



Central Texas College

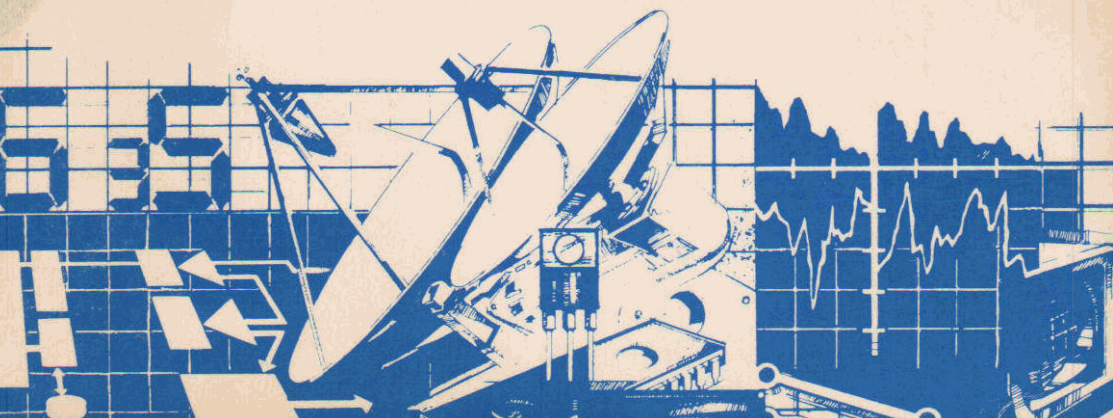


Catalogue 1985-1987

CONTINENTAL & INTERNATIONAL SERVICES CATALOGUE SUPPLEMENT

"The Age of Advanced Technology is descending upon this planet. In the new world of Advanced Technology, the future will belong to the innovators."

DR. LUIS M. MORTON, JR.
Chancellor



LOCATIONS SERVICED BY VARIOUS AMERICAN EDUCATIONAL COMPLEX PROGRAMS

CONTINENTAL CAMPUS

Alabama

Ft. McClellan

Alaska

Ft. Greely
Ft. Richardson
Ft. Wainwright

California

Lemoore NAS
Mare Island NS
Treasure Island NS

Colorado

Ft. Carson

District of Columbia

Bolling AFB

Florida

Mayport

Georgia

Ft. Stewart
Hunter Army Airfield

Hawaii

Ft. Shafter

Kansas

Ft. Riley

Kentucky

Ft. Knox

Louisiana

Ft. Polk

Maryland

Aberdeen Proving Grounds
Ft. Meade

Massachusetts

Hanscom AFB

Missouri

Ft. Leonard Wood

New Hampshire

Portsmouth Naval Yard

New Jersey

Ft. Dix

North Carolina

Ft. Bragg
Franklin
Pope Air Force Base

Oklahoma

Ft. Sill

Pennsylvania

Philadelphia
Carlisle Barracks

South Carolina

Charleston

Texas

Ft. Hood
Killeen

Virginia

Ft. Eustis
Ft. Lee
Ft. Monroe
Ft. Story
Norfolk

Washington

Ft. Lewis

PUERTO RICO

Antigua
Ft. Buchanan
Roosevelt Roads

CENTRAL AMERICA

Panama

Ft. Clayton
Ft. Davis
Ft. Kobbe

EUROPE CAMPUS

Germany

Amberg
Ansbach
Aschaffenburg
Augsburg

Germany (cont.)

Babenhausen
Bad Hersfeld
Bad Kissengen
Bad Kreuznach
Bad Toelz
Bamberg
Baumholder
Berlin
Bindlach
Buedingen
Butzbach
Crailsheim
Darmstadt
Dexheim
Erlangen
Fischbach
Frankfurt
Friedberg
Fuerth
Fulda
Garlstadt
Geibelstadt
Gelnhausen
Giessen
Goeppingen
Grafenwoehr
Hanau
Heidelberg
Heilbronn
Herborn Seelbach
Herzogenaurach
Hoechst
Hohenfels
Idar Oberstein
Illesheim
Kaiserslautern
Karlsruhe
Katterbach
Kirchgoens
Kitzingen
Kriegsfeld (North Point)
Landstuhl
Ludwigsburg
Mainz
Mannheim
Miesau
Munich
Neu Ulm
Nuernburg
Oberursel
Pirmasens
Schweinfurt
Schwabach
Schwaebisch-Gmuend
Schwetzingen
Stuttgart
Vilseck
Vogelweh
Wertheim
Wiesbaden
Wildflecken
Wuerzburg
Zindorf
Zweibrucken

Greece

Crete
Drama
Elefsis
Katsimdhi
Kilkis
Koropi
Langada
Nea Makri
Yannitsa

Italy

Vicenza

Spain

Torrejon

Turkey

Cakmakli
Corlu
Erzurum
Izmit
Ordykoy

PACIFIC FAR EAST CAMPUS

Guam

Anderson Air Force Base
CIRO
NAVAIR
NAVCAM
NAVSTA

Indian Ocean

Diego Garcia

Japan

Aisugi
Camp Zama
Iwakuni
Misawa Air Base
Sasebo
Yokosuka
Yokota Air Base

Korea

Camp Ames
Camp Carroll
Camp Casey
Camp Essayons
Camp Gary Owens
Camp Greaves
Camp Henry
Camp Hovey
Camp Howze
Camp Humphreys
Camp Long
Camp Market
Camp Page
Camp Pelham
Camp Red Cloud
Camp Stanley
Kwang-Ju Air Station
Kunsan Air Base
Osan Air Base
Pusan
Taegu Air Station
Suwan Air Station
Yongsan

Okinawa

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

Philippines

Botan
Clark Air Base
Camp O'Donnell
Cubi Point NAS
San Miguel
Subic Bay NS
Wallace Air Station

MAJOR CAMPUS ADDRESSES COLLEGE PROGRAMS

CENTRAL CAMPUS

CENTRAL TEXAS COLLEGE
U.S. Highway 190 West
Killeen, Texas 76542
1-817-526-1211

EUROPE CAMPUS

CENTRAL TEXAS COLLEGE
Yorkhof Kaserne-Hanau
APO New York 09165
06181-13027

DEAN OF STUDENT SERVICES

CENTRAL TEXAS COLLEGE
Dean of Student Services
U.S. Highway 190 West
Killeen, Texas 76542
1-817-526-1298

PACIFIC FAR EAST CAMPUS

CENTRAL TEXAS COLLEGE
Administrative Services
Yokota AFB - Japan
475 ABW/DPE/CTC
APO San Francisco 96328-5000
225-3690

SYSTEM REGISTRAR

CENTRAL TEXAS COLLEGE
System Registrar
U.S. Highway 190 West
Killeen, Texas 76542
1-817-526-1308

PACIFIC FAR EAST CAMPUS

STUDENT SERVICES
CENTRAL TEXAS COLLEGE
STUDENT SERVICES
Camp Market
Building P-1530
APO San Francisco 96483
292-3807

CONTINENTAL CAMPUS

CENTRAL TEXAS COLLEGE
Dean of Continental Campus
U.S. Highway 190 West
Killeen, Texas 76542
1-817-526-1368

CORRESPONDENCE AND INQUIRIES

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

Students departing Central Texas College locations must notify the administrative office of their departure to insure their records are transferred to the System Office at Killeen, Texas. Records and transcript services will be provided through the System Registrar. Evaluations and graduation applications will be processed through the Dean of Student Services Office.

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

Central Texas College

Continental and International Services

An Operating Unit of the American Educational Complex

Sixth

1985-1987

CATALOGUE SUPPLEMENT

Accredited By
Southern Association of Colleges and Schools

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

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

and
Accredited Institutions of Postsecondary Education by
Council On Postsecondary Education

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

Member Of
American Association of College Admissions Counselors
American Association of Collegiate Registrars and Admissions Officers
American Association of Community and Junior Colleges
Association of Texas Colleges and Universities
Servicemembers Opportunity College
Southern Association of Collegiate Registrars and Admissions Officers
Texas Association of College Admissions Counselors
Texas Association of Public Junior Colleges
Texas Association of Collegiate Registrars and Admission Officers

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Dean, Continental Atlantic/Western Campus

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Controller of International Campuses

Vesna Ostertag

Associate Dean, College Programs, Europe Campus

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Arnold Arms

Director, Administrative Services, Pacific Far East Campus

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Associate Dean, Student Services, Pacific Far East Campus

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GENERAL INFORMATION

CONTINENTAL AND INTERNATIONAL PROGRAMS

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

HISTORY

To provide increased opportunities in higher education, the voters of the Killeen and Copperas Cove Independent School Districts and the Nolanville Common School District created the Central Texas Union Junior College District in July, 1965. A \$2,000,000 bond issue to construct and equip the campus followed in October, 1965. In January, 1966, the Board of Trustees employed Dr. Luis M. Morton as President of Central Texas College and offices were opened in Killeen that same month. In June of that same year, ground breaking ceremonies were held and the first classes were held in September, 1967. Since that time Central Texas College has expanded its physical plant to the present twenty-nine buildings. Current student population at the Killeen Campus is approximately 5,000 per semester.

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

Worldwide Services:

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

Central Texas College provides the opportunity for higher education to military personnel serving our country in the United States and in foreign lands. Technical-vocational programs are offered by the College at over 200 locations throughout Europe and the Far East, as well as at military bases in the United States and to the United States Navy, Pacific and Atlantic Fleets.

EDUCATIONAL PHILOSOPHY

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

In order to ensure the fullest service possible to the civilians of the surrounding area, to the personnel of the large military installation adjacent to the Killeen campus and to the personnel of military installations around the world, the educational programs of the College

are designed to meet the needs of full-time and part-time students. To accommodate diverse educational needs, Central Texas College provides a variety of educational programs.

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

EDUCATIONAL OBJECTIVES

1. **UNIVERSITY PARALLEL EDUCATION** - The College provides the first two years of study for those students who expect to transfer to a senior college or university to complete a baccalaureate or professional degree.
2. **GENERAL EDUCATION** - The College provides general education courses which develop competence, skills, and attitudes essential to effective performance as an individual, as a citizen, and as a productive member of society. Within this academic framework are studies in communication and languages, social sciences and humanities, mathematics, physical and social development, as well as a program of co-curricular activities.
3. **OCCUPATIONAL EDUCATION** - The College offers comprehensive curricula and individual courses in day, evening and weekend classes to students who are interested in preparing for careers in a variety of business, health, industrial, and technical occupations. Transfer of these credits to senior colleges and universities offering baccalaureate degrees in technology or applied science is possible for those students seeking advanced study.
4. **CONTINUING EDUCATION SERVICES** - The College provides continuing education for adults, including opportunities for cultural enrichment, special interest courses, lectures and meetings. Continuing education services are provided to individual adults, business, industrial, and military organizations.
5. **COUNSELING AND PERSONAL GUIDANCE** - The College provides counseling and guidance services which enable the student to select, with proper perspective, the educational program that is compatible with individual abilities, aptitudes and ambitions.
6. **PLACEMENT** - The College provides an employment/placement service to assist graduating students and alumni in bringing their qualifications to the attention of possible employers.

THE CATALOGUE SUPPLEMENT

The supplement is an official bulletin of Central Texas College containing policies, regulations, procedures, and fees in effect as the publication went to press. The 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 fee changes when required.

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

EQUAL OPPORTUNITY POLICY

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

PROGRAM/COURSE AVAILABILITY

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

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

SCHEDULE OF FEES ALL CONTINENTAL AND INTERNATIONAL CAMPUSES

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

Certificate Fee - A fee of \$5.00 is payable at the time a student applies for each Certificate of Award. Two certificates are available, Level I and Level II.

Degree Fee - A fee of \$15.00 is payable at the time a student applies for a Degree.

Transcript Fee - The first transcript is issued free of charge. Subsequent transcripts are \$2.00 each.

Returned Check Charge - A charge of \$10.00 is made for checks which have been returned for insufficient funds.

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

TEXTBOOK COSTS

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

ADMISSIONS AND REGISTRATION

HOW TO BEGIN

COUNSELING

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

GENERAL ADMISSION INFORMATION

Requests for application materials or questions concerning admission should be addressed to Central Texas College personnel serving your location.

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

ADMISSION REQUIREMENTS - ALL STUDENTS

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

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

FORMS REQUIRED

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

RECORDS REQUIRED

TRANSCRIPTS AND TEST SCORES

Records of all previous education must be on file with the Records Office in order to fulfill admission requirements of Central Texas College.

1. **HIGH SCHOOL GRADUATES:** Who have not previously completed 12SH of coursework from a regionally accredited college or university must submit official high school transcript.
2. **HIGH SCHOOL EQUIVALENCY GRADUATES:** Who have not previously completed 12SH of coursework from a regionally accredited college or university must submit High School General Education Development (GED) scores.
3. **COLLEGE TRANSFER STUDENTS:** Seeking certificates or degrees from Central Texas College must provide official transcripts for all regionally accredited college study before official degree plans are provided.
4. **INDIVIDUAL ADMISSIONS STUDENTS** (except transient students): Must provide official transcripts from all regionally accredited colleges or universities they previously attended.

NOTE: Students are responsible for requesting their official records to be forwarded directly from the issuing institution to the Central Texas College campus serving the student's location. Addresses are listed in the front of the catalogue. Transcripts must bear original mark or seal and signature of the Registrar to be acceptable. Admission requirements are not met until records required are on file with the appropriate campus records office.

TRANSIENT STUDENTS

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

READMISSION REQUIREMENTS

Students who have attended other institutions during their absence from Central Texas College must provide transcripts from all institutions attended during the absence.

EARLY ADMISSION

Early admission offers the opportunity for high school seniors 17 years of age or older prior to the first class day of term enrolled to earn college credits while concurrently enrolled in high school. Early admission is open to any high school senior, subject to the following conditions:

- a) An Early Admission Form with the signatures of *high school principal or counselor** and parent or legal guardian must be submitted.
- b) Student must provide an official high school transcript showing that they are a minimum 17 years of age and a senior.
- c) The student will be expected to adhere to all policies of the College and the high school, to include attendance.

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

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

CAREER PILOT STUDENTS

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

UNIFORM APPLICATION OF STANDARDS

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

WHEN TO REGISTER FOR CLASS

REGISTRATION PERIODS

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

Calendar

1985-86

Term 1	August 19, 1985	thru	October 27, 1985
Term 2	October 28, 1985	thru	January 12, 1986
Term 3	January 13, 1986	thru	March 23, 1986
Term 4	March 24, 1986	thru	June 1, 1986
Term 5	June 2, 1986	thru	August 17, 1986

1986-1987

Term 1	August 18, 1986	thru	October 26, 1986
Term 2	October 27, 1986	thru	January 11, 1987
Term 3	January 12, 1987	thru	March 22, 1987
Term 4	March 23, 1987	thru	May 31, 1987
Term 5	June 1, 1987	thru	August 16, 1987

1987-88

Term 1	August 17, 1987	thru	October 25, 1987
Term 2	October 26, 1987	thru	January 10, 1988
Term 3	January 11, 1988	thru	March 22, 1988
Term 4	March 23, 1988	thru	May 31, 1988
Term 5	June 1, 1988	thru	August 14, 1988

WHO TO SEE FOR CLASSES

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

HOW TO SIGN UP FOR CLASSES

REGISTRATION REQUIREMENTS

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

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

NOTE: Step 3 may include providing completed military Tuition Assistance forms or completed Veterans Administration forms if this method of financial aid is chosen to pay for course work.

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

LATE REGISTRATION

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

CHANGING REGISTRATION

ADDING/DROPPING CLASSES

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

WITHDRAWAL - See page 13.

COST OF CLASSES

TUITION AND FEES

Costs of classes at Central Texas College locations outside of Texas vary with the level of support provided by the sponsoring agency at each branch campus.

Tuition and fee schedules may be adjusted, based on local conditions, during the period this Catalogue Supplement is in effect. For current tuition and fees consult the Central Texas College representative on the installation at which classes are offered.

PAYMENT

METHOD OF PAYMENT

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

REFUNDS

All refunds will be computed from the date the Application for Withdrawal/Refund is filed at the local Education Center or Navy Campus office (not from the date of the last class attended) according to the following schedule:

- If not more than one-eighth of the class meetings have elapsed at the time the withdrawal form is filed, the College will refund 75% of the tuition.
- If more than one-eighth to one-quarter of the class meetings have elapsed at the time the withdrawal form is filed, the College will refund 25% of the tuition.
- If more than one-quarter of the class meetings have elapsed at the time the withdrawal form is filed, no tuition will be refunded. Refunds will be processed when the Student Services Office receives the properly completed Application for Withdrawal/Refund form.

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

STUDENT FINANCIAL AID

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

TYPES OF AID

PELL GRANT: The PELL Grant is authorized by the Higher Education Act Amendments of 1972 to assist students in pursuing their first undergraduate degree. The intent of the PELL Grant is to provide a foundation of financial assistance to supplement the cost of postsecondary education. The amount of the PELL award is based on the actual cost of the 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, Education centers, and Navy Campus offices.

VETERAN'S BENEFITS: Most Central Texas College's programs are approved for those who wish to attend and receive benefits under the Veterans Readjustment Benefits Act of 1966; Post-Vietnam Era Veterans Educational Assistance Program, the Veterans' Educational Assistance Act of 1984, and dependents qualified for VA Educational Benefits.

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 costs paid by the government but will be responsible for paying the remaining amount as well as all fees and book costs.

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

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

DEPARTMENT OF DEFENSE CIVILIANS

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

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

SATISFACTORY PROGRESS

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

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

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

- c. Half-time students (enrolled in three to five credit hours) shall have twenty-four 8-week terms of half-time enrollment to complete a degree objective.

Satisfactory Progress can be satisfied with any combination of full-time and/or part-time enrollment. Students may refer to their degree plan, college catalogue, or see a College Representative for further details regarding their specific academic program.

RECORDS ACCESS

STUDENT RECORDS

The following information concerning student records maintained by Central Texas College is published in compliance with the Family Education Rights and Privacy Act of 1974 as amended.

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

Directory information is not provided by the institution. Further information concerning access to student records is available through the Office of Student Services (see addresses in front of this catalogue).

COLLEGE POLICIES AND REGULATIONS

HOW MANY CREDIT HOURS SHOULD YOU TAKE

ACADEMIC LOAD:

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

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

NOTES:

1. For schedules other than eight (8) weeks, consult with the Central Texas College representative.
2. Final determination of academic load for purposes of VA benefits payments is the prerogative of the Veterans Administration, not the institution. Questions about VA payments must be sent by the student directly to the VA office serving the student's campus.

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

ATTENDANCE POLICY

ABSENCES AND TARDINESS

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

ABSENCES

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

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

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

EXCESSIVE ABSENCES:

Absences from classes, for any reason, must not exceed College standards. In general, students may be administratively withdrawn from any class with the grade of "F", when their unexcused absences reach a total equal to 12.5% of the class hours for the course. Example: Students attending a 48 hour class during a 8 week period normally meet 180 minutes each session for 16 sessions. Those students accumulating two (2) unexcused absences are subject to Administrative withdrawal since the total unexcused absences equals 12.5% of class hours for the course.

The following specific rules apply to absences:

1. A class meeting of 50 minutes equals 1 absence.
2. Beginning the first scheduled day of class meeting instructors are required to keep attendance records.
3. An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The course will be noted as an "FN" on the roll and record book, with a final grade of "F" on the transcript.

4. As a matter of policy, excused absences by college employees other than instructors are not provided for any reason. Regardless of the reason for the absence, students are responsible for completing all course work covered during any absence.

ARE YOU OFFICIALLY ENROLLED

CLASS MEMBERSHIP

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

YOUR CLASSIFICATION IS

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

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

RESIDENT CREDIT

ALL CAMPUSES

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

CREDIT TRANSFERS

TO OTHER COLLEGES AND UNIVERSITIES

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

CREDIT TRANSFER LIMITS

MAXIMUM HOURS FOR TRANSFER TO OTHER COLLEGES

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

HOW TO CHOOSE COURSES

COURSE NUMBERS

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

WHAT TO DO ABOUT COURSE PREREQUISITES

COURSES OUT OF SEQUENCE

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

HOW YOU RECEIVE GRADES

GRADE REPORTING

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

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 the College. For information on ordering transcripts, see page 16.

GRADES AND POINT AVERAGE

The grading system at Central Texas College is as follows:

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

Grade Notes:

"D":

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

"F":

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

"I" - INCOMPLETE:

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

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

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

"N"- NO CREDIT:

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

"P" - COMPLETED:

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

"W" - WITHDRAWAL:

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

GRADE POINT AVERAGING

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

GRADES AND FINANCIAL AID

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

CHANGE OF GRADES

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

REPEATING A COURSE

The total hours earned toward a degree are not increased if a student repeats a course in which a passing grade has already been earned. Through repeating a course, only the last grade earned is utilized in computing the grade point average. Honors designation at graduation considers all grades, including repeated courses.

ACADEMIC STANDARDS

STUDENT RESPONSIBILITY

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

GRADE REQUIREMENTS

MINIMUM FOR SATISFACTORY PROGRESS

GRADUATION - requires an overall grade point average of 2.0 to include a minimum 2.0 G.P.A. with Central Texas College.

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

IF YOU DON'T MAKE THE GRADE

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

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

SUSPENSION will be imposed for students who have attempted 8 or more semester hours and who previously failed to maintain a 2.0 cumulative grade point average, or for students who fail to achieve a 1.0 grade point average during the term. Suspended students may register for classes upon completion of requirements for return to class. **NOTE:** Students who use Financial Aid/VA benefits and who are suspended will be reported to the Financial Aid/Veterans Administration and must also meet Financial Aid/VA requirements prior to reinstatement of Financial Aid/VA benefits.

HOW YOU MAY RETURN

RETURN TO CLASS AFTER PROBATION

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

RETURN TO CLASS AFTER SUSPENSION

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

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

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

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

ARE CLASSROOM VISITS ALLOWED

VISITORS IN CLASS

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

REGULATIONS GOVERNING STUDENT ACTIVITIES

STUDENT RESPONSIBILITIES

ADDRESS CHANGE

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

to the last address on file.

ALCOHOL AND ILLEGAL SUBSTANCES

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

Anyone found in possession of, using, or distributing illegal drugs or aiding those involved in such activities will be immediately subject to expulsion from the College.

CLASS BEHAVIOR

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

FALSIFICATION OF RECORDS

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

HARASSMENT

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

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

SCHOLASTIC HONESTY

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

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

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

TEXTBOOKS

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

STUDENT DISCIPLINE

PHILOSOPHY

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

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

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

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

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

DUE PROCESS

Further information concerning due process procedures may be requested from Central Texas College personnel.

DISCIPLINARY ACTION

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

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

HOW TO OBTAIN CTC TRANSCRIPTS

TRANSCRIPT ORDERING

A student's records are considered *as confidential in nature*. Convenient forms for ordering transcripts are available from the Central Texas College personnel at local Education Centers and Navy Campuses served by the College.

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

Requests for transcripts should be addressed to the Campus Student Services Office for students attending in Europe or Far East campuses. All other requests should be sent to the Central Campus address. Addresses are listed in the front of this catalogue. Transcript requests should include full name, social security number, date of birth, last month, year, and location of attendance, as well as the complete address to which the transcript is to be sent.

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

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

OFFICIAL WITHDRAWAL POLICY

Any student who desires to, or must, withdraw from a course after the first scheduled class meeting must file an Application for Withdrawal/Refund with the instructor. Additionally students must file with the Education Services Officer or Navy Campus Representative. Applications for Withdrawal/Refund will not be accepted after the close of business on the last working day before the last week of class. (Also see grade notes: "W" page 13)

Students using Financial Aid, Military Tuition Assistance, VA benefits, or other than personal funds may be required to repay tuition and fees to the funding agency. For specific repayment requirements, students are referred to the Student Services office. Military Tuition Assistance students are referred to the Military Education Center or Navy Campus office. Students who are administratively withdrawn from classes without officially withdrawing will receive an "F" grade and are ineligible for refunds.

Emergency withdrawal will be considered, when documentary evidence is presented. See Refunds, page 7.

CERTIFICATE & DEGREE REQUIREMENTS

WHAT DEGREES ARE OFFERED

Central Texas College confers the Associate in Arts, the Associate in Science, the Associate in Applied Science, or the Associate in General Studies degree upon students who have completed all the requirements for graduation. Degrees are conferred three times each year in December, May and August. It is the student's responsibility to make application for the degree. Each degree candidate must earn a minimum of 12 semester hours resident credit in Central Texas College classrooms. Resident credit can be earned at any Central Texas College location. No designation of a major area of concentration will be written on the face of any Central Texas College degree or certificate.

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

WHAT REQUIREMENTS MUST BE MET FOR ASSOCIATE IN ARTS DEGREE

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

1. Twelve semester hours of communications to include a, b, and c:
 - a. ENGL 1301, 1302
 - b. Three semester hours of ENGL 2301, 2302, 2303, 2304, 2305, 2306
 - c. Three semester hours of speech
2. Three semester hours of humanities of art, music, or philosophy.

3. Three semester hours of mathematics, MATH 1302 or higher excluding MATH 1307
4. HIST 1301, 1302
5. GOVT 2301, 2302
6. Eight semester hours of foreign language (1401, 1402 sequence)
7. Six semester hours of natural science
8. Four semester hours of physical education from activity courses
9. Four semester hours of computer science
10. PSYC 1101
11. A minimum of eighteen semester hours of sophomore courses
12. Satisfy a, b, and c:
 - a. A minimum overall grade point average of 2.0 ("C" average)
 - b. A minimum of 2.0 ("C") on each course in the major
 - c. A 2.0 ("C") with Central Texas College
13. Meeting all other college and departmental requirements

ASSOCIATE IN SCIENCE DEGREE

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

1. Twelve semester hours of communications to include a, b, and c:
 - a. ENGL 1301, 1302
 - b. Three semester hours of ENGL 2301, 2302, 2303, 2304, 2305, 2306
 - c. Three semester hours of speech
2. Three semester hours of humanities from art, music, or philosophy.
3. HIST 1301, 1302
4. GOVT 2301, 2302
5. Twelve semester hours of laboratory science (1401, 1402 sequence)
6. COSC 1403 or MISC 1451 (additional hours of computer science courses are recommended).
7. Six semester hours of mathematics. MATH 1302 or higher excluding MATH 1305, 1306, 1307 and 1309.
8. Four semester hours of physical education from activity courses.
9. PSYC 1101
10. A minimum of eighteen semester hours of sophomore courses.
11. A minimum of twelve semester hours credit earned anywhere within the Central Texas College system.
12. Satisfy a, b, and c:
 - a. A minimum overall grade-point average of 2.0 ("C" average)
 - b. A minimum of 2.0 ("C") on each course in the major
 - c. A minimum of 2.0 ("C") with Central Texas College
13. Meeting all other college and departmental requirements.

ASSOCIATE IN GENERAL STUDIES DEGREE

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

1. Three semester hours of written English and three semester hours of written or oral communications. (English language only).

2. Three semester hours of mathematics or science.
3. Three semester hours of U.S. History or U.S. Government.
4. PSYC 1101
5. A minimum of 12 semester hours of sophomore courses.
6. A minimum of 12 semester hours of credit earned anywhere within the Central Texas College system.
7. A minimum overall grade point of 2.0 ("C" average).
8. A minimum of 2.0 ("C") with Central Texas College.
9. Meeting all other college requirements.

ASSOCIATE IN APPLIED SCIENCE DEGREE

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

CERTIFICATE OF COMPLETION

A Certificate of Completion will be awarded to students who fulfill the curricular requirements of special courses and programs. Minimum residency and G.P.A. as listed for other degrees is required.

TRANSFERABILITY OF COURSES

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

DEVELOPMENTAL STUDIES

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

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

HOW TO EARN A CERTIFICATE

CERTIFICATES CONFERRED

Since the duties of military personnel normally prohibit them from full-time student status, the College provides indicators of progress toward the Associate Degree in the form of certificates. The College presents the Certificate of Award at two levels, 15 hours and 30 hours, to indicate skills obtained by the student through course work 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 these hours must be taken with Central Texas College by traditional (classroom) methods (including video study). An additional 15 semester hours of credit in the same program area of study will qualify the student for the 30 hour Certificate of Award. To receive the certificate, the student must have a minimum 2.0 G.P.A.

WHEN ARE CERTIFICATES & DEGREES AWARDED

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

HOW TO APPLY FOR CERTIFICATE/DEGREE

Request for Certificate Completion or Degree, with appropriate fees, must be submitted to the appropriate Central Texas College Office by:

Fall Semester-December Graduation
Spring Semester-May Graduation
Summer Semester-August Graduation

Deadline
October 1st
February 1st
June 10th

NOTE: All College entrance and course requirements must be complete prior to Certificate/Degree award. Requests for certificate/degree received from students who have not completed course requirements and who are not enrolled in the remaining courses by the date specified above will not be processed. Official transcripts or GED scores from previously attended institutions must be on file in the Central Texas College Records Office by the above dates.

Any student who fails to meet the above listed graduation deadlines will be processed in the next degree order time frame. NO STUDENT will be denied a graduation appointment. The graduation date on the Certificate/Degree must conform with the dates listed above.

REPLACING LOST CERTIFICATE/DEGREE

If your Certificate/Degree has been lost, stolen, or damaged, a REQUEST FOR REPLACEMENT may be obtained at the Career Guidance Center. An appropriate fee will be required for the replacement of Certificate/Degree.

WHEN IS COMMENCEMENT HELD

GRADUATION

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

HONORS

GRADUATION WITH HONORS

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

1. To graduate with HONORS a candidate must have a 3.5 grade point average on a 4.0 scale with no grades below "B" on all course work taken. In computing the candidate's grade point average for HONORS, the grades in all courses taken at Central Texas College, as well as courses transferred from other accredited institutions of higher learning, are included. A repeated course will not clear the graduate for "HONORS", however the GPA will reflect only the repeated course in the final GPA.
2. In any graduating class the student(s) with the highest grade point average and who meets all other requirements above will be designated as graduating with HIGHEST HONORS.
3. Public recognition for graduation with honors or highest honors is conferred only when the student participates in the formal commencement ceremonies.
4. To qualify for honors consideration, students must have earned a minimum of 30 semester hours of traditional study with Central Texas College.

EVALUATION OF PREVIOUS EDUCATION

TRANSFER STUDENTS

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

NON-TRADITIONAL EDUCATION

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

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

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

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

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

EVALUATION PROCEDURES

Curriculum plans outlining accepted transfer and/or non-traditional credit as well as remaining requirements are available from College or Military Education Center advisors upon a student's request.

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

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

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

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

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

SOC CRITERIA

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

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

SOCAD/SOCNAV DEGREE COMPLETION AGREEMENT

All students can continue their Central Texas College degree programs regardless of location. Through the "credit bank" provisions of the Servicemembers Opportunity College, a student may study at any other accredited college and apply the work toward Central Texas College degree requirements, so long as 12 semester hours with a minimum 2.00 G.P.A. have been completed with Central Texas College, and the courses taken at other institutions satisfy the requirements of the Central Texas College degree program. Requests for SOCAD/SOCNAV agreements should be addressed to the SOCAD/SOCNAV Advisor at the administrative office serving the student's location. Addresses are listed in the front of this catalogue.

Students no longer attending Central Texas College who have previously completed the minimum residency G.P.A. requirements may request a SOCAD/SOCNAV agreement by writing to the Office of the Dean of Student Services at the Central Campus in Killeen.

PROGRAMS OF STUDY

PROGRAM OFFERINGS

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

COURSE AVAILABILITY

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

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

PREREQUISITE COURSES

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

Example: ELTE 1302 - Technical Math II requires that ELTE 1301 - Technical Math I be successfully completed prior to registering for ELTE 1302.

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

SEMESTER CREDIT HOURS

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

TECHNICAL ELECTIVES

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

APPROVED ELECTIVES

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

Curriculum plans for various degrees and/or certificates are listed alphabetically. Course descriptions for all courses offered are listed in numerical and alphabetical order.

ALTHOUGH ACADEMIC COUNSELING IS AVAILABLE, IT WILL REMAIN THE RESPONSIBILITY OF EACH STUDENT TO DETERMINE MAJOR AREA OF STUDY, THE SENIOR COLLEGE OR UNIVERSITY TO WHICH THE STUDENT WISHES TO TRANSFER, AND THE REQUIRED COURSES AND THEIR PREREQUISITES.

Central Texas College - Continental & International Services

	Alaska	Europe	Fort Lee	Fort Leonard Wood	Fort Riley	Fort Sill	Panama	Pope AFB	Fort McChallan	PACE Atlantic	Fort Stewart	Pacific Far East	Roosevelt Roads	Fort Polk	Bolling AFB	Fort Buchanan
Accounting Technology												○			○	
Administrative Secretary	○	○		○		○				○		○			○	
Air Conditioning & Refrigeration		○		○		○					○					
Air Conditioning & Refrigeration with Solar Energy Option										○						
Applied Management	○	○	○	○	○		○	○	○	○		○	○			
Applied Management w/Computer Science Option		○						○				○				
Applied Management w/Food Service Operations Option		○								○		○				
Applied Management w/Electronics Servicing Option									○							
Applied Management with Microcomputer Option								○								
Art												○				
Automotive Body Repair	○	○		○		○										
Automotive Mechanic (Apprentice)												○				
Automotive Service & Repair	○	○		○	○	○		○		○		○			○	
Aviation Maintenance Technology										○		○	○			
Business Administration												○				
Business Management	○	○	○	○	○	○		○				○				
Career Pilot	○	○		○	○					○		○				
Child Development		○										○	○			
Communications Electronics Technology		○		○						○		○				
Computer Electronics Technology		○								○		○				
Computer Science		○	○							○	○	○			○	○
Consumer Electronics Technology		○		○						○		○				
Diesel Mechanics		○		○		○				○		○				
Diesel Mechanics (Apprentice)												○				
Drafting and Design	○	○		○						○						
Electrician/Lineman (Apprentice)												○				
Engineering												○				
Equipment Maintenance Mechanic (Apprenticeship)												○				
Equipment Maintenance Engineer Option (Apprentice)												○				
Finance and Banking												○			○	
Fire Protection Technology	○	○		○			○	○		○		○			○	
Food Service Management	○	○	○	○	○					○		○			○	
Hotel/Motel Management		○	○							○		○			○	
Law Enforcement	○	○	○	○	○	○		○		○		○	○		○	○
Legal Assistant	○											○	○			
Maintenance Technology		○		○	○					○						
Microcomputer Technology		○										○	○		○	
Office Management												○			○	○
Photography	○	○		○						○		○				
Physical Education												○				
Plumber (Apprenticeship)												○				
Real Estate		○		○						○		○			○	
Recreation																
Residential/Commercial Electrician (Apprentice)																
Sheet Metal (Apprenticeship)												○				
Small Gas Engine Repair	○	○		○						○		○				
Telecommunications		○		○						○						
Training Management		○						○				○				
Transportation Technology												○				
Welding	○	○		○	○	○				○		○				
Word Processing		○										○				○

Not all programs of study are available at all locations. Programs approved at the various locations are shown on the diagram above. Students interested in programs other than at locations shown should consult Central Texas College Representatives.

ACCOUNTING TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
ACCT	2303	Fundamentals of Accounting I	3	ACCT	2304	Fundamentals of Accounting II	3
BUSS	1301	Introduction to Business	3	ELCT*		Approved Elective	3
MATH	1307	Business Math	3	MGMT	1305	Introduction to Management	3
ENGL	1307	Business English	3	MGMT	1309	Income Tax	3
COSC	1300	Introduction to Computer Information Processing		SPCH	2303	Business and Professional Speaking	3
MISC	1450	Microcomputers for Business	3	PYED		Physical Education	1
PYED		Physical Education	1				16
PSYC	1101	College Orientation	1				
			17				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
ACCT	2309	Fundamentals of Accounting III	3	ACCT	2310	Fundamentals of Accounting IV	3
MGMT	2305	Business Law I	3	MGMT	2306	Business Law II	3
ACCT	2305	Basics of Managerial Accounting	3	ACCT**		Accounting Elective	3
ACCT	2311	Accounting & Financial Information Systems I	3	ENGL	2309	Technical Writing	3
ELCT		Elective	3	ELCT*		Approved Elective	3
			15	TOTAL HOURS			63

*Approved Electives: BUSS 2301, BUSS 2302, FIBA 2306, MGMT 1304, MGMT 1306, MGMT 1307, MGMT 2301, MGMT 2302, MATH 1308, OADM 1309 and OADM 2307.

**Accounting Electives: ACCT 2306 and ACCT 2312

ADMINISTRATIVE SECRETARIAL

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
OADM	1301*	Beginning Shorthand	3	OADM	1302*	Intermediate Shorthand	3
OADM	1303*	Beginning Typewriting	3	OADM	1304*	Intermediate Typewriting	3
OADM	1305	Clerical Practice	3	OADM	1306	Secretarial Practice	3
OADM	1309	Business Mathematics & Calculating Machines	3	OADM	1308	Business Correspondence	3
ENGL	1307	Business English	3	COSC	1300	Introduction to Computer Information Processing	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				16
			17				

ADMINISTRATIVE SECRETARIAL (cont'd)

SECOND YEAR

First Semester		Credit	Second Semester		Credit
OADM 2301*	Advanced Shorthand	3	OADM 2303*	Advanced Transcription	3
OADM 2302*	Advanced Typewriting	3	OADM 2305	Bookkeeping II	3
OADM 2304	Bookkeeping I	3	OADM 2307	Office Administration & Procedures	3
BUSS 2301	Macroeconomics	3	ELCT	Elective	3
ELCT	Elective	15	ELCT*	Elective	3
					15
TOTAL HOURS					63

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

AIR CONDITIONING & REFRIGERATION

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester		Credit	Second Semester		Credit
AIRC 1400	Air Conditioning & Refrigeration, Theory & Application	4	AIRC 1402	Household Refrigeration	4
AIRC 1401	Basic Electrical Circuits	4	AIRC 1403	Heating Systems	4
WELD 1401	Beginning Gas Welding	4	AIRC 1405	Test Instruments	4
ENGL 1309	Communications Skills	3	TMTH 1300	Technical Mathematics I	3
PSYC 1101	College Orientation	1	PYED	Physical Education	1
PYED	Physical Education	1			
					16
					17

SECOND YEAR

First Semester		Credit	Second Semester		Credit
AIRC 1404	Residential Air Conditioning	4	AIRC 2403	Commercial Air Conditioning Systems	4
AIRC 2401	Control Theory and Application	4	AUTO 1405	Automotive Air Conditioning	4
AIRC 2402	Commercial Refrigeration Systems	4	BUSS 1301	Introduction to Business	3
DRDS 1400	Fundamentals of Drafting	4	ELCT*	Approved Elective	4
					3
					18
TOTAL HOURS					67

*WELD 1402, MGMT 1306, MTNT 1401, MTNT 2403, DRDS 1303 or other elective approved by appropriate College official.

**AIRC 1201 and AIRC 1202 may be substituted at selected sites. MTNT 1402 may be substituted for AIRC 1401.

APPLIED MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
BUSS	1302	Consumer Economics	3	BUSS	2306	Personal Finance	3
*		COSC/MGMT		MATH	1307	Business Math	3
		Selection(s)	3	*		ENGL/Communications	
MGMT	1305	Introduction to Man-				Selection(s)	3
		agement	3	SPCH	1301	Public Speaking	3
MGMT	1306	Human Relations	3	**		MGMT Selection(s)	3
*		ENGL/Communications		PYED		Physical Education	1
		Selection(s)	3				16
PYED		Physical Education	1				
PSYC	1101	College Orientation	1				
			17				

SECOND YEAR

First Semester				Credit	Second Semester				Credit
ACCO	2303	Principles of Accounting I	3	HIST	2301	International Relations &			
MGMT	2302	Personnel Management	3			U.S. Foreign Policy			3
MGMT	2309	Supervision	3	MGMT	2303	Law & Legal Assistance			3
SPCH	2303	Business and Professional		MGMT	2310	Personnel Counseling			3
		Speaking	3	**		MGMT Selection(s)			3
**		MGMT Selection(s)	3	ELCT		Elective			3
PYED		Physical Education	1						15
			16			TOTAL HOURS			64

Selected courses approved by appropriate College official or authorized Central Texas College personnel according to the student need.

*ENGL 1301, ENGL 1307, ENGL 1309, ENGL 2309, ENGL 2350

**ACCO 2104, ACCO 2304, BUSS 1301, COSC 1300, COSC 1307, COSC 1403, COSC 1405, MGMT 1151, MGMT 1152, MGMT 1153, MGMT 1154, MGMT 1155, MGMT 1156, MGMT 1159, MGMT 1160, MGMT 1201, MGMT 1202, MGMT 1203, MGMT 1204, MGMT 1205, MGMT 1206, MGMT 1207, MGMT 1208, MGMT 1209, MGMT 1301, MGMT 1302, MGMT 1303, MGMT 1304, MGMT 1307, MGMT 1309, MGMT 2151, MGMT 2152, MGMT 2161, MGMT 2162, MGMT 2164, MGMT 2165, MGMT 2201, MGMT 2202, MGMT 2203, MGMT 2204, MGMT 2205, MGMT 2206, MGMT 2251, MGMT 2253, MGMT 2254, MGMT 2260, MGMT 2301, MGMT 2304, MGMT 2305, MGMT 2306, MGMT 2312, MGMT 2350, MGMT 2351, MGMT 2354, MGMT 2355, OADM 1308, OADM 2307, PSYC 2301, REAE 1301, REAE 2304, REAE 2305, SOCI 2308.

APPLIED MANAGEMENT

WITH TECHNICAL OPTIONS

A Two-Year Associate in Applied Science Degree

OPTION 1. FOOD SERVICE OPERATIONS

FIRST YEAR

First Semester		Credit	Second Semester		Credit
(1)	Food Preparation Selection	3	FSOP 1303	Sanitation & Safety	3
ELCT	FSMG/FSOP/HMMG Elective	3	(3)FSMG 1304	Work Organization	3
(2)	English Selection	3	(4)	Math Selection	3
ELCT	ACCO/BUSS Selection	3	FSMG 1302	Nutrition	3
ELCT	Elective	3	ELCT	FSMG/FSOP/ACCO/ BUSS/MGMT Selection	3
PYED	Physical Education	1			
PSYC 1101	College Orientation	1	PYED	Physical Education	1
		17			16

OPTION 1. FOOD SERVICE OPERATIONS (cont'd)

SECOND YEAR

First Semester		Credit	Second Semester		Credit
(5)FSOP 1305	Food Purchasing	3	(8)	Classical Food	
(6)	Speech Selection	3		Preparation Selection	3
FSOP 1306	Menu Planning	3	(9)	Exhibition Work Selection	3
(7)FSOP 2303	Cafeteria Management	3	ELCT	MGMT/BUSS Selection	3
ELCT	FSMG/FSOP/HMMC		ELCT	FSMG/FSOP/ACCO/	
	Elective	3		BUSS/MGMT Selection	3
PYED	Physical Education	1	ELCT	Social Science Selection	3
		16	PYED	Physical Education	1
					16
				TOTAL HOURS	65

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

- (1) FSMG 1401, 1402, or 2355
- (2) ENGL 1301, 1307, 2309, or 2350
- (3) MGMT 1304 may be substituted.
- (4) MATH 1307 or AMTH 1301
- (5) FSMG 1307 may be substituted
- (6) SPCH 1301 or 2303
- (7) FSMG 1250 may be substituted
- (8) FSMG 2401, 2356, or FSMG 2452
- (9) FSMG 2402, 2353, or 2306

OPTION 2. COMPUTER SCIENCE

FIRST YEAR

First Semester		Credit	Second Semester		Credit
MGMT 1305	Introduction to Management	3	MGMT 1304	Work Organization	3
COSC 1405	Introduction to Computer		MGMT 1301	Organization and	
	Concepts and Analysis	4		Management	3
COSC 1403	Introduction to Computer		COSC**	Computer Science Elective	3
	Science and		COSC 1406	Computer Organization	
	Programming	4		and Architecture	4
MATH*	Mathematics Option	3	SPCH 1301	Public Speaking	3
ENGL 1309	Communications Skills	3	PYED	Physical Education	1
PYED	Physical Education	1			17
PSYC 1101	College Orientation	1			
		19			

SECOND YEAR

First Semester		Credit	Second Semester		Credit
MGMT 2303	Law & Legal Assistance	3	MGMT 2312	Fundamentals of Systems	
MGMT 2302	Personnel Management	3		Management	3
ACCO 2303	Principles of Accounting I	3	COSC 1408	Conversational Languages -	
COSC** 1404	COBOL Programming	4		Basic	4
COSC 2301	Introduction to Computer		ACCO 2304	Principles of Accounting II	3
	Center Management	3	ELCT	Elective	3
		16	ELCT***	Approved Elective	4
					17
				TOTAL HOURS	68

*MATH 1301, 1307, or 1308.

**COSC 2409 may be substituted if required.

***Electives: COSC/MISC courses approved by appropriate College official; MGMT 1306, MGMT 1307, MGMT 1309, MGMT 2301, MGMT 2305, MGMT 2309, BUSS 1302, OADM 2304, OADM 2305.

OPTION 3. MICROCOMPUTER TECHNOLOGY

FIRST YEAR

First Semester			Credit	Second Semester			Credit
MGMT	1305	Introduction to Management	3	MGMT	1301	Organization and Management	3
MISC	1405	Introduction to Computer Concepts & Analysis	4	MGMT	1304	Work Organization	3
MISC	1403	Introduction to Computer Science and Programming	4	MISC***		Computer Science Elective	3
ENGL	1309	Communications Skills	3	MISC	1406	Computer Organization and Architecture	4
MATH*		Mathematics Option	3	SPCH	1301	Public Speaking	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
PYED		Physical Education	1				17
			19				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
MGMT	2303	Law & Legal Assistance	3	MGMT	2312	Fundamentals of Systems Management	3
MGMT	2302	Personnel Management	3	MISC	1451	Introduction to Microcomputer Programming	4
ACCO	2303	Principles of Accounting I	3	ACCO	2304	Principles of Accounting II	3
MISC	1404	COBOL Programming	4	ELCT***		Elective	3
MISC	1450	Microcomputers for Business	4	ELCT***		Elective	3
			17				16
							69

*MATH 1301, 1307, or 1308.

**MISC 2455 or COSC 2409 may be substituted if required.

***Electives: MISC 1454, 2451, 2453, 2454, 2455, MGMT 1306, 1307, 1309, 2301, 2305, 2309, BUSS 1302, OADM 2304, or 2305.

OPTION 4. ELECTRONICS SERVICING

FIRST YEAR

First Semester			Credit	Second Semester			Credit
MGMT	1302	Safety (OSHA)	3	MGMT	1304	Work Organization	3
MGMT	1305	Introduction to Management	3	MGMT	1306	Human Relations	3
BUSS	1301	Introduction to Business	3	ELTE	1403	Solid State Electronics	4
PYED		Physical Education	1	ELTE	1503	Advanced Electricity for Electronics	5
ELTE	1501	Basic Electricity for Electronics	5	ENGL	1309	Communications Skills	3
CMET	1401	Digital Circuits	4	PYED		Physical Education	1
PSYC	1101	College Orientation	1				19
			20				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
MGMT	2309	Supervision	3	MGMT	1309	Income Tax	3
ELTE	1404	Communications Circuits I	4	MGMT	2305	Business Law I	3
CMET	1409	CRT Systems	4	OADM	2305	Bookkeeping II	3
OADM	2304	Bookkeeping I	3	ELCT		Elective	3
SPCH	2303	Business and Professional Speaking	3	PYED		Physical Education	1
PYED		Physical Education	1	ELTE	2407	Communications Circuits II	4
			18				17
							74

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

ART

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
ART.		Two courses from 1301, 1303, 1305, or 1307	6	ART.		Two courses from 1302, 1304, 1306, or 1308	6
ENGL	1301	Composition & Rhetoric I	3	ENGL	1302	Composition & Rhetoric II	3
HIST	1301	History of the U.S. to 1877	3	HIST	1302	History of the U.S. from 1877	3
LANG	1401	Beginning Foreign Language	4	LANG	1402	Foreign Language	4
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				17
			18				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
ART.		One course, sophomore level	3	ART.		One course, sophomore level	3
ELCT		ENGL 2301, 2302, 2304, 2305 or 2306	3	ELCT		SPCH 1301, 2303, 2304, or 2305	3
ELCT		Natural Science Elective	3	ELCT		Natural Science Elective	3
MATH*		Math Elective	3	ELCT		Computer Science Elective	4
GOVT	2301	State & Federal Government I	3	GOVT	2302	State & Federal Government II	3
PYED		Physical Education	1	PYED		Physical Education	1
			16				17

TOTAL HOURS 68

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

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

AUTOMOTIVE BODY REPAIR

A Two-Year Associate in Applied Science Degree

FIRST YEAR

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

SECOND YEAR

First Semester			Credit	Second Semester			Credit
ATBR	2400	Major Vehicle Damage Repair	4	ATBR	2402	Glass, Electrical & Power Accessory Serv.	4
ELCT		Elective	3-4	ATBR	2405	Management & Estimating	4
ATBR	2403	Painting & Refinishing	4	ELCT		Elective	3-4
AUTO	1402	Automotive Electrical Systems	4	MATH	1307	Business Math	3
PYED		Physical Education	1				14-15
			16-17				
							TOTAL HOURS 66-68

*Suggested Electives: AUTO 1405, AUTO 1407, WELD 1404, MGMT 1305, BUSS 1301.

AUTOMOTIVE MECHANIC APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
AUTO	1400	Shop Practices & Safety	4	AUTO	1402	Automotive Electrical System	4
AUTO	1401	Internal Combustion Engine Fundamentals	4	AUTO	1403	Internal Combustion Engine Service	4
ENGL	1307	Business English	3	AUTO	1404	Fuel Systems	4
DRDS	1302	Blueprint Reading	3	SPCH	1301	Public Speaking	3
TMTH	1300	Technical Mathematics I	3	TMTH	1301	Technical Mathematics II	3
			17				18

Summer Session

AUTO	1407	Brake Systems	4
AUTO	2401	Standard Transmissions & Differentials	4
AUTO	2404	Ignition, Starting & Charging Systems	4
			12

SECOND YEAR

First Semester			Credit	Second Semester			Credit
AUTO	2405	Steering & Suspension Systems	4	AUTO	2402	Shop Organization & Management	4
AUTO	2406	Engine Diagnosis & Emission Control	4	AUTO	2403	Automatic Transmissions	4
DRDS	1303	Architectural Blueprint Reading	3	AUTO	2409	Automotive Practicum	4
PHYS	1403	Survey of Physics	4	PHYS	1401	College Physics I	4
PSYC	2301	Introduction to Psychology	3				16
			18	TOTAL HOURS			81

AUTOMOTIVE SERVICE & REPAIR

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
AUTO	1400	Shop Practices & Safety	4	AUTO	1403	Internal Combustion Engine Service	4
AUTO	1401	Internal Combustion Engine Fundamentals	4	AUTO	1404	Fuel Systems	4
AUTO	1402	Automotive Electrical System	4	AUTO	1407	Brake Systems	4
TMTH	1300	Technical Mathematics I	3	*		Communications/ENGL Selection(s)	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
PYED		Physical Education	1				16
			17				

AUTOMOTIVE SERVICE & REPAIR (cont'd)

SECOND YEAR

First Semester	Credit	Second Semester	Credit
AUTO 2401 Standard Transmission & Differentials	4	AUTO 1405 Automotive Air Conditioning	4
AUTO 2404 Ignition, Starting, & Charging Systems	4	AUTO 2403 Automatic Transmissions	4
AUTO 2405 Steering & Suspension Systems	4	AUTO 2406 Engine Diagnosis & Emission Control	4
* AUTO/MGMT/WELD Selection(s)	4	* AUTO/MGMT/WELD Selection(s)	4
	16	ELCT Elective	3
			19
		TOTAL HOURS	68

Selected course approved by appropriate College official or authorized Central Texas College personnel according to the student need.

*ENGL 1301, ENGL 1307, ENGL 1309, ENGL 2309, ENGL 2350, SPCH 1301, SPCH 2303, MGMT 1302, MGMT 1304, MGMT 1305, MGMT 2161, MGMT 2162, MGMT 2164, MGMT 2250, MGMT 2251, MGMT 2254, MGMT 2302, MGMT 2309, AUTO 1150, AUTO 1151, AUTO 1157, AUTO 1250, AUTO 1251, AUTO 1252, AUTO 1253, AUTO 1254, AUTO 1255, AUTO 2250, AUTO 2251, AUTO 2350, AUTO 1406, AUTO 2402, AUTO 2407, DIEM 1150, DIEM 1250, DIEM 1401, DIEM 1403, WELD 1250, WELD 1251, WELD 1401, and WELD 1402.

AVIATION MAINTENANCE TECHNOLOGY

Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester	Credit	Second Semester	Credit
AVMT 1301 Maintenance Publications-G	3	AVMT 1303 Aircraft Drafting-G	3
AVMT 1302 Weight & Balance-G	3	AVMT 1304 Airframe Materials & Corrosion Control-G	3
AVMT 1305 Basic Aircraft Electricity-G	3	AVMT 1306 Aircraft Finishes-A	3
ENGL 1309 Communications Skills	3	AVMT 1402 Sheet Metal Structures-A	4
PHYS 1403 Survey of Physics	4	ELCT Elective	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		17
	18		
Summer Semester			
AVMT 2303 Airframe Inspection-A	3		
AVMT 2304 Aircraft Fuel Systems-A	3		
AVMT 2402 Hydraulics & Pneumatics-A	4		
	10		

SECOND YEAR

First Semester	Credit	Second Semester	Credit
AVMT 2305 Aircraft Instruments Systems-A	3	AVMT 2404 Powerplant Maintenance Reciprocating Engines-P	4
AVMT 2306 Engine Electrical Systems-P	3	AVMT 2307 Engine Lubrication & Cooling Systems-P	3
AVMT 2403 Aircraft Electrical Systems-A	4	AVMT 2406 Aircraft Propellers-P	4
AVMT 2405 Engine Fuel Systems-P	4	AVMT 2407 Powerplant Maintenance Turbine Engines-P	4
	14		15
		TOTAL HOURS	74

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

BUSINESS ADMINISTRATION

A Two-Year Associate in Arts Degree

FIRST YEAR

First Semester		Credit	Second Semester		Credit
SCIE	Biology Chemistry, Physics or Geology	4	SCIE	Biology, Chemistry, Physics or Geology	4
BUSS 2301	Macroeconomics	3	BUSS 2302	Microeconomics	3
ENGL 1301	Composition & Rhetoric I	3	ENGL 1302	Composition & Rhetoric II	3
MATH*	Approved Math Elective	3	ELCT***	Humanities Elective	3
PSYC 2301	Introduction to Psychology	3	BUSS 1301	Introduction to Business	3
PYED	Physical Education	1	PYED	Physical Education	1
PSYC 1101	College Orientation	1			17
		18			

SECOND YEAR

First Semester		Credit	Second Semester		Credit
HIST 1301	History of the U.S. to 1877	3	ACCO 2304	Principles of Accounting II	3
ACCO 2303	Principles of Accounting I	3	COSC/ MISC	Approved Computer Science Elective	4
ENGL	English Elective	3	GOVT 2302	State & Federal Government II	3
GOVT 2301	State & Federal Government I	3	HIST 1302	History of the U. S. from 1877	3
ELCT	Approved Elective	3	SPCH	1301 or 2303	3
PYED	Physical Education	1	PYED	Physical Education	1
		16			17
					68

*Approved Math electives: MATH 1301, 1302, 1303, 1304, 1305, 1306, 1308, 1309, 2301, 2302, 2303. Since senior college math requirements vary widely, students have the responsibility to consult with the four-year institution he/she is planning to attend.

**Approved English courses include: ENGL 2301, ENGL 2302, ENGL 2303, ENGL 2304, ENGL 2305, ENGL 2306.

***Selection from Art, Music or Philosophy.

BUSINESS MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester		Credit	Second Semester		Credit
MGMT 1304	Work Organization	3	MGMT 2302	Personnel Management	3
MGMT 1305	Introduction to Management	3	MGMT 2309	Supervision	3
MGMT 1306	Human Relations	3	MATH	MATH 1305 or 1307	3
BUSS 1301	Introduction to Business	3	OADM	OADM 1309 or other	3
ENGL*	ENGL 1301 or ENGL 1307	3		OADM elective	3
PYED	Physical Education	1	SPCH	SPCH 1301 or 2303	3
PSYC 1101	College Orientation	1	PYED	Physical Education	1
		17			16

BUSINESS MANAGEMENT (cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
ACCO	2303	Principles of Accounting I	3	ACCO	2304	Principles of Accounting II	3
	or				or		
OADM	2304	Bookkeeping I	3	OADM	2305	Bookkeeping II	3
MGMT	2301	Marketing Principles	3	BUSS	2302	Microeconomics	3
BUSS	2301	Macroeconomics	3	ELCT**		Selection from Art, Philosophy or Music	3
ELCT*		Approved Elective	3				
MISC	1450	Microcomputers for Business	4	OADM		OADM 2307 or MGMT 1308	3
				ELCT		Elective	3
			16				15
						TOTAL HOURS	64

*Approved Business, Management, Office Administration, Social Science or other related electives must be approved by appropriate College official. Students are required to take three semester hours of Social Science.

**Selection from Art, Music or Philosophy.

CAREER PILOT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
CAPI	1301	Aircraft Science	3	CAPI	1302	Propulsion Systems	3
CAPI	1303	Air Navigation	3	CAPI	1304	Intermediate Flight	3
CAPI	1300	Basic Flight	3	CAPI	1306	Meteorology	3
ENGL	1301	Composition & Rhetoric I	3	CAPI	1305	Advanced Air Navigation	3
MATH		Approved Mathematics		SPCH		Speech Elective	3
		Elective	3	PYED		Physical Education	1
PYED		Physical Education	1				16
PSYC	1101	College Orientation	1				
			17				

SECOND YEAR

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

*SPCH 1301 or SPCH 2303.

**Approved electives are: Career Pilot, Business Management, Social Science, Mathematics, or other courses approved by appropriate College official.

***CAPI 2310 and CAPI 2311 are substitutes for CAPI 2304 and CAPI 2305 for Rotary Wing Transition students.

CHILD DEVELOPMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

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

Students may apply for a Certificate of Completion after completing all first year requirements.

SECOND YEAR

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

*ENGL 1301 may be substituted for ENGL 1309.

**Approved electives are SOCI 2306, BUSS 1301, MGMT 1305, FSMG 1302, FSMG 1306, MATH 1307, or other course approved by appropriate College official.

COMMUNICATIONS ELECTRONICS TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
ELTE	1301	Technical Mathematics I	3	ELTE	1302	Technical Mathematics II	3		
ELTE	1401	Electrical Circuits I	4	ELTE	1402	Electrical Circuits II	4		
CMET	1400**	Electronics & Computer Skills	4	ELTE	1403	Solid State Electronics	4		
CMET	1401	Digital Circuits	4	*		Communications/ENGL			
PYED		Physical Education	1			Selection(s)	3		
PSYC	1101	College Orientation	1	ENGR	1301	Engineering Graphics	3		
			17	PYED		Physical Education	1		
									18

COMMUNICATIONS ELECTRONICS TECHNOLOGY (cont'd) SECOND YEAR

First Semester			Credit	Second Semester			Credit
ELTE	1404	Communications Circuits I	4	ELTE	2303	Special Intensive Study	3
ELTE	2103	Individualized Research	1	ELTE	2407	Communications Circuits II	4
ELTE	2406	Integrated Devices	4	CMET	2401	Microprocessors & Microcomputers	4
CMET	1409	CRT Systems	4	ELTE	2409	Electronic Systems Troubleshooting	4
*		Elective	3	*		Communications/ENGL Selection(s)	3
*		Computer Maintenance/ Electronics Selection(s)	4				18
			20	TOTAL HOURS			73

*Selected course approved by appropriate College official or authorized Central Texas College personnel according to the student need. ENGL 1301, ENGL 1309, ENGL 2309, ENGL 2350, SPCH 1301, SPCH 2303, ELTE 1150, ELTE 1151, ELTE 2250, ELTE 2251, ELTE 2301, ELTE 2402, ELTE 2409, ELTE 2410, ELTE 2411, ELTE 2421.

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

COMPUTER ELECTRONICS TECHNOLOGY A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester			Credit	Second Semester			Credit
CMET	1400	Electronics & Computer Skills	4	CMET	1403	Computer Systems & Operational Programming	4
CMET	1401	Digital Circuits	4	ELTE	1302	Technical Mathematics II	3
ELTE	1301	Technical Mathematics I	3	ELTE	1402	Electrical Circuits II	4
ELTE	1401	Electrical Circuits I	4	ELTE	1403	Solid State Electronics	4
PYED		Physical Education	1	ENGR*	1301	Engineering Graphics	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			17				19

SECOND YEAR

First Semester			Credit	Second Semester			Credit
CMET	1409	CRT Systems	4	CMET	2401	Microprocessors & Microcomputers	4
CMET	2402	Computer Circuits Analysis	4	CMET	2404	Computer System: Diagnosis & Maintenance	4
ELTE	2103	Individualized Research	1	ELTE	2303	Special Intensive Study	3
ELTE	2406	Integrated Devices	4	ELTE	2409	Electronic Systems Troubleshooting	4
ELCT*		Approved Technical Elective	4			Elective	3
ENGL	1309	Communications Skills	3				18
			20	TOTAL HOURS			74

*If student desires PHYS 1401 may be substituted.

**Approved Technical Electives: ELTE 2402, CMET 2403.

COMPUTER SCIENCE

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
COSC	1403	Introduction to Computer Science and Programming	4	COSC	1404	COBOL Programming	4
COSC	1405	Introduction to Computer Concepts and Analysis	4	COSC	1406	Computer Organization & Architecture	4
ENGL	1301	Composition & Rhetoric I	3	SPCH	2303	Business and Professional Speaking	3
MATH		Approved Mathematics Option	3	MATH		Approved Mathematics Option	3
PSYC	1101	College Orientation	1	ELCT**		Approved Technical Elective	4
PYED		Physical Education	1	PYED		Physical Education	1
			16				19

SECOND YEAR

First Semester			Credit	Second Semester			Credit
COSC	2403	Introduction to Operating Systems and Job Control Language	4	COSC	2401	Advanced COBOL	4
				COSC	2402	Advanced Systems	4
COSC	2404	Assembler Language Programming	4	ELCT**		Approved Technical Elective	4
ELCT**		Approved Technical Elective	4	ELCT		Elective	3
GOVT		GOVT 2301 or 2302	3	ACCO	2304	Principles of Accounting II	3
ACCO	2303	Principles of Accounting I	3				18
			18	TOTAL HOURS			71

Math Option--Math 1301, 1305, 1306, 1308

**Approved Technical Electives--COSC or MISC courses and may include DRDS 2410 if the student meets the prerequisites.

CONSTRUCTION TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
CONS	1301	Materials and Methods of Construction	3	CONS	1401	Construction Equipment and Methods	4
CONS	1302	Building Science I	3	CONS	1402	Building Science II	4
DRDS	1302	Architectural Blueprint Reading	3	CONS	1403	Construction Estimating	4
MATH*	1302	College Algebra	3	MATH*	1303	Trigonometry	3
MGMT	1302	Safety (OSHA)	3	ENGL	1301	Composition & Rhetoric I	3
PSYC	1101	College Orientation	1				18
PYED		Physical Education	1				
			18				

CONSTRUCTION TECHNOLOGY (cont'd)

SECOND YEAR

First Semester		Credit	Second Semester		Credit
CONS** 2301	Principles and Practices in Light Construction	3	†CONS 2402	Forming and Framing Construction	4
CONS** 2302	Specialty Trades--Light Construction	3	†CONS 2403	Concrete and Masonry Construction	4
CONS 2401	Construction Management & Scheduling	4	SPCH	Speech Selection	3
ENGR** 1301	Engineering Graphics	3	ELCT†	Approved Elective	3
APPH 1450	Applied Physics	4	ELCT	Elective	3
PYED	Physical Education	1			17
		18			

TOTAL HOURS: 70

*Industrial Trades may substitute TMTH 1300 and 1301.

**Industrial Trades will substitute MTNT 1401 and 1402.

†Industrial Trades will select 12 hours from MTNT 2401, 2402, 2403, 2404, 2405.

CONSUMER ELECTRONICS TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester		Credit	Second Semester		Credit
ELTE 1301	Technical Mathematics I	3	ELTE 1302	Technical Mathematics II	3
ELTE 1401	Electrical Circuits I	4	ELTE 1403	Solid State Electronics	4
CMET 1400	Electronics & Computer Skills	4	ELTE 1402	Electrical Circuits II	4
CMET 1401	Digital Circuits	4	BUSS 1301	Introduction to Business	3
PYED	Physical Education	1	ENGL*	Approved English	3
PSYC 1101	College Orientation	1			17
		17			

SECOND YEAR

First Semester		Credit	Second Semester		Credit
CMET 1409	CRT Systems	4	CMET 2401	Microprocessors & Microcomputers	4
ELTE 2410	Radio Systems	4	COES 2408	CATV & Audio Distribution Systems	4
ELTE 2406	Integrated Devices	4	COES 2409	Advanced TV Servicing	4
ELCT**	Approved Technical Elective	4	ELCT**	Approved Technical Elective	3
PYED	Physical Education	1	ENGL*	Approved English	3
		17			18
					69

*ENGL 1301, ENGL 1309, ENGL 2309.

**ELTE 2408, ELTE 2409, COES 2301.

The appropriate College official may substitute ELTE 1303 for CMET 1400 and ELTE 2402 for CMET 2401.

DIESEL MECHANICS

A Two-Year Associate in Applied Science Degree

FIRST YEAR

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

SECOND YEAR

First Semester			Credit	Second Semester			Credit
DIEM	2400	Hydraulics & Steering Systems	4	DIEM	2404	Diesel Automatic Power Trains	4
DIEM	2401	Diesel Engine Auxiliary Systems	4	DIEM	2405	Advanced Diesel Engine Service	4
DIEM	2402	Diesel Starting & Charging Systems	4	MGMT	1306	Human Relations	3
DIEM	2403	Diesel Engine Overhaul	4	ELCT*		Approved Elective	4
			16	WELD	1401	Beginning Gas Welding	4
							19
							68
							TOTAL HOURS

*Suggested Electives: WELD 1402, AUTO 1405, AUTO 2406.

DIESEL MECHANICS APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
DIEM	1401	Diesel Engine Fundamentals	4	DIEM	1402	Diesel Engine Service	4
AUTO	1400	Shop Practices & Safety	4	DIEM	1403	Fuel & Injector Systems	4
ENGL	1307	Business English	3	AUTO	1407	Brake Systems	4
DRDS	1302	Blueprint Reading	3	SPCH	1301	Public Speaking	3
TMTH	1300	Technical Mathematics I	3	TMTH	1301	Technical Mathematics II	3
			17				18

Summer Session

DIEM	1404	Standard Transmissions & Differentials	4
DIEM	2400	Hydraulics & Steering Systems	4
DIEM	2401	Diesel Engine Auxiliary Systems	4
PHYS	1403	Survey of Physics	4
			16

SECOND YEAR

First Semester			Credit	Second Semester			Credit
DIEM	2402	Diesel Electric Starting & Charging Systems	4	DIEM	2404	Diesel Automatic Power Trains	4
DIEM	2403	Diesel Engine Overhaul	4	DIEM	2405	Advanced Diesel Engine Service & Troubleshooting	4
DRDS	1303	Architectural Blueprint Reading	3	DIEM	2409	Diesel Practicum	4
PHYS	1401	College Physics I	4	WELD	1401	Beginning Gas Welding	4
PSYC	2301	Introduction to Psychology	3				16
			18				85
							TOTAL HOURS

DRAFTING & DESIGN/GRAPHIC ARTS

A Two-Year Associate in Applied Science Degree

FIRST YEAR

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

SECOND YEAR

First Semester			Credit	Second Semester			Credit
DRDS	2401	Pipe Drafting	4	DRDS	2405	Civil Design Drafting	4
DRDS	2402	Architectural Drafting	4	DRDS††	2410	Computer Aided Drafting	4
DRDS	2403	Electronic Drafting	4	DRDS	2404	Principles of Design	4
ELCT**		Approved Elective	3-4	ELCT		Elective	3-4
ENGL*		Approved English	3				15-16
			18-19				

TOTAL HOURS 67-69

*Approved communication electives: ENGL 1301, 1307, 1309, or 2309. If ENGL 1309 is the first course, may take ENGL 2309. If not must take SPCH 1301 or SPCH 2303 as the second course.

**DRDS 1302, DRDS 1400, DRDS 1303, DRDS 2406, DRDS 2411, MATH 1301, MATH 1302, MATH 1303, ART. 1301, OPRT 1301, or other elective approved by appropriate College official.

†DRDS 1405 may be substituted for ENGR 1301. DRDS 1406 may be substituted for ENGR 1302.

††DRDS 2406 may be substituted.

ELECTRICIAN/LINEMAN APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
ELTE*	1400	Basic Electricity	4	ELEC	1301	Electrical Codes	3
ENGL	1307	Business English	3	ELEC	1401	Low Voltage and	
DRDS	1302	Blueprint Reading	3			Appliance Circuits	4
MGMT	1302	Safety (OSHA)	3	MTNT	1402	Electricity	4
TMTH	1300	Technical Mathematics I	3	SPCH	1301	Public Speaking	3
			16	TMTH	1301	Technical Mathematics II	3
							17

Summer Session

ELEC	1402	Commercial Wiring	4
ELEC	1403	Control Circuits	4
ELTE	1403	Solid State Electronics	4

12

SECOND YEAR

First Semester			Credit	Second Semester			Credit
ELEC	1404	Single and Three-Phase Transformers	4	ELEC	2402	Lineman Fundamentals II	4
ELEC	2401	Lineman Fundamentals I	4	ELEC	2408	Lineman Practicum	4
DRDS	1303	Architectural Blueprint Reading	3	PHYS	1401	College Physics I	4
PHYS	1403	Survey of Physics	4	PSYC	2301	Introduction to Psychology	3
			15				15
				TOTAL HOURS			75

*ELTE 1401 and ELTE 1402 may be substituted.

EMERGENCY MEDICAL TECHNICIAN

Certificate of Completion

LEVEL I

First Semester			Credit
EMET	1402	Emergency Medical Technician-Ambulance	4
or			
EMET	1403	Emergency Medical Technician-Recertification	
ELCT*		Approved Electives	11
			15

*EMET 1101, 1201, 1301, 1302, 1303, 1304, 1305, 1307 or 1308.

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

EMERGENCY MEDICAL TECHNICIAN

A Two-Year Associate in Applied Science Degree

Level II

FIRST YEAR

First Semester			Credit	Second Semester			Credit
EMET	1201	Emergency Medical Technician Supplemental	2	MGMT	1304	Work Organization	3
EMET	1402	Emergency Medical Technician-Ambulance	4	MGMT	1306	Human Relations	3
				EMET	1302	Military Medicine	3
ENGL		ENGL 1301 or 1307	3	ELCT		COSC/MISC Selection	3
MGMT	1305	Introduction to Management	3	PYED		Physical Education	1
ELCT*		Approved Elective	3	ELCT*		Approved Elective	3
PYED		Physical Education	1				16
PSYC	1101	College Orientation	1				
			17				

Students may apply for a Certificate of Completion after completing the first year requirements.

SECOND YEAR

First Semester				Credit	Second Semester				Credit
EMET	2301	Disaster Planning		3	EMET	2302	Emergency Medical		
EMET	2101	Introduction to					Center Management		3
		Paramedic		1	EMET	2303	Psychology of		
ACCO†	2303	Principles of Accounting I	3				Emergencies		3
MGMT	2302	Personnel Management	3		ENGL	2309	Technical Writing		3
MGMT	2309	Supervision	3		ACCO†	2304	Principles of Accounting II	3	
SPCH		SPCH 1301 or 2302	3		ELCT		Elective		3
				16					15
					TOTAL HOURS				64

*EMET 1304, 1305, 1403, or PSYC 2301.

†OADM 2304 and 2305 may be substituted.

ENGINEERING

A Two-Year Associate in Science Degree

FIRST YEAR

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

SECOND YEAR

First Semester				Credit	Second Semester				Credit	
HIST	1301	History of the U.S. to 1877		3	HIST	1302	History of the U.S. from 1877		3	
ENGL	2301*	English Literature I		3	SPCH	SPCH 1301 or SPCH 2303			3	
GOVT	2301	State & Federal Gov- ernment I		3	GOVT	2302	State & Federal Gov- ernment II		3	
ELCT**		Humanities Elective		3	PHYS	2402	Modern Physics II		4	
PHYS	2401	Modern Physics I		4	ELCT		Elective		3	
PYED		Physical Education		1	PYED		Physical Education		1	
				17					17	
									TOTAL HOURS	70

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

**Selection from Art, Music, or Philosophy.

EQUIPMENT MAINTENANCE MECHANIC

APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
EQMT	1400	Shop Practice and Safety	4	EQMT	1402	Machine Tools	4
EQMT	1401	Fundamentals of Machinery	4	MTNT	1402	Electricity	4
ENGL	1307	Business English	3	DRDS	1303	Architectural Blueprint Reading	3
TMTH	1300	Technical Mathematics I	3	TMTH	1301	Technical Mathematics II	3
			17	WELD	1401	Beginning Gas Welding	4
							18

Summer Session

EQMT	1403	Maintenance of Valves and Pumps	4
EQMT	1404	Maintenance of Galley Equipment and Fans	4
MTNT	2403	Plumbing	4
			12

EQUIPMENT MAINTENANCE MECHANIC (cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
EQMT	2401	Maintenance of Air Compressors	4	EQMT	2403	Maintenance of Power Plant Equipment II	4
EQMT	2402	Maintenance of Power Plant Equipment I	4	EQMT	2409	Equipment Maintenance Practicum	4
PHYS	1403	Survey of Physics	4	PHYS	1401	College Physics I	4
WELD	1402	Beginning Arc Welding	4	PSYC	2301	Introduction to Psychology	3
			16	SPCH	1301	Public Speaking	3
							18
						TOTAL HOURS	81

EQUIPMENT MAINTENANCE ENGINEER OPTION APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
EQMT	1400	Shop Practice and Safety	4	EQMT	1402	Machine Tools	4
EQMT	1401	Fundamentals of Machinery	4	MTNT	1402	Electricity	4
ENGL*		English Selection	3	EQMT	1351	Trade Drawing II	3
EQMT	1350	Trade Drawing I	3	TMTH	1301	Technical Mathematics II	3
TMTH	1300	Technical Mathematics I	3	MGMT	1306	Human Relations	3
			17				17

Summer Session

EQMT	1403	Maintenance of Valves and Pumps	4
EQMT	1404	Maintenance of Galley Equipment and Fans	4
APPH	1350	Applied Physics I	3
			11

SECOND YEAR

First Semester			Credit	Second Semester			Credit
EQMT	2401	Maintenance of Air Compressors	4	EQMT	2403	Maintenance of Power Plant Equipment II	4
EQMT	2402	Maintenance of Power Plant Equipment I	4	DRDS	2351	Applied Statics II	3
APPH	1351	Applied Physics II	3	ELCT**		Approved Elective	3
DRDS	2350	Applied Statics I	3	ELCT**		Approved Elective	3
			14	SPCH	1301	Public Speaking	3
							16
						TOTAL HOURS	75

*ENGL 1301, 1307, 1309

**Approved Electives: MGMT 1301, MGMT 1304, ELTE 1450, EQMT 2405

FIRE PROTECTION TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

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

SECOND YEAR

First Semester				Credit	Second Semester				Credit
FPRT	2301	Industrial Fire Protection I	3	FPRT	2302	Industrial Fire Protection II	3		
FPRT	2303	Hazardous Material I	3	FPRT	2306	Fire & Arson Investigation	3		
FPRT	2305	Building Codes & Construction	3	FPRT	2404	Fire Fighting Tactics and Strategy	4		
ENGL	2309	Technical Writing	3	FPRT**		Fire Protection Technology	3		
GOVT	2301	State & Federal Government		ELCT		Approved Elective	3		
or	2302	I & II	3						16
ELCT		Elective	3						
			18						
							TOTAL HOURS	67	

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

**Fire Protection Technology Electives: FPRT 1309, 2304, 2308, 2309. For selected sites FPRT 2310, 2314 and EMET 1401.

***MATH 1307 may be substituted where FPRT 1307 & 1308 are offered.

FOOD SERVICE MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
FSMG	1302	Nutrition	3	FSMG	1305	Food Purchasing	3
FSMG	1303	Sanitation & Safety	3	FSMG	1306	Menu Planning	3
FSMG	1401	Food Preparation & Serving	4	**		Math Selection	3
***		MGMT/FSMG Selection(s)	3	***		ACCO/FSMG/HMMC/MGMT Selection(s)	3
*		Communications/ENGL Selection(s)	3	*		SPCH Selection(s)	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
PYED		Physical Education	1				16
			18				

FOOD SERVICE MANAGEMENT (cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
FSMG	2304	Marketing & Sales Promotion	3	FSMG	2305	Financial Management	3
FSMG	2307	Hospitality Industry Law	3	FSMG	2303	Cafeteria Management	3
FSMG	1307	Meat Science	3	***		Management Selections	3
**		MGMT/COSC Selection	3	***		MGMT/ACCO/FSMG/MGMT Selection(s)	3
***		Management Selection	3	ELCT		Elective	3
			15				15
TOTAL HOURS							64

*ENGL 1301, ENGL 1307, ENGL 2309, or ENGL 2350, SPCH 1301, SPCH 2303

**AMTH 1301 or MATH 1307.

***Selected courses approved by appropriate College official or authorized Central Texas College personnel according to the student need:

ACCO 2303, ACCO 2304, COSC 1300, COSC 1306, COSC 1307, COSC 1403, FSMG 1250, FSMG 1304, FSMG 1308, FSMG 2150, FSMG 2151, FSMG 2201, FSMG 2250, FSMG 2251, FSMG 2252, FSMG 2306, FSMG 2353, FSMG 2355, FSMG 2356, FSMG 2401, FSMG 2402, FSMG 2451, FSMG 2452, FSMG 2453, HMMG 1300, HMMG 1302, HMMG 1303, HMMG 2306, MISC 1420, MISC 1430, MISC 1440, MISC 1450, MGMT 1305, MGMT 1308, MGMT 2302, MGMT 2304, MGMT 2309, MGMT 2352.

Europe Only: FSMG 2453.

Alaska Only: FSMG 1309 and FSMG 1402.

FOOD SERVICE OPERATION OPTION

A One-Year Certificate of Completion

First Semester			Credit	Second Semester			Credit
FSMG	1302	Nutrition	3	FSMG	1309	Short Order Food Preparation	3
FSMG	1303	Sanitation & Safety	3				
MATH	1307	Business Math	3	FSMG	1402	Basic Baking and Pastry Production	4
FSMG	1401	Food Preparation and Serving	4				
ENGL	1309	Communications Skills	3	FSMG	2401	Classical Food Preparation	4
PSYC	1101	College Orientation	1				
			17	ELCT		Elective	3
TOTAL HOURS							14
							31

HOTEL-MOTEL MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
HMMG	1302	Hotel/Motel Organization and Administration	3	HMMG	1300	Food and Beverage Management	3
FSMG	1401	Food Preparation & Serving	4	HMMG	1303	Front Office Procedures	3
ELCT*		Approved Elective	3	HMMG	1304	Hotel/Motel Sales Promotion	3
ENGL	1309	Communications Skills	3	FSMG	1303	Sanitation and Safety	3
MATH	1307	Business Mathematics	3	FSMG	1305	Food Purchasing	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				16
			18				

HOTEL-MOTEL MANAGEMENT (cont'd)

SECOND YEAR

First Semester		Credit	Second Semester		Credit
ELCT	* Approved Elective	3	HMMG 2301	Hotel/Motel Law	3
ELCT	* Approved Elective	3	HMMG 2304	Hotel/Motel Financial Management	3
ACCO 2303**	Principles of Accounting I	3	ACCO 2304**	Principles of Accounting II	3
MGMT 2302	Personnel Management	3	FSMG 2303	Cafeteria Management	3
ELCT	Elective	3	ELCT	Elective	3
		15			15
				TOTAL HOURS	64

*ENGL 1302, ENGL 1307, ENGL 2309, MGMT 1305, MGMT 1308, Food Service Management, Hotel/Motel Management courses or courses approved by appropriate College official.

**OADM 2304 and OADM 2305 may be substituted.

IMAGE DATA MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester		Credit	Second Semester		Credit
WOPO 1303	Beginning Keyboarding/ Data Entry	3	WOPO 1304	Intermediate Word Processing Applications	3
ENGL 1301	Composition & Rhetoric I	3	WOPO 1307	Word Processing Concepts	3
MATH 1307	Business Math	3	SPCH*	Speech Selection	3
OADM 1305	Clerical Practice	3	MISC**	Microcomputer Selection	4
MISC**	Microcomputer Selection	4	OADM 1308	Business Correspondence	3
PSYC 1101	College Orientation	1	PYED	Physical Education	1
PYED	Physical Education	1			17
		18			

SECOND YEAR

First Semester		Credit	Second Semester		Credit
WOPO 2302	Advanced Word Processing Applications	3	WOPO 2303	Office Automation	3
WOPO 2308†	Word Processing Internship I	3	WOPO 2309†	Word Processing Internship II	3
OADM 2304	Bookkeeping I	3	WOPO 2310	Word Processing Center Management	3
MISC 1450	Microcomputers for Business	4	OADM 2305	Bookkeeping II	3
ELCT	Elective	3	OADM 2307	Office Administration & Procedures	3
		18	***	Social Studies Elective	3
					18
				TOTAL HOURS	69

*SPCH 1301 or SPCH 2303.

**Any MISC course the student is qualified to take.

***GOVT 2301, 2302, HIST 1301, 1302, 2301, PSYC 2301, 2302, or SOCL 2301 or 2302.

†Microcomputer course may substitute.

LAW ENFORCEMENT (cont'd)

SECOND YEAR

First Semester	Credit	Second Semester	Credit
LAWE 2101 Emergency Medical Aid	1	PSYC 2301 Introduction to Psychology	3
LAWE 2201 Firearms	2	SPCH 2303 Business and Professional Speaking	3
LAWE 2304 Juvenile Procedures	3	LAWE* Law Enforcement Elective	3
GOVT 2301 State & Federal	3	ELCT Elective	3
or 2302 Government I or II	3	ELCT Elective	3
SOCI 2301 Introduction to Sociology	3		
LAWE* Law Enforcement Elective	3		
ELCT Elective	3		
	18	TOTAL HOURS	67

Students receive a certificate of competency upon satisfactory completion of the core curriculum: LAWE 1301, 1302, 1303, 1304, 1307, 1308, 1309, 2101 and 2201.

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

Patrol/Traffic Option: LAWE 1305, 2303, 2306, and 2309.

Correctional/Courts Option: LAWE 1306, 2301,*2307, and 2310.

Criminalistics: LAWE 1310, 1311, and 1312.

Electives: May be a choice of any course desired by the student to include EMET 1401.

LEGAL ASSISTANT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester	Credit	Second Semester	Credit
LEGA 1301 Introduction to Legal Assistant	3	LEGA 1401 Legal Writing, Legal Documents, Wills, Trusts, and Probate	4
LEGA 1302 Techniques of Legal Research	3	LEGA 1305 Law of Real Property and Real Estate Transactions	3
LEGA 1304 Principles of Family Law	3	ACCO 2303 Principles of Accounting I	3
ENCL 1301 Composition and Rhetoric I	3	ENGL 1302 Composition & Rhetoric II	3
GOVT 2301 State & Federal Government I	3	ELCT* Approved Elective	3
PSYC 1101 College Orientation	1	PYED Physical Education	1
PYED Physical Education	1		18
	17		

SECOND YEAR

First Semester	Credit	Second Semester	Credit
LEGA 2301 Tort and Insurance Law & Claims Investigation	3	LEGA 2402 Income Taxation and Legal Accounting	4
LEGA 2401 Techniques of Legal Practice	4	LEGA 2403 Legal Office Ethics and Management	4
GOVT 2302 State and Federal Government II	3	LEGA 2302 Personal Property, Sales and Credit Transactions	3
ELCT* Approved Elective	3	ELCT* Approved Elective	3
ELCT Elective	3	ELCT Elective	3
	16		17
		TOTAL HOURS	68

Approved Electives: LEGA 2303, LEGA 2304, LEGAL 2305, LEGA 2404, ACCO 2304, COSC 1306, COSC 1403, ENGL 2309, HIST 1301, HIST 1302, MGMT 1301, MGMT 1306, OADM 1303, OADM 1304, OADM 1307, PSYC 2301, SOCI 2301, SOCI 2303, SOCI 2306, and SPCH 1301.

**Students who do not have a minimum of one year work experience in the legal field must take LEGA 2404.

MAINTENANCE TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
MTNT	1400	Shop Practice & Safety	4	WELD	1401	Beginning Gas Welding	4
MTNT	1401	Carpentry I	4	MTNT**	1402	Electricity	4
AIRC	1400	Air Conditioning & Refrigeration Theory & Application	4	AIRC	1403	Heating Systems	4
				ENGL	1309	Communications Skills	3
				ELCT*		Approved Elective	3
TMTH	1300	Technical Mathematics I	3				
PSYC	1101	College Orientation	1				18
PYED		Physical Education	1				
			17				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
MTNT	2402	Carpentry II	4	MTNT	2401	Masonry	4
MTNT	2403	Plumbing	4	DRDS	1303	Architectural Blueprint Reading	3
AIRC	1402	Household Refrigeration Systems	4	MTNT	2404	Painting & Refinishing	4
ELCT*		Approved Elective	4	AIRC	1404	Residential Air Conditioning	4
PYED		Physical Education	1	ELCT		Elective	3
			17				18
							20
						TOTAL HOURS	

*AIRC 1405, AIRC 2403, DRDS 1400, MGMT 1302, MGMT 1304, MGMT 1305, OADM 2304, SESY 1401, WELD 1402.

**Approved Prerequisite for AIRC 1402, 1403, 1404 in place of AIRC 1401.

MICROCOMPUTER TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
MISC	1451	Introduction to Microcomputer Programming	4	MISC	1406	Computer Organization & Architecture	4
MISC	1405	Introduction to Computer Concepts and Analysis	4	MISC	1454	PASCAL Programming	4
ENGL	1301	Composition & Rhetoric I	3	ELCT**		Approved Technical Elective	4
ELCT**		Approved Technical Elective	4	Approved Math Option			3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
PYED		Physical Education	1				16
			17				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
MISC	2451	Operations Systems & Programming	4	MISC	2402	Advanced Systems	4
MISC	2453	Advanced BASIC Programming	4	MISC	2454	Advanced Microcomputer Applications	4
ELCT**		Approved Technical Elective	4	ELCT		Business Elective	3
ACCO	2303	Principles of Accounting I	3	ELCT		Elective	3
			15	SPCH	2303	Business and Professional Speaking	3
							17
						TOTAL HOURS	65

*MATH Option - MATH 1301, MATH 1307, MATH 1308.

**Approved Technical Electives: MISC, COSC, CMET, or ELTE courses.

MID-MANAGEMENT

Finance and Banking Option

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
FIBA	1301	Banking Principles	3	FIBA	1302	Money and Banking	3
MGMT	1305	Introduction to Management	3	PSYC	2301	Introduction to Psychology	3
BUSS	1301	Introduction to Business	3	MATH	1307	Business Mathematics	3
ENGL	1301	Composition & Rhetoric I	3	MISC	1450	Microcomputers for Business	4
MGMT	1306	Human Relations	3	SPCH	1301 or SPCH 2303		3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
PYED		Physical Education	1				
			17				17

SECOND YEAR

First Semester			Credit	Second Semester			Credit
MGMT	2302	Personnel Management	3	ELCT		Elective	3
FIBA*		Finance and Banking		FIBA*		Finance and Banking	
		Elective	3			Elective	3
BUSS	2301	Macroeconomics	3	BUSS	2302	Macroeconomics	3
ACCO	2303	Principles of Accounting I	3	ACCO	2304	Principles of Accounting II	3
ELCT		Elective	3	ELCT		Approved MGMT/BUSS/FIBA	
			15			Elective	3
							15
							64

TOTAL HOURS: 64

*Approved FIBA electives: FIBA 2301, FIBA 2302, FIBA 2303, FIBA 2304, FIBA 2305, FIBA 2306, and REAE 2304.

Management and Business electives must be approved by appropriate College official.

OFFICE MANAGEMENT

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
OADM	1303*	Beginning Typewriting	3	OADM	1304*	Intermediate Typewriting	3
OADM	1305	Clerical Practice	3	OADM	1308	Business Correspondence	3
OADM	2304	Bookkeeping I	3	OADM	2305	Bookkeeping II	3
MGMT	1305	Introduction to Management	3	OADM	1309	Business Mathematics & Calculating Machines	3
ENGL	1307	Business English	3	COSC	1300	Introduction to Computer	
PYED		Physical Education	1			Information Processing	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			17				16

OFFICE MANAGEMENT (cont'd)

SECOND YEAR

First Semester		Credit	Second Semester		Credit
MGMT 1304	Work Organization	3	MGMT 2302	Personnel Management	3
MGMT 2305	Business Law I	3	MGMT 2306	Business Law II	3
ELCT	Elective	3	MGMT 2309	Supervision	3
SPCH 2303	Business and Professional Speaking	3	OADM 2307	Office Administration & Procedures	3
ELCT**	Approved Elective	3	ELCT**	Approved Elective	3
		15			15
				TOTAL HOURS	63

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

**MGMT 2301, MGMT 2310, OADM 2308, OADM 2309, or other electives approved by appropriate College official.

PHOTOGRAPHY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

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

SECOND YEAR

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

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

†TELE 2407 - Electronic Field Production may be substituted for PHOT 1407.

‡Approved Electives: SPCH 1301, OPRT 1302, TELE 1403, TELE 1408, TELE 2408, or other elective approved by the appropriate College official.

PHYSICAL EDUCATION

A Two-Year Associate in General Studies Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
ENGL	1301	Composition & Rhetoric I		3	ENGL	1302	Composition & Rhetoric II		3
HIST	1301	History of the U.S. to 1877		3	HIST	1302	History of the U.S. from 1877		3
BIOL	1401	General Biology I		4	BIOL	1402	General Biology II		4
SPCH	1301	Public Speaking		3	ELCT		Approved Mathematics Elective		3
PYED	1302	Foundations of Health		3					
PYED		Physical Education		1	PYED	1301	Foundations of Physical Education		3
PSYC	1101	College Orientation		1	PYED		Physical Education		1
				18					18

SECOND YEAR

First Semester				Credit	Second Semester				Credit
PSYC	2301	Introduction to Psychology		3	ENGL	2302	English Literature II		3
ENGL	2301	English Literature I		3	GOVT	2302	State & Federal Government II		3
GOVT	2301	State & Federal Government I		3	SOCI	2301	Introduction to Sociology		3
PYED	2301	Sports Officiating		3	PYED	2302	Safety & First Aid		3
BIOL	1405	Human Anatomy		4	ELCT		Approved Elective		3
PYED		Physical Education		1	PYED		Physical Education		1
				18					17
					TOTAL HOURS				71

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

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

PLUMBER

APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
PLUM	1400	Shop Practice & Safety		4	PLUM	1402	Principles of Plumbing II		4
PLUM	1401	Principles of Plumbing I		4	PLUM	1403	Residential Plumbing I		4
ENGL	1307	Business English		3	SPCH	1301	Public Speaking		3
DRDS	1302	Blueprint Reading		3	TMTH	1301	Technical Mathematics II		3
TMTH	1300	Technical Mathematics I		3	WELD	1401	Beginning Gas Welding		4
				17					18
Summer Session									
PLUM	1404	Residential Plumbing II		4					
PLUM	1405	Commercial Plumbing		4					
DRDS	1400	Fundamentals of Drafting		4					
				TOTAL HOURS					12

SECOND YEAR

First Semester				Credit	Second Semester				Credit
PLUM	2401	Plumbing Layout, Codes and Estimating		4	PLUM	2403	Heating and Air Conditioning Plumbing		4
PLUM	2402	Plumbing Repair and Maintenance		4	PLUM	2409	Plumbing Practicum		4
PHYS	1403	Survey of Physics		4	PHYS	1401	College Physics I		4
PSYC	2301	Introduction to Psychology		3	SMTL	1401	Sheet Metal I		4
				18					18
					TOTAL HOURS				81

REAL ESTATE

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
COSC/	MISC	Computer Science Selection	3	REAE	1302	Real Estate Marketing	3
MGMT	1306	Human Relations	3	REAE	2304	Real Estate Finance	3
REAE	1301	Real Estate Fundamentals	3	BUSS	2301	Macroeconomics	3
BUSS	1301	Introduction to Business	3	MATH	1307	Business Mathematics	3
ENGL		ENGL 1301 or 1307	3	ELCT		Approved Social Science Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
PSYC	1101	College Orientation	1				16
			17				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
REAE	2302	Residential Real Estate Appraisal	3	MGMT	2301	Marketing Principles	3
BUSS	2302	Microeconomics	3	REAE	2305	Real Estate Law	3
ACCO	2303	Principles of Accounting I	3	ACCO	2304	Principles of Accounting II	3
REAE*		Approved Real Estate Elective	3	REAE*		Approved Real Estate Elective	3
ELCT		Elective	3	SPCH		SPCH 1301 or 2303	3
			15				15
				TOTAL HOURS			63

Approved Real Estate electives are: REAE 1300, REAE 1303, REAE 2301, REAE 2303, REAE 2305, REAE 2306, REAE 2307, REAE 2308 and REAE 2309 or other courses approved by appropriate College official.

RECREATION

A Two-Year Associate in General Studies Degree

FIRST YEAR

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

SECOND YEAR

First Semester			Credit	Second Semester			Credit
ENGL	2301	English Literature I	3	ENGL	2302	English Literature II	3
GOVT	2301	State & Federal Government I	3	GOVT	2302	State & Federal Government II	3
ART.	2311	Fiberarts I	3	SOCI	2301	Introduction to Sociology	3
PSYC	2301	Introduction to Psychology	3	PYED	2301	Sports Officiating	3
PYED	2302	Safety & First Aid	3	RECR		Approved Recreation Activity	3
PYED		Physical Education	1	PYED		Physical Education	1
			17				17
				TOTAL HOURS			70

RESIDENTIAL/COMMERCIAL ELECTRICIAN APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
ELTE	1400*	Basic Electricity		4	ELEC	1301	Electrical Codes		3
ENGL	1307	Business English		3	ELTE	1403	Solid State Electronics		4
DRDS	1302	Blueprint Reading		3	MTNT	1402	Electricity		4
MGMT	1302	Safety (OSHA)		3	SPCH	1301	Public Speaking		3
TMTH	1300	Technical Mathematics I		3	TMTH	1301	Technical Mathematics II		3
				16					17
Summer Session									
ELEC	1401	Low Voltage and Appliance Circuits		4					
ELEC	1402	Commercial Wiring		4					
ELEC	1403	Control Circuits		4					
				TOTAL HOURS	16				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
ELEC	1404	Single and Three-Phase Transformers	4	ELEC	2406	Electrical Planning	4
ELEC	2405	Motors and Motor Codes	4	ELEC	2409	Electrician Practicum	4
DRDS	1303	Architectural Blueprint Reading	3	PHYS	1401	College Physics I	4
PHYS	1403	Survey of Physics	4	PSYC	2301	Introduction to Psychology	3
			15				15
							TOTAL HOURS
							75

*ELTE 1401 and ELTE 1402 may be substituted.

SHEET METAL APPRENTICESHIP PROGRAM

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester				Credit	Second Semester				Credit
SMTL	1401	Sheet Metal I		4	SMTL	1303	Insulation & Sheet Metal		
DRDS	1302	Blueprint Reading		3			Standards & Materials		3
TMTH	1300	Technical Mathematics I		3	SMTL	1402	Plumbing & Heating		
WELD	1401	Beginning Gas Welding		4			Insulation		4
WELD	1402	Beginning Arc Welding		4	DRDS	1400	Fundamentals of Drafting		4
				18	TMTH	1301	Technical Mathematics II		3
					WELD	1404	Beginning GMAW & GTAW		
							(MIG&TIG)		4
									18
Summer Session									
SMTL	2401	Sheet Metal II		4					
FPRT	2305	Building Codes &							
		Construction		3					
ENGL	1307	Business English		3					
		TOTAL HOURS		10					

SHEET METAL (cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
SMTL	2302	Sheet Metal Layout & Planning	3	SMTL	2402	Duct Work	4
MGMT	1302	Safety (OSHA)	3	SMTL	2409	Sheet Metal Practicum	4
PHYS	1403	Survey of Physics	4	PHYS	1401	College Physics I	4
PSYC	2301	Introduction to Psychology	3	SPCH	1301	Public Speaking	3
DRDS	1303	Architectural Blueprint Reading	3				15
			16				
						TOTAL HOURS	77

SMALL GAS ENGINE REPAIR

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
SGER	1400	Shop Practice & Safety	4	SGER	1407	Small Gas Engine Service	4
SGER	1401	Gas Engine Fundamentals	4	SGER	1408	Chain Saw Service and Repair	4
WELD	1401	Beginning Gas Welding	4	SGER	1409	Motorcycle Service	4
TMTH	1300	Technical Mathematics I	3	ENGL	1309	Communications Skills	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
PYED		Physical Education	1				16
			17				

SECOND YEAR

First Semester			Credit	Second Semester			Credit
SGER	2407	Off-Road Small Engine Repair and Service	4	SGER	2311	Shop Organization & Management	3
SGER	2410	Lawn & Garden Equipment Service	4	SGER	2408	Outboard Motor Service and Repair	4
WELD	1402	Beginning Arc Welding	4	OADM	2304	Bookkeeping I	3
ELCT*		Approved Elective	3	ELCT*		Approved Elective	3
			15	ELCT		Elective	3
							16
						TOTAL HOURS	64

*Approved Electives: SGER 2409, AUTO 1401, BUSS 1301, MGMT 1302, MGMT 1304, MGMT 1305, MGMT 1306, MGMT 1309, MGMT 2302, MGMT 2305, WELD 1404.

TELECOMMUNICATIONS

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
TELE	1301	Introduction to Broadcasting	3	TELE	1305	Broadcast Writing	3
TELE	1402	Beginning Radio Production	4	TELE	1406	Television Film	4
TELE	1403	Beginning Television Production	4	TELE	1407	Advanced Radio Production	4
ENGL	1301	Composition & Rhetoric I	3	TELE	1408	Advanced Television Production	4
SPCH	1301	Public Speaking	3	ENGL	1302	Composition & Rhetoric II	3
PSYC	1101	College Orientation	1				18
			18				

TELECOMMUNICATIONS (cont'd)

SECOND YEAR

First Semester			Credit	Second Semester			Credit
TELE	2301	Technical Aspects of Broadcasting	3	TELE	2306	Telecommunications Seminar	3
TELE	2304	Broadcast Sales	3	TELE	2307	Broadcast Station Management	3
TELE	2407	Electronic Field Production	4	TELE	2408	Telecommunications Practicum	4
TELE	2409	Telecommunications Field Projects I	4	JOUR	1401	Communications Media	4
ELCT		Business, English, or Social Science Elective	3	PYED		Physical Education	1
PYED		Physical Education	1	ELCT*		Approved Elective	3
			18				18
				TOTAL HOURS			72

*TELE 1405, TELE 2410, JOUR 1402, MISC 1450 or other elective approved by the appropriate College official.

TRAINING MANAGEMENT SYSTEMS

A Two-Year Associate in Applied Science Degree

First Year

First Semester			Credit	Second Semester			Credit
ENGL	1309	Communication Skills	3	BUSS	2306	Personal Finance	3
MGMT	1201	Management of Performance Oriented Training	2	MGMT	1205	Analysis of Training Requirements	2
MGMT	1202	Briefing Techniques, Aids, & Devices	2	MGMT	1206	Professional Resource Management	2
MGMT	1203	Evaluation of Instruction and Training	2	MGMT	1207	Professional Development of the Manager	2
MGMT	1204	Setting Goals & Objectives	2	MGMT	1208	Training Management System	2
ELCT*		Approved Elective	3	MGMT	1209	Managerial Theories	2
PSYC	1101	College Orientation	1	ELCT*		Approved Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
			16				17

SECOND YEAR

First Semester			Credit	Second Semester			Credit
MGMT	2201	Job Performance and Motivation	2	SPCH	2303	Business and Professional Speaking	3
MGMT	2202	Individual Orientation Techniques	2	MGMT	2204	Assessing of Training Standards, Goals and Objectives	2
MGMT	2203	Group Orientation Techniques	2	MGMT	2205	Management Training Theories	2
MGMT	2350	Performance Counseling & Certification by Army Supervisor	3	MGMT	2206	Management Learning Strategies	2
ENGL	2350	Effective Army Writing	1	HIST	2350	Military History I	3
ELCT*		Approved Elective	3	ELCT		Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
			14				18
				TOTAL HOURS			63

*Approved Electives: MGMT 1158, MGMT 2150, MGMT 2151, MGMT 2152, MGMT 2181, MGMT 2182, MGMT 2183, MGMT 2255, MGMT 2258, MGMT 2257, MGMT 2258, MGMT 2259, MGMT 2351 and MGMT 2358.

TRANSPORTATION TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester		Credit	Second Semester		Credit
ENGL	ENGL 1301 or 1309	3	COMM	SPCH 1301 or ENGL 2309	3
MATH	MATH 1302 or 1307	3	OADM 2305	Bookkeeping II or	
OADM 2304	Bookkeeping I or		ACCO 2304	Principles of Accounting II	3
ACCO 2303	Principles of Accounting I	3	TRAN 1303	Economics of	
TRAN 1301	Introduction to			Transportation I	3
	Transportation	3	TRAN 1304	Interstate Commerce	
TRAN 1302	International Trade	3		and Practice	3
PSYC 1101	College Orientation	1	MGMT 1306	Human Relations	3
PYED	Physical Education	1	PYED	Physical Education	1
		17			16

SECOND YEAR

First Semester			Credit	Second Semester			Credit	
MGMT	2302	Personnel Management	3	MGMT	2309	Supervision	3	
TRAN	2301	Economics of Transportation II	3	TRAN	2304	Traffic Management II	3	
TRAN		Transportation Elective	3	TRAN	2302	Transportation Law and Regulation	3	
TRAN	2303	Traffic Management I	3	TRAN		Transportation Elective	3	
TRAN	2311	Transportation Marketing	3	ELCT		Elective	3	
			15				15	
							TOTAL HOURS	63

WELDING

A Two-Year Associate in Applied Science Degree

FIRST YEAR

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

SECOND YEAR

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

*AUTO 1400, ENGR 1301, MGMT 1305, MGMT 1302, or other courses approved by the appropriate College official.

WORD PROCESSING SPECIALIST

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester			Credit	Second Semester			Credit
WOPO	1303	Beginning Keyboarding/ Data Entry	3	WOPO	1304	Intermediate Word Processing Applications	3
ENGL	1301	Composition & Rhetoric I	3	WOPO	1307	Word Processing Concepts	3
MATH	1307	Business Math	3	SPCH*		Speech Selection	3
OADM	1305	Clerical Practice	3	**		Computer/Microcomputer Selection(s)	3
		Computer/Microcomputer Selection(s)	3	OADM	1308	Business Correspondence	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
PYED		Physical Education	1				
			17				16

(Certificate of Completion, Word Processing Operator, awarded upon completion).

SECOND YEAR

First Semester			Credit	Second Semester			Credit
WOPO	2302	Advanced Word Processing Applications	3	WOPO	2303	Office Automation	3
WOPO	2308†	Word Processing Internship I	3	WOPO	2309†	Word Processing Internship II	3
OADM	2304	Bookkeeping I	3	WOPO	2310	Word Processing Center Management	3
ELCT		Elective	3	OADM	2305	Bookkeeping II	3
ELCT		Elective	3	OADM	2307	Office Administration & Procedures	3
			15	ELCT	***	Social Studies Elective	3
							18
							TOTAL HOURS
							66

*SPCH 1301 or SPCH 2303.

**Elective approved by the appropriate College official.

***GOVT 2301, GOVT 2302, HIST 1301, HIST 1302, HIST 2301, PSYC 2301, PSYC 2302, or SOCI 2301, 2302.

†Computer/Microcomputer course may be substituted.

COURSE DESCRIPTIONS

Accounting (ACCO)

ACCO 2303 Principles of Accounting I (3-0) Credit: 3

Analysis and recording of financial transactions, use of journals and ledgers, internal control of cash transactions, income statement and balance sheet, payroll records and reports, depreciation systems, inventory methods, sale and exchange of assets, special journals and voucher systems, accounting for inflation, generally accepted accounting principles.

ACCO 2304 Principles of Accounting II (3-0) Credit: 3

Continues Accounting I. Partnership and corporate accounting methods and procedures, statement of changes in financial position, consolidated financial statements, departments and branches, manufacturing systems, cost accounting systems, capital budgeting, breakeven analysis, financial statement analysis, income tax accounting and business decisions.

ACCO 2305 Introduction to Managerial Accounting (3-0) Credit: 3

A study of the methods by which accounting data are used by management in planning, coordinating, and controlling the operations of a business. Measurement of financial position; analysis of financial statements; cost accumulation and analysis; budgeting; product costing; and quantitative decision techniques. Prerequisite: ACCO 2304.

ACCO 2309 Intermediate Accounting I (3-0) Credit: 3

A detailed study of financial accounting with emphasis on financial statements, current assets, current liabilities, property, plant, and equipment, present value concepts, short-term investments, and intangible assets. Prerequisite: ACCO 2304 with a minimum grade of C.

ACCO 2310 Intermediate Accounting II (3-0) Credit: 3

Continuation of Intermediate Accounting I. Long-term liabilities; corporate capital; accounting for leases and pensions; analysis of financial statements; sources and uses of funds; long term investments; and price-level impact on financial statements. Prerequisite: ACCO 2309.

ACCO 2103 Accounting I Lab (0-3) Credit: 1

ACCO 2104 Accounting II Lab (0-3) Credit: 1

Accounting Technology (ACCT)

ACCT 2303 Fundamentals of Accounting I (3-0) Credit: 3

Analysis and recording of financial transactions, use of journals and ledgers, internal control of cash transactions, income statement and balance sheet, payroll records and reports, depreciation systems, inventory methods, sale and exchange of assets, special journals and voucher systems, accounting for inflation, generally accepted accounting principles.

ACCT 2304 Fundamentals of Accounting II (3-0) Credit: 3

Continues Accounting I. Partnership and corporate accounting methods and procedures, statement of changes in financial position, consolidated financial statements, departments and branches, manufacturing systems, cost accounting systems, capital budgeting, breakeven analysis, financial statement analysis, income tax accounting and business decisions.

ACCT 2305 Basics of Managerial Accounting (3-0) Credit: 3

A study of the methods by which accounting data are used by management in planning, coordinating, and controlling the operations of a business. Measurement of financial position; analysis of financial statements; cost accumulation and analysis; budgeting; product costing; and quantitative decision techniques. Prerequisite: ACCT 2304.

ACCT 2306 Cost Accounting (3-0) Credit: 3

An introduction to the objectives and procedures of cost accounting and control for business firms. It covers the principles and methods of accounting for materials, direct labor, and the distribution of overhead expenses, as well as cost records, operating reports and budgetary control. Prerequisite: ACCT 2304.

ACCT 2309 Fundamentals of Accounting III (3-0) Credit: 3

A detailed study of financial accounting with emphasis on financial statements, current assets, current liabilities, property, plant, and equipment, present value concepts, short-term investments, and intangible assets. Prerequisite: ACCT 2304 with a minimum grade of C.

ACCT 2310 Fundamentals of Accounting IV (3-0) Credit: 3

Continuation of ACCT 2309. Long-term liabilities; corporate capital; accounting for leases and pensions; analysis of financial statements; sources and uses of funds; long term investments; and price-level impact on financial statements. Prerequisite: ACCT 2309.

ACCT 2311 Accounting and Financial Information System I (3-0) Credit: 3

This course is a study of the overall flow systems emphasizing financial data and computerized systems. It covers flow and logic concepts, developing meaningful control concepts and data reporting techniques. Prerequisite: ACCT 2304.

ACCT 2312 Accounting and Financial Information System II (3-0) Credit: 3

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

Administrative Secretarial

(See Office Administration)

Air Conditioning and Refrigeration (AIRC)

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

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

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

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

AIRC 1400 Air Conditioning & Refrigeration Theory & Application (2-4) Credit: 4

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

AIRC 1401 Basic Electrical Circuits (2-4) Credit: 4

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

AIRC 1402 Household Refrigeration Systems (2-4) Credit: 4

Application of the refrigeration cycle to household refrigeration, including refrigerators, home freezers, and window air conditioning units. Instruction in service procedures for locating and correcting problems in the mechanical and electrical systems of units; trouble shooting, repairing and charging refrigeration equipment. Development of shop skills in the use of special refrigeration tools and equipment. Prerequisites: AIRC 1400 and AIRC 1401 or MTNT 1402.

AIRC 1403 Heating Systems (2-4) Credit: 4

The study of types of heating equipment and their application. Service procedures for locating and correcting problems in heating systems. Study of manufacturers information on various heating units and equipment, to enable the student to determine proper installation. Prerequisites: AIRC 1400 and AIRC 1401 or MTNT 1402.

AIRC 1404 Residential Air Conditioning (2-4) Credit: 4

Instruction in heat transfer through material, heat loss and heat gain calculations for residential heating and air conditioning systems, equipment selection and location, duct sizing and layout, controls and control circuits installation and service procedures. Prerequisites: AIRC 1400 and AIRC 1401 or MTNT 1402.

AIRC 1405 Test Instruments**(3-3) Credit: 4**

This course will provide the student with an understanding of the special instruments used in the diagnosis of problems in heating, air conditioning and solar energy equipment. Both the care and use of the instruments will be covered.

AIRC 2401 Control Theory and Application**(2-4) Credit: 4**

Instruction in the operation of control devices, how they can be applied and varied to achieve the designed conditions. Includes interpretation and drawings of schematic and pictorial control circuit diagrams. Prerequisites: AIRC 1400 and AIRC 1401 or MTNT 1402.

AIRC 2402 Commercial Refrigeration Systems**(2-4) Credit: 4**

Types of commercial refrigeration units and systems. Instruction in controls and control circuits in commercial refrigeration. Heat loss and heat gain calculations for commercial applications, equipment selections, locating and piping procedures. Instruction in installation and service procedures for different systems. Prerequisites: AIRC 1400 and AIRC 1401 or MTNT 1402.

AIRC 2403 Commercial Air Conditioning Systems**(2-4) Credit: 4**

A course designed to cover heat transfer, heat loss and heat gain calculations as applied to commercial heating and air conditioning. Psychometrics of conditioned air, duct design and layout, equipment selection and location, shop drawings, controls and control circuits for automatic conditioning of air. Prerequisites: AIRC 1400 and AIRC 1401 or MTNT 1402, AIRC 1404.

Applied Physics (APPH)

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

This course is designed for students in technical areas who must be able to apply certain basic principles of physics to their career field. The course considers only certain areas of physics; especially, mechanics, heat, fluids and the nature of matter. Prerequisite: TMTH 1301 or equivalent.

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

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

APPH 1450 Applied Physics I**(3-3) Credit: 4**

This course is designed for students in technical areas who must be able to apply certain basic principles of physics to their career field. The course considers only certain areas of physics; especially, mechanics, heat, fluids and the nature of matter. Prerequisite: TMTH 1301 or equivalent.

APPH 1451 Applied Physics II**(3-3) Credit: 4**

This is a continuation of Applied Physics I for students in technical areas who must be able to apply certain basic principles of physics to their career field. This course covers wave motion, light, electricity and magnetism, applied electronics and an introduction to nuclear energy. Prerequisite: APPH 1450.

Art (ART.)

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

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

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

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

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

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

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

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

- ART. 1308 History & Appreciation of Art II** (3-0) Credit: 3
This course is a survey of the major and minor arts from the 14th century to the present.
- ART. 1309 Printing for Advertising Art** (2-4) Credit: 3
This course covers the fundamentals of various graphic techniques. Instruction is given in the classification of printing methods, composition, copy and art preparation, paper selection, type and letter styles and usage, trademarks, and handlettering.
- ART. 2301 Graphic Media** (2-4) Credit: 3
This introductory course covers the fundamentals and creative experimentation in etching, serigraphy, and other printmaking media.
- ART. 2302 Oil Techniques** (2-4) Credit: 3
This course is an introduction to the techniques and materials of oil painting.
- ART. 2303 Advanced Oil Painting** (2-4) Credit: 3
This course is a continued exploration of the medium with emphasis on individual expression. Prerequisite: ART.2302.
- ART. 2304 Watercolor Painting** (2-4) Credit: 3
This course covers various techniques of painting in watercolor. It stresses color and composition in application of the medium.
- ART. 2305 Advertising Art I** (2-4) Credit: 3
This course is an introduction to the basic processes and techniques of advertising art. The materials and techniques of layout and commercial design are covered.
- ART. 2306 Advertising Art II** (2-4) Credit: 3
This course is an advanced study of advertising art and production. It continues the principles covered in Advertising Art. Prerequisite: ART 2305.
- ART. 2307 Pen & Ink Techniques** (2-4) Credit: 3
This drawing course is a study of the potentials of the medium and special attention is given to the study of the illusion of form, texture, and value.
- ART. 2308 Color Composition** (2-4) Credit: 3
This course covers the theory of color and form involving definite technical procedures in properties of color theory, and its application to painting.
- ART. 2309 Ceramics I** (2-4) Credit: 3
This course is an introduction to making pottery by hand and/or wheel methods. Glazing and decoration techniques are also covered.
- ART. 2310 Ceramics II** (2-4) Credit: 3
This course is a continuation of techniques of pottery making. Prerequisite: ART. 2309.
- ART. 2311 Fiberarts I** (2-4) Credit: 3
This course involves a study of weaving, rug making, dying, and papermaking. Emphasis will vary from one semester to another.
- ART. 2312 Fiberarts II** (2-4) Credit: 3
This course is a continuation of ART. 2311. Emphasis will vary from semester to semester.
- ART. 2313 Jewelry and Lapidary I** (2-4) Credit: 3
This course is an introduction to jewelry making techniques. Direct metal working techniques are stressed. Instruction is given in the basics of cutting, grinding, and polishing gemstones.
- ART. 2314 Jewelry and Lapidary II** (2-4) Credit: 3
This course is a continuation of jewelry making techniques. Instruction is given in the lost wax method of metal forming and in creative methods of gemstone finishing. Prerequisite: ART. 2313.
- ART. 2315 Problems In Contemporary Art I** (3-0) Credit: 3
This course is an examination of current concerns and practices in contemporary visual art. Recent historical influences, modern aesthetics, contemporary media and techniques, and public accessibility will be covered in classroom lectures and on-site examination of art and art production.
- ART. 2316 Problems In Contemporary Art II** (3-0) Credit: 3
This course is a continuation of Contemporary Art I. Students select and pursue individual projects and research reflecting the concerns of contemporary art. Prerequisite: ART. 2315.

Automotive Body Repair (ATBR)

ATBR 1401 Shop Practices

(3-3) Credit: 4

A course designed to provide the student with basic auto body skills involving safety, lifting devices, measuring tools, fasteners, hand and power tool use.

ATBR 1402 Body and Frame Construction

(2-4) Credit: 4

A course designed to provide an understanding of body frame construction of both conventional and unit bodies. Special emphasis will be placed on repair equipment and procedures to diagnose, repair and align collision-damaged parts. Corequisite: ATBR 1401.

ATBR 1403 Roughing and Alignment

(2-4) Credit: 4

A course designed to provide an understanding of roughing and shaping procedures on automotive sheet metal necessary to make satisfactory body repairs with special emphasis on alignment of component parts such as hoods, doors, fenders, McPherson Strut, etc. Prerequisite or corequisite: ATBR 1401, ATBR 1402, ATBR 1405..

ATBR 1404 Frame Repair & Alignment

(2-4) Credit: 4

A course designed to provide the student with a working knowledge of the types of body frames, misalignment, alignment straightening, repair and the use of special equipment and measuring devices. Prerequisite: ATBR 1401, ATBR 1402, ATBR 1405.

ATBR 1405 Auto Body Welding

(2-4) Credit: 4

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

ATBR 1406 Body Panel Repair, Replacement Finishing

(2-4) Credit: 4

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

ATBR 2400 Major Vehicle Damage Repair

(2-4) Credit: 4

This course is a continuation of ATBR 1404 & 1406 and places emphasis on developing the skills involved in major vehicle damage repairs utilizing the latest techniques and equipment. Prerequisite: All first year courses.

ATBR 2402 Glass, Electrical & Power Accessory Service

(2-4) Credit: 4

A course designed to provide the student with a knowledge of all types of glass and weathersealing devices and service, and various types of power assist and minor electrical repair. Prerequisite: ATBR 1402.

ATBR 2403 Painting & Refinishing

(2-4) Credit: 4

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

ATBR 2405 Management & Estimating

(3-3) Credit: 4

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

Automotive Service and Repair (AUTO)

AUTO 1150 (CEOS 0351)

Auto Maintenance

(0.3-1) Credit: 1

Procedures (Elec & Body)

Designed to teach the students to perform maintenance and troubleshooting on the electrical systems and body maintenance.

AUTO 1151 (CEOS 0551)

Auto Maintenance

(0.3-1) Credit: 1

(Brakes)

Provide the students with the knowledge and skills to maintain and troubleshoot the brake system as detailed in the service manual.

AUTO 1157 (CEOS 0251)

Auto Maintenance

(0.3-1) Credit: 1

Procedures (Engine)

Course is designed to teach organizational maintenance on wheel vehicles ¼ ton, 1¼ ton, 2½ ton, and 5 ton. Includes safety, test equipment and fundamentals.

AUTO 1253 Operational Maintenance Course (1.5-2) Credit: 2
Course is designed to teach vehicle operators to perform maintenance and operate the M809 series 5-ton and unit generators.

AUTO 1254 (CEOS 0195) Operators Training & Maintenance (2-2) Credit: 2

This course is designed to teach operators proper operation of vehicles and maintenance of vehicles, includes forms, safety, accident forms, PMCS, and use of Publications. Includes NSC Defensive Driving.

AUTO 1400 (CEGV 0107) Shop Practices & Safety (2-4) Credit: 4
A course designed to provide the student with basic automotive skills involving shop safety, automotive lifting devices, use of shop and flat rate manuals, measuring devices, fasteners, hand and power tool use, thread repair, soldering, automotive terminology, cleaning methods, and the basic nine systems of the automobile.

AUTO 1401 (CEAM 0113) Internal Combustion Engine Fundamentals (2-4) Credit: 4

This course is designed to provide the student with a knowledge of the internal combustion engine including the types, engine nomenclature, basic minor tune-up, pre-tear down diagnosis and engine removal procedures. Valve train service and valve grinding operations are also included. Prerequisite or corequisite: AUTO 1400.

AUTO 1402 (CEAM 0111) Automotive Electrical Systems (2-4) Credit: 4

This course is designed to provide the student with a working knowledge of basic automotive electricity, including Ohm's Law, wiring and wiring service, wiring diagrams, lighting circuits, magnetism, electrical accessory service, and the use of basic electrical test instruments. Prerequisite or corequisite: AUTO 1400.

AUTO 1403 (CEAM 0110) Internal Combustion Engine Service (2-4) Credit: 4

This course covers a brief review of combustion engine fundamentals. Work experience in valve train service, engine disassembly, repair and replacement of pistons, rings, crankshafts, camshafts, timing gears and chains, lubrication and cooling system service, and engine rebuilding procedures are included in this course. Prerequisite: AUTO 1401.

AUTO 1404 (CEGV 0112) Fuel Systems (2-4) Credit: 4

A course designed to provide an understanding of the theory, fundamentals of operation, and construction of the various types of carburetors, fuel pumps, and components of the fuel system, using established procedures, measuring tools, hand tools, and special testing equipment for testing and adjusting overhauled carburetors. Prerequisite or corequisite: AUTO 1400.

AUTO 1405 (CEGV 0113) Automotive Air Conditioning (2-4) Credit: 4

A course designed to provide an understanding of the principles, design, construction, installation, and service procedures involved in automotive air conditioning, with special emphasis on system re-charging and compressor service. Prerequisite or corequisite: AUTO 1400.

AUTO 1406 (CEGV 0105) Engine Tune Up (2-4) Credit: 4

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

AUTO 1407 (CEAM 0117) Brake Systems (2-4) Credit: 4

A course designed to provide an understanding of the nomenclature, theory of operation and service procedures involved in the brake system. The use of the brake drum lathe, shoe grinder, bleeder, and other equipment necessary to effect brake repairs will be taught, with emphasis on power brake and dual braking systems. Prerequisite or corequisite: AUTO 1400.

AUTO 2251 (CEPG 0106) Power Generator Mechanics Course (1.5-4.5) Credit: 2

Course is designed to teach wheel vehicle mechanics the skills necessary to perform organizational maintenance on power generators. 1.5KW through 10KW.

AUTO 2250 (CEOS 0140) Operational Maintenance (1.5-2) Credit: 2
To familiarize the student with basic theories and principles of operational maintenance of military vehicles.

AUTO 2301 Automotive Maintenance Procedures (1-4) Credit: 3

This course is designed to cover preventative maintenance procedures of the principle automotive systems including engine, ignition, fuel, electrical, brake and steering systems.

AUTO 2350 (CEOS 0451) Auto Maintenance Procedures (1-4) Credit: 3

Maintenance and troubleshooting the engine, electrical system, transmission, power transfer, propeller shafts, brakes, steering and suspension, and winch as in the service manual.

AUTO 2401 (CEGV 0106) Standard Transmissions and Differentials (2-4) Credit: 4

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

Prerequisite or corequisite: AUTO 1400.

AUTO 2402 (CEMM 0112) Shop Organization and Management (3-3) Credit: 4

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

AUTO 2403 (CEGV 0108) Automatic Transmissions (2-4) Credit: 4

A study of the theory of operation, construction, and maintenance of fluid couplings and various automatic transmissions used in the modern automobile. This course emphasizes diagnostic repair and overhaul techniques applied on live units. Prerequisite: AUTO 2401.

AUTO 2404 (CEAM 0116) Ignition, Starting, and Charging Systems (2-4) Credit: 4

This course covers a review of automotive electrical systems, starting motor operations and service, charging system theory and service, ignition system theory and service including conventional and transistor systems and engine operating principles. Prerequisite: AUTO 1402.

AUTO 2405 (CEGV 0109) Steering & Suspension Systems (2-4) Credit: 4

A course designed to provide the student with an understanding of the function, theory of operation, maintenance, diagnosis, and service procedures involved in the automotive steering and suspension systems, wheels, tires, steering gears, and linkages, wheel alignment factors, diagnosis repair and alignment procedures on live automobiles. Prerequisite or corequisite: AUTO 1400.

AUTO 2406 (CEGV 0110) Engine Diagnosis and Emission Control (2-4) Credit: 4

A course designed to provide an understanding of engine trouble-shooting procedures, utilizing the oscilloscope analyzer and the theory of operation, adjustment, diagnosis, and repair of all types of emission control devices. Prerequisites: AUTO 1400, AUTO 1401, AUTO 1402, AUTO 1403 AUTO 1404.

AUTO 2407 (CEGV 0111) Automotive Diesel Applications (2-4) Credit: 4

This course is designed to cover preventative maintenance procedures of the principle automotive systems including the engine, ignition, fuel, electrical, brake, and steering systems.

AUTO 2409 Automotive Practicum (1-20) Credit: 4

This course consists of on-the-job automotive training that utilizes the principle, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved worksite under the supervision of a College instructor/coordinator.

Aviation Maintenance Technology (AVMT)

AVMT 1301 Maintenance Publications - G (2-2) Credit: 3

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

AVMT 1302 Weight & Balance - G**(2-2) Credit: 3**

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

AVMT 1303 Aircraft Drafting - G**(2-2) Credit: 3**

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

AVMT 1304 Airframe Materials & Corrosion Control - G**(2-2) Credit: 3**

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

AVMT 1305 Basic Aircraft Electricity - G**(2-4) Credit: 3**

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

AVMT 1306 Aircraft Finishes - A**(2-4) Credit: 3**

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

AVMT 1402 Sheet Metal Structures - A**(2-6) Credit: 4**

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

AVMT 2303 Airframe Inspection - A**(2-4) Credit: 3**

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

AVMT 2304 Aircraft Fuel Systems - A**(2-4) Credit: 3**

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

AVMT 2305 Aircraft Instruments Systems - A**(2-4) Credit: 3**

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

AVMT 2306 Engine Electrical Systems - P**(2-4) Credit: 3**

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

AVMT 2307 Engine Lubrication and Cooling Systems-P (2-4) Credit: 3

This course includes the identification and selection of lubricants as well as the repair, inspection, and trouble shooting of the components. It also covers the theory and practical applications of the repair, inspection, trouble shooting and servicing of cooling and exhaust systems. Prerequisite: Successful completion of the general (G) Aviation Maintenance Technology courses.

AVMT 2402 Hydraulics & Pneumatics - A (2-6) Credit: 4

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

AVMT 2403 Aircraft Electrical Systems - A (2-6) Credit: 4

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

AVMT 2404 Powerplant Maintenance Reciprocating Engines - P (2-6) Credit: 4

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

AVMT 2405 Engine Fuel Systems - P (2-8) Credit: 4

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

AVMT 2406 Aircraft Propellers - P (2-8) Credit: 4

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

AVMT 2407 Powerplant Maintenance - Turbine Engines - P (2-6) Credit: 4

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

Biology (BIOL)

BIOL 1301 Biological Science (3-0) Credit: 3

A study of selected topics of biological science for the non-science major. Topics include the cell concept, systems of the human body, aging, an introduction to genetics, evolution and ecology. (This course may be offered via television).

BIOL 1401 General Biology I (3-3) Credit: 4

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

BIOL 1402 General Biology II (3-3) Credit: 4

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

BIOL 1405 Human Anatomy (3-3) Credit: 4

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

BIOL 1406 Human Physiology**(3-3) Credit: 4**

Fundamental study of the chemical interrelationships of human systems. Digestion, respiration, excretion, muscular activities, reproduction, and metabolism are included. Basic physiological instruments and techniques are included in the lab. Prerequisite: BIOL 1405.

BIOL 2303 Genetics**(3-0) Credit: 3**

The study of the physical basis of inheritance and the laws of heredity and variations. Genetic problems are emphasized. Human genetic dysfunctions and modern research in genetic control is discussed. Prerequisites: BIOL 1401 and 1402 or consent of the instructor.

BIOL 2401 Invertebrate Zoology**(3-3) Credit: 4**

Classification, anatomy, physiology, and ecology of the invertebrates. Dissection and identification of structures are included in the laboratory. Field trips for the collection of invertebrates are required at minimal student expense. Prerequisite: BIOL 1401 or 1402 or consent of the instructor.

BIOL 2402 Vertebrate Zoology**(3-3) Credit: 4**

Structure, development, physiology, and natural history of the vertebrate animals; emphasis will be placed on North American forms; field trips are required at minimal student expense. Prerequisite: BIOL 1401, 1402, or consent of the instructor.

BIOL 2404 Microbiology**(3-3) Credit: 4**

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

Business (BUSS)**BUSS 1301 Introduction to Business****(3-0) Credit: 3**

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

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

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

BUSS 2301 Macroeconomics**(3-0) Credit: 3**

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

BUSS 2302 Microeconomics**(3-0) Credit: 3**

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

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

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

Career Pilot (CAPI)**CAPI 1300 Basic Flight****(8-2.8) Credit: 3**

Flight training for completion of the Private Pilot Certificate. A minimum of 57 hours of instruction is provided, including 25 hours of dual flight, of which two hours will be in the simulator, 20 hours of solo flight and 12 hours of oral instruction and briefings. The instruction in the course more than meets the requirements for a Private Pilot Certificate. Prerequisite: CAPI 1303, or concurrent enrollment.

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

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

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

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

CAPI 1303 Air Navigation**(3-0) Credit: 3**

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

CAPI 1304 Intermediate Flight**(.8-3.1) Credit: 3**

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

CAPI 1305 Advanced Air Navigation**(3-0) Credit: 3**

The Federal Aviation Regulations covering the privileges, limitations and operations of a commercial pilot. Basic Aerodynamics and the principles of flight which apply to airplanes. Inspection and certification requirements will be covered and operating limitations, high altitude operations, physiological considerations, weight and balance computations, significance of the use of airplane performance speeds, cruise control, the Airman's Information Manual will be emphasized. Prerequisite: CAPI 1303.

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

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

CAPI 2300 Commercial Aviation**(3-0) Credit: 3**

This course covers air traffic control procedures pertaining to Commercial Pilot, aviation weather and advanced navigational procedures. Advanced flight maneuvers, low altitude enroute charts, approach plates, and Airman's Information Manual. Also, airplane performance factors on a high performance aircraft with retractable gear and flaps and constant speed propeller. Prerequisite: CAPI 1305.

CAPI 2301 Aerodynamics**(3-0) Credit: 3**

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

CAPI 2302 Turbine Engines**(3-0) Credit: 3**

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

CAPI 2303 Air Transportation**(3-0) Credit: 3**

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

CAPI 2304 Advanced Flight**(.9-3.4) Credit: 3**

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

CAPI 2305 Commercial Flight**(.8-3.1) Credit: 3**

Commercial and instrument flight training to prepare the student for the FAA Commercial Pilot Certificate with Instrument Rating. A minimum of 63 hours of instruction is provided, including 30 hours of dual flight, of which 5 hours will be in the simulator. Twenty hours of solo flight and thirteen hours of oral instruction and briefings. Prerequisites: CAPI 2304 and CAPI 2307, or concurrent enrollment.

CAPI 2306 Multi-Engine Flight**(.8-.8) Credit: 3**

This course of flight training leads to the FAA Multi-Engine Pilot Rating. This course is designed to give the advanced pilot a greater depth of aircraft experience. A minimum of 24 hours of instruction is provided, including 12 hours of dual flight, and 12 hours of oral instruction and briefings. Prerequisite: CAPI 2305 or a Commercial Pilot Certificate.

CAPI 2307 Instrument & Ground School**(3-0) Credit: 3**

Basic radio fundamentals as used by the pilot. A description and practical use of various radio aids to safe aerial navigation, including Very High Frequency Omni Direction Range (VOR), Instrument Landing System (ILS), Direction Finding (DF), and others. Charts and approach plates as adapted to the radio navigation, including the use of the Flight Information Manual and ATC procedures. Prerequisite: CAPI 2300.

CAPI 2308 Instructor Rating**(2.5-1.6) Credit: 3**

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

CAPI 2309 Airline Transport Pilot**(1.7-1.7) Credit: 3**

The Airline Transport Pilot Rating is the most comprehensive rating issued by the Federal Aviation Administration. Flight and ground training to qualify for the instruction is provided, which includes 25 hours of dual flight, two flight hours for the FAA Check Flight, and 27 hours of oral instruction and briefings. Prerequisites: First Class FAA Medical Certificate; Age 23; 1,500 hours of approved flight time; and Instrument Rating.

CAPI 2310 Commercial Transition Flight I**(.8-3.1) Credit: 3**

This is the first half of two courses to transition Commercial Rotorcraft Helicopter Pilots to Commercial Airplane Single Engine Land Rated Pilots. The course covers 63 hours of instruction which includes 20 hours of dual flight with one hour in the simulator, 30 hours of solo flight, and 13 hours of oral instruction and briefings. Prerequisites: FAA Commercial Rotorcraft Helicopter Rating, Class II FAA Medical and CAPI 2300 or concurrent enrollment.

CAPI 2311 Commercial Transition Flight II**(.8-3.1) Credit: 3**

A continuation of Commercial Transition Flight I to complete the requirements for a Commercial Single Engine Land Aircraft Rating. The course consists of 63 hours of instruction, which includes 30 hours of dual flight, of which 5 will be in the simulator and 5 hours in a complex aircraft; 20 hours of solo flight with 5 hours in a complex aircraft, and 13 hours of oral instruction and briefings. Prerequisite: CAPI 2310.

CAPI 2312 Instrument Flight Instructor**(1.4-1.4) Credit: 3**

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

CAPI 2313 Multi-Engine Flight Instructor**(1.4-1.4) Credit: 3**

This course is designed to prepare an applicant for the FAA Multi-Engine Flight Instructor Flight Test. A minimum of 40 hours of instruction is provided, including 20 hours of dual flight instruction, two hours for the FAA check flight and 22 hours of oral instruction and briefings. Prerequisites: FAA Multi-Engine Rating and FAA Flight Instructor Single—Engine Land Rating.

CAPI 2314 Commercial Helicopter Rating**(.9-3.2) Credit: 3**

Additional Category Commercial Helicopter Rating Course. A minimum of 66 hours of instruction is provided, including 30 hours of dual instruction, 20 hours solo, and 15 hours oral instruction and briefings; and one hour for the FAA check flight. Prerequisite: FAA Commercial Pilot Rating Single-Engine Land.

CAPI 2315 Helicopter Instructor Rating**(2.5-1.6) Credit: 3**

This course prepares a pilot that is helicopter rated for the FAA Certified Flight Instructor Certificate for helicopter. This course includes 40 hours of ground training and 25 hours of instructor training, which involves 20 hours of dual flight in a helicopter, and 5 hours of practice ground instruction by the student. Prerequisite: Commercial Pilot Certificate with a helicopter category rating.

CAPI 2316 Cessna Citation Type Rating**(2.5-.6) Credit: 3**

This course prepares a pilot to obtain the Cessna Citation Type Rating and as an option an airline Transport Pilot Rating. There is 40 hours of classroom instruction and a minimum of 10 hours flight instruction in the Cessna Citation aircraft. Prerequisite: Commercial Pilot Certificate with instrument and Multi-Engine Rating.

Chemistry (CHEM)

CHEM 1401, 1402 General Chemistry I & II (3-4) Credit: 4, 4

A thorough study of the modern concepts and fundamental principles of chemistry. Quantitative experiments are stressed during the first semester of laboratory and the qualitative analysis of the common ions and an introduction to quantitative analysis is studied in the second semester laboratory. The course is designed for science majors and minors. The course includes three hours lecture, and four hours of laboratory per week. Prerequisite: Two years of high school algebra and MATH 1302, or consent of instructor. CHEM 1402 has a prerequisite of CHEM 1401.

CHEM 1404 Introduction to General Chemistry (3-3) Credit: 4

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

CHEM 2401, 2402 Organic Chemistry I & II (3-4) Credit: 4, 4

This course provides a thorough foundation in organic chemistry. A mechanistic approach is used. The student is introduced to planning of syntheses in lecture. The laboratory introduces students to basic techniques, synthesis of compounds and instrumental analysis. The course is designed for science majors and minors. Prerequisite: CHEM 1401, 1402, or consent of the instructor. CHEM 2402 has a prerequisite of CHEM 2401.

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

This is the study of the theory and practice of chemical analysis. The study of errors is introduced. Simple instrumental methods of analysis are introduced. The course is intended for science majors and minors and medical technology majors. The course includes three hours of lecture, and four hours of laboratory per week. Prerequisite: CHEM 1401, 1402.

CHEM 2404 Physiological Chemistry (3-3) Credit: 4

A study of organic and physiological chemistry for nursing students interested in the processes of life. Basic principles, nomenclature, principal reactions and methods of synthesis and the major classes of physiologically important compounds are studied. Prerequisite: CHEM 1404.

Child Development (CHDV)

CHDV 1301 Introduction to Child Development (3-0) Credit: 3

This course covers the history, philosophy, and ethics of child care, types of child care, facilities, laws and standards that are applicable to child care centers. Emphasis is placed on the responsibilities and duties of the child care worker. Experiences are gained in how to provide for the child's health needs and how to make the child care center a safe place for children.

CHDV 1302 Infant and Toddler Care (2-2) Credit: 3

This course emphasizes the skills required to care for children from birth to three years of age. It shows how the relationship of the primary caregiver to the child influences the physical, emotional, social, and cognitive development of the child. It will also include a study of the infant during the neonatal period and birth, infant stimulation, and the years of the turbulent toddler.

CHDV 1304 Developmental Language (2-2) Credit: 3

The objective of this course is to provide the student the knowledge and skills to develop the language ability of young children. Practical experiences are gained in teaching language activities in a child care center. Emphasis is placed on developing special materials and techniques for bilingual and multi-cultural children.

CHDV 1305 Instructional Aids (2-2) Credit: 3

This course is designed to instruct child care personnel and teacher's aids in the proper operation of various types of audiovisual equipment and the handling of associated materials. Students will also become familiar with resources for free materials and how to construct simple training aids such as bulletin boards, mobiles, picture mounting and laminating.

CHDV 1306 Physical Development & Disorders in Children (2-2) Credit: 3

Normal motor development and techniques for screening young children for motor skills development. Methods and materials for assisting children with physical disabilities and for promoting activities of daily living.

CHDV 1307 Techniques for Child Guidance for the Special Child (2-2) Credit: 3

Normal development of emotional responses in children; understanding emotional behavior disorders in children; techniques for screening children for emotional difficulties; methods and materials for assisting children with emotional disabilities.

CHDV 1401 Learning Programs (2-4) Credit: 4

This course covers methods of planning, working with young children for opportunities in the child's active participation, experimentation and problem solving using materials to provide the greatest scope of experience and learning.

CHDV 1403 Creative Expression (2-4) Credit: 4

Creative activities, both structured and unstructured, in arts, crafts, music, dance, literature, storytelling, dramatic play and recreational play, are covered in this course. Practical experiences are gained by working with the young in a child care center.

CHDV 2301 The Exceptional Child (2-2) Credit: 3

This course is designed to provide a basic knowledge of the child with behavioral problems. The special problems of mental retardation and conditions such as autism are included. Practical experiences at a child care center will cover etiology, diagnosis, characteristics and the daily and long-term management of the exceptional child. Prerequisite: CHDV 1301.

CHDV 2302 Parent-Child Relationships (3-0) Credit: 3

This course is a study in parent-child experiences and responsibilities and how they affect child behavior and development. Emphasis placed on experiences to stimulate a positive identification for family and self-concept, through thinking and reasoning skills and a positive attitude toward behavior management at each age and stage of development. Included is a study of the abused and neglected child.

CHDV 2401 Pre-School Center Management (2-4) Credit: 4

This course covers the theoretical and practical aspects of managing a pre-school center. The main emphasis is placed on developing a management system for a pre-school center that would include budgeting, record keeping, nutrition, health, safety, referral services and personnel practices, including employer/employee relations. Prerequisite: Sophomore standing in the Child Development program.

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

This course includes on-the-job experiences with opportunities for direct involvement in an approved program activity for the child development major. In addition to the practicum, seminar time is spent with community resource persons. Prerequisite: Sophomore standing in the Child Development program.

CHDV 2602 Special Projects (1-15) Credit: 6

This course is designed to allow the advanced Child Development student the opportunity to undertake a project that involves working with pre-school age children. The area of specialization would be selected and performed under the supervision of the instructor. Prerequisite: Sophomore standing in the Child Development program.

Communications Electronics Technology (ELTE)

ELTE 1150 (CEOS 0710) Power Generator Maintenance (1-2) Credit: 1

This course will provide the student with proper maintenance skills to accomplish required periodic maintenance.

ELTE 1151 (CEOS 0188) Radio Maintenance Procedures (1-3) Credit: 1

This course is designed to provide technical knowledge of servicing and repair of Tactical Radio Sets, AN/PRR-9, AN/PRT-4(A) Radio Sets. (Helmet Radios)

ELTE 1301 (CEEM 0150) Technical Mathematics I (3-0) Credit: 3

A study of the basic concepts of math and algebra and the use of the electronic calculator in problem solving.

ELTE 1302 (CEEM 0151) Technical Mathematics II (3-0) Credit: 3

A study in the solution of trigonometric problems through the use of tables, and the electronic calculator. Prerequisite: ELTE 1301.

ELTE 1303 (CEEM 0152) Assembly Methods (1-5) Credit: 3

A study of modern assembly methods and practices used in industry, including the design, layout, and construction of electronic apparatus.

ELTE 1400 Basic Electricity (3-3) Credit: 4

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

ELTE 1401 Electrical Circuits I (3-3) Credit: 4

The first of a two course study of electrical circuitry. This course includes a study of the elementary principles of electricity. It includes coverage of DC topics such as elementary physics, Ohms law, series and parallel resistive networks, and a power formula; and AC topics such as power generation, inductive and capacitive, waveform types, and voltage measurements. It also includes the study and use of analog and digital multimeters, power supplies, and an introduction to the oscilloscope and AC generator.

ELTE 1402 (CEEM 0154) Electrical Circuits II (3-3) Credit: 4

The second course in the study of electrical circuitry. This course includes alternating current topics such as single and polyphase systems, impedance calculations, resonant circuits, transformers, and an in-depth study of the use of the triggered-sweep oscilloscope. Prerequisite: ELTE 1401.

ELTE 1403 (CEEM 0155) Solid State Electronics (3-3) Credit: 4

A study of the active electronic devices (ie. diodes, transistors, etc.) and their more common circuit applications. This course covers circuit design methods of simple power supplies, amplifiers, relaxation oscillators, and switching circuits. This is a technical course requiring a working knowledge of simple algebra. Prerequisite or corequisite: ELTE 1402.

ELTE 1404 (CEEM 0156) Communications Circuits I (3-3) Credit: 4

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

ELTE 1450 Semiconductor Fundamentals (3-3) Credit: 4

An introduction to semiconductors. This course covers concepts and precautions concerning semiconductors, transistor circuits, transistor equivalent circuits, transistor characteristics as well as specification interpretation and biasing on special purpose transistors and diodes.

ELTE 1501 Basic Electricity for Electronics (4-3) Credit: 5

A study of the elementary principles of electricity including voltage, current, resistance, power, magnetism, Ohm's Law, power formulas as related to complex series, parallel, and series-parallel circuits and the use of Kirchoff's Law and Thevenin and Norton's theorems in their analysis. Also covered will be an introduction to inductance, inductive reactance, capacitance, capacitive reactance as applied to simple series and parallel circuits. Mathematic topics covered will include decimals, fractions, scientific notation, roots, powers, exponents, simultaneous equations, powers of ten, percentages and an introduction to trigonometry.

ELTE 1503 Advanced Electricity for Electronics (4-3) Credit: 5

A study of AC circuits containing inductive and capacitive reactance combined with resistance for single and polyphase sources and the application of laws and theorems for solving these complex circuits. Math topics covered in this course include trigonometry, efficiencies, impedance matching, inductive and capacitive reactance, Pythagorean theorem, resonant circuits, power factors, logarithmic and mathematical tables. Prerequisite: ELTE 1501.

ELTE 2103 Individualized Research (1-0) Credit: 1

This course allows the student to prepare the backup and research that is necessary in order for the student to complete ELTE 2303.

ELTE 2250 (CEFC 0103) Tactical Communications (1-4) Credit: 2

This course is designed to provide training and career development for the tactical communications systems operator/mechanic (MOS 31V) on specific communications equipment and components.

**ELTE 2251 (CERM 0100) Field Radio Repairer Course (1-4) Credit: 2
MOS 31E**

This course is designed to provide basic refresher training in Field Radio Repair and Maintenance at the organizational level, and to introduce new equipment and test and repair procedures.

ELTE 2301 (CEEM 0157) Broadcast Equipment Maintenance (1-6) Credit: 3

The operation, preventive maintenance procedures, and trouble-shooting of modern day radio and television broadcast equipment. The course gives the student that much needed practical experience that can only be gained in a live station atmosphere. Prerequisites: ELTE 1404 and ELTE 2407 and the approval of the appropriate College Official.

ELTE 2303 Special Intensive Study (0-9) Credit: 3

An intensive study in the design, theory of operation, and construction techniques used in a project which holds special interest to the student and is in the field of his/her major. A student obtaining a second or third degree, must repeat the course with emphasis and project related to the discipline in which the degree is to be awarded. The student must be eligible for graduation at the end of the semester in which this course is taken. Prerequisite: ELTE 2103 and the approval of the appropriate College Official.

ELTE 2402 (CEEM 0158) Advanced Test Equipment (3-3) Credit: 4

Includes the use and normal user calibration techniques for all phases of Electronic Test Equipment from the very simple to the most advanced. Prerequisite: ELTE 1403.

ELTE 2406 (CEEM 0161) Integrated Devices (3-3) Credit: 4

An advanced study of the many types of IC's in use today. The course will include digital, linear, and LED type devices. Course will also include application and application design. Prerequisite: ELTE 1403 and CMET 1401.

ELTE 2407 (CEEM 0162) Communications Circuits II (3-3) Credit: 4

A study of communications circuits necessary for the successful acquisition of the FCC first class license. Prerequisite: ELTE 1403, 1404.

ELTE 2408 (CEEM 0163) Industrial Electronic Control Circuits (3-3) Credit: 4

A study of special purpose electronic control circuits and systems as applied by industry today. This course will include theory and operation, maintenance, diagnostic troubleshooting, and repair of these special purpose circuits. Prerequisite: ELTE 1403.

ELTE 2409 (CEEM 0164) Electronic Systems Troubleshooting (3-3) Credit: 4

This course includes theoretical and practical laboratory assignments in the study of techniques used in signal tracing and logical circuit diagnosis of different types of analog electronic systems. Prerequisite: CMET 1409.

ELTE 2410 Radio Systems (3-3) Credit: 4

An in-depth study of the circuitry, both discrete and integrated, used in today's AM and FM tuner amps, including both two and four channel multiplexing. Prerequisite: ELTE 1403.

Computer Electronics Technology (CMET)

CMET 1400 Electronics & Computer Skills (2-4) Credit: 4

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

CMET 1401 Digital Circuits (3-3) Credit: 4

A review of the basic gates and gating networks used in digital circuits, and an intensive study of Boolean Algebra, as well as the theory and operation of flip-flop, registers, and counter circuits. The course also covers numbering systems, arithmetical circuitry, and elements of control circuits.

CMET 1403 Computer Systems & Operational Programming (3-3) Credit: 4

The study of the theory of the operation of several computer systems, to include instructions, an introduction to their logic diagrams, and circuit schematic, programming as a troubleshooting tool, and operational characteristics.

CMET 1409- CRT Systems (3-3) Credit: 4

A study of the vertical and horizontal scanning circuits video amplifiers and other related circuits encountered in the most common video display systems. The course includes theory of circuit operation and practical laboratory exercises in troubleshooting. Prerequisite: ELTE 1403.

CMET 2401 Microprocessors and Microcomputers (3-3) Credit: 4
A study of modern day microcomputer techniques includes eight and sixteen bit machines. Both the S-100 and 6800 bus structure will be studied as well as the use of emulation in the design and repair of a microcomputer system. *Prerequisite:* CMET 1401.

CMET 2402 Computer Circuit Analysis (3-3) Credit: 4
A comprehensive study of the clock and pulse generation circuit, wave-shaping circuits, trigger and control circuits, and synchronization and counting circuits, as well as other circuits used in modern-day computer. *Prerequisites:* CMET 1401 and CMET 1403.

CMET 2403 Peripherals & Interfacing (3-3) Credit: 4
The study of selected machine and peripheral interface techniques, to include mag tape and disk, paper tape, CTR, and printer. *Prerequisites:* CMET 2402 and ELTE 2404.

CMET 2404 Computer System: Diagnosis & Maintenance (3-3) Credit: 4
The operation, preventive maintenance procedures, and troubleshooting of modern-day computer equipment, to include the study of advanced diagnostic programming, including the finding, documenting, and repairing of computer malfunctions. The course gives the student the much-needed practical experience that can only be gained in a live computer atmosphere. *Prerequisite:* CMET 2402, or equivalent.

Computer Science (COSC)

COSC 1300 Introduction to Computer Information Processing (3-0) Credit: 3

An up-to-date survey of computer hardware and software systems and developments that will provide the basis for further advancements in information processing. The course is designed to provide 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. It covers terminology and examines the application of a broad range of organizational settings and social environments. Prepares non-computer majors to understand and utilize computers in both their personal and professional lives.

COSC 1301 Data Entry/Keypunch (2-3) Credit: 3
Introduction to keypunching is designed to train beginning keypunch operators. Keypunching, verifying, and program card design are covered. Drills will develop accuracy and speed. *Prerequisite:* Typing speed of 30 wpm.

COSC 1302 Data Entry/Terminal (2-3) Credit: 3
A course designed to train terminal data entry operators. Actual on-the-job type data entry will be performed by the student using on-line video display terminals. Accuracy and speed are stressed. Also covered are different types of data entry systems and the design of source documents and screen formats. *Prerequisite:* Typing speed of 30 wpm.

COSC 1304 Computer Center Operations (3-0) Credit: 3
This course covers operational theories, concepts, and terminology that is necessary for an understanding of how software and hardware interface together to provide a total system. Modern computer center workflow and throughput are emphasized in the course. *Prerequisite:* COSC 1401. *Corequisite:* COSC 1406.

COSC 1306 Introduction to BASIC (2-3) Credit: 3
Offers an introduction to the basic concepts and constructs of programming in BASIC for the student interested in using a computer at home or in a small business or as a tool in a subject area such as math or science. Applications will illustrate personal computing techniques.

COSC 1307 Introduction to Computer Concepts (3-0) Credit: 3
An overview of applications of computers. The course describes major computer system components; stresses the process of information system development, strength and limitations of the application of computer technology, and the relationship between the user of computer and information systems with the technical specialist.

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

This course is designed to provide the student with knowledge and responsibilities of a computer operator and tape librarian. Training is provided to develop the student's ability to work in a computer center.

COSC 1402 Advanced Operations Lab (1-15) Credit: 4
This course consists of supervised work in a computer center. The students learn to operate the computer and peripheral equipment. *Prerequisite:* COSC 1401. *Corequisite:* COSC 1304 and approval of appropriate College Official.

COSC 1403 Introduction to Computer Science & Programming (3-3) Credit: 4

This course is the first required course for Computer Science majors. No prior knowledge of computers or programming assumed. Problem solving, pseudo code, flowcharting and the programming language FORTRAN are covered in depth.

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

This course is designed to provide the student with skills and fundamentals in solving business data processing problems using Full American National Standard COBOL. The student becomes effective in COBOL programming techniques involving sequential files. Table searching, control breaks, and a coverage of Indexed Sequential file handling are presented. Prerequisite: COSC 1403.

COSC 1405 Introduction to Computer Concepts and Analysis (3-3) Credit: 4

Introduces the student to digital computer systems with emphasis on current technology and terminology. Historical development of computing machinery, number systems, data representation, hardware and software are discussed. Methods of identifying business problems best suited for computer solutions and the analysis techniques to develop systems which implement these applications are presented.

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

A study of hardware and software characteristics of digital computers, designed to give the student an understanding of how the fundamental principles by which computers work affect and govern programming techniques. Topics include data representation, machine instruction types, fetch and execution cycles, interrupt schemes, metaprograms, I/O handling, and assembler concepts. Prerequisite: COSC 1403, COSC 1405.

COSC 1407 RPG Programming (3-3) Credit: 4

Report Program Generator, a problem oriented language involving fixed program logic, file description, input, calculation, output of practical business oriented problems on card, tape, and disk systems. Prerequisite: COSC 1403.

COSC 1408 Conversational Languages (3-3) Credit: 4

This course provides a general background in Time-Sharing and conversational computing and a detailed study of the BASIC language. Algorithm development, programming efficiencies, and file organization for the interactive/conversational environment are stressed. Prerequisite: COSC 1403.

COSC 2110 Topics in Computer Science Laboratory (0-3) Credit: 1

Laboratory for COSC 2310 when topic has a laboratory requirement. Prerequisite: Concurrent enrollment in COSC 2310.

COSC 2301 Introduction to Computer Center Management (3-0) Credit: 3

Planning, organizing, and controlling data processing installations. Managerial aspects in the introduction and use of computer systems and management concepts. Prerequisites: 12 hours of Computer Science.

COSC 2310 Topics in Computer Science (3-0) Credit: 3

Study of recent developments and topics of current interest in computer science. Prerequisite: 12 hours computer science or approval of the appropriate College Official.

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

This course is designed to offer the student of COBOL programming an in-depth study of the theory, programming techniques, and needed programming efficiencies that will be required of the prospective COBOL programmer. A thorough coverage is given to file design and the special features of ANS COBOL language. Emphasis is placed on multi-dimensional table handling, searching and sorting techniques, and file manipulation. Programming assignments will require detailed knowledge of necessary Job Control Language (JCL) for program execution. Prerequisite: COSC 1404, COSC 2403 & COSC 2404.

COSC 2402 Advanced Systems (3-3) Credit: 4

The methodology, techniques, and tools used in performing in-depth analysis of information systems destined for computer implementation are described in their relationships within the overall study. An overview of current systems with emphasis on data base management systems. Prerequisites: COSC 1405 and COSC 2404.

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

A study of computer operating system concepts including major software components and their functions. An in-depth coverage of Job Control Language and/or a command language. Use of utilities for data set maintenance and manipulation of system control information. Prerequisites: COSC 1404 and COSC 1406.

COSC 2404 Assembler Language Programming (3-3) Credit: 4
Assembler language programming for the current college system. Programming and debugging of business oriented problems, with emphasis on the standard and decimal instruction set and the sequential access method. Prerequisites: COSC 1404 and COSC 1406.

COSC 2405 Advanced FORTRAN (3-3) Credit: 4
This course is designed for the computer science major to augment his algorithmic and programming talents, and to offer the non-computer science major a thorough coverage of the FORTRAN language to employ as a tool to solve business or scientific problems. Emphasis is placed on multi-dimensional arrays, use of functions and subprograms, searching and sorting techniques, and direct access processing. Prerequisite: COSC 1403 and one other program language.

COSC 2407 PL/I Programming (3-3) Credit: 4
Business and scientific computer applications are developed using PL/I. Emphasis is placed on advanced programming concepts. Prerequisites: COSC 1404 and COSC 1403.

COSC 2408 Introduction to Teleprocessing (3-3) Credit: 4
An introduction to programming for the teleprocessing environment under CICS. Applications will be written and tested on-line. Prerequisite: COSC 2404.

COSC 2409 Field Projects (1-9) Credit: 4
This course provides the student with an opportunity to utilize the knowledge acquired in his/her academic program by designing, planning, developing, and implementing an activity directly associated with a real computing/data processing environment. Prerequisite: Consent of Instructor.

Construction Technology (CONS)

CONS 1301 Materials and Methods (3-0) Credit: 3
A course in the fundamental aspects of the more important materials used in modern construction and how some of these materials can be used to the best advantage.

CONS 1302 Building Science I (3-0) Credit: 3
A study of construction company internal operations to include project supervision, layout and materials handling and job site supervision.

CONS 1401 Construction Equipment and Methods (3-3) Credit: 4
A study of the types of construction equipment and method in which each is employed in the industry. Field projects and assignments will be required.

CONS 1402 Building Science II (3-3) Credit: 4
An extension of CONS 1302 to include a study of construction company field operations, office management, owner, architect and subcontractor management. Prerequisite: CONS 1302.

CONS 1403 Construction Estimating (3-3) Credit: 4
A study of the principles and procedures employed by the construction industry to determine the cost of construction projects, labor productivity, job site overhead and equipment cost. Sweet's Catalog and other standard estimator's reference material will be studied and used to prepare project cost estimates.

CONS 2301 Principles and Practices in Light Construction (3-0) Credit: 3
A comprehensive study of field operations used to erect residential and light commercial construction projects. Prerequisite: CONS 1402.

CONS 2302 Specialty Trades--Light Construction (3-0) Credit: 3
A course designed to acquaint individuals with specialty trades in light construction, such as plumbing, house wiring and roofing. Prerequisite: CONS 1402.

CONS 2401 Construction Management and Scheduling (3-3) Credit: 4

This course covers construction management concepts. It includes a study of planning, organizing, records keeping, scheduling and company policies. It will cover the scheduling of work materials, equipment and subcontractors using the Critical Path Method.

CONS 2402 Form and Framing Construction (3-3) Credit: 4
A course designed to acquaint individuals with the carpentry trades to include forming, setting and framing. Prerequisite: CONS 1402.

CONS 2403 Concrete and Masonry Construction (3-3) Credit: 4
A course designed to acquaint individuals with masonry and concrete trades, to include concrete placement, finishing, bricklaying and plastering. Prerequisite: CONS 1402.

Consumer Electronics Technology (COES)

COES 2301 TV Shop Practices

(1-6) Credit: 3

An in-depth study of basic procedures used in the modern TV shop. Includes record keeping, stocking and ordering procedures, shop management, and advanced techniques of TV repair. Prerequisite: CMET 1409, or equivalent.

COES 2408 CATV & Audio Distribution Systems

(3-3) Credit: 4

A two-part course consisting of a study of commercial P.A. or sound reinforcement systems, and a study of large scale T.V. "cable systems" and small scale antenna distribution systems. This course includes some "on the job" training with commercial companies. Prerequisite: ELTE 1403.

COES 2409 Advanced Television Servicing

(2-4) Credit: 4

The operation and service of the more complicated television receiver circuits are covered in this course. Special attention is given to the use of techniques and equipment for the most economical solutions to difficult problems. Includes an introduction to transistorized and color television. Prerequisite: CMET 1409.

Developmental Studies (DS--)

DSCO 0300 Developmental Communications

(1-2) Credit: 3

A course offered in a laboratory setting to improve reading comprehension and rate and word recognition. Specific areas of study include syllabication, phonetic analysis, context clues, word elements, sequence, setting, main ideas, drawing conclusions, and making inferences.

DSED 0300 College Study Skills

(1-2) Credit: 3

Designed for improvement of study systems. Emphasis is placed on high level study skills and the improvement of time management, effective listening and notetaking, marking tests, learning through media, concentration, retention of information, and taking examinations.

DSMA 0101 Basic Developmental Mathematics

(1-1.5) Credit: 1

This course helps students prepare to pursue college-level academic work. It uses varied instructional techniques to identify deficiencies and provide a review of fundamental operations in mathematics.

DSMA 0300 Developmental Mathematics I

(1-2) Credit: 3

An introductory course including instruction in mathematical operations with rational numbers, the application of measurement systems to geometric problems, and an introduction to basic probability and statistics.

DSMA 0301 Developmental Mathematics II

(1-2) Credit: 3

A mathematical approach to consumer-oriented and family living problems, including budgeting, balancing a checkbook, calculating wages and payroll deductions, and completing Federal income tax forms.

DSMA 0302 Developmental Mathematics III

(1-2) Credit: 3

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

DSRE 0101 Developmental Reading

(1-1.5) Credit: 1

This course helps students prepare for college level academic work. It uses varied instructional techniques to help students improve their proficiency in reading comprehension and rate, word recognition and vocabulary development.

DSRE 0300 Reading & Comprehension I

(1-2) Credit: 3

A course offered in a laboratory setting, using varied instruction techniques, designed to help students improve their proficiency in reading comprehension and rate, word recognition and vocabulary development.

DSRE 0301 Reading & Comprehension II

(1-2) Credit: 3

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

DSSP 0300 Developmental Speech

(1-2) Credit: 3

An introductory course emphasizing structure and different techniques of presentation, as well as principles and methods of discussion. Designed to identify deficiencies and strengths, and to develop and improve interpersonal skills and the student's ability to communicate through effective speech.

DSWR 0101 Basic Developmental Writing

(1-1.5) Credit: 1

This course helps a student prepare to pursue college-level academic work. It uses varied instructional techniques to identify deficiencies and improve basic writing skills.

DSWR 0300 Developmental Writing I (1-2) Credit: 3

A course offered in a laboratory setting, using varied instructional techniques, designed to identify deficiencies and improve basic writing skills necessary for the student who intends to pursue college-level academic work.

DSWR 0301 Developmental Writing II (1-2) Credit: 3

A course in a laboratory setting to develop the ability to locate specific types of material, interpret and summarize information, analyze data and draw conclusions, and to prepare and present the findings in written form.

DSWR 0302 Developmental Writing III (1-2) Credit: 3

A course designed to extend reading, research, and writing skills. Emphasis is placed on reference materials relating to consumers, including deceptive trade practices, terms used in written contracts, and a wide variety of consumer oriented literature.

Diesel Maintenance

(See Diesel Mechanics)

Diesel Mechanics (DIEM)

DIEM 1150 (CESP 0104) GOER Operator/ (1.6-1.9) Credit: 1
Organizational Maintenance

This course is designed to train personnel in operator and organizational maintenance tasks for the GOER family of vehicles. Includes PMCS, familiarization and operation, and organizational maintenance tasks for the family of vehicles.

DIEM 1250 (CESP 0103) GOER Vehicle Direct (1.3-3.8) Credit: 2
Support Maintenance

This course is designed to train maintenance personnel in Direct Support maintenance tasks for the GOER family of vehicles. Course is performance based, emphasizing hands-on performance tasks on the various systems of the GOER vehicles.

DIEM 1401 Diesel Engine Fundamentals (2-4) Credit: 4

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

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

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

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

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

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

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

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

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

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

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

DIEM 2402 Diesel Starting & Charging Systems (2-4) Credit: 4
This course will provide an understanding of the theory of operation and construction of the starting and charging systems to include starters, relays, switches, alternators, and batteries. Testing, trouble-shooting and repair of the various components will be emphasized. Prerequisite: AUTO 1400.

DIEM 2403 Diesel Engine Overhaul (2-4) Credit: 4
This course is designed to provide the student with the knowledge to perform a complete engine overhaul on various types of diesel engines. Crankshaft, camshaft, bearing, seals, cylinder sleeves, and valve reconditioning service will be performed. Prerequisites: AUTO 1400, DIEM 1401, DIEM 1402.

DIEM 2404 Diesel Automatic Power Trains (2-4) Credit: 4
This is a theory and laboratory course in torque converters and various automatic transmissions utilized in conjunction with diesel engine application. It will provide a working knowledge of the mechanical and hydraulic operations in the automatic transmission. Emphasis will be placed on how to clean, disassemble, inspect, service and trouble-shoot various automatic transmissions. Prerequisites: AUTO 1400, DIEM 1404.

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

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

DIEM 2409 Diesel Practicum (1-20) Credit: 4
This course consists of on-the-job diesel mechanics training that utilizes the principles, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved worksite under the supervision of a College instructor/coordinator.

Drafting and Design/Graphic Arts (DRDS)

DRDS 1302 Blueprint Reading (2-2) Credit: 3
The fundamentals of blueprint and sketching as they apply to machine drawing.

DRDS 1303 Architectural Blueprint Reading (2-2) Credit: 3
The fundamentals of blueprint reading for the construction trades. This course includes familiarization with standard terms, sizes, estimations and commercial practices.

DRDS 1400 Fundamentals of Drafting (2-4) Credit: 4
An overview of drafting to include shape and size description, lettering, dimensioning, pictorial drawings, copy reproduction, and the use of equipment essential to the field of drafting.

DRDS 1401 Pictorial Drafting (3-3) Credit: 4
A course mainly concerned with pictorials. Includes the theory of oblique and isometric drawings. Also covered are one and two point perspectives of shade and shadow application. Prerequisite: ENGR 1301 or DRDS 1405 or concurrent enrollment.

DRDS 1402 Technical Illustration (3-3) Credit: 4
Introduction to pictorial drawings as used in industrial catalogues, assembly sheets, newspaper publications, and promotional literature. Work to be done in various media to include pencil, ink, transfer tapes, and air brush. Prerequisites: ENGR 1301, DRDS 1401, DRDS 1405 or concurrent enrollment.

DRDS 1403 Machine Drawing (2-4) Credit: 4
Drawings and manufacturing processes; Training in producing various kinds of advanced drawings; commercial practices and economics; the use of standard parts, sizes, symbols, and abbreviations. Prerequisites: ENGR 1301, DRDS 1401, DRDS 1405 or concurrent enrollment.

DRDS 1404 Structural Drafting (2-4) Credit: 4
A study of the A.I.S.C. specifications and standards; structural theory and data; designing and detailing structural members and connections. Design and development of details and specifications for light industrial structures to include structural steel, pipe, and reinforced concrete rods. Prerequisite: ENGR 1301, DRDS 1405.

DRDS 1405 Technical Drafting (2-4) Credit: 4
Freehand and instrument drawing, dimensioning, fastening, pictorial methods, charts and graphs, projections drawings, geometry or graphical construction.

- DRDS 1406 Applied Descriptive Geometry** (2-4) Credit: 4
Involves point, line and plane relationships, auxiliary views, intersections, and flat pattern development. Emphasis is placed on practical solutions to realistic engineering problems relating to aerospace, mining, and geology. Prerequisite: ENGR 1301 or DRDS 1405.
- DRDS 2350 Applied Statics I** (3-0) Credit: 3
A study of the principles of mechanics of rigid bodies in equilibrium with emphasis in the areas of friction, centroids, center of gravity and moments of inertia. Prerequisite: TMTH 1301 or equivalent.
- DRDS 2351 Applied Statics II** (3-0) Credit: 3
A continuation of Applied Statics I. This course covers the application of knowledge and skills relative to the stability of structures and safe loads that can be carried by girders. Activities include computation of the center of gravity of an object when given the appropriate information, a discussion of the variety of materials used and their strength and brief practices on designing equilibrium tools and mechanisms.
- DRDS 2401 Pipe Drafting** (2-4) Credit: 4
Design and detailing of pipe systems making use of standard practices and symbols; includes single line, double line, plan profile and isometric drawings of pipe systems. Prerequisite: ENGR 1301 or DRDS 1405.
- DRDS 2402 Architectural Drafting** (2-4) Credit: 4
A study of the preparation of architectural plans; elevations, sections, site plans, various building details, room finish, door and window schedules, and structural drawings. Prerequisite: ENGR 1301 or DRDS 1405.
- DRDS 2403 Electronic Drafting** (2-4) Credit: 4
A study of layout and preparation of finished electronic and electrical drawings, stressing modern representation used for pictorial drawing, wiring and connection diagrams, printed circuits, control circuits, and schematic diagrams. Some review of lettering and mechanical drawing principles. Prerequisite: ENGR 1301 or DRDS 1405 or approval of the appropriate College Official.
- DRDS 2404 Principles of Design** (3-3) Credit: 4
Theory and practice of design as related to engineering and technology. Analysis in the areas of architecture, machine design, structural design, and product development. Prerequisites: ENGR 1301 or DRDS 1405, DRDS 1401, DRDS 1402.
- DRDS 2405 Civil Design Drafting** (3-3) Credit: 4
Drafting problems and techniques in civil engineering projects, including key maps, drainage, plans and profiles, typical roadway cross sections, earthwork, land development and surveying. Prerequisites: ENGR 1301, ENGR 1302, or DRDS 1405 and DRDS 1406.
- DRDS 2406 Industrial Practice** (2-4) Credit: 4
This course is designed to give specialized practice to the student in his major field of interest. The student will complete actual jobs for area industries to gain realistic experience in his chosen career. Note: Must be taken during the last semester of the sophomore year.
- DRDS 2410 Computer Aided Drafting** (2-4) Credit: 4
A course designed to introduce the computer to the student of drafting as another means of preparing detailed drawings. Emphasis is placed on equipment familiarization, graphics/terminal functions and the application of computer graphics to the development of drawings to standards set by industry. Prerequisite: Sophomore standing in Drafting Program.
- DRDS 2411 Computer Aided Drafting II** (2-4) Credit: 4
This course is a continuation of DRDS 2410. Emphasis will be placed on the use of the CADAM system as a design and problem-solving instrument. The student will select problems from the drafting field of his choice. Prerequisite: DRDS 2410 and approval of the appropriate College Official.

Electronic Data Processing

(See Computer Science)

Emergency Medical Technician (EMET)

EMET 1201 Emergency Medical Technician Supplemental

(1-1) Credit: 2

This course supplements the instruction and course content and types of didactic and practical experiences in EMET 1402. This course in conjunction with EMET 1402, will meet and/or exceed the emergency medical service requirements of all states.

EMET 1302 Military Medicine

(2-2) Credit: 3

This course increases the military medic's ability to provide prehospital care in an isolated environment, and prepares the medic in military-specific subjects such as specialty extrication and evacuation; battlefield triage; nuclear, biological and chemical casualty management; preventive medicine; field hygiene and sanitation; as well as specific medical support procedures such as Radio Telephone. Portions of this course may be used to satisfy the National Registry requirements for continuing education. Prerequisite: EMET 1402 or equivalent in MOS 91A, 91B, 91C (Army), HM-0000, HM-8404 (Navy), 902 series (Air Force).

EMET 1303 First Responder

(2-1) Credit: 3

This course prepares the first responder, or medically untrained, to be proficient in not only providing basic life support to victims or emergencies, but also in taking any actions necessary to minimize the patient's discomfort and prevent further injury. This course has been designed to meet the specifications of the Department of Transportation's First Responder Training Course.

EMET 1304 Drug and Alcohol Abuse

(3-0) Credit: 3

This course discusses the physiological and psychological effects of drug and alcohol abuse on the individual, the family and on society. Students learn the symptoms of drug and alcohol abuse and how to recognize them in individuals. The course discusses the problems causing abuse and how to understand and help the user. The course also includes discussion of the organizations available for treatment of the user, their effectiveness and an evaluation of alternate treatment programs.

EMET 1305 Emergency Medical Seminar

(3-0) Credit: 3

This course is designed to keep the Emergency Medical Technician abreast of new developments, trends, current major issues, legal professional concerns, and other important factors that have an impact upon the emergency medical field. This course may be repeated for credit.

EMET 1401 Emergency Medical Technician

(2-4) Credit: 4

The objective of this course is to provide emergency medical theory and skills training to enable the student to function as an emergency medical technician.

EMET 1402 Emergency Medical Technician-Ambulance

(2-5) Credit: 4

This course exposes the student to the didactic and practical experiences outlined in the 1984 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. Successful completion of this course enables qualified personnel to take the examination and become a Registered Emergency Medical Technician-ambulance.

EMET 1403 Recertification

(2-4) Credit: 4

This course covers all didactic and practical experiences covered in courses EMET 1402, 1201, and 1302. Through National Registry approval this course provides the necessary continuing education, CPR, and refresher training requirements needed for national re-certification requirements. Pre-requisites: EMET 1402 or certification as an EMT.

EMET 2101 Introduction to Paramedic

(1-0) Credit: 1

This course provides an overview of the paramedic's roles in both civilian and military environments, the paramedic's function, legal responsibilities and career opportunities.

EMET 2301 Disaster Planning

(3-0) Credit: 3

This course is designed to help administrators to prepare emergency operation plans and to train existing personnel to cope with a disaster if it should strike. The course provides valuable information on how to plan and prepare efficient responses to earthquakes, floods, fires, nuclear attacks and other emergency situations. It includes elements of disaster preparation, organization of emergency operations plans, training of personnel, the emergency operations center and coordination with other organizations.

EMET 2302 Emergency Medical Center Management

(3-0) Credit: 3

This course provides the student with an understanding of management theories and functions as they relate to the operations of an emergency medical center.

EMET 2303 Psychology of Emergencies

(3-0) Credit: 3

This course covers communicating with families involved in emergencies and the EMT's role in counseling. It also considers personality structures, defense mechanisms, and the developmental stages of man.

Engineering (Civil & General) (ENGR)

ENGR 1101 Introduction to Engineering

(1-0) Credit: 1

This course introduces the student to all the engineering fields and the opportunities within the scope of professional work.

ENGR 1301 Engineering Graphics

(2-4) Credit: 3

Freehand and instrument drawing, dimensioning, fastening, pictorial methods, charts and graphs, projections drawing, geometry of graphical construction. Required for beginning engineering students.

ENGR 1302 Descriptive Geometry

(2-4) Credit: 3

Involves point, line and plane relationships, auxiliary views, intersections, and flat pattern development. Emphasis is placed on practical solutions to realistic engineering problems relating to aerospace, mining, and geology. Prerequisite: ENGR 1301.

ENGR 1303, 1304 Plane Surveying I & II

(2-3) Credit: 3-3

These courses cover the use and care of surveying instruments, note keeping, distance measurements, traverse surveying, areas, angles and elevations, legal principles, and elementary map making. They also cover planetable and transit methods of topographic map production, field problems related to highway surveying, circular and vertical curves, earthwork, volumes and cost estimates, triangulation and base lines. Prerequisite: MATH 1303 or equivalent.

ENGR 1305 Engineering Problems

(3-0) Credit: 3

This is an introductory course in engineering for students of physics and engineering which includes elementary statics and dynamics. Emphasis is given to the engineering method of analysis in problem solving.

ENGR 2301 Advanced Problems in Surveying

(2-3) Credit: 3

Advanced problems in circular, parabolic, and spiral curves; adjustment of level lines and nets; conversion from plane to geodetic coordinates and reverse; establishment of triangulation nets; and other problems encountered in extensive and in special purpose surveys. Essential elements of analytical geometry and of statistics will be applied to problems. Prerequisite: ENGR 1302 and 1304.

ENGR 2302 Land Mapping

(2-2) Credit: 3

The drawing of contour maps, plot plans, parcels or tracts of land surveyed, and the layout of subdivisions; the drawing of road maps as used by civilians and the military. Prerequisite: ENGR 1304.

English (ENGL)

ENGL 1300 English Fundamentals

(3-0) Credit: 3

A study of basic composition skills with emphasis on sentence structure, paragraph structure, and grammar. Intended only for native English speakers.

ENGL 1301 (CEED 0111) Composition & Rhetoric I

(3-0) Credit: 3

Composition of short papers, with emphasis on sentence structure, paragraph development, and paper organization. Analysis of expository prose.

ENGL 1302 (CEGS 0127) Composition & Rhetoric II

(3-0) Credit: 3

An introduction to literature; the short story, poetry, drama, and the novel. Composition of short papers with emphasis on interpretation and analysis of literary selections, optional research paper. Prerequisite: ENGL 1301 or advanced standing.

ENGL 1303, ENGL 1304 English for International Students I & II

(3-2) Credit: 3, 3

Speaking and writing for students whose native language is not English. Intended to aid foreign students in attaining greater facility in the use of the English language.

ENGL 1305 Basic English I

(2-1) Credit: 3

A review of reading fundamentals emphasizing the development of reading techniques by improving reading comprehension and rate, word recognition, and vocabulary development. Instruction is also given in phonics and spelling.

ENGL 1306 Basic English II

(2-1) Credit: 3

A continuation of Basic English I. A continued review of reading fundamentals with the emphasis on the further development of reading techniques by improving reading comprehension and rate, word recognition, and vocabulary development.

ENGL 1307 Business English**(3-0) Credit: 3**

Fundamentals of grammar, punctuation, and sentence structure as employed in written business communications. A review of word study, sentence analysis, punctuation, paragraphing. Required for all students majoring in Office Administration.

ENGL 1309 (CEED 0107) Communications Skills**(3-0) Credit: 3**

Instruction in grammatical construction, spelling; punctuation; writing effective business letters; preparation of technical reports, business forms and blanks; speaking to groups; business meetings; personal interviews; telephone conversations; and social speech situations.

ENGL 2150 (CEOS 0192) Expressive and Forceful Writing**(20-0) Credit: 1**

Develops skills and techniques necessary for writing effective military correspondence.

ENGL 2301 English Literature I**(3-0) Credit: 3**

A survey of English literature from Beowulf through the eighteenth century. Includes selections of poetry, prose, and drama. Prerequisites: ENGL 1301, 1302.

ENGL 2302 English Literature II**(3-0) Credit: 3**

A survey of English literature beginning with the Romantic period and including masterpieces of Victorian and contemporary writers. Includes selections of poetry, prose, and drama. Prerequisites: ENGL 1301, 1302.

ENGL 2303, 2304 World Literature I & II**(3-0) Credit: 3,3**

A study of masterpieces of Western World Literature from Homer through the Renaissance and from the Renaissance to the present. Prerequisites: ENGL 1301, 1302.

ENGL 2305 American Literature I**(3-0) Credit: 3**

Survey from the beginning to 1860. A critical study of the major American writers from the Colonial Period to Whitman. Includes both narrative and expository prose, as well as poetry and drama. Prerequisite: ENGL 1301 and 1302.

ENGL 2306 American Literature II**(3-0) Credit: 3**

A critical study of the major American writers from Franklin to Faulkner. Prerequisite: ENGL 1301 and ENGL 1302.

ENGL 2309 (CEED 0101) Technical Writing**(3-0) Credit: 3**

Provides opportunities to apply the principles of exposition to the preparation of formal written and oral technical reports. Covers various types of reports that use modern style and format. Prerequisite: ENGL 1301 or ENGL 1309.

ENGL 2350 (CEGS 0134) Effective Army Writing I**(3-0) Credit: 3**

A study of basic composition skills with emphasis on sentence structure, paragraph structure, and grammar. Aimed primarily at development of skills and techniques necessary for writing effective military correspondence.

Equipment Maintenance (EQMT)**EQMT 1350 Trade Drawing I****(2-3) Credit: 3**

This is a basic course with emphasis on introduction and use of drawing equipment and instruments, geometric construction, lettering, freehand drawing and sketching, orthographic projection, sectioning and dimensioning practices.

EQMT 1351 Trade Drawing II**(2-3) Credit: 3**

This course is a study of dimensioning practices, sectional views, auxiliary views, secondary auxiliary views, pictorial drawings, development and intersection ions, conventional practices, welding drawings, piping drawings, thread and fasteners, working drawings and blueprint readings.

EQMT 1400 Shop Practice and Safety**(2-4) Credit: 4**

This course is an introduction to job and shop safety methods and practices, the proper use of common hand and power tools and the basic skills in the use of these tools.

EQMT 1401 Fundamentals of Machinery**(3-2) Credit: 4**

A study of machines to include levers, gears, inclined planes, chain falls, pulleys, wedges and cams. Students will calculate mechanical advantages and the practical work will include selecting and using proper mechanical aids.

EQMT 1402 Machine Tools**(2-4) Credit: 4**

A course designed to provide an understanding of the theory of operation of lathes, milling machines, grinders, drill presses, power saws and shapers. The student will also have an understanding of the construction, operation, and maintenance of each type machine. Safety practices for each type of machine will be stressed.

EQMT 1403 Maintenance of Valves and Pumps (2-4) Credit: 4
This course provides an understanding of the theory of operation of valves and pumps. It covers both stop and check valves to include globe, gate, swing check, ball check, lift check, and safety valves. Students will learn to disassemble, repair, assemble, align, and maintain both pumps and valves.

EQMT 1404 Maintenance of Galley Equipment and Fans (2-4) Credit: 4

This course provides the theory of operation, maintenance required, and practical work in repair of fans, blowers, and galley equipment. Ice machines, rotating ovens, dough mixers, scullary machines, meat cutting machines, pre-wash machines, roof exhaust fans, and fan static balance method will be covered.

EQMT 2401 Maintenance of Air Compressors (2-4) Credit: 4
This course provides the theory of operations, design, classification, application and maintenance of air compressors. It will include reciprocating and vane type compressors and will cover disassembly, repair, assembly and trouble shooting.

EQMT 2402 Maintenance of Power Plant Equipment I (2-4) Credit: 4

This course provides an understanding of the functioning of and maintenance required for selected power plant equipment. Steam and water pumps, traveling screen, and pressure boilers are covered. The course also covers the steam water and water cooling cycles. Prerequisite: EQMT 1400, EQMT 1404.

EQMT 2403 Maintenance of Power Plant Equipment II (2-4) Credit: 4

A continuation of EQMT 2402. This course covers turbines, generators and auxiliary equipment. Overhaul of selected equipment and proper lubrication will be included. Prerequisite: EQMT 2402.

EQMT 2405 Principles of Machine Design (3-3) Credit: 4

A study in machine designs with emphasis on drawing and manufacturing processes. This course includes drawings for sand castings, forging and drawings of forgings, fundamentals of machining, lathe, drill press, shaper, planer parts machined from stock and other pertinent areas relative to machine practices.

EQMT 2409 Equipment Maintenance Mechanic Practicum (1-20) Credit: 4

This course consists of on-the-job equipment maintenance training that utilizes the principles, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved worksite under the supervision of a College instructor/coordinator.

Finance and Banking (FIBA)

FIBA 1301 Banking Principles (3-0) Credit: 3

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

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

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

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

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

FIBA 2302 Bank Management**(3-0) Credit: 3**

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

FIBA 2303 Marketing for Bankers**(3-0) Credit: 3**

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

FIBA 2304 Installment Credit**(3-0) Credit: 3**

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

FIBA 2305 Investment Principles**(3-0) Credit: 3**

The study of investments to detail the basic principles necessary to prepare individuals to operate in the securities markets either on their own or on behalf of an institution employing their services. Especially important are the relationship of investments to business and the unique functions, advantages, and purpose served by a wide range of securities. Investment terminology is covered in detail.

FIBA 2306 Analyzing Financial Statements**(3-0) Credit: 3**

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

Fire Protection (FPRT)

FPRT 1301 Fundamentals of Fire Protection**(3-0) Credit: 3**

History and philosophy of fire protection; review of statistics of loss of life and property by fire; introduction to agencies involved in fire protection; current legislative developments and career orientation; recruitment and training for fire departments; position classification and pay plans; employee organizations; a discussion of current related problems and review of expanding future fire protection problems.

FPRT 1302 Fire Prevention**(3-0) Credit: 3**

The objectives and views of inspection, fundamental principles, methods, techniques, and procedures of fire prevention administration. Fire Prevention organization; public cooperation and image; recognition of fire hazards; insurance problems and legal aspects; development and implementation of systematic and deliberate inspection program. Survey of local, state, and national codes pertaining to fire prevention and related technology; relationship between building inspection agencies and fire prevention organizations. Engineering as a solution to fire hazards.

FPRT 1303 Fire Protection Systems**(3-0) Credit: 3**

Study of the required standard for water supply; special hazards protection systems; automatic sprinklers and special extinguishing systems; automatic signaling and detection systems; rating organizations and underwriting agencies.

FPRT 1304 Fire Administration I**(3-0) Credit: 3**

An in-depth study of the organization and management as related to a fire department including budgeting, maintenance of records and reports, and management of fire department officers. Personnel administration and distribution of equipment and personnel and other related topics, including relation of various government agencies to fire protection areas, Fire Service Leadership as viewed from the Company Officer's position.

FPRT 1305 Fire Administration II**(3-0) Credit: 3**

Study to include insurance rates and rating, preparation of budgets, administration and organization of training in the fire department; city water requirements, fire alarm and communications systems; importance of public relations, report writing and record keeping; measurements of results, use of records to improve procedures, and other related topics; legal aspects relating to fire prevention and fire protection with stress on municipal and state agencies; design and construction of fire department buildings.

FPRT 1307 Fire Service Chemistry I (3-0) Credit: 3

An introductory study to inorganic and organic chemistry, with emphasis on the metric systems, the periodic chart, water, oxygen, hydrogen, carbon, hydrocarbons, carbohydrates, and polymers.

FPRT 1308 Fire Service Chemistry II (3-0) Credit: 3

A continuation of FPRT 1307. Prerequisite: FPRT 1307.

FPRT 2301 Industrial Fire Protection I (3-0) Credit: 3

Specific concerns and safeguards related to business and industrial organization. A study of industrial fire brigade organization and development, plant lay-out, fire prevention programs, extinguishing factors and techniques, hazardous situations and prevention methods. *Gaining cooperation between the public and private fire department organization.* Study of elementary industrial fire hazards in manufacturing plants.

FPRT 1309 Methods of Teaching (3-0) Credit: 3

This course is designed to teach students how to teach fire service skills, techniques and information.

FPRT 2302 Industrial Fire Protection II (3-0) Credit: 3

Development of fire and safety organizations in industry; relation between private and public fire protection organizations; current trends, deficiencies and possible solutions for industrial fire problems; role of insurance and other special organizations, an in-depth study of specific industrial processes, equipment, facilities and work practices to understand the potential hazards and techniques to detect and control such hazards. Field trips to selected plants and demonstrations of new techniques equipment and innovations. Prerequisite: FPRT 2301

FPRT 2303 Hazardous Material I (3-0) Credit: 3

Study of chemical characteristics and behavior of various materials that burn or react violently related to storage, transportation, handling hazardous materials, i.e., flammable liquids, combustible solids, and gases. Emphasis on emergency situations and most favorable methods of handling fire fighting and control. Prerequisite: FPRT 1307.

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

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

FPRT 2305 Building Codes and Construction (3-0) Credit: 3

Fundamental consideration and exploration of building construction and design with emphasis on fire resistance of building materials and assemblies, exposures, and related data focused on fire protection concerns; reviews of related statutory and suggested guidelines, both local and national in scope. Review of Model Building Codes and Life Safety Codes.

FPRT 2306 Fire and Arson Investigation (3-0) Credit: 3

A study of the detection of arson, investigation techniques, case histories, gathering and preserving of evidence; preparing for a court case; selected discussions of laws, decisions and opinions; kinds of arsonists, interrogation procedures, cooperation and coordination between firefighters and arson investigators and other related topics.

FPRT 2308 Hazardous Material II (3-0) Credit: 3

Hazardous materials covering storage, handling, laws, standards, and fire fighting techniques associated with chemicals, gases, flammable liquids, corrosives, poisons, explosives, rocket propellants and exotic fuel, and radio-active materials. The formation of toxic fumes and health hazards is also stressed. Ignition and combustion characteristics of gases, liquids, and solids related to free-burning fire and explosion phenomena. Familiarization with radiological instruments, human exposure to radiation, decontamination procedures, common uses of radioactive materials and operational procedures. Prerequisites: FPRT 2303.

FPRT 2309 Fire Safety Education (3-0) Credit: 3

A survey of physical, chemical, and electrical hazards and their relationship to loss of property and/or life. Study of codes, laws, problems, and cases. Detailed examination and study of the physical and psychological variables related to the occurrence of casualties. Safe storage, transportation and handling techniques are stressed to eliminate or control potential risks.

FPRT 2310 Marine Fire Protection**(3-0) Credit: 3**

This course covers the specific fire protection concerns of the maritime industry. It provides an in-depth study of the causes of fires, fire prevention, special fire fighting techniques, special equipment and fire safety as they relate to watercraft.

FPRT 2314 Fire Service Hydraulics**(3-0) Credit: 3**

This course covers the fundamental concepts needed to solve a broad range of fire protection hydraulic problems. It includes the measurements of water from flowing orifices; the characteristics of water flow through conduits; the pressure, volume and frictional characteristics of mobile and stationary fire pumps; the trajectory and patterns of fire streams; and the relationship between fixed and mobile fire suppression equipment.

FPRT 2404 Fire Fighting Tactics and Strategy**(4-0) Credit: 4**

Essential elements in analyzing the nature of fire and determining the requirements. Efficient and effective utilization of manpower, equipment and apparatus. Emphasis to be placed on pre-planning, study of conflagration problems, fire ground organization, problem solving related to fire ground decision making and attack tactics and strategy. Use of Mutual Aid and large scale command problems. Prerequisite: Completion of, or registration therein of all other required fire courses.

Food Service Management (FSMG)**FSMG 1250 (CEFS 0100) Food Service Management****(2.5-0) Credit: 2**

Food Service Management, provides basic principles of management process, personnel management, goal setting, job performance and evaluation, delegation of authority and motivation.

FSMG 1300 Quantity Food Production**(3-0) Credit: 3**

An introductory course in culinary skills. Covers basic institutional food preparation. Emphasizes the use of equipment and tools common to an institutional food service kitchen. Stresses the human relations challenges inherent to large food service operations.

FSMG 1302 (CEFS 0203) Nutrition**(3-0) Credit: 3**

A study of dietary needs; the role of proteins, fats, carbohydrates, minerals, and vitamins; factors to be considered in proper selection and preparation of foods for maximum nutritional value.

FSMG 1303 (CEFS 0204) Sanitation & Safety***(3-0) Credit: 3**

This course includes a study of personal cleanliness; sanitary practices in food preparation; cause, investigation and control of illness caused by food contamination; food storage and refrigeration; sanitation of dishes, equipment, and kitchens; cleansing materials, garbage and refuse disposal; safety precautions and accident prevention. Upon completion of this course, the student will have sufficient knowledge to pass the National Institute for the Food Service Industry (N.I.F.I.) sanitation examination. Students must pass the national certification examination to receive credit for this course.

FSMG 1304 (CEFS 0108) Work Organization**(2-2) Credit: 3**

This course is designed to provide a general introduction and orientation to principles of job analysis, performance evaluation, job evaluation and salary administration, and how these affect the work situation. Work measurement and work standard techniques are studied, as well as flow processes and work distribution methods, quantity and quality control planning, and the current impact of governmental guidelines upon such procedures.

FSMG 1305 (CEFS 0109) Food Purchasing***(3-0) Credit: 3**

Applied theory of food and beverage purchasing; factors affecting selections, standards, quality, and prices; techniques of receiving, storing, and issuing supplies, foods, and materials; applied theory of cost control, pricing and portions. Students must pass the national certification examination to receive credit for this course.

FSMG 1306 Menu Planning***(3-0) Credit: 3**

Basic factors of planning menus; variety and nutrition in menu planning; techniques of preparing attractive menus and maintaining budgetary controls; types of menus for various public and private institutions. Students must pass the national certification examination to receive credit for this course.

FSMG 1307 (CEFS 0207) Meat Science**(3-0) Credit: 3**

An introductory course in raising, slaughtering, and packing meats, fish, and poultry, accompanied by an intensive study of wholesale and retail cuts of beef, veal, pork, and lamb. Emphasis is placed on the knowledge of grades, bone structure, muscle configuration, and appropriate cooking methods of hotel and restaurant meat cuts.

FSMG 1306 (CEFS 0125) Restaurant Merchandising (2-3) Credit: 3
Sales promotion; interior decor; types and uniformity of service; food and beverage display; menu and room styling.

FSMG 1309 Short Order Food Preparation (1-6) Credit: 3
Short order food preparation is an introductory course that includes instruction on the basic equipment, tools and preparation techniques necessary to qualify a student to operate a short order food station sufficiently efficient to handle large numbers of customers in a short time.

FSMG 1401 Food Preparation & Serving (3-3) Credit: 4
An introduction to techniques of food preparation. Includes preparation of vegetables, pastries, oven dishes, soups, salads, meats, fish, and poultry. Techniques include experimental cookery, food marketing and preservation, serving and table service.

FSMG 1402 Basic Baking and Pastry Production (2-6) Credit: 4
This is an introductory course in baking and pastry production in a commercial food service establishment or in a bakery. Students learn how to properly use the tools and equipment used in baking and how to make breads, yeast-raised dough products, fried bakery products (donuts and crullers), variety pies, layer cakes and cupcakes, puff pastries, variety cookies, and how to decorate cakes and pastries.

FSMG 2150 (CEFS 0129) Food Purchasing and Financial Management (1.3-1.3) Credit: 1
Preparing financial statements, food pricing, quality and quantity, purchasing, and controlling food costs.

FSMG 2151 (CEFS 0131) Nutrition and Menu Planning (1.5-1.5) Credit: 1
Nutrition and menu planning in the food service industry.

FSMG 2201 (CEFS 0119) Food Service Terminology (2-0) Credit: 2
This course is an introduction to the terminology utilized in the food service industry.

FSMG 2250 (CEFS 0101) Advanced Culinary Skills (2-0) Credit: 2
This course is designed to give fine points of culinary skills and theory. Preparation of classical food menus and the arts of serving food.

FSMG 2251 (CEFS 0302) Culinary Skills (2-2) Credit: 2
Food Preparation and Serving, introduces the student to the methods, techniques, and terminology needed to effectively manage a quality food kitchen.

FSMG 2252 (CEFS 0133) Nutrition and Physical Fitness (2.5-0) Credit: 2

The relationship between proper nutrition and physical fitness. Lectures deal with calorie consumption, apathy, self-discipline, performance, and other character deficiencies, as they relate to obesity and physical fitness.

FSMG 2303 Cafeteria Management (3-0) Credit: 3
This course points out the specific differences between an industrial cafeteria and a conventional restaurant and explains how to cope with the unusual problems of industrial and institutional feeding. Students must pass the national certification examination to receive credit for this course.

FSMG 2304 Marketing & Sales Promotion* (3-0) Credit: 3
A course designed to develop an understanding of what must be done in order to bring the wheels of production and consumption in the United States into mesh. The business activities that direct the flow of goods and services from the producer to the ultimate consumer are analyzed. Coordination of personal selling, advertising, produce design, market research, and customer relations/services are the individual ingredients of sales promotion, and each is examined in detail. Advertising is studied as the force that creates prospects, converts these prospects into customers, and keeps customers returning and buying. Students must pass the national certification examination to receive credit for this course.

FSMG 2305 Financial Management* (3-0) Credit: 3
Methods and application of financial management within the combined food service facility. Primary emphasis upon sales accountability and internal controls utilized within bar, food, dining room, and hotel operation area. Secondary emphasis on budgeting and forecasting with application of effective labor/sales ratios. Students must pass the national certification examination to receive credit for this course. Prerequisite or Corequisite: MATH 1397.

FSMG 2306 Layout and Design (3-0) Credit: 3
Fundamentals of equipment layout for optimum production and operational efficiency. This course will include procedures to design and decorate remodeling projects.

FSMG 2307 (CEFS 0128) Hospitality Industry Law* (3-0) Credit: 3
A study of the nature and scope of business law with emphasis on the hospitality industry. Licensing, civil rights, owner responsibility for safety and property loss of guests, rights of the owner, and history of contemporary hospitality law will be discussed. Students must pass the national certification examination to receive credit for this course.

FSMG 2353 (CEFS 0117) Creative Work (2-3) Credit: 3
Exhibition Work, the art of combining creativity and design with superior food preparation and serving the art of "Garde Manger" is taught.

FSMG 2355 (CEFS 0102) Kitchen Management & Food Servicing (2.5-2.5) Credit: 3

This course introduces the student to the methods, techniques, and terminology needed to effectively manage a quality food kitchen.

FSMG 2356 (CEFS 0116) Gourmet Cooking (2-3) Credit: 3
Gourmet Cooking introduces the student to the art of cooking as practiced by professional master chefs.

FSMG 2401 Classical Food Preparation (3-3) Credit: 4
This course emphasizes the fine points of culinary skills and theory. Concentration on the preparation of menus. Responsibility of the Chef and Sous-Chef.

FSMG 2402 Exhibition Work (3-3) Credit: 4
Taught in conjunction with Classical Food Preparation. This course is designed to assist the student in professional employment. The essence of exhibitions, buffets, centerpieces, and the role of the Executive Chef will be emphasized. This course will include an exhibition planned and prepared by the student.

FSMG 2452 (CEFS 0103) The Chef's Course (2.5-2.5) Credit: 4
Course is designed to develop a combination of good management practices, food preparation expertise, artistic creativity in laboratory exercises in food preparation. Student will be required to prepare and serve a buffet meal.

FSMG 2453 (CEFS 0110) Dining Facility Management (2.5-4) Credit: 4

This course is designed to provide Food Service personnel the technical knowledge and skills to manage and operate a unit or consolidated dining facility under garrison or field conditions.

*Nationally certified courses.

Food Service Operations (FSOP)

FSOP 1303 Sanitation and Safety (3-0) Credit: 3
This course includes a study of personal cleanliness; sanitary practices in food preparation; cause, investigation and control of illness caused by food contamination; food storage and refrigeration; sanitation of dishes, equipment, and kitchens; cleansing materials garbage and refuse disposal; safety precautions and accident prevention. Upon completion of this course, the student will have sufficient knowledge to pass the National Institute for the Food Service Industry (N.I.F.I.) sanitation examination.

FSOP 1305 Food Purchasing (3-0) Credit: 3
Applied theory of food and beverage purchasing; factors affecting selections, standards, quality and prices; techniques of receiving, storing and issuing supplies, foods and materials; applied theory of cost control, pricing and portions.

FSOP 1306 Menu Planning (3-0) Credit: 3
Basic factors of planning menus; variety and nutrition and menu planning; techniques of preparing attractive menus and maintaining budgetary controls; types of menus for various public and private institutions.

FSOP 2303 Cafeteria Management (3-0) Credit: 3
This course points out the specific differences between an industrial cafeteria and a conventional restaurant and explains how to cope with the unusual problems of industrial and institutional feeding.

FSOP 2304 Marketing & Sales Promotion (3-0) Credit: 3

A course designed to develop an understanding of what must be done in order to bring the wheels of production and consumption in the United States into mesh. The business activities that direct the flow of goods and services from the producer to the ultimate consumer are analyzed. Coordination of personal selling, advertising, produce design, market research and customer relations/services are the individual ingredients of sales promotion and each is examined in detail. Advertising is studied as the force that create prospects, converts these prospects into customers and keeps customers returning and buying.

FSOP 2305 Financial Management (3-0) Credit: 3

Methods and application of financial management within the combined food service facility. Primary emphasis upon sales accountability and internal controls utilized within bar, food, dining room and hotel operation area. Secondary emphasis on budgeting and forecasting with application of effective labor/sales ratios. Prerequisite or Corequisite: MATH 1307.

FSOP 2307 Hospitality Industry Law (3-0) Credit: 3

A study of the nature and scope of business law with emphasis on the hospitality industry. Licensing, civil rights, owner responsibility for safety and property loss of guests, rights of the owner and history of contemporary hospitality law will be discussed.

French (FREN)

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

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

FREN 1402 Beginning French II (3-3) Credit: 4

Elementary grammar is completed. Pronunciation, drill, and conversation based on reading are continued. Stress is given to everyday conversational phrases. Prerequisite: FREN 1401.

FREN 2301 Intermediate French I (3-0) Credit: 3

This course includes grammar review, composition, and reading of French masterpieces, with conversation based on material read. Prerequisite: FREN 1401, 1402, or two years of French in an accredited high school.

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

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

Geology (GEOL)

GEOL 1401 Physical Geology (3-3) Credit: 4

An introductory course in the nature and properties of the materials which make up the earth. Topics included are processes of glaciation, volcanism, weathering, and erosion. Modern theories such as plate tectonic are also studied. Field work, including the study of local rocks and minerals, is an integral part of the course.

GEOL 1402 Historical Geology (3-3) Credit: 4

The course involves a study of the record of life forms that developed throughout geological time. It also covers the development of the earth from its cosmic beginning to current land forms. Principles of stratigraphy, paleontology, geologic time, plate tectonics, and hypotheses of earth origin are studied in the course. Field work, including the study of local fossil fauna, is an integral part of the course.

GEOL 2301 Geomorphology (3-0) Credit: 3

The genesis of landforms, their characteristics and analysis. Emphasis on geological processes, both constructional and destructional, stage of development and relationship to geological structure. Prerequisite: GEOL 1401.

GEOL 2401 Invertebrate Paleontology (3-3) Credit: 4

The classification, methods of preservation, morphology and identification of invertebrate fossils, including the ecological relationships between groups of fossils, stratigraphic significances and evolutionary development and adaptations of fossils. Field trips required. Prerequisite: GEOL 1402.

GEOL 2403 Geologic Field Methods (2-4) Credit: 4

A practical course which deals with the interpretation of aerial photographs, topographic and geologic maps, and examination of petrologic systems in a field setting. Students will collect field data and construct geologic maps, topographic maps, cross-sections and columns. Prerequisites: GEOL 1401 and 1402.

German (GERM)

GERM 1401 Beginning German I

(3-3) Credit: 4

For those who have had no previous work in German. The essential grammar expression. Three laboratory hours per week requires for the memorization and presentation of German dialogues by the students.

GERM 1402 Beginning German II

(3-3) Credit: 4

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

GERM 2301 Intermediate German I

(3-0) Credit: 3

Includes grammar review, composition and practice in conversation, with readings in contemporary German writings, including short stories and some longer works, providing a conversational basis. Prerequisite: GERM 1401, GERM 1402 or two years of German in an accredited high school.

GERM 2302 Intermediate German II

(3-0) Credit: 3

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

Government (GOVT)

GOVT 2301, 2302 State & Federal Government I & II

(3-0) Credit: 3, 3

Fulfills the legislative requirements for six hours of American Government. A functional study of the American constitutional and governmental system, federal, state, and local. Special attention to Texas. The origins and development of the American governmental system; federal-state and interstate relations; lesser units of government; the individual as a citizen, person, and voter; political parties. Legislative, executive, and judicial functions in federal and state governments; financing governmental activities; foreign relations and national defense; governmental services and functions.

GOVT 2303 Introduction to Political Science

(3-0) Credit: 3

This course is designed to introduce the student to the general area of political science and to provide knowledge and understanding of political fundamentals, public law, political dynamics, public policy, theory and organization of the modern state, and international relations.

Graphic Arts

(See Drafting and Design/Graphic Arts)

History (HIST)

HIST 1301 History of the United States to 1877

(3-0) Credit: 3

English colonization; the Revolution; adoption of the Constitution; growth of nationalism; cotton and the slavery problem; war for southern independence; Reconstruction.

HIST 1302 History of the United States from 1877

(3-0) Credit: 3

New social and industrial problems; rise of the progressive movement; United States emergence as a world power; World War I; reaction and the New Deal; World War II; contemporary America.

HIST 2301 International Relations and U.S. Foreign Policy

(3-0) Credit: 3

A study of international relationships and problems in world affairs; organization and processes used to arrive at foreign policy decisions of the United States; the elements of international communist ideologies; and the evolution of American foreign policy since 1945.

HIST 2350 & HIST 2351 Military History I & II

(3-0) Credit: 3, 3

(CEOS 0154 & CEOS 0155)

Courses designed to give the non-commissioned officer a concept of the development of the U.S. Army from pre-revolutionary days to the present, the effect of society on the structures and development of the Army, and the history of the development of tactics and strategies based on modern technology.

Hotel-Motel Management (HMMG)*

HMMG 1300 Food & Beverage Management (3-0) Credit: 3

This is an introductory course in food and beverage operation, with an introduction to purchasing, receiving, storage, preparation and service. Students must pass the national certification examination to receive credit for this course.

HMMG 1302 Hotel/Motel Organization and Administration (3-0) Credit: 3

This course includes management and organization of hotel industry, communications, accounting, personnel relations and administration, management of guests. Planning for today and tomorrow. Students must pass the national certification examination to receive credit for this course.

HMMG 1303 Front Office Procedures (3-0) Credit: 3

This course includes hotel organization and services, front office salesmanship, cashiering, front office posting, accounting for guest charges, procedures and form for accounting controls. Students must pass the national certification examination to receive credit for this course.

HMMG 1304 Hotel/Motel Sales Promotion (3-0) Credit: 3

This course includes sales planning, media advertising to include outdoor, radio, and TV; mail advertising, personal sales; telephone selling; individual and group room business; food and beverage sales and sales incentive. Students must pass the national certification examination to receive credit for this course.

HMMG 1305 Energy Management (3-0) Credit: 3

This course includes techniques that will save money through effective energy conservation methods. Energy management functions to be studied include energy problems facing the hospitality industry, an action plan for energy management, implementing an energy management program and energy management consisting of retrofit and design. Students must pass a national certification examination to receive credit for this course.

HMMG 2301 Hotel/Motel Law (3-0) Credit: 3

This course includes a study of the consequences resulting from a lack of foresight on the part of management, understanding of the attitudes of courts toward innkeepers involved in litigations, and an awareness of the responsibilities law imposes upon the innkeeper. Students must pass the national certification examination to receive credit for this course.

HMMG 2302 Supervisory Housekeeping (3-0) Credit: 3

This course includes organization of a housekeeping department of a hotel, job schedules, job breakdown, floor care, stain removal, fire inspection, purchasing records, equipment records, linen inventory and care, carpeting and care, and basic interior design. Students must pass the national certification examination to receive credit for this course.

HMMG 2304 Hotel/Motel Financial Management (3-0) Credit: 3

This course includes accounting of business for creditors, owners, and government; control of payroll and other operational expenses; and profit making management. Prerequisite or Corequisite: MATH 1307. Students must pass the national certification examination to receive credit for this course.

HMMG 2305 Hotel/Motel Maintenance (3-0) Credit: 3

This course includes a study of the organization, terms and concepts common to building maintenance. Maintenance functions to be studied include heating, plumbing, electrical, refrigeration and air conditioning, communications and signal system, kitchen equipment, fire prevention and protection, and elevator systems. Students must pass the national certification examination to receive credit for this course.

HMMG 2306 Recreational Services (3-0) Credit: 3

This course includes the study of the needs of guest recreation and entertainment, space available for these activities, cost of operation and maintenance, layout and design and direct and indirect benefits. Students must pass the national certification examination to receive credit for this course.

*All courses certified by the American Hotel and Motel Association.

Image Data Management Services

(See Microcomputer, Word Processing and Office Administration)

Journalism (JOUR)

JOUR 1401 Communications Media

(3-3) Credit: 4

Gives the student an understanding and respect for the mass media of the modern world. Includes a survey of all the mass communicative media, their purposes, and methods of operation.

JOUR 1402 News Gathering & Reporting

(3-3) Credit: 4

Designed to acquaint the student with fundamental news gathering and writing techniques for the print medium. It includes instruction and practice in interviewing, writing, and discussion of news sources and values.

Law Enforcement (LAWE)

LAWE 1201 (CELE 0100) Defensive Tactics

(1-2) Credit: 2

This course is designed to provide the student with defensive and protective philosophies to better protect the public and criminal justice personnel against illegal force. Techniques of self-defense, safe arrest procedures, citizen contact, and proper prisoner transportation techniques, along with humane methods of handling disturbed persons, will be presented. The legal and humane use of limited force will be stressed at all times.

LAWE 1301 (CELE 0201) Introduction to Criminal Justice

(3-0) Credit: 3

History, development, and philosophy of law enforcement and criminal justice in a democratic society. Introduction and career orientation to the multifaceted agencies involved in the administration of criminal justice.

LAWE 1302 (CELE 0204) Basic Criminal Investigation

(3-0) Credit: 3

Introduction to the fundamentals of criminal investigation, including theory and history, conduct at crime scenes, collection and preservation of evidence.

LAWE 1303 (CELE 0202) Legal Aspects of Law

(3-0) Credit: 3

Enforcement

History and philosophy of modern criminal law, including the structure, definition and application of statutes and leading case law, the elements of crimes and penalties; general provisions of the Penal Code.

LAWE 1304 (CELE 0203) Criminal Procedure & Evidence

(3-0) Credit: 3

Introduction to the rules governing the admissibility of evidence and types of evidence; criminal procedures in various courts, review of the Model Code of Criminal Procedure, including laws of arrest, search and seizure, and leading case law on each topic.

LAWE 1305 (CELE 0101) Traffic Law

(3-0) Credit: 3

This course is designed to cover all laws pertaining to the control and enforcement of traffic. The officer is taught the use of spot maps and charts, the techniques of enforcement, and the maintenance of good public relations. An analysis of the Model Motor Vehicle Code is given.

LAWE 1306 Survey of Corrections

(3-0) Credit: 3

A general course describing the history and evaluation of the corrections process. Covers all aspects of institutional and community based corrections.

LAWE 1307 Police-Community Relations

(3-0) Credit: 3

The role of the individual officer in achieving and maintaining positive public response; intergroup relations and public information.

LAWE 1308 Police Role in Crime & Delinquency

(3-0) Credit: 3

Study of deviate behavior and current criminological theories, with emphasis on police applications; crime prevention and the phenomena of crime as it relates to juveniles.

LAWE 1309 Police Organization and Administration

(3-0) Credit: 3

Principles of organization and management as applied to law enforcement agencies; introduction to concepts of organizational behavior.

LAWE 1310 Advanced Criminal Investigation

(3-0) Credit: 3

Modern methods and skills required for criminal investigation, to include discovery methods, development and lifting of latent fingerprints; criminal scene sketches; the use of plaster and silicone rubber for reproducing evidence at crime scene; use of modern investigation aids; and techniques of criminal interviews. Prerequisite: LAW 1302.

LAWE 2101 Emergency Medical Aid

(1-1) Credit: 1

This course will focus on the first aid fundamentals that will be helpful to patrol officers in the event of a first aid emergency situation. Procedures recommended by the American Red Cross will be used as guidelines for this course.

LAWE 2201 Firearms**(1-2) Credit: 2**

This course is designed to introduce the student to the skills and techniques of firearms used in the protection of the public and criminal justice personnel. Students will fire various weapons under precision and police combat conditions. The importance of safe weapons handling and the danger of not adopting a mature attitude towards firearms will be stressed at all times. The intelligent, legal, and moral use of the police firearms will be emphasized at all stages of teaching and firing.

LAWE 2301 Probation & Parole**(3-0) Credit: 3**

Course will provide the student with some understanding of the evolution of criminal corrections and explore with the student the many avenues into which the corrections field branches. Develops in each student a basic understanding of the various methods of corrections so that they can function efficiently in the field.

LAWE 2303 Law Enforcement Seminar**(3-0) Credit: 3**

A problems course dealing with current criminal justice trends, issues, and literature. Prerequisite: Approval of appropriate College official. This course may be repeated for credit.

LAWE 2304 Juvenile Procedures**(3-0) Credit: 3**

The organization, functions and jurisdiction of juvenile agencies; the processing and detention of juveniles, case disposition; juvenile statutes and court procedures.

LAWE 2306 (CELE 0110) Traffic Planning and Administration**(3-0) Credit: 3**

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

LAWE 2307 Penology (Jail Operation & Management)**(3-0) Credit: 3**

A survey of the basic concepts of penal and correctional rationale as employed by criminal justice administrators. An overview of the operation and management principles of the institutional setting will be examined in depth.

LAWE 2308 (CELE 0116) Patrol Administration**(3-0) Credit: 3**

Discussion of the administration of surveys, special problems arising while the officer is on patrol, improvement in patrol methods, observation of persons and things, preventive techniques, methods of handling complaints, and the development of contacts.

LAWE 2309 (CELE 0208) Provost Marshal Operations**(3-0) Credit: 3**

The principles of organization and administration as applied to the operational system of a military Provost Marshal's office as well as that of the Inspector General's. Practical training in conduct of briefings, management, and attendant qualities of leadership, and some cases of dissident conditions which might impair role and mission of the dissident command.

LAWE 2310 Correctional Control & Administration**(3-0) Credit: 3**

The course prepares the student to perform supervisory functions related to control of prisoners and contraband; segregation and accountability of prisoners; procedures required at a correctional facility; emergency measures, prisoner privileges; and the records and reports of the detention center.

LAWE 2350 First Responder**(3-0) Credit: 3**

This course covers health knowledge with regard to individual and group welfare. It is concerned with the principles and practices of first-aid for the sick and injured for the non-medically trained individual. Emphasis is given to the preventive aspects as well as care following injury or illness.

Legal Assistant (LEGA)**LEGA 1301 Introduction to Legal Assistant****(3-0) Credit: 3**

This course provides a general introduction to the law with emphasis on the role of the Legal Assistant. To give the Legal Assistant student the necessary legal background, topics to be covered include: the American system of law (constitutional law, statutory law, criminal law and tort law); court systems; and court procedures. General concepts of law are introduced for students with no specific prior legal knowledge. This serves as the introductory course for the program of Legal Assistant.

LEGA 1302 Techniques of Legal Research (2-2) Credit: 3

This course focuses on the importance of legal research as part of a legal assistant's responsibilities. It explores principles of legal research, kinds of lawbooks, components of a law book, citations, reading and finding constitutional law, regulations, cases, law and statutory law. Students will learn how to use the various legal research tools, such as indexes, digests, Shepards, and treaties. Other sources of research, the federal and state codes and reports and administrative regulations will also be covered.

LEGA 1304 Principles of Family Law (3-0) Credit: 3

The legal aspects of divorce and annulment, separation, defense, custody, habeas corpus, support, alimony, tax consulting, out-of-state divorces and validity and jurisdiction service will be discussed. Students will receive a review analysis of separation and custody agreement, as well as the other documents involved in divorce proceeding.

LEGAL 1305 Law of Real Property and Real Estate Transactions (3-0) Credit: 3

Study of the law of real property and in-depth survey of the more common types of real estate transactions and conveyances, such as deeds, contracts, leases, deeds of trust, etc.; drafting problems involving projects related to the subject matter; study of the system of recording and search of public documents. Prerequisite: LEGA 1301.

LEGA 1401 Legal Writing, Legal Documents, Wills, Trust and Probate (3-3) Credit: 4

This course presents the basics of legal writing and legal documents which a legal assistant will have to deal with. The various kinds of legal writing will be considered. These are: letters, instruments (e.g., contracts, deeds, wills, bonds, leases), pleadings (e.g., complaint, answer), memoranda and briefs. Special attention will be given to the memoranda as documents which must be resolved before instruments, pleadings or briefs are sent out. The forms and principles of law for wills and trusts are covered. The organization and jurisdiction of the Texas Probate Court are studied. The administration of estates under Texas Probate Law is analyzed and estate and inheritance taxes are reviewed. Prerequisites: LEGA 1301 and ENGL 1301.

LEGA 2301 Tort and Insurance Law and Claims Investigation (3-1) Credit: 3

A study of the fundamental principles of evidence and of the law of torts and insurance, including special research assignments related to the subject matter; consideration of the techniques of investigation involved in the lawyer's handling of tort and insurance claims and workmen's compensation; a study of the various forms of pleadings involved in commencing such claims in court actions. This course will also cover how to use cameras, tape recorders, video equipment and other investigative equipment; documenting cases and gathering evidence. Prerequisite: LEGA 1302.

LEGA 2302 Personal Property, Sales and Credit Transactions (3-0) Credit: 3

A study of the law of personal property, contracts, including those special forms related to the law of sales and credit transactions, special drafting problems of various instruments and legal research projects; and a survey of the Uniform Commercial Code and its effect on the course subject matter. Prerequisite: LEGA 1301.

LEGA 2303 Business Organizations (3-0) Credit: 3

A study of the formation and operation of corporations, partnerships, limited partnerships, business trusts and other business vehicles, including a survey of the fundamental principles of law applicable to each; special research projects related to the subject matter. Prerequisite: LEGA 1301.

LEGA 2304 Criminal Law and Procedures (3-0) Credit: 3

A study of the Texas Penal Code including definitions of various kinds of defenses and trial procedures; the United States Constitution as it pertains to criminal law; practice in drafting subpoenas, writs, briefs and other trial papers. Prerequisite: LEGA 1301.

LEGA 2305 Civil Litigation

(3-0) Credit: 3

This course is an overview of civil litigation in both state and federal court with particular emphasis on the areas in which a legal assistant can assist the trial attorney. Particular attention is paid to preparation for litigation (interviewing client and witnesses, reviewing public information), discovery proceedings (interrogatories, requests for admissions, depositions and document production) pretrial proceedings (motions to dismiss, motions for summary judgment, pretrial orders), and trial (witnesses and exhibits). Attention is also devoted to practical techniques required to cope with protracted or complex litigation, including organization of pleadings, documents and depositions; preparation of summaries, chronologies and indices; and maintaining a complex file in an orderly manner. Mention is made of the legal theories involved in complex litigation (e.g., products liability, civil rights, securities and antitrust). Principal emphasis is on procedural techniques rather than substantive areas of law.

LEGA 2401 Techniques of Legal Practice

(3-3) Credit: 4

This course emphasizes the techniques of legal writing and coordinates with other Legal Assistant courses to provide specialized training in the actual preparation of legal documents on a case method. Questions of statute of limitation, client, interviews and interview forms, complaints, interrogatories, depositions, answers, motions, orders to show cause, third-party practice, orders, medical records, judgments, pre-trials, settlements, and releases are some of the topics discussed. Prerequisites: LEGA 1301 and 1302.

LEGA 2402 Income Taxation and Legal Accounting

(3-3) Credit: 4

Study of federal, state and local income taxation of individuals and taxpaying entities such as estates, trusts and corporations. Emphasis is placed on the preparation of basic tax returns and other tax-related documents. The course also includes a general introduction to accounting as it relates to legal problems. Prerequisite: LEGA 1301 and ACCO 2303.

LEGA 2403 Legal Office Ethics and Management

(3-3) Credit: 4

This course will provide the ethical considerations applicable to the legal assistant, office organization, specialized bookkeeping, and accounting for attorneys fees and billing procedures, scheduling and calendaring, legal research, management of personnel, proofreading, management of investigations and file preparation, legal drafting, management and organization procedures for specialized areas of law, special considerations with respect to attorney's trust account, preparation of law office forms, check list and files, and disbursement on behalf of clients.

Maintenance Technology (MTNT)

MTNT 1400 Shop Practice & Safety

(3-3) Credit: 4

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

MTNT 1401 Carpentry I

(2-4) Credit: 4

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

MTNT 1402 Electricity

(2-4) Credit: 4

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

MTNT 2401 Masonry

(2-4) Credit: 4

This course covers the theory and practical applications of setting forms, pouring and finishing concrete slabs, laying of brick, concrete tiles, and ceramic tile. Prerequisite or corequisite: MTNT 1400.

MTNT 2402 Carpentry II

(2-4) Credit: 4

This course is a continuation of MTNT 1401, with additional emphasis placed on cabinetry, exterior and interior trim and finish work, including door and hardware installation. Prerequisite: MTNT 1401.

MTNT 2403 Plumbing

(2-4) Credit: 4

This course covers the theory and practical application on plumbing maintenance, service and repair procedures for residential and light commercial buildings. Topics of study include plastic, copper, cast iron, galvanized pipe, cutting and joining. Prerequisite or corequisite: MTNT 1400 or permission of appropriate College Official.

MTNT 2404 Painting & Refinishing**(2-4) Credit: 4**

This course covers the theory and practical application of painting and refinishing residential and light commercial buildings. Topics of study include various types of paint, preparation of surfaces, refinishing damaged and proper maintenance of finished surfaces. Prerequisite or corequisite: MTNT 1400.

MTNT 2405 Foundations, Framing, and Roofing**(2-4) Credit: 4**

The student will be introduced to form fabrication, setting foundations, setting piers and castings and will practice framing and roofing residential buildings. Students will also have practical exercises in roofing. The course will also cover modern methods of placement of materials for structures and building layout systems. Prerequisite: MTNT 1401.

MTNT 2406 Building Materials and Estimating**(3-3) Credit: 4**

The course begins with a study of the manufacturing process, uses, and selection of building construction materials, and continues with exercises in estimating areas, volumes of concrete, foundations, linear and board foot requirements, wall framing, ceiling joist, roof rafter and sheathing material requirements. Prerequisite: MTNT 1401.

MTNT 2407 Interior-Exterior Finishing**(2-4) Credit: 4**

A study of interior and exterior finishing. The topics covered are cornice treatment, roof coverings, window installation and trim, exterior doors, frames and trim, exterior wall coverings which are typically applied by carpenters, insulation and vapor barriers, wall and ceiling coverings, finishing floors, stair finish, shelving and interior trim. The student will also learn the importance of truing areas where cabinets will be installed. Prerequisite or corequisite: MTNT 2405.

MTNT 2408 Mill Cabinetry Construction and Installation**(2-4) Credit: 4**

This course is designed to teach the student to plan operations, select lumber and perform a variety of operations and basic skills required in mill cabinetry. Students will receive practical experience in layout, construction, installation of cabinet work and applying plastic laminates. Prerequisite or corequisite: MTNT 2402.

MTNT 2409 Milling Machines**(2-4) Credit: 4**

Practical application in the basic skills in the set-up and operation of wood machines. The course also covers mass production of fine cabinetry and millwork and wood finishing. Prerequisite or corequisite: MTNT 2408.

Management, Business (MGMT)**MGMT 1302 Safety (OSHA)****(3-0) Credit: 3**

A study of safety as it relates to the military, industrial, and business communities. Special emphasis will be given the requirements of the Occupational Safety and Health Act as it affects management and employees.

MGMT 1303 (CEMG 0400) Fundamentals of Industrial Management**(3-0) Credit: 3**

Application of the systems approach to the unification of all areas from human factors to environmental factors are covered, along with the manner and methods through which work can be simplified, yet made more meaningful and satisfying.

MGMT 1304 (CEMG 0401) Work Organization**(2-2) Credit: 3**

This course is designed to provide a general introduction and orientation to principles of job analysis, performance evaluation, job evaluation and salary administration, and how these affect the work situation. Work measurement and work standard techniques are studied, as well as flow processes and work distribution methods, quantity and quality control planning and the current impact of governmental guidelines upon such procedures.

MGMT 1305 (CEMM 0108) Introduction to Management**(3-0) Credit: 3**

This course is designed to give the student a knowledge and understanding of management theories and functions which are essential to the person planning a career in business or industry.

MGMT 1306 (CEGS 0116) Human Relations**(3-0) Credit: 3**

This fundamental management course examines topics such as morale, motivation, communications, leadership, and change as they relate to managerial decision making.

MGMT 1307 (CEMG 0403) Insurance**(3-0) Credit: 3**

Introduction to theory and practice of insurance, including life, fire, automobile, and personal and business risk.

MGMT 1308 Small Business Management (3-0) Credit: 3

Methods and applications of financial management in a small business. Primary emphasis on internal controls and sales accountability. Secondary emphasis on budgeting, forecasting, effective sales/labor ratios, licensing requirements.

MGMT 1309 (CEMG 0404) Income Tax (3-0) Credit: 3

Income tax legislation; present income tax law and regulations; treasury decisions, court decisions, and departmental rulings; income tax problems and returns.

MGMT 2301 (CEMG 0405) Marketing Principles (3-0) Credit: 3

The study of Marketing as an exchange relationship in public and private organizational concerns. Includes an orientation of the different prevailing thoughts in marketing today, including the historical, economic, consumer, and systems approaches. Market research and market segmentation strategies are examined, as well as current government agency regulation concerning marketing practices.

MGMT 2302 Personnel Management (3-0) Credit: 3

The dynamic role of management as it relates to personnel, with emphasis on the management aspects important to the line executive or supervisor. Personnel functions and procedures are viewed in the light of management objectives while personnel management is treated as an active and dynamic process which is motivated by basic human drives.

MGMT 2303 (CEMG 0406) Law & Legal Assistance (3-0) Credit: 3

Nature and scope of the law, court systems, law of contracts, principal and agent as relates to the military. Explanation of bailments, carriers, mortgages, securities, negotiable instruments, banks and banking, wills and estates. The procedures of obtaining and acquiring legal assistance for both military and civilian cases in or out of the continental limits of the United States of America are addressed. Emphasis is given on the knowledge required by the supervisor to counsel subordinates in the areas of law and legal assistance.

MGMT 2304 Labor-Management Relations (3-0) Credit: 3

Labor relations aspects of personnel management are emphasized; selection and placement, discipline and morale, promotions, lay-offs, job evaluation, incentive systems, profit sharing, and the influence of collective bargaining and legislation on personnel policies. Methods used by organized labor and employers in industrial conflicts.

MGMT 2305 (CEMG 0408) Business Law I (3-0) Credit: 3

Nature and scope of law; court system; law of contracts; principal and agent; business organizations, including partnerships and corporation; Texas community property laws.

MGMT 2306 (CEMG 0409) Business Law II (3-0) Credit: 3

Additional studies in law of business, dealing with bailments, carriers, mortgages, suretyships, negotiable instruments, banks and banking, wills and estates, sales, bankruptcy. No prerequisite is required for this course.

MGMT 2307 Life Insurance (3-0) Credit: 3

Principles of life insurance, business and personal use in insurance; classification and analysis of policies; reserve and policy values; organization and administration of life insurance companies.

MGMT 2309 Supervision (3-0) Credit: 3

A course designed to provide an understanding of: planning work leadership, decision making, work problem solving, human behavior and personnel relations.

Management, Applied (MGMT)

MGMT 1151 (CEOS 0842) Military Correspondence (1.5-2) Credit: 1
Typing Course

MGMT 1152 (CEOS 0142) Military Correspondence (1-3) Credit: 1
Typing Course

This course is designed to improve and expand the basic typing skills with emphasis on production of various forms of military correspondence.

MGMT 1153 (CETA 0100) The Army Maintenance (1.3-1.3) Credit: 1
Management System (TAMMS)

This course is designed to provide information on the purpose, use, preparation and disposition of Maintenance Management Forms for Army personnel.

MGMT 1154 (CEUS 0144) Supply Management Course (2-.5) Credit: 1

This course provides detailed and management information on preparation and maintenance of unit supply records, hand receipt, personal clothing records, laundry, and accounting for lost, damaged, and destroyed property utilizing DA PAM 710-2-1 and DLOGS systems.

MGMT 1155 (CEPL 0105) Prescribed Load List Course (DLOGS) (1.3-1.3) Credit: 1

This course provides management and detailed information for initiation, requesting and accounting for repair parts under the DLOGS System TM 38-L22-15-2 and DA PAM 710-2-1.

MGMT 1156 (CEPL 0108) Prescribed Load List (Manual) (1.3-1.3) Credit: 1

This course provides management information and detailed information on initiation, posting, maintenance of accounting records under a manual system and requesting and turning in repair parts using DA PAM 710-2-1.

MGMT 1158 (CEOS 0215) Training Manager's Workshop (1.5-0) Credit: 1

This course is designed for Battalion and Company Commanders and S-3's for their Training Management duties and stresses training status, goals, priorities, resources and short and long term plans.

MGMT 1159 (CEAD 0100) College Typing and Military Correspondence (A) (1.5-2) Credit: 1

This course is designed to teach typing up to 25 words a minute, Army functional files, military correspondence, military orders and handling and safeguarding of classified information.

MGMT 1160 (CEAD 0108) Beginning Typing and Military Correspondence (.5-2.3) Credit: 1

This 45 hour course is designed to provide sufficient practice for the soldier to develop his/her career field as clerk typist. Upon completion of this course, soldiers will be able to type at a minimum of 25 WPM (GWAM) and produce simple military correspondence such as disposition forms, military letters, civilian letters, and endorsements.

MGMT 1171 Personnel Counseling Seminar (1-0) Credit: 1

This course covers the major theories of counseling and the use of basic influence and attending skills.

MGMT 1301 (CEMM 0205) Organization and Management (3-0) Credit: 3

Organizational structure can have considerable impact on the manner in which an organization functions. The student studies the complex variables over which managers can exercise control to determine proper structure. While surveying management topics such as planning, decision making, organizing, staffing and controlling, this course deals, in specific terms, with how the organization must be structured to fit its environment and operation.

MGMT 1303 (CEMG 0400) Fundamentals of Industrial Management (3-0) Credit: 3

Application of the systems approach to the unification of all areas from human factors to environmental factors are covered, along with the manner and methods through which work can be simplified, yet made more meaningful and satisfying.

MGMT 2101 Stress Management (1-0) Credit: 1

This course identifies the factors causing stress, shows how to interpret the signs of stress and explains the basic fundamentals involved in the management of personal and organizational stress. The instruction covers the most common causes of stress in the workplace and prescriptive measures that can be taken by the manager to obtain high performance and low stress levels within the organizational setting.

MGMT 2161 (CEOS 0136) Unit & Organizational Supply (2.5-0) Credit: 1

To provide the students the skills and knowledge to accomplish the duties required of units and organizational supply personnel.

MGMT 2162 (CEOS 0152) Personal Finance Management (Army) (1.3-0) Credit: 1

Develops an understanding of the personal business activities and actions that affect personal and family accounts, budgets, budgetary control, bank accounts, charge accounts, borrowing, buying and investing.

MGMT 2164 (CEGS 0124) Army Personnel (1-0) Credit: 1

This course is designed to provide the student with the knowledge of fundamental personnel management concepts used in industry, the Army and U.S. Civil Service.

MGMT 2165 (CEOS 0302) Prescribed Load List (PLL) (2.5-0) Credit: 1

To provide the students with the skills and knowledge to accomplish the duties required of PLL stock supply personnel.

MGMT 2250 (CEMM 0102) Motor Sergeant's Maintenance Management Course (0.6-1.8) Credit: 2

Provides training in procedures and techniques of establishing, conducting, and evaluating standard maintenance programs for unit vehicles. Includes maintenance operations, organization management, controls, requirements, training and records.

MGMT 2251 (CEMM 0100) Junior Leader's Maintenance Orientation Course (2.5-0) Credit: 2

This course is designed to familiarize junior leaders with maintenance concepts, maintenance management, and keeping maintenance forms.

MGMT 2253 (CEOS 0242) College Typing and Military Correspondence (2.5-2.5) Credit: 2

This course provides basic typing skills in touch typing, standard formats, proof reading symbols, and formats used in preparation of military correspondence as prescribed by AR 340-15. Basic military publications ordering, maintenance of files, and posting of regulations are also covered. Class may be split into advanced and basic typing students.

MGMT 2254 (CEMM 0109) Supply and PLL Procedures (2.5-2.5) Credit: 2

This course provides general information for personnel in MOS 76Y or 76C to operate a unit/organizational supply room and Prescribed Load List (Repair Parts) using automated system or manual records.

MGMT 2260 (CEUS 0134) Supply Officer Course (2.2-0) Credit: 2

This logistics management course covers the use and interpretation of supply and authorization media; authentication of request for issue and turn in of supplies, document registers and status card files; maintenance of property books; computation of supply requirements; determination of transportation requirements; preparation and processing reports of survey; and formulation and management of budget.

MGMT 2300 Credit & Collections (3-1) Credit: 3

The elements of merchantile and consumer credit; organization of a credit department; sources of credit information; collection tolls and procedures.

MGMT 2303 (CEMG 0406) Law & Legal Assistance (3-0) Credit: 3

Nature and scope of the law, court systems, law of contracts, principal and agent as relates to the military. Explanation of bailments, carriers, mortgages, securities, negotiable instruments, banks and banking, wills and estates. The procedures of obtaining and acquiring legal assistance for both military and civilian cases in or out of the continental limits of the United States of America are addressed. Emphasis is given on the knowledge required by the supervisor to counsel subordinates in the areas of law and legal assistance.

MGMT 2304 Labor-Management Relations (3-0) Credit: 3

Labor relations aspects of personnel management are emphasized; selection and placement, discipline and morale, promotions, lay-offs, job evaluation, incentive systems, profit sharing, and the influence of collective bargaining and legislation on personnel policies. Methods used by organized labor and employers in industrial conflicts.

MGMT 2310 (CEMG 0411) Personnel Counseling (3-0) Credit: 3

Systematic study of major theories of personnel counseling with supervised experience in role-playing utilizing these approaches.

MGMT 2312 (CEMG 0413) Fundamentals of Systems Management (3-0) Credit: 3

Introduction to the "systems" concept of management and integration of this concept with the more traditional "principles" approach. This course combines theory and application of systems management and focuses on systems as they exist in many fields such as education, law enforcement, military, industry, and a variety of nonprofit organizations.

**MGMT 2350 (CEOS 0158) Performance Counseling (3-0) Credit: 3
and Certification by Army Supervisors**

A course designed to assist the non-commissioned officer in development of performance counseling procedures and techniques for use in the performance of their duties.

MGMT 2351 (CEOS 0157) Advanced Leadership (3-0) Credit: 3
Presents advanced leadership and management techniques, organizational goals, problem solving, communications and management of changes.

MGMT 2354 (CEOS 0189) Management Problems (3-0) Credit: 3
This course is designed to develop and improve the soldier's skills to enable him/her to effectively execute the duties required of the military manager.

MGMT 2355 (CEUS 0121) Unit/Organization Supply (3.7-.6) Credit: 3
Course is designed to prepare personnel members assigned duties of performing to supervise supply management procedures at the organizational level and to control and safeguard all supplies and equipment assigned to the organization.

Management, Training (MGMT)

**MGMT 1158 (CEOS 0215) Training Manager's (1.5-0) Credit: 2
Workshop**

This course is designed for Battalion and Company Commanders and S-3's for their Training Management duties and stresses training status, goals, priorities, resources and short and long term plans.

**MGMT 1201 (CEMM 0125) Management of Performance (2-0) Credit: 2
Oriented Training**

A course designed to provide a performance oriented approach to managing training in which the manager learns to establish performance oriented objectives, tests, and follow-up evaluations.

**MGMT 1202 (CEMM 0525) Briefing Techniques, Aids, (2-1) Credit: 2
and Devices**

A course designed to provide the manager with the capability of employing proper briefing methods and to develop the skills required to produce briefing aids to include charts, graphs, posters, slides, filmstrips, transparencies, opaques, and other media.

**MGMT 1203 (CEMM 0526) Evaluation of Instruction and (2-1) Credit: 2
Training**

A course designed to provide the manager with the rationale, methods, and procedures for evaluating the effectiveness and efficiency of instruction and training. Emphasis will be directed toward evaluating performance oriented training and developing the suggestions for improvement which can be provided to management.

**MGMT 1204 (CEMM 0527) Setting Objectives (2-1) Credit: 2
and Goals**

A course designed to provide managers with the processes involved in defining objectives, determining desired goals, and analyzing performance training to enhance achievement of those goals and objectives.

**MGMT 1205 (CEMM 0528) Analysis of Training (2-1) Credit: 2
Requirements**

A course designed to provide managers with techniques for determining organizational and personnel training requirements. Definition of needs and insuring they are compatible with available resources will be stressed in this course.

**MGMT 1206 (CEMM 0529) Professional Resource (2-0) Credit: 2
Management**

A course designed to provide managers with the capability to assist subordinates in the screening, selection, evaluation, and application of employee training programs.

**MGMT 1207 (CEMM 0530) Professional Development (2-0) Credit: 2
of the Manager**

A course designed to equip leaders with skills necessary to provide assistance to subordinates in problem solving. Emphasis will be placed on effective, active and passive performance by leaders which will correct mistakes or reinforce good performance that will cause individuals to be motivated.

MGMT 1208 (CEMM 0531) The Training System Management (2-1) Credit: 2

A course designed to provide managers with methods required to plan, organize, staff, influence, and control training. The main purpose will be to develop a plan and employ limited resources to accomplish system objectives.

MGMT 1209 (CEMM 0532) Managerial Theories (2-0) Credit: 2

A course designed to provide examination of managerial theories to include management functions, decision-making skills, problem solving techniques, and performance standard oriented approaches to management.

MGMT 2150 (CEBT 0200) Trainers Workshop (TW) (1.5-0) Credit: 1

MGMT 2151 (CEBT 0201) Platoon Trainer's Workshop (1.5-0) Credit: 2

MGMT 2152 (CEBT 0202) Training Supervisor's Workshop (1.5-0) Credit: 1

MGMT 2201 (CEMM 0210) Job Performance and Motivation (2-0) Credit: 2

A course designed to provide managers with the capability of applying approaches that influence employee job performance through the adoption of appropriate leadership and motivation techniques, and assessment of group and individual behavior patterns. Communication problem solving techniques in a changing society, as they affect the day to day efforts of subordinates will also be explored.

MGMT 2202 (CEMM 0534) Individual Orientation Techniques (2-0) Credit: 2

A course designed to provide managers with the skills required to orient personnel in individual job tasks and to facilitate the continuity of the organizations' functions.

MGMT 2203 (CEMM 0535) Group Orientation Techniques (2-1) Credit: 2

A course designed to develop managerial skills required in group training efforts. Emphasis is placed on integrating individual experiences into the group orientation efforts. Prerequisite: MGMT 2202.

MGMT 2204 (CEMM 0536) Assessing of Training Standards, Goals and Objectives (2-1) Credit: 2

A course designed to provide managers with the ability to establish realistic and relevant training standards. The relationships among organizational goals, training objectives, and training standards are emphasized to insure continuity of effort. Personnel involved in the process and appropriate strategies and methodologies in the establishment of training standards are also stressed. Prerequisite: MGMT 1204.

MGMT 2205 (CEMM 0537) Management Training Theory (2-1) Credit: 2

A study of selected learning theories. Emphasis on study and application of training aspects which influence the effectiveness of the training and learning process.

MGMT 2206 (CEMM 0538) Management Learning Strategies (2-1) Credit: 2

A course designed to provide the trainee with a varied approach to the training problem through the study and practical application of alternate means of instruction to accommodate individual learning strategies.

MGMT 2255 Platoon Trainer's Workshop (2.5-0) Credit: 2

MGMT 2256 Training Supervisor's Workshop (2-0) Credit: 2

Provide training management for the medium sized organization (Battalion) to include long and short range plans, LRC, and ARTEP.

MGMT 2257 Trainers Workshop (TW) (2.3-0) Credit: 2

MGMT 2258 Training Managers Workshop (2-0) Credit: 2

Provide training management information for battalion sized units to include long and short range goals, training assets, money and allocations, and ARTEP standards.

MGMT 2259 Platoon Trainer's Workshop (2.3-0) Credit: 2

Course provides management of training instruction at the platoon level, includes long and short range planning and ARTEP integrated training for small groups.

MGMT 2358 Trainers Workshop (TW)**(2.5-0) Credit: 3**

Course provides management of training for the small unit, individual SQT and small group performance oriented training.

Management, Food Service

(See Food Service)

Mathematics (MATH)**MATH 1300 Introductory Algebra****(3-0) Credit: 3**

Designed for students desiring a review of fundamental algebraic operations. This course may not be used as a part of the requirements for a major in mathematics. Topics considered include operations with signed numbers, exponents, operations with polynomials, factoring, solving linear equations.

MATH 1301 Intermediate Algebra**(3-0) Credit: 3**

Includes a brief review of fundamental algebraic operations, linear equations, systems of linear equations, determinants, quadratic functions, inequalities, logarithmic functions. Prerequisite: MATH 1300 or equivalent.

MATH 1302 College Algebra**(3-0) Credit: 3**

Includes consideration of quadratic functions, systems of quadratic equations, quadratic inequalities, matrices, binomial theorem, exponential functions, sequences, progressions, series, and applications. Prerequisite: MATH 1301 or equivalent.

MATH 1303 Trigonometry**(3-0) Credit: 3**

Wrapping function, circular functions, trigonometric functions, use of tables, identities, applications to right triangles and oblique triangles, inverse functions, trigonometric equations, logarithms. Prerequisite: MATH 1301 or equivalent.

MATH 1304 Analytic Geometry**(3-0) Credit: 3**

An algebraic treatment of straight lines, circles, parabolas, hyperbolas, ellipses. Transformation of coordinates, curve sketching, polar coordinates. Prerequisite: MATH 1303 or equivalent.

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

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

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

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

MATH 1307 Business Math**(3-0) Credit: 3**

Introduction to the arithmetic processes in business, including interest, mortgages, taxes, insurance, payroll, inventory deductions, discounts, depreciation, annuities.

MATH 1308 Elementary Statistics**(3-0) Credit: 3**

Collection and tabulation of data, bar charts, graphs, sampling, averages, dispersion, correlation, index number, normal curve, probability, inferential statistics, applications.

MATH 1309 Modern Math**(3-0) Credit: 3**

An introduction to topics taught in the modern elementary curriculum - modern algebra, geometry, sets, number systems, relations, functions, equivalence, congruence.

MATH 2301 Calculus I**(Fall) (3-0) Credit: 3**

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

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

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

MATH 2303 Advanced Calculus**(3-0) Credit: 3**

A further study of limits, functions, sequences, series, elementary differential equations, partial derivatives, multiple integrals, surface integrals. Prerequisite: MATH 2302 or equivalent.

Mathematics, Applied (AMTH)

AMTH 1301 Applied Business Math (3-0) Credit: 3

Introduction to the arithmetic processes in business, including interest, mortgages, taxes, insurance, payroll, inventory deductions, discounts, depreciation, annuities. (Students who have successfully completed MATH 1307 may not take this course for credit, and students who have successfully completed this course may not take MATH 1307 for credit.)

Mathematics, Technical (TMTH)

TMTH 1300 (CEGS 0131) Technical Mathematics I (3-0) Credit: 3

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

TMTH 1301 (CEGS 0132) Technical Mathematics II (3-0) Credit: 3

This course is a continuation of Technical Mathematics I, and includes a study of algebra, trigonometric functions, graphs of trigonometric functions, solution of triangles, and plane and solid geometry. Prerequisites: MATH 1300, or TMTH 1300, or permission of the appropriate College Official.

Microcomputer Technology (MISC)

MISC 1306 Introduction to BASIC (2-3) Credit: 3

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

MISC 1403 Introduction to Computer Science & Programming (3-3) Credit: 4

Problem solving, pseudo code, flowcharting and the programming language FORTRAN are covered in depth. No prior knowledge of computers or programming is assumed.

MISC 1404 COBOL Programming (3-3) Credit: 4

This course is designed to provide the student with skills and fundamentals in solving business data processing problems using Full American National Standard COBOL. The student becomes effective in COBOL programming techniques involving sequential files. Table searching, control breaks, and a coverage of Indexed Sequential file handling are presented. Prerequisite: MISC 1403 or MISC 1451.

MISC 1405 Introduction to Computer Concepts and Analysis (3-3) Credit: 4

Introduces the student to digital computer systems with emphasis on current technology and terminology. Historical development of computing machinery, number systems, data representation, hardware and software are discussed. Methods of identifying business problems best suited for computer solutions and the analysis techniques to develop systems which implement these applications are presented.

MISC 1406 Computer Organization & Architecture (3-3) Credit: 4

A study of hardware and software characteristics of digital computers, designed to give the student an understanding of how the fundamental principles by which computers work affect and govern programming techniques. Topics include data representation, machine instruction types, fetch and execution cycles, interrupt schemes, metaprograms, I/O handling, and assembler concepts. Prerequisite: MISC 1403 or MISC 1451 and MISC 1405.

MISC 1420 Introduction to Word Processing Systems (3-3) Credit: 4

An entry level course that defines word processing requirements of business and management and how to best meet those needs through appropriate word processor selection. A current state-of-the-art word processor is used by the student to implement varied applications to meet identified needs. Topics include in-depth use of word processors, overview of currently available word processors, similarities and differences, selection, based on information requirements and word processor capabilities.

**MISC 1430 Introduction to Spreadsheets
For Microcomputers**

(3-3) Credit: 4

An entry level course that presents the design and use of typical spreadsheet software available. Selected state-of-the-art spreadsheet software packages will be used by the student for hands-on computer applications. Advantages and disadvantages of current spreadsheet software packages will be covered.

**MISC 1440 Introduction to Data Base
for Microcomputers**

(3-3) Credit: 4

An entry level course that presents methods and criteria used to define those information requirements of business and management which can best be met by use of a data base system. A selected, state-of-the-art data base is used by the student to implement applications to meet identified requirements. Includes an overview of current available data bases, their similarities and differences, and the selection process of matching information requirements with data base capabilities.

MISC 1450 Microcomputers for Business

(3-3) Credit: 4

An introduction to the use of the microcomputer as a business tool. Designed specifically for the business oriented, this course will provide familiarity with the microcomputer and its use in the business sector. An introduction to BASIC programming is provided. Types of hardware and software available for business use will be studied.

**MISC 1451 Introduction to Microcomputer
Programming**

(3-3) Credit: 4

This course is the first required course for Microcomputer Technology majors. No prior knowledge of computers or programming is assumed. Problem solving, flow-charting, and the programming language BASIC are covered in depth. Applications will emphasize interactive computing techniques.

MISC 1454 PASCAL Programming

(3-3) Credit: 4

A thorough coverage of Structured Programming. Emphasis on top-down programming (where overall structure can be established before adding details), and modular organization (which makes correcting programming errors easier, as any module can be modified independently). Major topics to be covered include: constants, variables, expressions, input and output, self-contained procedures, making decisions (REPEAT-UNTIL, WHILE-DO, and FOR loops), data types arrays, character strings, records and sets, pointers, and disk files. An introduction to C Language will also be provided. Prerequisite: MISC 1451 or COSC 1403.

MISC 2402 Advanced Systems

(3-3) Credit: 4

The methodology, techniques, and tools used in performing indepth analysis of information systems destined for computer implementation are described in their relationships within the overall study. An overview of current systems with emphasis on data base management systems. Prerequisite: MISC 1405 and 2451.

MISC 2451 Operating Systems and Programming

(3-3) Credit: 4

This course provides comprehensive coverage of major present-day disk operating systems, as well as a solid foundation in programming at the operating system level. Topics include: I/O operations, disk management, software modification, and system generation. Programs will be written for selected applications. Prerequisites: MISC 1406 and MISC 1454.

MISC 2453 Advanced BASIC Programming

(3-3) Credit: 4

An in-depth study of advanced techniques necessary to the writing of efficient and well designed commercial applications. Interactive and conversational programming techniques, to include data editing, menus, string handling, and file handling will be emphasized. Prerequisite: MISC 1451 and one other programming language.

MISC 2454 Advanced Microcomputer Applications

(3-3) Credit: 4

A study of the method and criteria used to define and implement telecommunications and networking of present day microcomputers systems. Topics include selection of appropriate components for particular applications, system configuration, software selection and implementation, software system maintenance. Prerequisite: MISC 2451.

MISC 2455 Microcomputer Field Projects

(1-9) Credit: 4

This course consists of practical applications in the field of microcomputers, commercial and/or scientific programming, and is designed to fit the needs and career objectives of the student. Prerequisite: Consent of instructor.

Mid-Management Finance and Banking Option (FIBA)

(See Finance and Banking)

Office Administration (OADM)

OADM 1131 Beginning Typing I (1.5-1.5) Credit: 1

A beginning course in touch typing. The course will emphasize mastery of machine parts and the keyboard.

OADM 1133 Intermediate Typing I (1.5-1.5) Credit: 1

A continuation of Beginning Typing I and Beginning Typewriting. Students will increase typing accuracy and speed. Prerequisite: OADM 1303 or OADM 1232 or ability to type 25 wpm for five minutes with no more than five errors.

OADM 1232 Beginning Typing II (1.5-1.5) Credit: 2

A continuation of Beginning Typing I. Special emphasis will be placed on speed development. The course will include an introduction to letter writing, tabulating and preparing manuscripts. Prerequisite: OADM 1131.

OADM 1234 Intermediate Typing II (1.5-1.5) Credit: 2

A continuation of Intermediate Typing I. Students will compose and type business letters, tabulations, and manuscripts of a more demanding nature. Prerequisite: OADM 1133.

OADM 1301 Beginning Shorthand (3-3) Credit: 3

An introduction to shorthand. Students will receive initial training in shorthand emphasizing reading, writing, theory principles, brief forms and related activities.

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

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

OADM 1303 Beginning Typewriting (3-3) Credit: 3

A beginning course in touch typewriting for the mastery of machine parts and the keyboard. Special emphasis of speed development, including an introduction to letter writing, tabulating, and preparing manuscripts.

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

A continuation of OADM 1303. Additional skills in terms of accuracy and speed will be evidenced by students. Composition and typing of business letters, tabulations and manuscripts of more demanding content will be instructed.

OADM 1305 Clerical Practice (2-1) Credit: 3

Procedures of filing and finding operations employed in business offices, standard filing systems. Training in the operation of transcribing machines and dry copy machines. Training in proficiency in handling the mail, telephone techniques, and handling receptionist duties. Considerable emphasis and training in integrating these activities into an office environment will be instructed.

OADM 1306 Secretarial Practice (3-1) Credit: 3

This course is designed for the student who wishes to prepare for a career as an executive secretary. More advanced mailable letters, transcribing machines, organization of meetings and conferences, travel arrangements, information sources, and human relations skills are studied. Students are trained in word processing procedures. Students are introduced to various "needs" theories such as Abraham Maslow's hierarchy of needs. Students are guided into the solution of office problems due to personality problems. Group work, group dynamics, and student evaluations are utilized extensively in this course.

OADM 1307 Word Processing (3-3) Credit: 3

This course is designed to train students in the theory of word processing. It introduces the student to word processing facilities and equipment. It provides hands on experience with word processing equipment to include processing, editing, storing information, printing devices, formatting, type style, and paragraphing. Prerequisite: Minimum typing skill of 40 GWAM.

OADM 1308 Business Correspondence (3-0) Credit: 3

A course designed to teach effective business writing and to give practice in composing all types of business letters and reports. Typing ability and sound background in English are strongly recommended.

OADM 1309 Business Mathematics and Calculating Machines (3-3) Credit: 3

Technique familiarization in the operation of the most commonly used office machines: Computations; calculations, speed drills; percentages, discounts and net values, chain discounts, business forms. Emphasis will be placed on business mathematics.

OADM 2301 Advanced Shorthand (3-3) Credit: 3

Students will improve their ability to take dictation and transcribe mailable copy. Theory principles; brief form derivatives; *vocabulary development*; *speed building*; *mailable transcription*; and office style dictation will be emphasized. Prerequisite: OADM 1302 or equivalent.

OADM 2302 Advanced Typewriting (3-3) Credit: 3

This course includes advanced work in such specialized production as tabulation, inter-office correspondence, manuscripts, telegrams, stencil cutting and mimeograph operation, legal forms, medical forms, special inter-office forms, and additional work on the arrangement of business letters with special features.

OADM 2303 Advanced Transcription (3-3) Credit: 3

This course is designed to train students in the *advanced theory of word processing and transcription techniques*. The students will work with advanced problems utilizing hands-on *experience with word processing facilities and equipment*. Hands-on experience includes the following: review of machine transcription, editing, storing information, printing, formatting, type styling, and paragraphing. Computational capabilities, advanced application of the word processing training received in OADM 1307 Word Processing and office-type filing procedures for software will be studied. A thorough study of present and future systems, i.e. *interchangeability and adaptability will also be presented*. Prerequisite: OADM 1307.

OADM 2304 Bookkeeping I (3-3) Credit: 3

Elementary principles of bookkeeping, journalization; posting, statements, special journals; *subsidiary ledgers*. Special emphasis is placed on personal, family and small business accounting systems.

OADM 2305 Bookkeeping II (3-3) Credit: 3

Analysis and recording of business transactions; use of the journal and ledgers; trial balance and work sheets; adjusting and closing entries; accounting statements; payroll records and payroll taxes; introduction to partnership accounting; *special journals and ledgers*; business papers and business procedures relating to accounting voucher system. Prerequisite: OADM 2304 or equivalent.

OADM 2307 (CEOA 0112) Office Administration and Procedures (3-0) Credit: 3

This course includes topics of instruction in office procedures, work simplification, selection and training of office workers, supervision, office etiquette and ethics, and an analysis of the responsibilities of the manager, secretary, clerk, and other office workers. The student is given an opportunity to relate knowledge, information and skills acquired in previous academic courses. Special emphasis is placed on the *relationship of the various systems that affect the modern office*. Prerequisite: Sophomore standing or consent of the instructor.

OADM 2308 Office Occupations Internship (1-5) Credit: 3

The student will be provided a combination of occupationally related classroom instruction and on-the-job training in cooperation with offices within the Office Administration Department and other campus offices. Actual work training will be available in the following areas: typewriting, filing, duplication, use of telephone, preparation of correspondence, voice transcription machine, record-keeping, proofreading, etc.

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

Students will be provided a combination of occupational related classwork instruction and on-the-job training in cooperation with Office Administration offices and other campus offices. Students will demonstrate *advanced competencies* with work experiences in the following areas: taking dictation, typewriting, letter composing, telephone procedures, filing, *work scheduling*, financial calculating, duplicating, transcribing from dictation equipment, etc.

OADM 2350 Machine Shorthand (3-3) Credit: 3

This course is an introduction to machine shorthand. It covers machine shorthand principles, abbreviations, derivatives, word lists, and operation of the machine. The students develop dexterity and keyboard mastery through writing practices and laboratory exercises.

Offset Printing (OPRT)

OPRT 1301 Introduction to Offset Printing (2-4) Credit: 3

This course offers the student an introduction to offset printing with a general survey of various printing processes and their uses in industry. The history of printing, the techniques involved in the production and distribution of printing materials, the kinds of printing industries, and printing terminology are included. It provides an introduction to all equipment and how each piece of equipment relates to the total plant operation.

OPRT 1302 Camera & Darkroom Procedures Stripping & Platemaking I (2-4) Credit: 3

Basic camera operations and darkroom procedures including percentage size calculations, simple line shots, and film processing by the tray method. Basic techniques in the precise layout of simple line negative, halftones, and combinations. Selection of proper plates for specific jobs and the exposing and developing of plates.

Photography (PHOT)

PHOT 1400 Photography as a Communicative Art (3-2) Credit: 4

This course covers the history of photography and the general techniques and technical processes of still photography.

PHOT 1401 Introduction to Photography (3-2) Credit: 4

This course emphasizes the handling of small cameras, film exposure, processing, contact printing and basic enlarging. Flash and existing light photography is studied with new features, action photography, and story-telling photographs. Printing and composing photographs for publications included.

PHOT 1402 Portrait Photography (3-2) Credit: 4

A study is made of fundamental lighting, camera techniques, posing, composition, processing, and printing as applied to portraiture. Experience in retouching negatives and prints, mounting and making story-telling pictures for fashion and advertising is provided. Prerequisite: PHOT 1401 or consent of instructor.

PHOT 1403 Advanced Photography (3-2) Credit: 4

This course includes elements of composition and film exposure development for specific gamma studied sensitometry, advanced photographic printing characteristics of printing papers, processing for contrast, print balance, and toning. Principles of filters and lenses and advanced focusing techniques are studied. Prerequisite: PHOT 1401 or consent of instructor.

PHOT 1404 Commercial Photography (3-2) Credit: 4

A study is made of the fundamental differences between commercial and advertising photography. Although both are studied, emphasis will be on the commercial level such as products, houses, factories, weddings and party photography. Emphasis on what a commercial photographer does, how business is set up, what equipment is needed, how clients are found, what prices are charged, and new trends in the field are reviewed. Prerequisites: PHOT 1401 and PHOT 1402, or consent of instructor.

PHOT 1405 Advanced Printmaking (3-2) Credit: 4

This course includes special instruction and laboratory work in advanced printmaking, mounting, display, toning and tinting and special procedures in graphic techniques in printmaking with higher contrast materials. Preparation of a black and white portfolio is included. Prerequisites: PHOT 1401, PHOT 1402, PHOT 1403, PHOT 1404 or consent of instructor.

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

Study of primary and secondary colors of light, color temperature, color compensations in film exposure, the making of color slides for visual education, theory of color negative systems and demonstrations of Type-C printing.

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

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

PHOT 2403 Portrait Retouching (3-2) Credit: 4

Portrait negatives retouched by the use of leads, dye and etching with special attention to the study of facial structure and demonstrations in printing and retouching negatives. Some color techniques included. Prerequisite: PHOT 1402.

PHOT 2404 Photographic Production (3-2) Credit: 4

The student prepares a portfolio of photographs for the mass media, business, education, government, industry and science for presentation to staff members and to prospective employers. Individualized projects. Prerequisites: PHOT 1401, PHOT 1402, PHOT 1404, PHOT 1406, and PHOT 1407.

Physical Education (PYED)

PYED 1100	Football and Basketball	(1-2)	Credit: 1
PYED 1101	Volleyball and Softball	(1-2)	Credit: 1
PYED 1102	Beginning Badminton	(1-2)	Credit: 1
PYED 1103	Beginning Bowling	(1-2)	Credit: 1
PYED 1104	Soccer	(1-2)	Credit: 1
PYED 1105	Folk and Square Dancing	(1-2)	Credit: 1
PYED 1106	Beginning Swimming	(1-2)	Credit: 1
PYED 1107	Beginning Tennis	(1-2)	Credit: 1
PYED 1108	Beginning Golf	(1-2)	Credit: 1
PYED 1109	Basketball and Soccer	(1-2)	Credit: 1
PYED 1110	Karate	(1-2)	Credit: 1
PYED 1111	Roller Skating	(1-2)	Credit: 1
PYED 1112	Angling	(1-2)	Credit: 1
PYED 1113	Country Western Dance	(1-2)	Credit: 1
PYED 1114	Volleyball	(1-2)	Credit: 1
PYED 1115	Basketball	(1-2)	Credit: 1
PYED 1116	Individual Physical Education Activity	(1-2)	Credit: 1
PYED 1117	Hunting	(1-2)	Credit: 1
PYED 1118	Jogging	(1-2)	Credit: 1
PYED 1119	Racquetball	(1-2)	Credit: 1
PYED 2100	Advanced Bowling	(1-2)	Credit: 1
PYED 2101	Advanced Swimming	(1-2)	Credit: 1
PYED 2102	Intermediate Tennis	(1-2)	Credit: 1
PYED 2103	Advanced Golf	(1-2)	Credit: 1
PYED 2104	Tumbling	(1-2)	Credit: 1
PYED 2105	Figure Development	(1-2)	Credit: 1
PYED 2106	Advanced Badminton	(1-2)	Credit: 1
PYED 2107	Modern Dance	(1-2)	Credit: 1
PYED 2108	Physical Conditioning	(1-2)	Credit: 1
PYED 2109	Aerobics	(1-2)	Credit: 1
PYED 2111	Weight Training	(1-2)	Credit: 1
PYED 2112	Water Safety	(1-2)	Credit: 1
PYED 2113	Cycling	(1-2)	Credit: 1
PYED 2114	Archery	(1-2)	Credit: 1
PYED 2115	Figure Control	(1-2)	Credit: 1
PYED 2116	Rhythmic Aerobics	(1-2)	Credit: 1

PYED 1301 Foundations of Physical Education (3-0) Credit: 3

A course which introduces the student to the fields of health, physical education, and recreation. Emphasis on the scope and organization of professional activities, opportunities and qualifications of the professional physical educator.

PYED 1302 Foundations of Health (3-0) Credit: 3

A fundamental course in principles and problems of healthful living. Emphasis on current information and thought to be applied to individual daily lives.

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

Theory and practice in techniques of officiating. Officiating experience.

PYED 2302 Safety and First Aid (3-0) Credit: 3

Health knowledge and practice with regard to individual and group welfare; personal hygiene; community health problems; communicable disease control and health organizations. Instruction in American National Red Cross first aid methods for emergency treatments of injuries and sudden illness.

Physics (PHYS)

PHYS 1401 College Physics I

(3-3) Credit: 4

Fundamentals of classical mechanics, heat, and sound are discussed. This course is primarily for students who plan to major in medicine, dentistry, veterinary medicine, pharmacy, and for all other students needing a two semester course in physics. The course includes three hours of lecture, and three hours of laboratory per week. Prerequisite: MATH 1303 or registration therein.

PHYS 1402 College Physics II

(3-3) Credit: 4

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

PHYS 1403 Survey of Physics

(3-3) Credit: 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 1404 Laser Optics

(3-1) Credit: 4

This course includes a fundamental study of the operating principles of lasers, the theory of wave transmission and diffraction, and reflection and refraction of light rays. Mathematical solutions for equations involving Snell's Law and the mirror and lens formulas will be taught at appropriate times during the course. Prerequisite: MATH 1303 or consent of appropriate College Official. This course is offered in Europe only.

PHYS 2401 Modern Physics I

(3-3) Credit: 4

Mechanics and heat for science majors and minors, and engineering majors. Vector algebra and calculus are used. The course includes three hours of lecture, and three hours of laboratory per week. Prerequisite: MATH 2301 or registration therein.

PHYS 2402 Modern Physics II

(3-3) Credit: 4

Electricity, magnetism, wave-motion and light, an introduction to modern physics for science majors and minors, and engineering majors. Vector algebra and calculus are used. The course includes three hours of lecture, and three hours of laboratory per week. Prerequisite: PHYS 2401 or equivalent.

Plumber (PLUM)

PLUM 1400 Shop Practice and Safety

(3-3) Credit: 4

A course designed to provide the student with an introduction to the basic plumbing tools and practice in their use. This course will stress shop and job safety.

PLUM 1401 Principles of Plumbing I

(2-4) Credit: 4

This course presents the theory and practice in measuring, cutting and threading steel pipe; cutting and caulking cast iron pipe; installation of hot and cold water lines and grading and laying of sewer lines.

PLUM 1402 Principles of Plumbing II

(2-4) Credit: 4

A course of the theory and practice in gas pipe work, copper sweating, plastic drain, waste and vent systems, soil cast iron fitting and their uses.

PLUM 1403 Residential Plumbing I

(2-4) Credit: 4

A study of the practices, procedures, and techniques employed by a plumber in the roughing-in of complete plumbing systems in new construction. The different plumbing stages, the "rough-in", "pulling of copper lines", and the "top-out" are covered in this course.

PLUM 1404 Residential Plumbing II

(2-4) Credit: 4

The setting of plumbing fixtures after they have been "roughed-in" is explained and practiced. The student will practice the installation of bathroom fixtures, kitchen fixtures, water heaters, dishwashers and garbage disposals. Heating units and controls are covered in this course.

PLUM 1405 Commercial Plumbing

(2-4) Credit: 4

Practices and procedures employed by a plumber in usual and unusual commercial-industrial plumbing, heating units, commercial water heaters and gas line installations are covered. Water pumping equipment, water conditioners, hot water circulation, double check valves, and backflow preventers are also emphasized.

PLUM 2401 Plumbing Layout, Codes and Estimating (3-3) Credit: 4
The residential plumbing systems are planned and plotted. Grading specifications and schematics are developed and presented. Multistory plumbing systems are studied. Residential and commercial plumbing codes are analyzed. This course also introduces techniques, formulas and methods necessary for practical, on-the-job plumbing estimates. Procedures for interpreting and reading building specifications and blueprint "take-offs" are explained and practiced. Prerequisite: DRDS 1400.

PLUM 2402 Plumbing Repair and Maintenance (2-4) Credit: 4
This course consists of practices and procedures employed by a plumber in usual and unusual service work in the field. The repairing and maintaining various types of valves, faucets, fixtures, gas controls and safety practices are covered in this course. A basic study of mechanical skills as well as public relations necessary to be developed by a service man in the field are emphasized.

PLUM 2403 Heating and Air Conditioning Plumbing (2-4) Credit: 4
This course is designed to provide the student with the basic knowledge required to install heating and air conditioning units to include the use of copper, galvanized, black and plastic pipe and fittings.

PLUM 2409 Plumbing Practicum (1-20) Credit: 4
This course consists of on-the-job plumbing training that utilizes the principles, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved worksite under the supervision of a College instructor/coordinator.

Psychology (PSYC)

PSYC 1101 College Orientation (1-0) Credit: 1
This course is designed to assist the student to recognize and develop aptitudes, interests, and abilities; to make adequate personal and social adjustments to college life; and to become acquainted with Central Texas College policies, services and activities. This course will familiarize students with the library and the use of references, texts, and other materials contained in the library.

PSYC 2301 (CEED 0110) Introduction to Psychology (3-0) Credit: 3
Basic principles of human experience and behavior involving biological, environmental, and sociological studies. An overview course including an introduction to the major studies of psychology. Recommended for students of sophomore standing.

PSYC 2303 Child Growth & Development (3-0) Credit: 3
The purpose of this course is to develop an understanding of children and to engender a real interest in them. Consideration is given to the human organism as it develops physically, mentally, emotionally, and socially; problems of adjustment.

Real Estate (REAE)

REAE 1300 Real Estate Mathematics (3-0) Credit: 3
This course includes, but is not limited to, basic arithmetic skills and review of mathematical logic, percentage, interest, time-valued money, depreciation, amortization, proration, and estimation of closing statements. In addition, there is an introduction to real estate investments and the basic mathematical skills needed by the successful real estate agent.

REAE 1301 Real Estate Fundamentals (3-0) Credit: 3
This course includes an overview of licensing requirements for a real estate broker and salesman, ethics of practice, titles to and conveyancing of real estate, legal descriptions, law of agency, deeds, encumbrances and liens, distinctions between personal and real property, contracts, appraisal, finance and regulations, closing procedures, and real estate mathematics.

REAE 1302 Real Estate Marketing (3-0) Credit: 3
This course includes a study of real estate professionalism and ethics, characteristics of successful salesmen, time management, psychology of marketing, listing procedures, advertising, negotiating and closing, financing, and the Deceptive Trade Practices-Consumer Protection Act, as amended, and the Business & Commerce Code.

REAE 1303 Introduction to Residential Construction (3-0) Credit: 3

This course is a beginner's orientation to the concepts and terminology of residential construction including one-to-four family residential units. Topics include site analysis; foundation work; framing, interior and exterior walls; plumbing and electrical work; energy efficiency; roofing; paint and trim work; the role of architects, builders, and real estate brokers in the new home construction business; and other related topics. This course is accepted by the Texas Real Estate Commission as a "related" real estate course for license credit toward both the salesman's and broker's license. The course is also apropos for the general consumer public seeking an orientation to new home construction.

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

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

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

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

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

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

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

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

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

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

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

This course is a special subjects course that may vary in content with each offering. It is designed to provide a classroom setting in order to meet the changing needs in real estate education and training. Subjects may range from math, finance, law, contracts, construction, appraisal, property management, taxation, investments, interior decoration, site analysis, blueprint reading, microcomputer applications, and various other subjects.

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

This is an explanation of the purposes and functions of appraisal; the social and economic determinants of value; appraisal case studies; cost; market data; income approaches to appraisal; final correlations; and reporting. The course also consists of discussions and case studies pertaining to building material and equipment; building costs and estimates; accrued depreciation; gross income estimates; analysis of expense; rates in capitalization; straight and annuity capitalization; and reconciliation of value indications. Prerequisites: REAE 2303, REAE 1300 or MATH 1307, REAE 1301 or consent of appropriate College Official.

REAE 2308 Real Estate Investments**(3-0) Credit: 3**

This course shall include an analysis of real estate investment, characteristics, techniques of investment analysis, time-valued money, discounted and nondiscounted investment criteria, leverage, tax shelters, depreciation, and applications to property tax. In addition, a study of consumer investment alternatives to real estate and the customer/client counseling concerns for real estate investments will be covered. Prerequisites: REAE 1301, MATH 1307, or REAE 1300, REAE 2304, or approval of appropriate College Official.

REAE 2309 Advanced Real Estate Finance**(3-0) Credit: 3**

This is an advanced course in real estate finance designed for the licensed real estate salesman or broker, entry level mortgage loan processor, general contractor, or real estate investor. Subjects include: monetary systems, primary and secondary markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative financial instruments, equal credit opportunity acts, community reinvestment act, and the Texas Housing Agency. In addition, students will receive an extensive amount of "hands-on" training in qualification underwriting guidelines, closing costs, yield analysis, graduate payment mortgages, adjustable rate mortgages, and other variable rate programs. Prerequisites: REAE 2304, Real Estate Finance; and REAE 1300, Real Estate Math or equivalent.

Recreation (RECR)**RECR 1301 Foundations of Recreation****(3-0) Credit: 3**

This course is designed to introduce the student to the development, structure, purposes and functions of the professional fields in recreation. It will introduce the functions of recreation, parks and leisure services, explain the roles of different governmental agencies in providing and implementing various programs and describe special areas for development of recreational programs.

RECR 1302 Principles of Recreational Leadership**(3-0) Credit: 3**

A study of the development of skills and leadership ability in various program areas of recreation including boys clubs, city recreation and armed forces. It describes recreational leadership methods for selection and discusses the principles and problems of recreational supervision.

RECR 1303 Theory & Practice of Teaching Sports**(3-0) Credit: 3**

Designed to be preparation for jobs in physical education, teaching, coaching and recreation. It will teach the student evaluation procedures, rules and methods of skill improvement. It explains the learning process and offers techniques for teaching sports classes.

RECR 2301 Camp Counseling**(3-0) Credit: 3**

Understanding the child in camp settings and techniques of camp counseling including administration, organizational trends, personnel management, camp-site location, health and safety aspects, food services, business management, public relations and camper skills.

RECR 2302 Program Planning for Recreation**(3-0) Credit: 3**

Designed to teach the student procedures, techniques, and methods of planning, developing and implementing recreational programs. It will discuss the need for surveying the community, evaluating the systems of program delivery and considering the effects of population, geography and community resources on the programs.

RECR 2303 Theory & Practice of Teaching Aquatics**(3-0) Credit: 3**

Basic skills, professions, and safety techniques in swimming and water safety. Emphasis on methods and materials.

RECR 2304 Outdoor Recreational Sport**(3-0) Credit: 3**

A course designed to review the history of outdoor recreational sports, games and activities and to equip the student with the knowledge, skills and appreciation of outdoor activities.

RECR 2305 Field Work in Recreation**(3-0) Credit: 3**

This is a hands-on class providing the student the opportunity to work on an assigned recreational program under supervision similar to student teaching classes. The student will observe, participate and lead classes under supervision.

Science

(See Biology, Chemistry, Geology)

EASC 1301 Earth Science (3-0) Credit: 3

A course designed for Education majors. This course covers the nature of the earth as revealed by geology, astronomy, meteorology, and other related physical sciences.

GESC 1301 General Physical Science (3-0) Credit: 3

This is an introductory course for students who need to acquire a basic understanding of the philosophy and methods of science. Topics will be selected from various fields of physical science and will cover a review of the basic principles and theories.

Sheet Metal (SMTL)

SMTL 1303 Insulation & Sheet Metal Standards & Materials (2-2) Credit: 3

A study of insulation and sheet metal standards and specifications. The course also includes the identification and uses of various materials, material take-off and estimating.

SMTL 1401 Sheet Metal I (2-4) Credit: 4

This course is an introduction to the use of hand tools, power tools, flux, rivets, and fastening devices. Measurement and layout is stressed.

SMTL 1402 Plumbing & Heating Insulation (2-4) Credit: 4

A study of the theory and application of insulating materials related to pipes, fittings, vessels, tanks, heaters, breechings and ducts. The student will practice roughing-in and finish work.

SMTL 2302 Sheet Metal Layout & Planning (2-2) Credit: 3

This course presents the theory of the psychometrics of conditioned air and duct design and sizing. It is a course in practical pattern drafting and planning for industrial, commercial and residential use of sheet metal. Prerequisite: DRDS 1302, DRDS 1400.

SMTL 2401 Sheet Metal II (2-4) Credit: 4

Practice in sheet metal fabrication and installation of skylights and ventilators. Prerequisites: SMTL 1401, WELD 1401, WELD 1402, WELD 1404.

SMTL 2402 Duct Work (2-4) Credit: 4

The student will practice fabricating and installing ducts using the various fastening hardware and techniques. This course also presents the theory and practical application of carpentry as it applies to duct installation and sheet metal work. Prerequisite: SMTL 2302.

SMTL 2409 Sheet Metal Practicum (1-20) Credit: 4

This course consists of on-the-job sheet metal training that utilizes the principles, knowledge and skills gained in the classroom and laboratory. The student is employed at an approved worksite under the supervision of a College instructor/coordinator.

Small Gas Engine Repair (SGER)

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

A course designed to provide the student with basic small engine skills involving safety, use of manuals, measuring devices, fasteners, hand and power tools, thread repair, soldering and engine cleaning methods.

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

This course is a study of the fundamental principles and operation of the two and four stroke air-cooled engine. Testing and maintenance procedures are performed on the ignition, compression, fuel, starting and lubrication systems of 2 HP to 8 HP engines. Prerequisite: SGER 1400.

SGER 1407 Small Gas Engine Service (2-4) Credit: 4

This course provides the student with "hands on" experiences in the repair and overhaul of small gas engines. Emphasis will be placed upon valve reconditioning, magnetos, and ignition repair, carburetor overhaul, crankshaft replacement and other types of service requirements. Prerequisites: SGER 1400, SGER 1401.

SGER 1408 Chain Saw Service and Repair (2-4) Credit: 4

This course provides the student with the theory and repair skills necessary to service all types of modern chain saws. Areas of study will include preventative maintenance, chains, guide bars, sprockets, clutches, fuel, ignition and lubrication systems. Prerequisites: SGER 1400, SGER 1401.

SGER 1409 Motorcycle Service**(2-4) Credit: 4**

This course is designed to provide the student with the necessary skills to perform preventative maintenance, and an understanding of the theory and operation of two and four stroke motorcycle engines. Study will include the battery, electrical, fuel, tune-up, drive-line and brake systems. Prerequisites: SGER 1400, SGER 1401.

SGER 2311 Shop Organization and Management**(3-0) Credit: 3**

This course is designed to provide the student with an understanding of small engine repair in business management. Areas of study includes customer relations, warranty provisions, service salesmanship, organization and shop layout, and the financial and operational aspects of managing a small engine repair business. Prerequisite: Sophomore standing.

SGER 2407 Off-Road Small Engine Repair and Service**(2-4) Credit: 4**

This course provides the student with experiences in the maintenance and repair of minibikes, go-carts, snowmobiles, mobile generators, farm equipment and other small engine applications. Prerequisite: Sophomore standing.

SGER 2408 Outboard Motor Service and Repair**(2-4) Credit: 4**

This course is designed to provide the student with the necessary skills to disassemble, repair, and assemble outboard engines and lower drive units on various types of outboard engines. Special emphasis will be placed on the cooling, ignition and fuel systems, and the use of special tools, and service manuals. Prerequisite: Sophomore standing.

SGER 2409 Motorcycle Repair**(2-4) Credit: 4**

This course is designed to provide the student with the necessary skills to disassemble, repair, replace, and assemble motorcycle engines, drive train components, transmission, and suspension systems. Special emphasis will be placed on special tools and test equipment. Prerequisites: SGER 1400, SGER 1401, SGER 1409.

SGER 2410 Lawn and Garden Equipment Service**(2-4) Credit: 4**

This course is designed to provide the student with "hands on" experience in the repair of all types of power lawn care units including lawn mowers, riding mowers, garden tractors, tillers and other similar small engine applications. Skills employed will utilize both oxy-gas and arc welding equipment when necessary. Prerequisites: SGER 1400, SGER 1401, SGER 1407, WELD 1401. Co-requisite: WELD 1402.

Sociology (SOCl)**SOCI 2301 (CEED 0109) Introduction to Sociology****(3-0) Credit: 3**

The study of human society; human behavior and personality as a product of group life; community organization; social change and current social problems.

SOCI 2302 Contemporary Social Problems**(3-0) Credit: 3**

Identification and analysis of contemporary social problems, development of criteria for evaluating problems for social betterment.

SOCI 2303 Criminology**(3-0) Credit: 3**

Causes and manifestations of delinquency; case studies of criminals and their social milieu; the offender and agencies of his adjustment; analysis and evaluation of penal methods.

SOCI 2304 Social Institutions & Processes**(3-0) Credit: 3**

Sociological concepts and principles that are basic to an understanding of the complexity of modern society. Students, through firsthand observation and course materials, are familiarized with social institutions, class structures, and social processes which produce social organization and disorganization. Major social institutions are viewed from the standpoint of social structure and social processes, and their future roles in society's operation and influence upon the individual and groups.

SOCI 2305 Social Psychology**(3-0) Credit: 3**

The origin and development of personal behavior in interpersonal situations.

SOCI 2306 Marriage and the Family**(3-0) Credit: 3**

A study of problems in courtship, marriage, and family living as they relate to the social structure of American society.

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

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

SOCI 2308 (CEMG 0410) American Minorities (3-0) Credit: 3
The principal minority groups in American society and their sociological significance problems of intergroup relations, social movements, and related social changes occurring on the contemporary American scene.

Solar Energy (SESY)

SESY 1401 Solar Heating and Cooling Systems (3-3) Credit: 4
This course is an introduction to solar heating and cooling systems. Topics of instruction will include an overview of this basic system components of both solar heating and solar cooling systems, and the operation, installation, maintenance, trouble-shooting, and service procedures of solar heating and solar cooling systems. Prerequisites: AIRC 1403 and AIRC 1404.

Spanish (SPAN)

SPAN 1401 Beginning Spanish I (3-3) Credit: 4
The study of Spanish grammar and development of vocabulary. Stresses conversation in Spanish.

SPAN 1402 Beginning Spanish II (3-3) Credit: 4
A continuation of Beginning Spanish I, with continued emphasis on conversation. Prerequisite: SPAN 1401.

SPAN 2301 Intermediate Spanish I (3-0) Credit: 3
Continued emphasis is placed on conversation, correct pronunciation, and correct writing. Readings from various Spanish-American authors are studied. Prerequisite: SPAN 1401, 1402, or two years of Spanish at an accredited high school.

SPAN 2302 Intermediate Spanish II (3-0) Credit: 3
Continues the readings from Spanish-American authors. Emphasizes grammar, composition, and conversation. Prerequisite: SPAN 2301 or equivalent.

Speech (SPCH)

SPCH 1301 (CESP 0500) Public Speaking (3-0) Credit: 3
Research, composition, organization, and delivery of speeches for various purposes and occasions, including informative, persuasive sales, and demonstration speeches. Studies of theories and principles of interpersonal, small groups and public communication.

SPCH 2303 (CEGS 0106) Business and Professional Speaking (3-0) Credit: 3
Theories and skills of speech communication as applied to business and professional situations. Includes participating in an interview, the preparation of a resume and cover letter, engaging in a problem solving discussion, and delivering speeches in public.

Telecommunications (TELE)

TELE 1301 Introduction to Broadcasting (3-0) Credit: 3
This is a survey course tracing the history of broadcasting from 1884 to the present. Besides history, the course will present information on comparative systems of broadcasting and on the basic operational procedures of radio and television stations. Preparation for the FCC Radio-Telephone Operator's Third Class Permit is included in this course of study.

TELE 1305 Broadcast Writing (3-0) Credit: 3
This course covers the stylistic writing techniques as needed for commercial copy, promotional copy, news editing, radio-television show formats, and individualistic creative writing for drama or documentaries. Practical experience will be available through actual radio and television stations.

TELE 1402 Beginning Radio Production (3-3) Credit: 4
In this course the fundamental techniques and practices of production and programming are emphasized with a great deal of practical experience in an actual radio station. Production of various types of programs including interviews, documentaries, and basic news will be studied. Each student will be trained to competently operate a radio control board, turntables, and tape recorders.

TELE 1403 Beginning Television Production (3-3) Credit: 4

This course is designed to give the student the fundamental skills in camera operation, microphone techniques, basic set design, basic graphics, and lighting. In addition, each student will participate in the production of a daily live broadcast from a television station and other live and taped productions. A basic study of the operations of a television station will be covered.

TELE 1405 Radio-Television Announcing (3-3) Credit: 4

This course covers the duties and responsibilities of the announcer, such as operation of the audio console, announcing commercial copy, announcing station breaks, newscasting, interviewing, etc. Special emphasis is given in the areas of voice and diction and pronunciation. Practical experience will be offered through the use of actual radio and television stations.

TELE 1406 Television Film (3-3) Credit: 4

This course is designed to introduce the student to the fundamentals of cinematography and its applications in the television industry. Basic filming techniques will be covered, and each student will learn to shoot 16 mm motion picture cameras, edit, story board, and process film. Laboratory exercises will provide for the shooting of at least 200 feet of film per student.

TELE 1407 Advanced Radio Production (3-3) Credit: 4

The major emphasis in this course is advanced training in the production of radio commercials, promotion announcements, documentaries, newscasting, and interviewing. An in-depth study of the programming formulas and different types of radio broadcasting is presented. Each student will be responsible for weekly programming to be aired over an actual radio station. Prerequisite: TELE 1402 or approval of appropriate College Official.

TELE 1408 Advanced Television Production (3-3) Credit: 4

This course offers advanced training in television production. Included will be experience as cameraman, floor director, talent, lighting, director, technical director, producer, graphics, film director, video tape operator, and audio engineer. Practical experience in weekly television program production will be available through the use of an actual television station. In addition, a critical look will be given to television programming techniques, types of station structure, and innovative technological breakthroughs. Prerequisite: TELE 1403 or approval of appropriate College Official.

TELE 2301 Technical Aspects of Broadcasting (3-0) Credit: 3

This course will help the student develop a broad technical vocabulary and a basic understanding of the technical aspects of Telecommunications. Emphasis is placed on the study of operating fundamentals and the technical limitations of telecommunications systems. Broadcast technical standards and their rationale are a major part of the course. Limited emergency maintenance techniques for production personnel are also taught.

TELE 2304 Broadcast Sales (3-0) Credit: 3

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

TELE 2306 Telecommunications Seminar (3-0) Credit: 3

This seminar is designed to allow the student of broadcasting to take an in-depth look at the industry he will soon serve. Individual investigation will be conducted on the current trends in broadcasting, major issues facing the broadcaster, and the importance of broadcasting in today's society. Considerable discussion on such issues as freedom of the press and the future of broadcasting will take place. This course will give the student an up-to-date and realistic perspective of his chosen industry.

TELE 2307 Broadcast Station Management (3-0) Credit: 3

This course is an in-depth study of management responsibilities within the broadcast industry. Areas of study include personnel management, station budgets, profit and loss statements, network negotiations, and equipment purchases. Also included is a study of the Federal Communications Commission's rules and regulations pertaining to the overall operation of the broadcast station. Prerequisite: TELE 1301 or approval of appropriate College Official.

TELE 2407 Electronic Field Production (3-3) Credit: 4

Electronic news gathering techniques are covered including mini-camera operations, electronic editing, principles, remote audio and lighting techniques. Students are given weekly assignments for television newscasts.

TELE 2408 Telecommunications Practicum (1-8) Credit: 4
The purpose of this course is to give each student an opportunity to receive practical experience in a specialized area of study. A student may choose his individual study practicum from any of the following broadcast-related areas: Graphic arts, set design, photography, cinematography, broadcast journalism, radio production, television production, broadcast promotion, traffic and continuity. Prerequisite: TELE 1402 and TELE 1403 or approval of appropriate College Official.

TELE 2409 Telecommunications Field Projects I (1-8) Credit: 4
The field projects will constitute an on-the-job training experience for all the students. The laboratory portion will place the student in responsible production positions for on-air broadcast activities over television and radio stations. Each student will produce and direct at least three major TV or radio programs on a regularly scheduled basis. In conjunction with this practical training, the student will compile a daily log of his work experience for in-class discussion and criticism. Prerequisite: TELE 1402 and TELE 1403 or approval of appropriate College Official.

TELE 2410 Telecommunications Field Projects II (1-8) Credit: 4
A continuation of TELE 2409, this course consists of on-the-job training as a production member of an actual television or radio station for on-air operations. Prerequisite: TELE 2409.

Transportation (TRAN)

TRAN 1301 Introduction to Transportation (3-0) Credit: 3
Provides the history and development along with a broad overview of the transportation industry. Includes a basic knowledge of the various modes of transportation (air, motor, rail, water and pipeline), and an introduction of transportation law.

TRAN 1302 International Trade (3-0) Credit: 3
This course considers the relation of foreign trade to domestic trade. It covers the operation of import and export business including organization, marketing, terminology, documents, financial procedures, credits and collection, and communications. The basic principles and practices of world trade are studied.

TRAN 1303 Economics of Transportation I (3-0) Credit: 3
This is a general introduction to the economics of transportation and includes a study of the principles of economics and economic theory applicable to transportation, the principles of marketing and how they relate to transportation, a general survey of government in regulation of transportation, and a survey of business organizations and their financing.

TRAN 1304 Interstate Commerce Law and Practice (3-0) Credit: 3
This is a general review of the statutory law, leading court decisions, and government regulations and practices. It shows the effect and purpose of federal regulation of transportation including a review of the respective spheres of federal and state regulations.

TRAN 2301 Economics of Transportation II (3-0) Credit: 3
This is a study of the general services performed by the various types of transportation instrumentalities including organization, operation, and practices. It also presents a review of the economics of freight rates from the point of view of the shipper, carrier, and regulatory bodies.

TRAN 2302 Transportation Law and Regulation (3-0) Credit: 3
This course covers the major laws of the United States and state laws which provide for regulation of domestic land and water transportation by for-hire carriers.

TRAN 2303 Traffic Management I (3-0) Credit: 3
This introductory course provides the student with the basic principles of traffic management. The course will cover organization of an industrial traffic department, carrier selection, routing, classification and rating, packaging and warehousing.

TRAN 2304 Traffic Management II (3-0) Credit: 3
This is a continuation of Traffic Management I. It provides the student with the knowledge and understanding necessary to function as the supervisor or traffic manager of either an industrial traffic department or a for-hire carrier's traffic department. Prerequisite: TRAN 2303.

TRAN 2305 Railroad Transportation I (3-0) Credit: 3
This is the beginning study of rail rates, including instruction in the use of freight classification and state rail tariffs. It also includes instruction in applicable state and federal regulation of rail rates.

TRAN 2306 Rail Transportation II**(3-0) Credit: 3**

A study of transcontinental rail freight rates, construction of combination through rates, routings, use of guides and maps, rail accessorial services including switching, reconsignment, stop-off, transit and demurrage, and rate adjustment procedures. Prerequisite: TRAN 2305.

TRANS 2307 Highway Transportation I**(3-0) Credit: 3**

This is the beginning study of motor carrier rates including instruction in the use of freight classification and state tariffs.

TRAN 2308 Highway Transportation II**(3-0) Credit: 3**

This is an advanced study of motor carrier rates and practices including instruction in diversified rate problems including both interstate and intrastate tariffs. Prerequisite: TRAN 2307.

TRAN 2309 Airline Freight Transportation I**(3-0) Credit: 3**

This is an introduction to the airline transportation industry and includes the study of freight by transport aircraft, air express, air freight forwarders as well as the regulation and economics of commercial air transportation.

TRAN 2310 Airline Freight Transportation II**(3-0) Credit: 3**

A continuation of Airline Freight Transportation I. This is an advanced course in airline freight transportation. Prerequisite: TRAN 2309.

TRAN 2311 Transportation Marketing**(3-0) Credit: 3**

This course covers the basic sales principles and techniques involved with selling transportation to include personal appearance, communications, development and use of product knowledge, why and how people buy, how to prospect for customers, and how to prepare a presentation.

Welding (WELD)

WELD 1250 (CEWL 0102) Basic Oxy Welding**(2-2.3) Credit: 2**

Instruction in selected types of weld joints and edge preparation includes safety requirements and maintenance of metal-working tools, supplies and equipment.

WELD 1251 (CEWL 0101) Basic Arc Welding**(2-2.3) Credit: 2**

Provides the student with basic arc welding skills, includes selection of electrodes, heat ranges, types of joints, edge preparation, shop safety and maintenance of equipment.

WELD 1301 Basic Gas Welding**(1-2) Credit: 3**

This course covers the theory and practice of oxyacetylene cutting and welding of metals in horizontal, vertical and overhead positions.

WELD 1302 Basic Arc Welding**(1-2) Credit: 3**

This course covers the theory and practice of electric arc welding. Welds will be made in all positions with various types of electrodes.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Word Processing (WOP0)

WOP0 1303 Beginning Keyboarding/Data Entry (3-3) Credit: 3

A beginning course in the fundamentals and techniques of keyboarding and data entry on a word processor. Special emphasis of speed development, including an introduction to letter writing, tabulating, and preparing manuscripts.

WOP0 1304 Intermediate Word Processing Applications (3-3) Credit: 3

A continuation of WOP0 1303. Additional skill in terms of accuracy and speed will be evidenced by students. Composition and typing of business letters, tabulations and manuscripts of more demanding content will be instructed.

WOP0 1307 Word Processing Concepts (3-3) Credit: 3

This course is designed to train students in the theory of word processing. It introduces the student to word processing facilities and equipment. It provides hands on experience with word processing equipment to include processing, editing, storing information, printing devices, formatting, type style, and paragraphing. Prerequisite: Minimum typing skill of 40 GWPM.

WOP0 2302 Advanced Word Processing Applications (3-3) Credit: 3

This course includes advanced work in such specialized production as tabulation, inter-office correspondence, manuscripts, telegrams, legal forms, medical forms, special inter-office forms, and additional work on the arrangement of business letters with special features.

WOP0 2303 Office Automation (3-0) Credit: 3

This course is designed to train students in the advanced theory of word processing and transcription techniques. The students will work with advanced problems utilizing hands-on experience with word processing facilities and equipment. Hands-on experience includes the following: review of machine transcription, editing, storing information, printing, formatting, type styling, and paragraphing. Computational capabilities, advanced application of the word processing training received in WOP0 1307, Word Processing and office-type filing procedures for software will be studied. A thorough study of present and future systems, i.e. interchangeability and adaptability will also be presented. Prerequisite: WOP0 1307.

WOPO 2308 Word Processing Internship I (2-4) Credit: 3

The student will be provided a combination of occupationally related classroom instruction and on-the-job training in cooperation with offices within the Office Administration Department and other campus offices. Actual work training will be available in the following areas: word processing, filing, duplication, use of telephone, preparation of correspondence, voice transcription machine, record keeping, proofreading, etc.

WOPO 2309 Word Processing Internship II (2-4) Credit: 3

Students will be provided a combination of occupational related classwork instruction and on-the-job training in cooperation with Office Administration offices and other campus offices. Students will demonstrate advanced competencies with work experiences in the following areas: taking dictation, word processing, letter composing, telephone procedures, filing, work scheduling, financial calculating, duplication, transcribing from dictation equipment, etc.

WOPO 2310 Word Processing Center Management (3-0) Credit: 3

This course covers the factors that influence work efficiency and human behavior in the word processing center environment. This course includes a consideration of systems limitations and capabilities, work flow, system security, scheduling, managerial theories, system evaluation, human relations, and supervision. Prerequisite: WOPO 2303.

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. Generally, classes provide training for the individual; however, special interest groups can also be accommodated within the scope and philosophy of the program. Classes are geared to the changing needs and requirements of the area being served. There are no limits to the number or variety of courses. Classes are offered in the vocational business fields as well as practical arts. Non-credit courses are offered in the following:

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

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

SPECIAL REQUESTS

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

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