one in lab activities to include the use of computers, graphing calculators, and/or problem solving discussions. Prerequisite: MATH 2413 or equivalent.

**MATH 2415 Calculus III (Summer) 3-1-4**

A third course in differential and integral calculus. Topics include vectors and curves in the plane, solid analytic geometry, and vectors in space, functions of several variables, multiple integration, and vector analysis. This course meets four hours per week—three in lecture and one in lab activities to include the use computers, graphing calculators, and/or problem solving discussions. Prerequisite: MATH 2414 or equivalent.

## MISC Microcomputer Technology

**MISC 1100 Special Topics 0-3-1**

Recent developments and topics of current interest taught in a laboratory format. May be repeated when topics vary.

**MISC 1131 Introduction to UNIX 1-0-1**

An introduction to the fundamentals of UNIX. Topics include an overview of system structure, file systems, shells, shell scripts, communications, system administration, and a comparison of UNIX and MS-DOS capabilities. Provides practical lab exercises by topic.

**MISC 1141 MS-DOS Fundamentals 1-1-1**

A coverage of commonly used DOS commands and procedures. Introduces basic DOS concepts, disk preparation, storing and retrieving of information on disk, and file manipulation.

**MISC 1306 Introduction to BASIC 2-2-3**

Offers an introduction to programming in BASIC for the student interested in using a computer at home, in a small business or as a tool in a subject area such as math or science. Applications will illustrate personal computing techniques. Introduction to programming for non-computer majors.

**MISC 1400 Microcomputer Fundamentals 3-3-4**

Provides the student with fundamental skills needed in designing computer programs. Focus will be on problem analysis and developing algorithms for the step-by-step solution to problems. Students will learn to use a microcomputer under the MS-DOS operating system in a hands-on environment. A microcomputer language will be used for programming and debugging.

**MISC 1403 Introduction to Computer Science and Programming 3-3-4**

Introductory programming for Microcomputer Technology majors. Problem solving, algorithm development, pseudocode, and flowcharting. In-depth coverage of a high-level language through programming assignments.

**MISC 1404 COBOL Programming 3-3-4**

Provides the student with skills and fundamentals in solving business data processing problems using COBOL. The student becomes effective in COBOL programming techniques involving sequential files, single- and double-dimension table handling, and control breaks.

**MISC 1405 Computer Concepts and Analysis 3-3-4**

Provides the essential foundation for computer science majors in computer concepts, terminology, and business computer systems. Students will be introduced to word processor and spreadsheet software.

**MISC 1406 Computer Organization and Architecture 3-3-4**

A study of hardware and software characteristics of digital computers. Designed to give the student an understanding of how the fundamental principles by which computers work affect and govern programming techniques. Topics include data representation, machine instruction types, fetch and execution cycles, interrupt schemes, metaprograms, I/O handling, and assembler concepts. Prerequisites: COSC 1403 or MISC 1451 or COSC 1401.

**MISC 1420 Word Processing for Microcomputers 3-3-4**

An entry-level course designed to teach the use of a current state-of-the-art word processor in a hands-on environment to include installation of word processor software.

**MISC 1430 Spreadsheets for Microcomputers 3-3-4**

An entry-level course designed to teach the use of a current state-of-the-art spreadsheet in a hands-on environment to include installation of spreadsheet software.

**MISC 1440 Data Base for Microcomputers 3-3-4**

An introduction to state-of-the-art Database Management Systems for the Microcomputer. Major topics include database design, table creation, query and view construction, form building and report generation. Theory topics are reinforced with hands-on exercises. Prerequisites: MISC 1420, MISC 1430, or MISC 1450.

**MISC 1450 Microcomputers for Business 3-3-4**

An introduction to the use of the microcomputer as a business tool. Designed specifically for the business oriented, this course will provide familiarity with the microcomputer and its use in the business sector. A hands-on introduction to the use of a word processor, spreadsheet, and database is provided. Types of hardware and software available for business will be studied.

**MISC 1451 Introduction to Microcomputer Programming 3-3-4**

Introductory programming course for Microcomputer Technology Major. Problem solving, algorithm development, pseudocode and flowcharting. An in-depth look at a high-level language through programming assignments.





**MISC 1454 PASCAL Programming 3-3-4**

A thorough coverage of structured programming. Emphasis on top-down programming and modular organization. Major topics to be covered include constants, variables, expressions, input and output, self-contained procedures, making decision (REPEAT-UNTIL, WHILE-DO and FOR loops), data types, arrays, character strings, records and set pointers, and disk files. Prerequisite: MISC 1451 or COSC 1403.

**MISC 1460 Desk Top Publishing 3-3-4**

Designed to provide the student with a working knowledge of desk top publishing. Taught in a hands-on environment. Prerequisite: MISC 1420 or MISC 1450.

**MISC 1461 Operating Systems 3-3-4**

A study of microcomputer operating systems. Topics include commands, system configuration, batch files, directory and hard disk management. Prerequisite: 8 semester hours of computer courses.

**MISC 2110 Topics in Computer Science Laboratory 0-3-1**

A laboratory course. May be offered as a stand-alone laboratory course or in conjunction with MISC 2310 when a laboratory is required to develop the topic.

**MISC 2301 Information Center Management 3-0-3**

Defines the infrastructure of information centers and describes their role and responsibilities in terms of assisting professionals with varying degrees of computer knowledge in using computer technology in the performance of their job function. Prerequisite: MISC 1450.

**MISC 2302 Hardware/Software Selection and Acquisition 3-0-3**

Selection and acquisition of hardware and software. Topics include capacity sizing of key hardware components, compatibility considerations, lease/purchase alternatives, in-house versus packaged software, documentation and training provided, vendor responsibilities and support, future up-grade capability to support growth, procurement proposals and contracting. Prerequisite: 12 semester hours of MISC courses or equivalent experience.

**MISC 2310 Topics in Computer Science 3-0-3**

A study of recent developments and topics of current interest in computer science.

**MISC 2401 Advanced COBOL 3-3-4**

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. Thorough coverage is given to file design and the special features of ANSI COBOL language. Emphasis is placed on multi-dimensional table handling, searching and sorting techniques, and indexed file manipulation. Structured design and programming will be stressed. Prerequisite: MISC 1404.

**MISC 2402 Systems in the MIS Environment 3-3-4**

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 data base management systems through the development of a data base project. Prerequisite: 12 semester hours of computer courses.

**MISC 2453 Visual BASIC Programming 3-3-4**

An introduction to the Visual BASIC Programming Language. Major topics include forms and controls, selection, loops, data access and menus. Theory topics are reinforced with hands-on programming exercises. Prerequisite: Minimum of one other programming language.

**MISC 2454 Basic Communications, Networking and Internet 3-3-4**

A study of data communications and networking of microcomputer systems. Topics include communications hardware and software, using the Internet as a resource tool, and Local Area Networks. Prerequisite: MISC 1461.

**MISC 2455 Microcomputer Field Projects 1-9-4**

This course consists of practical applications in the field of microcomputers. It is designed to fit the career objectives of the student. Prerequisite: Consent of the Department Chair.

**MISC 2456 C Language Programming I 3-3-4**

The use of C in application programming. Major topics include fundamental flow-control constructions, statement grouping, decision making, looping with termination test at top(WHILE, FOR) or bottom (DO), and case selection (SWITCH). Detailed use of functions with internal, external, and global variables. Address arithmetic and call by reference will also be covered. Prerequisite: COSC 1406 and one other programming language.

**MISC 2457 Programming with ADA\* 3-3-4**

An introduction of the basic syntax and semantics of ADA programming language. The design and use of the language will be the general theme of the course while programming exercises will be used to illustrate specific implementations of the language structure. Emphasis will be on importance of style and linguistic considerations. Prerequisite: MISC 1454.

\* ADA is a registered trademark of the United States Department of Defense.

**MISC 2458 C Language Programming II 3-3-4**

An introduction to Object-Oriented Programming (OOP) using the C++ Language. Major topics include data structures, classes, inheritance, encapsulation and polymorphism. Theory topics are reinforced with hands-on programming exercises. Prerequisite: MISC 2456.

**MRKG Business Administration and Management**  
See also BMGT, BUSG and HRPO

**MRKG 1311 Principles of Marketing (MGMT 2301) 3-0-3**

Introduction to basic marketing functions; identification of consumer and organizational needs; explanation of economic, psychological, sociological, and global issues; and description and analysis of the importance of marketing research.

**MTNT Maintenance Technology****MTNT 1401 Carpentry I 3-3-4**

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 Co-requisite: INDU 1400 or consent of the Department Chair.

**MTNT 1402 Electricity 3-3-4**

This course is designed to provide the student with a working knowledge of electrical installation as well as service and repair procedures for residential and light commercial buildings. Prerequisite or Co-requisite: INDU 1400 or consent of the Department Chair.

**MTNT 1411 Basic Masonry I 2-7-4**

This course is an introduction to the highly skilled craft of masonry including safety methods, practices, and proper use of tools and equipment. The student will learn the names, uses, and maintenance of basic masonry tools and equipment. A basic study of masonry materials and federal and state guidelines regulating the trade, safety, and building plans.

**MTNT 1412 Basic Masonry II 2-6-4**

This course covers the theory and practical applications of the basic bricklaying techniques such as mortar making and spreading, setting courses and laying of brick. Prerequisite: MTNT 1411 or consent of the Department Chair.

**MTNT 1413 Intermediate Masonry I 2-7-4**

The student will learn the theory and practical applications of laying straight leads and walls using standard bonds, and the construction of piers. Use of plain and reinforced mortars will be emphasized. Prerequisite or Co-requisite: MTNT 1412 or consent of the Department Chair.

**MTNT 2402 Carpentry II 3-3-4**

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: INDU 1400 and MTNT 1401 or consent of the Department Chair.

**MTNT 2403 Plumbing I 3-3-4**

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 Co-requisite: INDU 1400 or consent of the Department Chair.

**MTNT 2404 Painting and Refinishing 3-3-4**

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, surface preparation, proper maintenance of and refinishing damaged finished surfaces. Prerequisite or Co-requisite: INDU 1400 or consent of the Department Chair.

**MTNT 2405 Foundations, Framing, and Roofing 3-3-4**

The student will be introduced to form fabrication, setting foundations, setting piers and castings, and will practice framing and roofing residential buildings. Students will also have practical exercises in roofing. The course also covers modern placement methods of materials for structures and building layout systems. Prerequisite: MTNT 1401 or consent of the Department Chair.

**MTNT 2407 Interior-Exterior Finishing 3-3-4**

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, floor finishing, stair finishing, shelving and interior trim. The student will also learn the importance of truing areas where cabinets will be installed. Prerequisite or Co-requisite: MTNT 2405 or consent of the Department Chair.

**MTNT 2410 Plumbing II 3-3-4**

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 citing in accordance with established codes, cost estimating, and sprinkler systems. Also included are the procedures involved in cast iron pipe installation. Prerequisite: MTNT 2403 or consent of the Department Chair.

**MTNT 2414 Intermediate Masonry II 2-6-4**

This course is designed to develop the student's ability to lay brick to the line, alone and in group situations with maximum efficiency, safety, and work quality. The theory and practice of special construction such as bond patterns, fireplaces, arches, and lintels will be covered. Prerequisite: MTNT 1413 or consent of the Department Chair.

**MTNT 2415 Advanced Masonry I and Blueprint Reading 2-7-4**

This course will teach the masonry student the skills necessary to estimate the amount and cost of building material, mortar, equipment, and other materials required to complete a given job. The student will also learn how to estimate man-hours required and convert all of the above estimate man-hours required and convert all of the above estimations into a monetary figure used in bidding and how to use estimation formulas. It also provides additional training in bricklaying. Prerequisite: MTNT 2414 or consent of the Department Chair.

**MTNT 2416 Advanced Masonry II and Estimating 2-7-4**

This course will teach the masonry student the skills necessary to estimate the amount and cost of building material, mortar, equipment and other materials required to complete a given job. The student will also learn how to estimate man-hours required and convert all of the above estimations into a monetary figure used in bidding and how to use estimation formulas. It also provides additional training in bricklaying. Prerequisite: MTNT 2415 or consent of the Department Chair.

## OADM Office Administration

**OADM 1131 Beginning Typing I 1.5-1.5-1**

A beginning course in touch typing. The course will emphasize mastery of machine parts and the keyboard.

**OADM 1133 Intermediate Typing I 1.5-1.5-1**

A continuation of Beginning Typing II and Beginning Keyboarding/Data Entry. Students will increase typing accuracy and speed. Prerequisite: WOPO 1303 or OADM 1232 or ability to type 25 WPM for five minutes with no more than five errors.

**OADM 1232 Beginning Typing II 1.5-1.5-2**

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 1.5-1.5-2**

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 2-4-3**

An introduction of shorthand. Students will receive initial training in shorthand emphasizing reading, writing, theory principles, brief forms and related activities.

**OADM 1302 Intermediate Shorthand 2-4-3**

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

**OADM 1305 Information and Records Management 2-4-3**

This course introduces the basic principles and procedures concerning the management of document-based information systems required in the operation of an organization's business. Topics include document-based records classification, storage, maintenance, and disposition methods and systems; electronic database creation, storage, and retrieval technology; and the principles for the selection of records equipment and supplies. Prerequisite: WOPO 1303 or equivalent.





**OADM 1306 Office Procedures and Applications 3-0-3**

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 3-0-3**

A course designed to teach effective business writing and to give practice in composing all types of business correspondence, including e-mail. Students will also complete research using the Internet. Keyboarding skills are required.

**OADM 1309 Business Mathematics and Calculating Machines 2-4-3**

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 2308 Office Occupations Internship 1-5-3**

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. Departmental approval is required.

**OADM 2309 Office Administration Internship 1-5-3**

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. Departmental approval is required.

**OADM 2371 Office Procedures II 3-0-3**

Advanced office application with special emphasis on decision making, goal setting, management theories, and critical thinking.

**PHED Physical Education**

PHED 1100 Football and Basketball	0-3-1
PHED 1101 Volleyball and Softball	0-3-1
PHED 1102 Beginning Badminton	0-3-1
PHED 1103 Beginning Bowling	0-3-1
PHED 1104 Soccer	0-3-1
PHED 1105 Folk and Square Dancing	0-3-1
PHED 1106 Beginning Swimming	0-3-1
PHED 1107 Beginning Tennis	0-3-1
PHED 1108 Beginning Golf	0-3-1
PHED 1109 Basketball and Soccer	0-3-1
PHED 1110 Karate I	0-3-1
PHED 1113 Country Western Dance	0-3-1
PHED 1114 Volleyball	0-3-1
PHED 1115 Basketball	0-3-1
PHED 1117 Hunting	0-3-1
PHED 1118 Jogging/Walking	0-3-1
PHED 1119 Racquetball	0-3-1
PHED 1120 Body Building	0-3-1

PHED 1123 Advanced Bowling	0-3-1
PHED 1124 Advanced Swimming	0-3-1
PHED 1125 Intermediate Tennis	0-3-1
PHED 1126 Advanced Golf	0-3-1
PHED 1127 Tumbling	0-3-1
PHED 1129 Advanced Badminton	0-3-1
PHED 1130 Physical Conditioning	0-3-1
PHED 1131 Aerobics	0-3-1
PHED 1132 Varsity Athletics	0-3-1
PHED 1133 Weight Training	0-3-1
PHED 1134 Cycling	0-3-1
PHED 1135 Archery	0-3-1
PHED 1136 Figure Control	0-3-1
PHED 1138 Rhythmic Aerobics	0-3-1
PHED 1140 Karate II	0-3-1

**PHED 1151 Scuba Diving 0-3-1**

PADI open-water, level-one certification may be earned.

**PHED 1152 Scuba Diving II 0-3-1**

Advanced open-water certification may be earned.

**PHED 1301 Foundations of Physical Education 3-0-3**

A course which introduces the student to the fields of health, physical education, and recreation. Emphasis on the scope and organization of professional activities, opportunities and qualifications of the professional physical educator.

**PHED 1304 Foundations of Health 3-0-3**

A fundamental course in principles and problems of healthy living. Emphasis on current information and research as it applies to individuals' daily lives.

**PHED 1306 Safety and First Aid 3-0-3**

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. American Red Cross certification in Community CPR and Standard First-Aid Responding to Emergencies may be earned.

**PHED 1308 Sports Officiating 3-0-3**

Theory and practice in techniques of officiating. Prerequisite: Officiating experience.

**PHED 1336 Principles of Recreational Leadership 3-0-3**

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.

**PHED 2155 Water Safety 0-3-1**

Participation and instruction in advanced aquatic activities. Prerequisite: Demonstrated swimming skills.

**PHIL Philosophy****PHIL 1301 Introduction to Philosophy 3-0-3**

A general introduction to critical and reflective thinking as applied to the basic problems of existence and the meaning of human life and institutions; study of methods and types of evidence utilized by authority, intuition, revelation, reason and scientific methods, and a study of the nature of philosophy, including its relation to religion, science, and art.

**PHIL 1304 World Religions 3-0-3**

A survey course dealing with the origins, tenets, and development of the major world religions. Deductive method used to understand religion as a phenomenon in man's life. Discussion of Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam.

**PHIL 1316 History of Religions I 3-0-3**

In an historical survey of major religions this course focuses on the history and literature of Ancient Judaism during the Old Testament period emphasizing its development of social, political, and religious institutions and ideas.

**PHIL 1317 History of Religions II 3-0-3**

In an historical survey of major religions this course focuses on the history and literature of Early Christianity during the New Testament period emphasizing its origin, development, and expansion of religious institutions and ideas.

**PHIL 2303 Logic 3-0-3**

Nature and methods of correct reasoning, deductive proof, inductive proof, fallacies, and arguments.

**PHIL 2306 Introduction to Ethics 3-0-3**

Study of basic principles of the normal life, with critical examination of traditional and current theories of the nature of goodness, happiness, duty, and freedom.

**PHIL 2307 Introduction to Social and Political Philosophy 3-0-3**

Critical examination of the major theories concerning the organization of societies and government.

**PHYS Physical Science****PHYS 1305 Survey of Physics 3-0-3**

A survey of the fundamental principles of physics designed to acquaint students with the basic concepts of classical and modern physics which are the foundation of everyday phenomena.

**PHYS 1311 Survey of Astronomy 3-0-3**

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

**PHYS 1312 Descriptive Astronomy 3-0-3**

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 are used in class.

**PHYS 1315 General Physical Science 3-0-3**

This is an introductory course for students who need to acquire a basic understanding of the philosophy and methods of science. Topics will be selected from various fields of physical science and will cover a review of the basic principles and theories.

**PHYS 1401 College Physics I 3-3-4**

Fundamentals of classical mechanics, heat, and sound are discussed. This course is primarily for students who plan to major in medicine, dentistry, veterinary medicine, pharmacy, and for all other students needing a two semester course in physics. The course includes three hours of lecture and three hours of laboratory per week. Prerequisite: MATH 1316 or concurrent enrollment.

**PHYS 1402 College Physics II 3-3-4**

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 Department Chair.

**PHYS 1405 Survey of Physics 3-3-4**

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 1413 Environmental Science 3-3-4**

This is a one-semester lab course designed for the non-science major. Emphasis is placed on a global approach to principles and problems in our environment. Topics include energy resources, air and water pollutants, environmental causes of cancer, pesticides and other toxic chemicals, solid and hazardous wastes, noise limits, crowding, land use and abuse, economic considerations and some governmental regulatory agencies. Lab includes methods of measurement, analysis and interpretation of environmental data.

**PHYS 1415 Physical Science 3-3-4**

This course is an introduction to the methods and philosophy of sciences and is designed for non-science majors surveying topics from physics, chemistry, geology, astronomy, and meteorology. Methods of instruction include practical laboratory experiments, computer applications, and guided discussions. This course is designed to provide development of skills needed for success in other science classes and for improving science literacy.

**PHYS 2425 Modern Physics I 3-3-4**

Mechanics and heat for Science majors/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 2413 or concurrent enrollment.

**PHYS 2426 Modern Physics II 3-3-4**

Electricity, magnetism, wave-motion and light, an introduction to modern physics for Science majors and minors, and Engineering majors. Vector Algebra and Calculus are used. The course includes three hours of lecture and three hours of laboratory per week. Prerequisite: PHYS 2425 or equivalent.

**PSYC Psychology****PSYC 2301 Introduction to Psychology 3-0-3**

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 2308 Child Growth and Development 3-0-3**

The purpose of this course is to develop an understanding of children and to engender a real interest in them. Consideration is given to the human organism as it develops physically, mentally, emotionally, and socially from birth through adolescence.

**PSYC 2314 Life Span Development 3-0-3**

This course will study the relationship of the physical, emotional, social and mental factors of growth and development of children and throughout the life span.

**PSYC 2315 Personality Adjustment 3-0-3**

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

**PSYC 2316 Psychology of Personality 3-0-3**

The study of various approaches to determinants, development, and assessment of personality. Prerequisite: PSYC 2301.



## RELE Real Estate

### RELE 1301 Principles of Real Estate (REAE 1301) 3-0-3

This course meets the Texas Real Estate Licensing Act (TRELA) requirement for a core course on Real Estate principles. An overview of licensing as a real estate broker and salesperson, 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. Also includes federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment.

### RELE 1303 Real Estate Appraisal (REAE 2302) 3-0-3

A study of the central purposes and functions of an appraisal, social and economic determinants of value, appraisal case studies, cost, market data and income approaches to value estimates, final correlations, and reporting.

### RELE 1307 Real Estate Investments (REAE 2308) 3-0-3

Financing, evaluation, and management of real estate investments. Emphasis on real estate investment characteristics, techniques of investment analysis, time-value of money, discounted investment criteria, leverage, and property tax implications of owning real estate.

### RELE 1309 Real Estate Law of Contracts (REAE 2305) 3-0-3

Provides a study of legal concepts of real estate, land description, real property rights, estates in land, contracts, conveyances, encumbrances, foreclosures, recording procedures, and evidence of title.

### RELE 1311 Law of Contracts (REAE 2300) 3-0-3

This course meets the Texas Real Estate Licensing Act (TRELA) requirement for a core course on Real Estate contract law. A review of real estate contracts required by Section 6A (3) of the Real Estate License Act with emphasis on general contract law requirements. Also covers the purpose, history, and working process of the Broker-Lawyer Committee. Includes preparation of real estate contract forms with emphasis on the most commonly used forms.

### RELE 1315 Property Management (REAE 2303) 3-0-3

A study of the role of the property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, and the Fair Housing Act.

### RELE 1319 Real Estate Finance (REAE 2304) 3-0-3

An overview of the U.S. monetary system, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative instruments, laws affecting mortgage lending, and the State Housing Agency.

### RELE 1321 Real Estate Marketing (REAE 1302) 3-0-3

A study of real estate professionalism and ethics; characteristics of successful salespersons; time management; psychology of marketing; listing procedures; advertising; negotiating and closing; financing; and the deceptive trade practice act, consumer protection act, and commercial code.

### RELE 1325 Real Estate Mathematics (REAE 1300) 3-0-3

Mathematical logic and basic arithmetic skills including percentages, interest, time-value of money, depreciation, amortization, proration, and estimation of closing statements.

### RELE 1327 Real Estate Commercial Appraisal (REAE 2307) 3-0-3

Principles and techniques used in the valuation of commercial property. Topics include purposes and functions of an appraisal, social and economic forces affecting value, appraisal case studies, cost, and income approaches to value.

### RELE 1335 Real Estate Construction (REAE 1303) 3-0-3

A study of the basic principles of design and construction of real estate properties.

### RELE 1391 Special Topics in Real Estate (REAE 2306) 3-0-3

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

### RELE 2301 Law of Agency (REAE 1304) 3-0-3

This course meets the Texas Real Estate Licensing Act (TRELA) requirement for a core course on Agency Law. A study of law of agency including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent's authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying procedures, and the disclosure of agency.

### RELE 2331 Real Estate Brokerage (REAE 2301) 3-0-3

A study of law of agency, planning and organization, operational policies and procedures, recruiting, selection and training of personnel, records and control, and real estate firm analysis and expansion criteria.

## SMER Small Gas Engine

### SMER 1372 Shop Organization and Management (SGER 2311) 3-0-3

This course is designed to provide the student with an understanding of small engine repair business management. Areas of study include customer relations, warranty provisions, service salesmanship, organization and shop lay-out, and the financial and operational aspects of managing a small engine repair business. Prerequisite: Sophomore standing or consent of Department Chair.

### SMER 1404 Outboard Service Principles (SGER 2408) 3-3-4

Principles of operation of two and four stroke outboard motors and their associated systems. Emphasis on troubleshooting and analysis of faulty systems and their individual components. Prerequisite: Sophomore standing or consent of Department Chair.

### SMER 1428 Small Engine Service Principles (SGER 1407) 3-3-4

Principles of operation of two and four stroke small engines and their associated systems. Emphasis on troubleshooting and the analysis of faulty systems and their components. Prerequisite or co-requisite: SMER 1471 or consent of Department Chair.

### SMER 1431 Small Engine Tune Up (SGER 2402) 3-3-4

Tune up procedures for two and four stroke small engines including analysis, valve train, ignition fuel, starter, cutter, and safety compliance systems. Emphasis on the use of appropriate equipment and procedures. Prerequisite: SMER 1471 and 1428 or consent of Department Chair.



**SMER 1434 Small Engine Two Stroke Overhaul (SGER 2410) 3-3-4**

Overhaul procedures for two stroke small engines as used in lawn and garden applications. Emphasis on proper shop procedures for disassembly, inspection, servicing, and assembly of two stroke small engines and their applicable drive systems. Prerequisites: SMER 1431, 1471 and WLDG 1425 or consent of Department Chair.

**SMER 1437 Small Engine Four Stroke Overhaul (SGER 2412) 3-3-4**

Overhaul procedures for four stroke small engines, transmissions, and transaxles. Emphasis on shop procedures for disassembly, assembly, component inspection, component measurement, component servicing, transmission troubleshooting, transmission inspection, and transaxle inspection. Prerequisite: SMER 1428 and 1434 or consent of Department Chair.

**SMER 1471 Small Gas Engine Fundamentals (SGER 1401) 3-3-4**

A study of the fundamental principles and operation of the two- and four-stroke air-cooled engine. Testing and maintenance procedures are performed on the ignition, compression, fuel, starting and lubrication systems of 2-HP and 8-HP engines. Prerequisite or co-requisite: DEMR 1401 or consent of the Department Chair.

**SMER 1473 Large Air Cooled Engines (SGER 2413) 3-3-4**

This course is designed to provide the student with an understanding of the theory and operating principles of large air-cooled engines used in lawn mowers, RV, and generator applications. Single- and twin-cylinder engines will be included. Emphasis will be placed on inspection, testing, diagnosing, and repair/overhaul procedures. Prerequisites: SMER 1428 and 1471 or consent of the Department Chair.

## SOCI Sociology

**SOCI 1301 Introduction to Sociology 3-0-3**

The study of human society, human behavior and personality as a product of group life, community organization, social change and current social problems.

**SOCI 1306 Contemporary Social Problems 3-0-3**

Identification and analysis of contemporary social problems and development of criteria for evaluating problems for social betterment.

**SOCI 2301 Marriage and The Family 3-0-3**

A study of problems in courtship, marriage, and family living as they relate to the social structure of American society.

**SOCI 2319 Race and Ethnicity 3-0-3**

The historical, economic, social, and cultural development of minority groups. May include Afro-American, Mexican American, Asian American, and Native American issues.

**SOCI 2336 Criminology 3-0-3**

Cases and manifestations of delinquency, case studies of criminals and their social milieu; the offender and agencies of his adjustment; analysis and evaluation of penal methods.

## SPAN Spanish

**SPAN 1411 Beginning Spanish I 4-2-4**

The study of Spanish grammar and development of vocabulary. Stresses conversation in Spanish.

**SPAN 1412 Beginning Spanish II 4-2-4**

A continuation of Beginning Spanish I, with continued emphasis on conversation. Prerequisite: SPAN 1411.

**SPAN 2311 Intermediate Spanish I 3-0-3**

Continued emphasis on conversation, correct pronunciation, and correct writing. Reading from various Spanish-American authors. Prerequisites: SPAN 1411 and 1412, or two years of Spanish at an accredited high school.

**SPAN 2312 Intermediate Spanish II 3-0-3**

Continues the readings from Spanish-American authors. Emphasizes grammar, composition, and conversation. Prerequisite: SPAN 2311 or equivalent.

## SPCH Speech

**SPCH 1144 Forensic Activities I 1-0-1**

Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments.

**SPCH 1145 Forensic Activities II 1-0-1**

Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments.

**SPCH 1315 Public Speaking 3-0-3**

Research, composition, organization, and delivery of speeches for various purposes and occasions in a variety of communication situations.

**SPCH 1318 Interpersonal Communications 3-0-3**

Theory, examples, and participation in exercises to improve effective one-to-one and small group communication.

**SPCH 1321 Business and Professional Speaking 3-0-3**

Theories and skills of speech communication as applied to business and professional situations. Includes participating in an interview, preparing a resume and cover letter, engaging in problem-solving discussions, and delivering public speeches.

**SPCH 2144 Forensic Activities III 1-0-1**

Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments.

**SPCH 2145 Forensic Activities IV 1-0-1**

Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments.

**SPCH 2341 Oral Performance of Literature 3-0-3**

Study and practice in the principles of oral reading of literature. Stresses analyzing good literature and recreating the logical and emotional content for an audience. Also includes group oral interpretation.

## TMTH Technical Math

**TMTH 1301 Technical Mathematics 3-0-3**

This course includes a study of algebra, trigonometric functions, graphs of trigonometric functions, solution of triangles, and plane and solid geometry. Prerequisite: DSMA 0303 or consent of the Department Chair.

## WLDG Welding

### **WLDG 1413 Introduction to Blueprint Reading for Welders (WELD 1406, TIWL 1401) 3-3-4**

A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes, including systems of measurements and industry standards. Interpretation of plans and drawings used by industry. Prerequisite or co-requisite: INDU 1400 or WLDG 2403 or consent of the Department Chair.

### **WLDG 1425 Introduction to Oxy-fuel Welding and Cutting (WELD 1401, TIWL 1302) 3-3-4**

An introduction to oxy-fuel welding and cutting, including history and future in welding, safety, set up and maintenance of oxy-fuel welding, and cutting equipment and supplies. Prerequisite or Co-requisite: INDU 1400 or WLDG 2403 or consent of the Department Chair.

### **WLDG 1428 Introduction to Shielded Metal Arc Welding (SMAW) (WELD 1402, TIWL 1303) 3-3-4**

An introduction to shielded metal arc welding process. Emphasis placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction provided in SMAW fillet welds in various positions. Prerequisite or Co-requisite: WLDG 1425 and 2403, or consent of the Department Chair.

### **WLDG 1430 Introduction to Gas Metal Arc (MIG) Welding (WELD 2408, TIWL 1408) 3-3-4**

A study of the principles of gas metal arc welding, set up and use of GMAW equipment, and safe use of tools and equipment. Instruction in various joint designs. Prerequisite: WLDG 1428 and 2403, or consent of the Department Chair.

### **WLDG 1434 Introduction to Gas Tungsten Arc (TIG) Welding (WELD 2407, TIWL 2409) 3-3-4**

An introduction to the principles of gas tungsten arc welding (GTAW) set up and use of GTAW equipment, and safe use of tools and equipment. Welding instruction in various positions on joint designs. Prerequisite: WLDG 1428 or consent of the Department Chair.

### **WLDG 1435 Introduction to Pipe Welding (WELD 2402, TIWL 2410) 3-3-4**

An introduction to welding of pipe using the shielded metal arc welding process, including electrode selection, equipment set up, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes. Prerequisite: WLDG 1457 or consent of the Department Chair.

### **WLDG 1457 Intermediate Shielded Metal Arc Welding (SMAW) (WELD 1403, TIWL 1304) 3-3-4**

A study of the production of various fillets and groove welds. Preparation of specimens for testing in all test positions. Prerequisite: WLDG 1428 or consent of the Department Chair.

### **WLDG 2403 Welding Safety, Tools, and Equipment (TIWL 1300) 3-3-4**

An introduction to welding careers and safety practice, including welding safety; OSHA and the Hazardous Communication Act; Material Safety Data Sheets (MSDS); basic mathematics; measuring systems; shop operations; use and care of precision measuring tools; and the use and care of the hand and power tools. Instruction on various types of welding equipment and processes, basic welding gases, fluxes, rods, electrodes, symbols, and blueprints.

### **WLDG 2406 Intermediate Pipe Welding 3-3-4**

A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 1G, 2G, 5G, and 6G using various electrodes. Topics covered include electrode selection, equipment set up, and safe shop practices. Prerequisite: WLDG 1435 or consent of the Department Chair.

### **WLDG 2413 Welding Using Multiple Processes (TIWL 1402) 2-7-4**

Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shield metal arc welding, gas metal arc welding, flux-cored arc welding, gas tungsten arc welding or any other approved welding process.

### **WLDG 2435 Advanced Layout and Fabrication (WLDG 1417, TIWL 2412) 3-3-4**

A capstone course in layout and fabrication which covers production and fabrication of layout tools and processes. Emphasis on application of fabrication and layout skills. Prerequisite: Completion of all WLDG courses in the program except WLDG 2488 or consent of the Department Chair.

### **WLDG 2439 Advanced Oxy-Fuel Welding and Cutting (WELD 1405) 3-3-4**

A study of all position welding on ferrous and nonferrous metals using oxy-acetylene welding process including welding and cutting, brazing, and soldering operations. Prerequisite: WLDG 1425 or consent of the Department Chair.

### **WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW) (WELD 2401, TIWL 1306) 3-3-4**

Advanced topics based on accepted welding codes. Training provided with various electrodes in shielded metal arc welding processes with open V-groove joints in all positions. Prerequisite: WLDG 1457 or consent of the Department Chair.

### **WLDG 2447 Advanced Gas Metal Arc (MIG) Welding 3-3-4**

Advanced topics in GMAW welding, including welding in various positions and directions. Prerequisite: WLDG 1430 or consent of the Department Chair.

### **WLDG 2451 Advanced Gas Tungsten (TIG) Welding 3-3-4**

Advanced topics in GTAW welding in various positions and directions. Prerequisite: WLDG 1434 or consent of the Department Chair.

### **WLDG 2453 Advanced Pipe Welding (WELD 2404, TIWL 2411) 3-3-4**

Advanced topics involving welding of pipe using the shielded metal arc welding process. Topics include electrode selection, equipment set up, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes. Prerequisite: WLDG 2406 or consent of the Department Chair.

## WOPO Word Processing

### **WOPO 1101 MS-DOS: An Introduction 1-5-1**

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 1-5-1**

A 24-hour course for professional personnel, word processing operators, writers, editors, and publishers. Hands-on experience with minimum lecture, this course includes demonstration, discussion/question/answer sessions. Topics covered include 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 1-5-1**

A 24-hour course for professional personnel, word processing operators, writers, editors, and publishers. Hands-on experience with lecture, this course includes demonstration, discussion/question/answer sessions. Topics covered include an 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 1-5-1**

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 1107 Spreadsheet Applications 1-5-1**

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 help features, tutorials and references.

**WOPO 1108 Word Processing Applications 1-5-1**

A 24-hour course for professional personnel, word processing operators, writers, editors, and publishers. Hands-on experience with minimum lecture; includes demonstration, discussion/question/answer sessions. Topics include: overview of word processing structure of word processing program; defining files; document formatting, text entry, retrieving, and editing and printing documents files; directory/files management; merging and printer/font selection and control.

**WOPO 1109 Data Base Applications 1-5-1**

A 24-hour course introducing participants to the capabilities of a data base structure. Hands-on with minimum lecture; includes demonstration, discussion/question/answer sessions. Topics include how to create, edit, browse, sort, search, and delete entries within a data base structure. In addition, participants will learn how to modify an existing structure, create a report, and how to change or replace fields using search criteria.

**WOPO 1303 Beginning Keyboarding/Data Entry 2-4-3**

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 2-4-3**

A continuation of WOPO 1303. Additional skills in terms of accuracy and speed will be evidenced by students in utilizing personal computers. Composition and typing of business letters, tabulations and manuscripts of more demanding content will be instructed. Prerequisite: WOPO 1303 or consent of the Department Chair.

**WOPO 1305 Applicational Software 2-4-3**

A course for professional, managerial, administrative, and financial analyst personnel having no prior microcomputer experience. A hands-on lecture/lab approach using actual equipment. Includes discussion/question/answer sessions based upon instructor-furnished practice exercises and examples. Topics include microcomputer system components, operating/controlling the system with MS-DOS; spreadsheet operating menus, worksheet design and creation, mathematical functions, graphics development, spreadsheet macros, and data manipulation; overview of the word processing program's structure, defining files, document formatting, text entry, retrieving, editing and printing document files, merging, printer control, and font selection. Knowledge of keyboarding is required.

**WOPO 1307 Word Processing/Transcription 2-4-3**

This course is designed to train students in the theory of word processing. It introduces the student to word processing facilities and equipment. It also 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. Suggested typing skills of 35 WPM. No timed writings are required.

**WOPO 2302 Advanced Information Processing Applications 2-4-3**

This course includes advanced work in such specialized production as desk top publishing and computer graphics. Personal computers and applicable software are used extensively in preparing students to be highly productive office employees. Prerequisites: WOPO 1304 or equivalent.

**WOPO 2303 Office Automation 2-4-3**

The students will work with advanced problems utilizing hands-on experience with information processing facilities and equipment. Hands-on experience includes the following: editing, storing, printing, formatting, computing and networking. A thorough study of present and future systems, i.e., interchangeability and adaptability of software. Prerequisite: 6 WOPO hours or equivalent.

**WOPO 2308 Information System Internship I 2-4-3**

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, telephone use, correspondence preparation, voice transcription machine, record keeping, proofreading, etc. Departmental approval required.

**WOPO 2309 Information System Internship II 2-4-3**

Students will be provided a combination of occupationally related class work instruction and on-the-job training in cooperation with offices within the Office Administration Department. Students will demonstrate advanced competencies with work experiences in the following areas: information processing, letter composing, telephone procedures, filing work, scheduling, financial calculating, duplication, transcribing from dictation equipment, etc. Departmental approval required.





# Personnel

## Deans

Colvin L. Davis, Dean, Pacific Far East Campus

Fred J. Ostertag, Dean, Europe Campus

Jim M. Yeonopolus, Assistant Deputy Chancellor, Campus Operations/Dean Navy Campus

## Staff

Maureen Abel, Area Director, Hawaii

Milton W. Alexander, Associate Dean/ATC Maint-NAS Pensacola, Florida

William J. Attan, Student Services Officer, Pacific Far East Campus

Ken Austin, College Program Coordinator, Navy Atlantic

Dave Bakey, FAST/LSEP, Fort Stewart, Georgia

Susan Barrett, PACE Site Coordinator, Bremerton, Washington, Navy Pacific

John F. Baumgardner, Associate Dean, Navy Atlantic

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Richard Gates, Site Director, Fort Lee, Virginia

Barbara A. Grice, Site Coordinator, MOU Programs, San Diego, California

Alethea Hamilton, Site Director, Bolling Air Force Base, Washington, D.C.

John B. Hunt, PACE Site Coordinator, Mayport, Florida, Navy Atlantic

Paul Illian, Site Director, Fort Riley, Kansas

Larry James, Student Services Officer, Navy Atlantic

Thomas James, Coordinator, Republic of Korea, 2nd ID, Pacific Far East Campus

Gordian Johnson, PACE Site Coordinator, Japan, Navy Pacific

Keith Johnston, Regional Director, Republic of Korea, Pacific Far East Campus

Kevin Kelly, Site Director, Fort Greely, Alaska

Sonoko H. Kemler, Regional Student Services Officer, Pacific Far East Campus

Neal Kepler, Regional Director, Okinawa & Diego Garcia, Pacific Far East Campus

Gary Kindred, Associate Dean, Continental Campus

Lisa Kochevar, Site Director, Fort Bragg, North Carolina

Anna Kordecki, Program Manager, Foreign Language, Fort Carson, Colorado

Donna Krikorian, PACE Education Planner, Navy Atlantic

Sunhee K. Lee, Coordinator, Republic of Korea, Seoul, Pacific Far East Campus

Donald Marcuccio, PACE Site Coordinator, Navy Atlantic

Oliver Miller, Puerto Rico Area Director and Site Director, Fort Buchanan and Sebana Seca

Niccole Neal, Coordinator, Air Force Reserve Programs

Hal Nolan, Director, Military Training Program

Linda C. Norton, Administrative Services Officer, Navy Atlantic  
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Teodoro Orendain, Director, Business Services, Pacific Far East Campus  
Marguerite C. Park, Director, Human Resources/Payroll, Pacific Far East Campus  
Ruth Perez, Coordinator, U.S. Embassies  
Scarlett C. Pirtle, Director, Mainland Japan, Pacific Far East Campus  
Santina Poor, Site Coordinator, Navy Pacific  
Katherine Price, Project Manager, Fort Rucker, Alabama  
Louis R. Pylant, Program Manager, Alaska Education Services  
Margaret Pylant, Site Director, Fort Richardson, Alaska  
Gacia Ratliff, PACE Site Coordinator, Hawaii, Navy Pacific  
Bernard A. Ray, Site Coordinator, Charleston, South Carolina, Navy Atlantic  
Shirley Reichert, Director, Forscom Foreign Language, Fort Bragg, North Carolina  
John Rice, Director, Support Services, Pacific Far East Campus  
Randall Rice, PACE Education Planner, Navy Atlantic  
Fred Richards, Site Coordinator, Eielson Air Force Base, Alaska  
Oscar Rodriguez, Site Director, Roosevelt Roads, Puerto Rico  
Gayle Ruffenach, Regional Director, Mainland Japan, Pacific Far East Campus  
Daniel Sadowitz, Director, Student and Library Services, Pacific Far East Campus  
Elaine Singley, Site Director, Holloman Air Force Base  
Dave Smith, Site Director, Fort Wainwright  
Lynn A. Stivison-Gibson, Administrative Services Officer, Navy Pacific  
Ron D. Stone, Site Director, Fort Leonard Wood, Missouri  
Robert B. Taylor, Program Coordinator/PACE Education Planner, Navy Atlantic  
Neil Teske, Site Director, Fort Polk, Louisiana  
Crystal Thomas, Director, Pope Air Force Base, North Carolina  
Ulla Torres, Site Director, Fort Lewis, Washington  
Joan M. Waldrop, Site Director, Fort Knox, Kentucky  
Christiana Warriner, Director, Forscom Foreign Language, Fort Lewis, Washington  
Robert R. White, Site Coordinator, Naples, Italy, Navy Atlantic  
Clarence E. Wolf, Coordinator, Republic of Korea, South, Pacific Far East Campus  
Kenneth P. Woodward, Associate Dean, Navy Campus Pacific Programs

## **System Student Support Staff - Central Campus**

Bob Criswell, Dean, Student Services  
Lillian Kroeger, System Registrar  
Annabelle L. Smith, Director, Offices of Student Aid

# Faculty

## **Continental Campus**

Maureen Abel  
Communications  
M.A., University of Massachusetts, Amherst

Ashley Abramson  
Government/Economics  
M.A., Columbia University  
M.Phil., Columbia University

Lori Adams  
Law Enforcement  
M.A., Auburn University

Simak Araghi  
Economics/Management  
B.S., Institute of Advanced Accounting  
M.B.A., Marshall University

Tonya Barnes  
Law Enforcement  
B.S., California State University  
B.A., California State University

Tonya Bauman  
Management  
M.B.A., University of Alaska, Fairbanks

Mark Bergman  
Criminal Justice  
B.S., Fayetteville State University  
M.A., Webster University  
M.S., Webster University

Chris Biggs  
Legal Assistant  
B.S., Kansas State University  
J.D., University of Kansas

Genny Black  
Mathematics  
B.S., Fayetteville State University

James Bratcher  
Management  
B.A., Campbell University  
M.P.A., Webster University

Albert Briggs  
Computer Science  
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# **N**otes



# Central Texas College Around the World<sup>as of July 1999</sup>

## Central Campus

Killeen

## Fort Hood and Service Area Campus

Brady  
Burnet  
Fort Hood  
Gatesville  
Hamilton  
Lampasas  
Mason  
San Saba

## Continental Campus

### Alaska

Eielson AFB  
Fort Greely  
Fort Richardson  
Fort Wainwright

### California

Camp Pendleton  
District of Columbia  
Bolling AFB

### Hawaii

Schofield Barracks

### Kansas

Fort Riley

### Kentucky

Fort Knox

### Louisiana

Fort Polk

### Missouri

Fort Leonard Wood

### New Mexico

Holloman AFB

### North Carolina

Fort Bragg  
Pope AFB

### Virginia

Fort Lee

## U.S. Embassies Worldwide

## Navy Campus

### California

San Diego

### Florida

Jacksonville

Mayport

### Hawaii

Pearl Harbor

### New Jersey

Earle

### South Carolina

Charleston

### Virginia

Norfolk

### Washington

Bangor

Bremerton

Whidbey Island

### Japan

Yokaruka

### Italy

Sigonella

### Puerto Rico

Fort Buchanan

Roosevelt Roads

Sabana Seca

## Ships at Sea Worldwide

## Pacific Far East Campus

### Indian Ocean

Diego Garcia, BIOT

### Japan

Akizuki

Atsugi NAS

Camp Zama

Iwakuni Mcas

Misawa Air Base

Sasebo NB

Yokosuka NB

Yokota Air Base

Johnston Island

## Korea

Camp Carroll

Camp Casey

Camp Colbern

Camp Edwards

Camp Essayons

Camp Gary Owen

Camp Greaves

Camp Henry

Camp Hovey

Camp Howze

Camp Humphreys

Camp Jackson

Camp Kyle

Camp La Guardia

Camp Long

Camp Page

Camp Red Cloud

Camp Sears

Camp Stanley

Camp Stanton

Chinhae

K16 AAF

Kunsan Air Base

Osan Air Base

Pusan

Suwon Air Base

Yongin

Yongsan

### Okinawa

Camp Courtney

Camp Foster

Camp Hansen

Camp Kinser

Camp Lester

Camp Schwab

Camp Shields

Futenma

Kadena Air Base

Torii Station



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