

CONTINENTAL & OVERSEAS SERVICES
CATALOGUE SUPPLEMENT 1981-83

LOCATIONS SERVICED BY VARIOUS CENTRAL TEXAS COLLEGE PROGRAMS

UNITED STATES Alaska Ft. Greely Ft. Richardson Ft. Wainwright California Alameda San Diego Colorado Ft. Carson Georgia Ft. Stewart Hunter Army Airfield Hawaii Pearl Harbor Florida **Jacksonville** Illinois Great Lakes Kansas Ft. Riley Louisiana Ft Polk Missouri Ft. Leonard Wood Oklahoma Ft. Sill South Carolina Charleston Texas Ft. Hood Killeen Virginia Ft. Lee Norfolk Washington Ft. Lewis ATLANTIC FLEET PACIFIC FLEET CENTRAL AMERICA **Panama** Ft. Clayton Ft. Davis Ft. Kobbe EUROPE Azores Laies Field England Alconbury Bentwaters Lakenheath Mildenhall Upper Heyford Weathersfield Welford Germany Amberg Ansbach Aschaffenburg Babenhausen **Bad Hersfeld**

Bad Kissingen

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

Greece Drama Elefsis Katsimdhi Kilkis Koropi Langada Nea Makri Yannitsa Arizignano Bovolone Camp Darby Ceggia Chioggia Codogne Conselve Cordovado Oderzo Pluto Rome Sciaves Vicenza Zelo Spain Torrejon Turkey Cakmakli Corlu Erzurum lzmit Ordykoy Sinop PACIFIC FAR EAST Guam Japan

Yokosuka Korea Camp Carroll Camp Casey Camp Greaves Camp Henry Camp Hovey Camp Howze Camp Humphreys Camp Pelham Camp Red Cloud Camp Stanley Yongsan **Philippines** Botan San Miguel

Subic Bay

MAJOR CAMPUS ADDRESSES COLLEGE PROGRAMS

CENTRAL CAMPUS

CENTRAL TEXAS COLLEGE U.S. Highway 190 West Bell/Coryell Counties Killeen, Texas 76542 817-526-1211

ALASKA

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

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

EUROPE

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

GUAM

Central Texas College c/o NCFA Supervisor NCFA Office COMNAV MARIANAS Box 40 APO San Francisco 96630

KOREA

Central Texas College-Far East APO San Francisco 96301

FORT LEE

Central Texas College-Fort Lee P.O. Box B Fort Lee, Virginia 23801

FORT LEONARD WOOD

Central Texas College-Fort Leonard Wood Truman Education Center-Box 216 Fort Leonard Wood, Missouri 65473

FORT RILEY

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

U.S. NAVY - PACE

Central Texas College - PACE (Pacific) 2223 El Cajon Blvd Suite 302 San Diego, California 92104

SUBIC BAY-PHILIPPINES

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

YOKOSUKA

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

CORRESPONDENCE AND INQUIRIES

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

Students departing branch campus locations must notify the branch administrative office of their departure to insure their records are transferred to the main campus at Killeen, Texas. Records and transcript services will be provided through the Killeen campus for students not in attendance at a branch campus.

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

Central Texas College

Continental and Overseas Services

Fourth 1981-1983

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 Collegiate Registrars and Admissions Officers
American Association of Community and Junior Colleges
Association of Texas Colleges and Universities
Southern Association of Collegiate Registrars and Admissions Officers
Texas Association of Public Junior Colleges
Texas Association of Collegiate Registrars and Admission Officers

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TABLE OF CONTENTS

	'age
GENERAL INFORMATION	
Continental and Overseas Programs	. 1
History	
Educational Philosophy	1
Educational Objectives	2
Catalogue Supplement	2
Equal Opportunity	3
Program/Course Availability	
Schedule Fees	3
ADMISSIONS AND REGISTRATION	4
Counseling	4
General Admission Information	4
Admission Requirements	4
Forms Required	4
Records Required	5
Early Admission	5
Registration	6
Tuition and Fees	7
Refunds	7
Financial Aid	8
Records Access	
COLLEGE POLICIES AND REGULATIONS	10
Academic Policy	
Academic Standards	
Regulations Governing Student Activities	
Request For Transcripts	
CERTIFICATE AND DEGREE REQUIREMENTS	
Degrees Conferred	
Certificates Conferred	
Evaluation of Previous Education	
SOC Agreement	-
PROGRAMS OF STUDY	
COURSE DESCRIPTIONS	
CONTINUING EDUCATION	
CURRICULUM AND COURSE INDEX	
GENERAL INDEX	-



GENERAL INFORMATION

CONTINENTAL AND OVERSEAS 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 under the auspices of Continental and Overseas Services. Individuals interested in programs which are not locally available should consult with the local Education Services Officer (ESO), Navy Campus 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. Since that time Central Texas College has expanded its physical plant to the present twentynine 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 175 locations throughout Europe and the Far East, as well as at military bases in the United States and to the United States Navy, Pacific Fleet.

EDUCATIONAL PHILOSOPHY

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

In order to ensure the fullest service possible to the civilians of the surrounding area, to the personnel of the large military installation adjacent to the Killeen campus and to the personnel of military installations around the world, the educational programs of the College are designed to meet the needs of full-time and part-time students. To accommodate diverse educational needs, Central Texas College and its sponsored activity, American Preparatory Institute, provide a variety of educational programs. The Research Institute of Advanced Technology, also a sponsored activity, contributes to program quality and diversity through its efforts.

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

EDUCATIONAL OBJECTIVES

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

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 OVERSEAS 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 - A fee of \$2.00 is charged for each transcript issued.

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 that student.

TEXTBOOK COSTS

Costs are based on publishers' prices plus transportation costs and may vary from term to term. Prices are available from the CTC 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 CTC representative or office of the Director.

ADMISSIONS AND REGISTRATION

HOW TO BEGIN

COUNSELING

Students wishing to attend Central Texas College should visit the local military Education Center to consult with the ESO or NCR about educational goals. Education Centers 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 CTC 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 profit from post-secondary education have the opportunity to enroll. New students will be admitted to the College unconditionally, providing all admission requirements are met. 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 course but who are prepared to undertake post high school studies may be admitted to certain areas of study if, in the judgement 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 intergovernmental approval prior to being permitted to file application for admission.

FORMS REQUIRED

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 prior to unconditional admission. Students whose records have not been provided by the end of their first semester will be ineligible to receive grades or transcripts.

- 1. HIGH SCHOOL GRADUATES: Must submit official high school transcript.
- 2. HIGH SCHOOL EQUIVALENCY GRADUATES: Must submit High School General Education Development (GED) scores.
- COLLEGE TRANSFER STUDENTS: Official transcript must be provided for all college study.
- INDIVIDUAL ADMISSIONS STUDENTS (except transient students): Must provide official transcripts for all previously attended institutions, high school and/or college, and/or GED scores.

NOTE: Students are responsible for requesting their official records (signed and sealed) to be forwarded directly from the issuing institution to the Central Texas College campus serving the student's location. Addresses are listed in the front of the catalogue.

TRANSIENT STUDENTS

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

READMISSION REQUIREMENTS

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

EARLY ADMISSION

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

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

Students who meet the above criteria will be accepted at Central Texas College on individual approval.

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

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.

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.

WHO TO SEE FOR CLASSES

Central Texas College normally assigns a representive to each Education Center 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 representive at the Education Center or to the local CTC 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 Card (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 site.

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 18.

COST OF CLASSES

TUITION AND FEES

Costs of providing classes at Central Texas College campuses are defrayed by student tuition and fees and 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 CTC representative on the installation at which classes are offered.

Students will be charged tuition at the rate established with the supporting agency which requests classes.

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 (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 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. The two forms of 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

BASIC EDUCATIONAL OPPORTUNITY GRANT: The BEOG is authorized by the Higher Education Act Amendments of 1972 to assist students in pursuing their first undergraduate degree. The intent of the BEOG is to provide a foundation of financial assistance to supplement the cost of postsecondary education. The amount of the BEOG award is based on the actual cost of the student's education while attending Central Texas College. Applications are available at the military Education Center.

GI BILL: Central Texas College is an approved college for those who wish to attend and receive benefits under the Veterans Readjustment Benefits Act or other Veterans Administration assistance.

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.

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

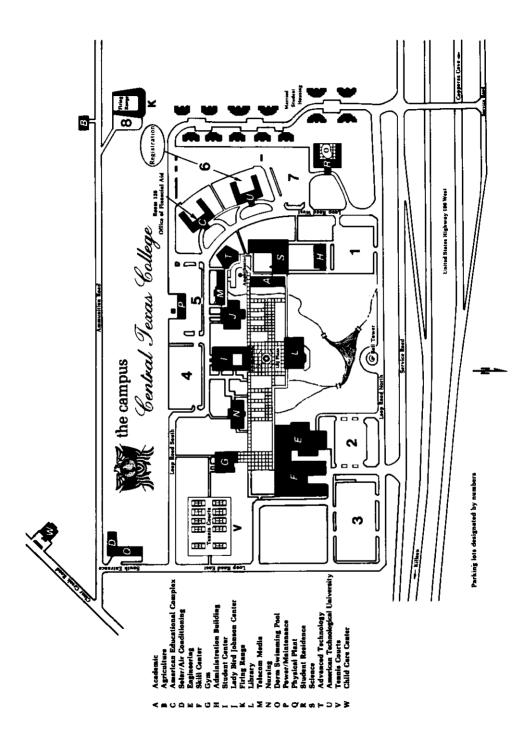
RECORDS ACCESS

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.

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 CTC representative.
- 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 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" "Non-Attendance," when their unexcused absences reach a total equal to 12.5% of the class hours for the course. Example: Forty-eight (48) contact hour course = 6.0 contact hours, or 12.5% of the class hours.

The following specific rules apply to absences:

- 1. A class meeting of 50 minutes equals 1 absence.
- 2. Instructors shall keep a record of class attendance.

- An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The course will be noted as an "F" "Non-Attendance" on the roll and record book.
- 4. As a matter of policy, administrative excuses from classes are not provided for any reason. Regardless of the reason for the absence, students are responsible for completing all course work covered during any absence.

ARE YOU OFFICIALLY ENROLLED?

CLASS MEMBERSHIP

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

YOUR CLASSIFICATION IS

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

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

RESIDENT CREDIT

ALL CAMPUSES

A student may earn an Associate Degree by completing all degree requirements, to include a minimum of twelve semester hours of formal study at branch campuses or in combination with study at the Killeen Campus. Courses offered at all Central Texas College campuses meet the same academic standards and carry the same resident credit.

CREDIT TRANSFERS

TO OTHER COLLEGES AND UNIVERSITIES

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

CREDIT TRANSFER LIMITS

MAXIMUM HOURS FOR TRANSFER TO OTHER COLLEGES

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

HOW TO CHOOSE COURSES

COURSE NUMBERS

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

Beginning with the Fall semester 1981, Central Texas College revised the course numbering system to follow a 4x4 course identification scheme. Course numbers from the 1980-1982 catalogue are shown in parentheses, following the new course number to assist returning students and institutions accepting transfer credits from Central Texas College in identifying former courses.

WHAT TO DO ABOUT COURSE PREREQUISITES

COURSES OUT OF SEQUENCE

Students who, for scheduling reasons, find it desirable to take an advanced course prior to completing the prerequisite must secure approval from the appropriate College official prior to registering for the course. 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 mailed by the College to the student's address of record at the end of
 each term. This method of reporting grades permits students to judge their performance
 at the end of each term. Students are responsible for notifying CTC of change of address.
- Transcripts are provided by the Records Office and are the official report of completed courses, grades, and credit awarded by the College. For information on ordering transcripts, see page 18.

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 N-No Credit P-Completed W-Withdrawal	0

Grade Notes:

"D":

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

"F":

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

"I" - INCOMPLETE:

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

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

"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" - WITHDRAWÂL:

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

GRADE POINT AVERAGING

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

GRADES AND FINANCIAL AID

The student attending college with military tuition assistance, tuition aid, or VA benefits should be familiar with the requirements and possible obligations incurred particularly upon receiving a grade of "F," "I," "W" or "N."

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

ACADEMIC STANDARDS

STUDENT RESPONSIBILITY

Students are expected to be aware of their grade point average, and to compute them 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.

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

IF YOU DON'T MAKE THE GRADE

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

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

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, listed below. NOTE: Students who use VA benefits and who are suspended will be reported to the Veterans Administration and must also meet VA requirements prior to reinstatement of VA benefits.

HOW YOU MAY RETURN

RETURN TO CLASS AFTER SUSPENSION

Students attending Central Texas College who have been suspended will be permitted to reenter the college on an individual basis. Students wishing to re-enter must:

- Receive counseling and be recommended, in writing, by the ESO or NCR for return to classes.
- Complete a re-entry petition and send it with the ESO or NCR's recommendation to the CTC 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 PROBATION and must meet academic standards required while on probation.

ARE CLASSROOM VISITS ALLOWED

VISITORS IN CLASS

Permission to visit a class may be granted by the 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 on campus or while attending any school-sponsored activity. Any student on campus 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:

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

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

TEXTBOOKS

Students are expected to buy the textbook(s) designated for each course. Textbooks may be purchased from the CTC representive 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 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 CTC 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 a 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 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 Korea. 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 branch campuses 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.

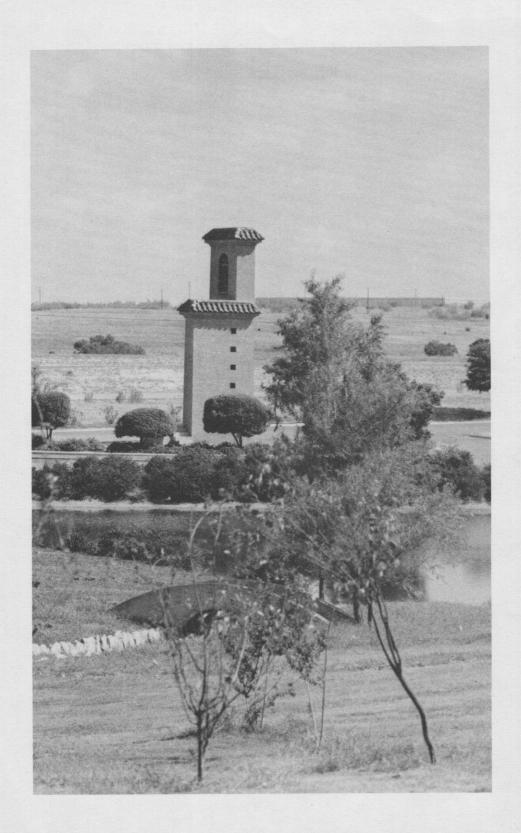
NOTE: Transcripts may be provided only upon the written request of the student.

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. 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. 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 general and specific requirements for graduation. Degrees are conferred three times each year, at the end of the fall, spring, and summer semesters. 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 is earned at every Central Texas College location.

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

WHAT REQUIREMENTS MUST BE MET FOR

ASSOCIATE IN ARTS DEGREE

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

- 1. Twelve semester hours of English.
- 2. Six semester hours of U.S. History.
- 3. Six semester hours of State & Federal Government.
- Fourteen semester hours of foreign language or eight semester hours of foreign language and eight semester hours of science.
- 5. Four semester hours of physical education.
- 6. Psychology 1101.
- 7. A minimum of eighteen semester hours of sophomore courses.
- 8. A minimum of twelve semester hours of credit earned anywhere within the Central Texas College system.
- 9. A minimum overall grade-point average of 2.0 ("C" average).
- Meeting all other college requirements.

ASSOCIATE IN SCIENCE DEGREE

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

- 1. Twelve semester hours of English.
- 2. Six semester hours of U.S. History.
- 3. Six semester hours of State and Federal Government.
- 4. Four courses of science.
- 5. Six semester hours of math.
- 6. Four semester hours of physical education.

- 7. Psychology 1101.
- 8. A minimum of fifteen semester hours of sophomore courses.
- A minimum of twelve semester hours credit earned anywhere within the Central Texas College system.
- 10. A minimum overall grade-point average of 2.0 ("C" average).
- 11. Meeting all other college requirements.

ASSOCIATE IN GENERAL STUDIES DEGREE

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

- Three semester hours of written communications and three semester hours of written or oral communications (English language only).
- 2. Three semester hours of mathematics or science.
- 3. Three semester hours of U.S. History or U.S. Government.
- 4. Psychology 1101.
- 5. A minimum of 12 semester hours of sophomore courses.
- A minimum of 12 semester hours of credit earned anywhere within the Central Texas College system.
- 7. A minimum overall grade point of 2.0 ("C" average).
- 8. Meeting all other college requirements.

ASSOCIATE IN APPLIED SCIENCE DEGREE

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

CERTIFICATE OF COMPLETION

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

TRANSFERABILITY OF COURSES

Students are urged to consult the catalogue of the institution to which 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.

WHEN ARE CERTIFICATES & DEGREES AWARDED

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

HOW TO APPLY FOR CERTIFICATE/DEGREE

Request for Certificate/Degree, with appropriate fees, must be submitted to the Counseling Office:

For Certificate or Degree in December, by October 1st.

For Certificate or Degree in May, by February 1st.

For Certificate or Degree in August, by June 10th.

NOTE: All course requirements must be complete prior to Certificate/Degree award. Requests for certificate/degree received from students who have not completed course requirements and who are not enrolled in the remaining courses by the date specified above will not be processed.

WHEN IS COMMENCEMENT HELD

GRADUATION

Central Texas College holds one consolidated graduation exercise annually 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:

- 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.
- In any graduating class the student(s) with the highest grade point average and who meets all other requirements above will be designated as graduating with HIGHEST HONORS.
- Public recognition for graduation with honors or highest honors is conferred only when the student participates in the formal commencement ceremonies.
- 4. To qualify for honors consideration, students must have earned a minimum of 30 semester hours with Central Texas College.

EVALUATION OF PREVIOUS EDUCATION

TRANSFER STUDENTS

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

NON-TRADITIONAL EDUCATION

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

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

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

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

- 1. DANTES Courses and Subject Standardized Tests.
- College Level Examination Program (CLEP) both the General Examination and Subject Examination.
- 3. Institutional Course Challenge Examinations.
- 4. Credit for military schools attended as recommended by the American Council on Education and recognized by Central Texas College ICEP.
- 5. Credit for Physical Education and Psychology 1101 for military service.
- MOS Training and Experience as recommended by the American Council on Education and recognized by Central Texas College - ICEP.
- American College Testing Program (ACT).
- College Board Admission Testing Program.
- Correspondence/Extension Courses offered by accredited institutions which are members of the National University Extension Association.
- 10. Other To include certain types of civilian training and specialized testing.

EVALUATION PROCEDURES

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

SERVICEMEN'S OPPORTUNITY COLLEGE - Because of its efforts to serve the educational needs of servicemen, Central Texas College has been designated a Servicemen's Opportunity College by the American Association of Community and Junior Colleges.

SOC DEGREE COMPLETION AGREEMENT

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

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 Education Centers 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.

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 specifically related to the major, are designed to broaden the student's exposure to various disciplines considered supportive of the program's objectives.

Central Texas College - Continental & Overseas Services

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

Associate in Applied	Locations								_	
Science Degree Programs	$A_{lask_{c}}$	Euron	Far F.	$F_{l,L_{\mathbf{Gas}}}$	F. Leonard	Fi. Rile	Cuam	Pace	Subic P	Yokosut
Administrative Secretarial	•	•	•		•				•	•
Air Conditioning & Refrigeration		•	•		•			•	•	
Applied Management	•	•	•	•	•	•	•	•	•	•
Applied Management w/Computer Science Option		•								•
Applied Management w/Electronics Option								•		
Applied Management w/Technical Options		•	•		•					
Automotive Body Repair	•	•	•		•					
Automotive Service & Repair	•	•	•		•	•		•	•	•
Aviation Maintenance Technology									•	
Business Management	•	•	•	•	•	•		•	•	•
Career Pilot	•	•	•		•	•		•	•	
Child Development		•								
Communications Electronics Technology		•	•		•			•	•	
Computer Science		Π	•	•				•	•	
Computer Electronics Technology			•							
Consumer Electronics Technology		•	•		•			•	•	
Diesel Mechanics		•	•		•			•	•	
Drafting & Design	•	•	•		•			•	•	
Environmental Control		•	•		•					
Fire Protection Technology		•	•		•			•	•	
Food Service Management	•	•	•	•	•	•		•	•	•
Hotel/Motel Management		•	•	•	•				•	•
Law Enforcement Technology	•	•	•	•	•			•	•	•
Maintenance Technology		•	•		•	•		•	•	•
Office Management		•	•		•				•	•
Petroleum Technology		•	•							
Photography	•	•	•		•			•	•	•
Real Estate		•	•		•			•	•	•
Small Gas Engine Repair_	•	•	•		•			•	•	
Telecommunications		•			•			•		
Welding Technology	•	•	•		•			•	•	•

ADMINISTRATIVE SECRETARIAL

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject				
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 &		OADM 1308 Business Correspon-				
Calculating Machines	3	dence	3			
ENGL 1307 Business English	3	COSC 1300 Computers & Society	3			
PYED Physical Education	1	PYED Physical Education	1			
PSYC 1101 College Orientation	1					
	17		16			

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject				
OADM 2301*	Advanced Shorthand	3	OADM	2303*	Advanced Transcription	3
OADM 2302*	Advanced Typewriting	3	OADM	2305	Bookkeeping II	3
OADM 2304	Bookkeeping I	3	OADM	2307	Office Administration &	
BUSS 2301	Principles of Economics I	3			Procedures	3
ELCT*	Approved Elective	3	ELCT		Elective	3
			ELCT		Elective	3
		15				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 Subject			Credit Hours	Second Subject	Credit Hours		
AIRC	1400	Air Conditioning &		AIRC	1402	Household Refrigeration	4
		Refrigeration, The-		AIRC	1403	Heating Systems	4
		ory & Application	4	AIRC	1404	Residential Air Con-	
AIRC	1401	Basic Electrical Cir-				ditioning	4
		cuits	4	TMTH	1300	Technical Math I	3
WELD	1401	Beginning Gas Weld-		PYED		Physical Education	1
		ing	4				16
MGMT	1302	Safety (OSHA)	3				
PYED		Physical Education	1				
PSYC	1101	College Orientation	1				
			1 7				

AIR CONDITIONING & REFRIGERATION (cont'd)

SECOND YEAR

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

^{*}SESY 1301, SESY 1401, MGMT 1306, MTNT 1401, MTNT 2403, DRDS 1303, or other elective approved by the appropriate College official.

APPLIED MANAGEMENT

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject				
BUSS	1302	Consumer Economics	3	BUSS	2306	Personal Finance	3	
ELCT	•	Computer Science		MATH	1307	Business Mathematics	3	
		Elective	3	OADM	1308	Business Correspondence	3	
MGM	T 1305	introduction to Man-		SPCH	1301	Fundamentals of Speech	3	
		agement	3	ELCT*		Approved Elective	3	
MGM	T 1306	Human Relations	3	PYED		Physical Education	1	
ENGL	1309	Communications Skills	3			•	16	
PYED		Physical Education	1					
PSYC	1101	College Orientation	1					
			17					

SECOND YEAR

First Semester Subject	Credit Hours	Second Semes Subject	Credit Hours	
BUSS 2303 Principles of Accounting	g 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 Speech	3	MGMT 2310	Personnel Counseling	3
ELCT* Approved Elective	3	ELCT*	Approved Elective	3
PYED Physical Education	1	ELCT*	Approved Elective	3
ŕ	16	PYED	Physical Education	1
			•	16
			TOTAL HOURS	65

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

APPLIED MANAGEMENT WITH TECHNICAL OPTIONS

A Two-Year Associate in Applied Science Degree OPTION I. AUTOMOTIVE TUNE—UP FIRST YEAR

11101 000100101	Credit Hours	Second Semester Subject	Credit Hours	
MGMT 1302 Safety (OSHA)	3	MGMT 1304 Work	c Organization	3
MGMT 1305 Introduction to Managemen	t 3	MGMT 1306 Hum	an Relations	3
AUTO 1401 Internal Combustion		AUTO 1404 Fuel	Systems	4
Engine Fundamentals	4	AUTO 2406 Engi.	ne Diagnosis &	
AUTO 1402 Automotive Electrical		Emis	sion Control	4
Systems	4	MATH 1307 Busin	ness Mathematics	3
BUSS 1301 Introduction to Business	3	PYED Phys	ical Education	1
PYED Physical Education	1			18
PSYC 1101 College Orientation	1			
	19			

SECOND YEAR

First Semester Subject	Crec Hou			er	Credit Hours
MGMT 1307 Insur	ance 3	MGMT	1309	Income Tax	3
ENGL 1307 Busin	ess English 3	MGMT	2305	Business Law I	3
OADM 2304 Book	keeping I 3	AUTO	2402	Shop Organization &	
SPCH 2303 Busin	ess Speech 3			Management	4
ELCT* Appr	oved Elective 3-4	OADM	2305	Bookkeeping II	3
PYED Physi	ical Education 1	ELCT*		Approved Elective	3-4
·	16-17	PYED		Physical Education	1
				·	17-18
				TOTAL HOURS	70.72

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

OPTION 2. ELECTRONICS SERVICING FIRST YEAR

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

OPTION 2. ELECTRONICS SERVICING (cont'd) SECOND YEAR

First Ser Subject	mester		Credit Hours	Second Seme Subject	ester	Credit Hours
MGMT	1307	Insurance	3	MGMT 1309	Income Tax	3
ELTE	1404	Communications Circuits	I 4	MGMT 2308	Business Law I	3
ELTE	1503	Advanced Electricity		OADM 2305	Bookkeeping II	3
		for Electronics	5	ELTE 2407		4
OADM	2304	Bookkeeping I	3	ELCT*	Approved Elective	3
SPCH	2303	Business Speech	3	PYED	Physical Education	1
PYED		Physical Education	1		•	-
		-	19			17
					TOTAL HOURS	71

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

OPTION 3. FOOD SERVICE OPERATIONS FIRST YEAR

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

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

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

OPTION 4. COMPUTER SCIENCE FIRST YEAR

First Semester Subject		Credit Hours	Second Subject		ter	Credit Hours
MGMT 1305	Introduction to Management	t 3	MGMT	1304	Work Organization	3
COSC 1405	Introduction to Systems		MGMT	1301	Organization and	
	Analysis	4			Management	3
COSC 1403	Introduction to Computer	,	COSC	1407	RPG Programming**	4
	Science and Computer		COSC	1406	Computer Organization a	nd
	Programming	4			Architecture	4
MATH*	Mathematics Option	3	SPCH	1301	Fundamentals of Speech	3
ENGL 1309	Communications Skills	3	PYED		Physical Education	1
PYED	Physical Education	1				18
PSYC 1101	College Orientation	1				
		19				

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Cre Subject Hou	
MGMT 2303 Law & Legal Assistance	3	MGMT 2312 Fundamentals of Systems	
MGMT 2302 Personnel Management	3	Management 3	Į.
BUSS 2303 Principles of Accounting	1 3	COSC 1408 Conversational Languages 4	
COSC 1404 COBOL Programming**	4	BUSS 2304 Principles of Accounting II 3	ļ.
COSC 2301 Introduction to Computer	r	ELCT*** Approved Elective 3	
Center Management	3	ELCT*** Approved Elective 4	
	16	17	,
*MATH 1301, 1307, or 1308.		TOTAL HOURS 70)
**COSC 2302 or COSC 2406.			

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

OPTION 5. HOME ENTERTAINMENT SERVICING FIRST YEAR

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

OPTION 5. HOME ENTERTAINMENT SERVICING (cont'd) SECOND YEAR

First Semest Subject	er	Credit Hours		Second Semester Subject			
MGMT 1307	Insurance	3	MGMT 13	09 Income Tax	3		
ELTE 2404	Electronics Circuits II	4	MGMT 23	05 Business Law I	3		
COES 2408	CATV & Audio Distribi	ution	COES 14	i09 Television Theory &			
	Systems	4		Servicing	4		
OADM 2304	Bookkeeping I	3	OADM 23	05 Bookkeeping II	3		
SPCH 2303	Business Speech	3	ELCT*	Approved Elective	3-4		
PYED	Physical Education	ι	PYED	Physical Education	1		
		18			17-18		
				TOTAL HOURS	71-72		

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

OPTION 6. RESIDENTIAL AIR CONDITIONING SERVICING

FIRST YEAR

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

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

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

OPTION 7. SMALL ENGINE SERVICING FIRST YEAR

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

SECOND YEAR

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

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

AUTOMOTIVE BODY REPAIR

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

First Semester Subject	Credit Hours			iter	Credit Hours
ATBR 2400	Major Vehicle Damage	ATBR	2402	Glass, Electrical &	
	Repair 4			Power Accessory Serv.	4
ATBR 2401	Upholstery & Vinyl Top Repair4	ATBR	2405	Management & Esti-	
ATBR 2403	Painting & Refinishing 4			mating	4
AUTO 1402	Automotive Electrical Systems 4	ELCT*		Approved Elective	3-4
PYED	Physical Education 1	MATH	1307	Business Math	3
	17				14-15
				TOTAL HOURS	67-68

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

AUTOMOTIVE SERVICE & REPAIR

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
AUTO 2405 Steering & Suspension		AUTO 2406 Engine Diagnosis &	
Systems	4	Emission Control	4
AUTO 2401 Standard Transmission	s&e	AUTO 2403 Automatic Transmis-	
Differentials	4	sions	4
AUTO 2404 Ignition, Starting &		AUTO 1405 Automotive Air Con-	
Charging Systems	4	ditioning	4
ELCT* Approved Elective	3-4	ELCT** Diesel Elective	4
ENGL 1309 Communications Skills	3		16
	18-19		
		TOTAL HOURS	67-69

^{*}WELD 1401, MGMT 1305, or other electives approved by the appropriate College official.

AVIATION MAINTENANCE TECHNOLOGY

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject		
AVMT 1301	Maintenance Publications-C	G 3	AVMT 1303	Aircraft Drafting-G	3
AVMT 1302	Weight & Balance-G	3	AVMT 1304	Airframe Materials &	
AVMT 1401	Basic Aircraft Electricity-G	4		Corrosion Control-G	3
ENGL 1309	Communications Skills	3	AVMT 2401	Aircraft Finishes-A	4
PHYS 1403	Survey of Physics	4	AVMT 2501	Sheet Metal Structures-A	5
PYED	Physical Education	1	ELCT	Approved Elective	3
PSYC 1101	College Orientation	1	PYED	Physical Education	1
	- 0	19		-	19

Summer Semester

First Se Subject			Credi Hour
AVMT	2403	Airframe Inspection-A	4
AVMT	2404	Aircraft Fuel Systems-A	4
AVMT	2502	Hydraulics & Pneumatics-A	5
		•	12

^{**}DIEM 1403, DIEM 2401.

AVIATION MAINTENANCE TECHNOLOGY (cont'd)

SECOND YEAR

First Semester Subject	Credit Hours	Second Semester Subject		
AVMT 2405 Aircraft Instruments Systems-A	4	AVMT 2407 Engine Lubrication & Cooling Systems-P	4	
AVMT 2406 Engine Electrical Systems-P	4	AVMT 2504 Powerplant Maintenan	ce	
AVMT 2503 Aircraft Electrical Sys-		Reciprocating Engines-	P 5	
tems-A	5	AVMT 2507 Powerplant Maintenan	ce	
AVMT 2505 Engine Fuel Systems	5	Turbine Engines-P	5	
	18	AVMT 2506 Aircraft Propellers-P	5	
			19	
		TOTAL HOURS	88	

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

BUSINESS MANAGEMENT

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject		
MGMT 1304 Work Organization	3	MGMT 2302	Personnel Management	3
MGMT 1305 Introduction to Managemen	ıt 3	MGMT 2309	Supervision	3
MGMT 1306 Human Relations	3	ELCT*	Approved BUSS/MGMT	*
BUSS 1301 Introduction to Business	3		OADM or other	
ELCT English Elective	3		elective	3
PYED Physical Education	1	OADM 1309	Business Machines &	
PSYC 1101 College Orientation	1		Calculations	3
	17	SPCH	SPCH 1301 or 2303	3
		PYED	Physical Education	1
			-	16

First Semester Subject	Credit Hours	Second Seme Subject	ster	Credit Hours
MGMT 2301 Marketing Principles	3	BUSS 2302	Principles of Economics	11 3
BUSS 2301 Principles of Economics I	3	BUSS 2304	Principles of Accounting II	or
BUSS 2303 Principles of Accounting	lor	OADM 2305	Bookkeeping II	3
OADM 2304 Bookkeeping I	3	ELCT*	Approved BUSS/MGMT	7
ELCT* Approved BUSS/MGM	T/		OADM or other elective	3
OADM Elective	3	OADM 2307	Office Administration &	
COSC ELCT	3		Procedures	3
	15	ELCT	Approved Elective	3
				15
			TOTAL HOURS	63

^{*}Approved BUSS/MGMT/OADM or other electives must be approved by the appropriate College official. Mathematics elective may be substituted for OADM 1309 with approval of the appropriate College official.

CAREER PILOT

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

SECOND YEAR

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

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

CHILD DEVELOPMENT

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
CHDV	1301	Introduction to Child		CHDV	1302	Infant and Toddler Care	3
		Development	3	CHDV	1304	Developmental Language	3
CHDV	1401	Learning Programs	4	CHDV	1305	Instructional Aids	3
CHDV	1403	Creative Expression	4	PSYC	2303	Child Growth and	
ENGL	1309	Communications Skills	3			Development	3
PYED		Physical Education	1	SPCH	1301	Fundamentals of Speech	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
		5	16				16

^{**}Approved electives are: Career Pilot, Business Management, Social Science, Mathematics, or other courses approved by the appropriate College Official.

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

CHILD DEVELOPMENT (cont'd)

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject			Credit Hours	
CHDV	2301 2601	The Exceptional Child Learning Theories Semi-	3	CHDV	2302 2401	Parent-Child Relationship Pre-School Center	3
CILDV	2001	nar and Practicum	6			Management	4
GOVT	2301	State & Federal Gov-		CHDV	2602	Special Projects	6
		ernment l	3	GOVT	2302	State & Federal Gov-	
SOCI	2301	Introduction to Sociology	3			ernment II	3
ELCT		Approved Elective	3				16
			18				
						TOTAL HOURS	66

^{*}ENGL 1301 may be substituted for ENGL 1309. Approved electives are SOCI 2306, BUSS 1301, MGMT 1305, FSMG 1306, or other course approved by the appropriate College official.

COMMUNICATIONS ELECTRONICS TECHNOLOGY

A Two-Year Associate in Applied Science Degree

FIRST YEAR

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

First Semester Subject	Credit Hours	Second Semester Subject			Credit Hours
ELTE 2404 Electronics Circuits	II 4	ELTE	2403	Special Intensive Study	4
COES 1409 Television Theory & S	Servicing 4	ELTE	2407	Communications Circuit	s II 4
COES 2402 Radio Systems	4	CMET	2401	Microprocessors &	
ELCT** Approved Technical F	lective 4			Microcomputers	4
PYED Physical Education	1	ELCT**	,	Approved Technical Electiv	-
	17	ENGL*		Approved English	3
					18-19
				TOTAL HOURS	69-70

^{*}ENGL 1301, ENGL 1309, ENGL 2309.

^{**}ELTE 2301, ELTE 2406, ELTE 2409.

The appropriate College official may substitute ELTE 1303 for CMET 1400 and ELTE 2402 for CMET 2406.

COMPUTER ELECTRONICS TECHNOLOGY

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject		Credit Hours				Credit Hours	
CMET	1400	Electronics & Computer		CMET	1403	Computer Systems &	
		Skills	4			Operational Programming	4
CMET	1401	Digital Circuits	4	ELTE	1302	Technical Mathematics II	3
ELTE	1301	Technical Mathematics I	3	ELTE	1403	Electronics Circuits I	4
ELTE	1400	Basic Electricity	4	ENGL*		Approved English	3
PYED		Physical Education	1	ELCT***	۲	Approved Elective	3
PSYC	1101	College Orientation	1	PYED		Physical Education	1
			17				18

SECOND YEAR

First Semester Subject			Credit Hours			Credit Hours	
CMET ELTE	2402 2404	Computer Circuit Analysi Electronics Circuits II	sis 4 4	CMET	2401	Microprocessors & Microcomputers	4
COES	1409	Television Theory & Servicing	4	CMET	2404	Computer System Diag- nosis & Maintenance	4
ELCT**		Approved Technical		ELTE	2403	Special Intensive Study	4
		Elective	4	ENGL*		Approved English	3
			16	ELCT**		Approved Technical	
						Elective	3
							18
						TOTAL HOURS	69

^{*}ENGL 1301, ENGL 1309, ENGL 2309.

The appropriate College official may substitute ELTE 1303 for CMET 1400 and ELTE 2402 for CMET 2406.

COMPUTER SCIENCE

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject			Credit Hours
COSC 1403	Introduction to Computer	г	COSC	1404	COBOL Programming	4
	Science & Computer Programming	4	COSC	1406	Computer Organization	
0000 4405	0	4			& Architecture	4
COSC 1405	Introduction to Systems		ELCT*		Approved Elective	3
	Analysis	4	ENGL		ENGL 1302, 1309,	
ENGL 1301	Composition & Rhetoric I	3			2309 or SPCH 2303	3
MATH**	Mathematics Option	3	MATH**	r	Mathematics Option	3
PYED	Physical Education	1	PYED		Physical Education	1
PSYC 1101	College Orientation	1			•	18
		16				

^{**}ELTE 2406, ELTE 2409, or CMET 2403.

^{***}ENGR 1301, PHYS 1401.

COMPUTER SCIENCE (cont'd)

. SECOND YEAR

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

^{*}Electives must be approved by the appropriate College official.

CONSUMER ELECTRONICS TECHNOLOGY

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

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

^{*}ENGL 1301, ENGL 1309, ENGL 2309.

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

^{**}ELTE 2406, ELTE 2408, ELTE 2409, CMET 2401.

The appropriate College official may substitute ELTE 1303 for CMET 1400 and ELTE 2402 for CMET 2406.

DIESEL MECHANICS

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

16

SECOND YEAR

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

^{*}WELD 1402, AUTO 1405, AUTO 2406.

DRAFTING & DESIGN

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

DRAFTING & DESIGN (cont'd) SECOND YEAR

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

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

ENVIRONMENTAL CONTROL

A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject			Credit Hours	
ENCT	1301	Water & Waste Water		ENCT	1302	Aquatic Biology	3
		Technology	3	ENCT	1303	Solid Waste Management	3
CHEM	1401	General Chemistry I	4	CHEM	1402	General Chemistry II	4
ENGL	1301	Composition & Rhetoric I	3	ENGL	2309	Technical Writing	3
SPCH	1301	Fundamentals of Speech	3	MATH	1303	Trigonometry	3
PYED		Physical Education	1	PYED		Physical Education	1
			14			-	17

First Semester Subject		Credit Hours	Second Semester Subject			Credit Hours
ENCT 2301	Air Pollution	3	ENCT	2303	Instrumentation	3
ENCT 2302	Industrial Waste Control	3	ENCT	2304	Water Quality Control	3
ENCT 2201	Pollution Abatement		ENCT	2202	Pollution Abatement	
	Seminar I	2			Seminar II	2
BIOL 2404	Microbiology	4	ENCT	2401	Water & Waste Water	
PHYS 1401	College Physics I	4			Chemistry	4
PYED	Physical Education	1	BUSS	2301	Principles of Economics I	3
		17	PYED		Physical Education	1
					•	16
					TOTAL HOURS	64

^{**}DRDS 1302, DRDS 1400, DRDS 1303, MATH 1301, MATH 1302, MATH 1303, ART. 1301, OPRT 1301, or other elective approved by the appropriate College official.

FIRE PROTECTION TECHNOLOGY

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject			Credit Hours
FPRT 2301	Industrial Fire Protection	n I 3	FPRT	2302	Industrial Fire Protection 1	Ι3
FPRT 2303	Hazardous Material I	3	FPRT	2306	Fire & Arson Investigation	3
FPRT 2305	Building Codes & Constr	uc-	FPRT	2404	Fire Fighting Tactics	
	tion	3			and Strategy	4
ENGL 2309	Technical Writing	3	FPRT**	٠	Fire Protection Technology	3
GOVT 2301	State & Federal Governmen	ıt	ELCT		Approved Elective	3
or	1 & 11				• •	
GOVT 2302		3				16
ELCT	Elective	3				
		18				
					TOTAL HOURS	67

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

FOOD SERVICE MANAGEMENT

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

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

FOOD SERVICE MANAGEMENT (cont'd) SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject			Gredit Hours
FSMG 2304	Marketing & Sales Pro-		FSMG	2303	Cafeteria Management	3
	motion	3	FSMG	2305	Financial Management	3
FSMG 2307	Hospitality Industry Law	3	ELCT		Elective	3
MGMT 2302	Personnel Management	3	ELCT*		Approved Elective	2-4
MGMT 2304	Labor Management Relation	s 3	FSMG	2306	Layout and Design	3
FSMG 1307	Meat Science	3	PYED		Physical Education	1
PYED	Physical Education	1			•	15-17
	•	16			TOTAL HOURS	65-67

^{*}Any FSMG, HMMG. ENGL 1301, ENGL 1302, BUSS 2303, BUSS 2304, MGMT 1305, or other courses approved by the appropriate College official.

HOTEL-MOTEL MANAGEMENT A Two-Year Associate in Applied Science Degree

FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject	Credit Hours
HMMG 1302 Hotel/Motel Organization		HMMG 1300 Food and Be	verage
and Administration	3	Management	3
FSMG 1401 Food Preparation & Serv	ing 4	HMMG 1303 Front Office	Procedures 3
ELCT* Approved Elective	3	HMMG 1304 Hotel/Motel S	ales Promotion 3
ENGL 1309 Communications Skills	3	FSMG 1303 Sanitation at	nd Safety 3
MATH 1307 Business Mathematics	3	FSMG 1305 Food Purcha	sing 3
PYED Physical Education	1	PYED Physical Edu	cation 1
PSYC 1101 College Orientation	1	-	16
_	18		

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

^{*}Any FSMG, HMMG, ENGL 1301, ENGL 1302, MGMT 1305, or other courses approved by the appropriate College official.

LAW ENFORCEMENT

A Two-Year Associate in Applied Science Degree FIRST YEAR

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

SECOND YEAR

First Semester Subject		•	Credit Hours	Second Semester Subject			Credit Hours
LAWE	2201	Firearms	2	LAWE	2308	Patrol Administration	3
LAWE	2304	Juvenile Procedures	3	SPCH	2303	Business Speech	3
PYED	2302	Safety and First Aid	3	ELCT*		Law Enforcement Elective	e 3
GOVT	2301	State & Federal Gov-		ELCT		Approved Elective	3
or	2302	ernment I or II	3	ELCT		Approved Elective	3
PSYC	2301	Introduction to Psycholog	y 3				15
ELCT*		Law Enforcement Elective	3				
			17			TOTAL HOURS	68

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

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

Electives must be approved by the appropriate College official.

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

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

^{*}Students desiring to concentrate in a specific option should take the following courses: Patrol/Traffic Option: LAWE 1305, LAWE 2303, LAWE 2306, LAWE 2309.

MAINTENANCE TECHNOLOGY (cont'd)

SECOND YEAR

First Semester Subject		Gredit Hours	Second Semester Subject			Credit Hours
MTNT 2402 C	Carpentry II	4	MTNT	2401	Masonry	4
*	Plumbing 1	4	DRDS	1303	Architectural Blueprint Read	ing 3
	Household Refrigeration		MTNT	2404	Painting & Refinishing	4
	Systems	4	AIRC	1404	Residential Air Conditioning	4
ELCT*	Approved Elective	4	ELCT*		Approved Elective	3
	Physical Education	1				18
	2	17				
					TOTAL HOURS	70

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

OFFICE MANAGEMENT

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject		
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	
ENGL 1307 Business English	3	OADM 1309 Business Mathematics &		
PYED Physical Education	1	Calculating Machines	3	
PSYC 1101 College Orientation	1	PYED Physical Education	1	
MGMT 1305 Introduction to Managemen	ıt 3	COSC 1300 Computers & Society	3	
J	17		16	

First Semester Subject		Credit Hours	Second Semes Subject	Credit Hours	
MGMT 1304	Work Organization	3	MGMT 2302	Personnel Management	3
MGMT 1306	Human Relations	3	MGMT 2306	Business Law II	3
MGMT 2305	Business Law I	3	MGMT 2309	Supervision	3
SPCH 2303	Business Speech	3	OADM 2307	Office Administration &	
ELCT	Elective	3		Procedures	3
		15	ELCT**	Approved Elective	3
					15
				TOTAL HOURS	63

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

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

PETROLEUM TECHNOLOGY

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject		•	Credit Hours	Second Semester Subject			Credit Hours
PETT	1301	Introduction to Petroleun	n	PETT	1303	Rotary Drilling Fluids	3
		Technology	3	PETT	1304	Oil Field Records	3
PETT	1302	Petroleum Geology	3	PETT	1402	Petroleum Logging &	
PETT	1401	Rig & Drilling Equipment	4			Mapping	4
CHEM	1401	General Chemistry I	4	CHEM	1402	General Chemistry II	4
TMTH	1300	Technical Mathematics I	3	ENGL	1307	Business English	3
PSYC	1101	College Orientation	1			o o	17
		-	19				

SECOND YEAR

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

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

PHOTOGRAPHY

A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
РНОТ	1401	Introduction to Photog-		PHOT	1403	Advanced Photography	4
		raphy	4	PHOT	1404	Commercial Photography	4
PHOT	1402	Portrait Photography	4	PHOT	1405	Advanced Printmaking	4
TOHG	1406*	Color Photography I	4	TOH9	1407	Color Photography II	4
ENGL	1309	Communications Skills	3	ELCT‡		Approved Elective	3
MATH	1307	Business Mathematics	3	PYED		Physical Education	1
PYED		Physical Education	1				20
PSYC	1101	College Orientation	1				
		_	20				

PHOTOGRAPHY (cont'd) SECOND YEAR

First Semester Subject		Credit Hours	Second Semester Subject			Credit Hours	
РНОТ	2301	Photography Internship I	3	PHOT	2302	Photography Internship II	1 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 [3
ELCT:		Approved Elective	3	ELCT‡		Approved Elective	3
PYED		Physical Education	1	PYED		Physical Education	1
		•	18				17
						TOTAL HOURS	75

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

REAL ESTATE A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject		
MGMT 1305 Introduction to Managemen	t 3	REAE 1302 Real Estate Marketing	3	
MGMT 1306 Human Relations	3	MGMT 2309 Supervision	3	
REAE 1301 Real Estate Funda-		BUSS 2301 Principles of Economics	I 3	
mentals	3	MATH 1307 Business Mathematics	3	
BUSS 1301 Introduction to Business	3	ELCT* Approved Social		
ENGL ENGL 1300, 1301, or 130	7 3	Science Elective	3	
PYED Physical Education	1	PYED Physical Education	1	
PSYC 1101 College Orientation	1		16	
_	17			

SECOND YEAR

First Semester Subject			Credit Second Semeste Hours Subject		oter Gr Ho	
BUSS	2302	Principles of Economics I	I 3	MGMT 2301	Marketing Principles	3
BUSS	2303	Principles of Accounting	I 3	BUSS 2304	Principles of Accounting	II 3
REAE		Approved Real Estate		REAE	Approved Real Estate	
		Elective	3		Elective	3
ELCT*		Approved Real Estate		ELCT*	Real Estate or	
		or Management Elective	3		Management Elective	3
ELCT*		Approved Elective	3	ELCT*	SPCH 1301 or 2303	3
		••	15			15
					TOTAL HOURS	63

^{*}All electives must be approved by the appropriate College official.

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

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

[‡]Approved Electives: ART. 1300, SPCH 1301, OPRT 1302, TELE 1303, TELE 2302, TELE 2308, or other elective approved by the appropriate College official.

SMALL GAS ENGINE REPAIR

A Two-Year Associate in Applied Science Degree FIRST YEAR

	First Semester Subject		Credit Hours				Credit Hours	
SGER	1401	Gas Engine Fundamentals	3 4	SGER	1404	Carburction Fuel and		
SGER	1402	Ignition Systems	4			Lubrication Systems	4	
SGER	1403	Shop Practices	4	SGER	1405	Motorcycle Engine Service	÷ 4	
TMTH	1300	Technical Mathematics I	3	SGER	1406	Lawn Care Equipment		
PYED		Physical Education	1			Service	4	
PSYC	1101	College Orientation	1	ENGL	1307	Business English	3	
			17	WELD	1401	Beginning Gas Welding	4	
				PYED		Physical Education	1	
						•	20	

SECOND YEAR

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

TELECOMMUNICATIONS A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject		Credit Hours	Second Semester Subject			Credit Hours	
TELE	1301	Introduction to Broad-		TELE	1304	Broadcast Sales	3
		casting	3	TELE	1307	Broadcast Station Manage	? -
TELE	1302	Beginning Radio Produc-				ment	3
		tion	3	TELE	1306	Television Film I	3
TELE	1303	Beginning Television		ENGL	1302	Composition & Rhetoric 11	3
		Production	3	SPCH	1301	Fundamentals of Speech	3
JOUR	1401	Communications Media	4	PYED		Physical Education	1
ENGL	1301	Composition & Rhetoric l	3				16
PSYC	1101	College Orientation	1				
		_	17				

TELECOMMUNICATIONS (cont'd)

SECOND YEAR

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
TELE	2305	Broadcast Writing Television Film II/Elec-	3	TELE	2302	Advanced Television Production	2
TELE	2307	tronic News Gathering	3	TELE	2303	Advanced Radio Produc-	3
TELE	2301	Technical Aspects of				tion	3
		Broadcasting	3	TELE	2306	Telecommunications Seminar	3
TELE	2309	Telecommunications Fiel	d	TELE	2308	Telecommunications	
		Projects I	3			Practicum	3
ELCT*		Approved Elective	3	ELCT*		Approved Elective	3
PYED		Physical Education	1				15
		•	16				
						TOTAL HOURS	64

^{*}Approved electives: TELE 1305, TELE 2304, TELE 2310. JOUR 1402, or other electives approved by the appropriate College official.

WELDING A Two-Year Associate in Applied Science Degree FIRST YEAR

First Semester Subject	Credit Hours	Second Semester Subject			Credit Hours
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	g 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
v	17	PYED		Physical Education	1
				-	16

First Semester Subject			Credit Hours	Second Semester Subject			Credit Hours
WELD 24	401	Advanced Arc Welding	4	WELD	2404	Advanced Pipe Welding	4
WELD 24	402	Beginning Pipe Welding	4	WELD	2405	Weld Testing &	
WELD 24	403	Advanced GMAW				Inspection	4
		& GTAW (MIG & TIG)	4	WELD	2406	Welding Fabrication	
ELCT*		Approved Elective	3-4			& Layout	4
TMTH 13	301	Technical Mathematics I	I 3	ELCT*		Approved Elective	3-4
		1	18-19				15-16
						TOTAL HOURS	66-68

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

[†]WELD 1301 may be substituted.

^{††}WELD 1302 may be substituted.

Air Conditioning and Refrigeration (AIRC) AIRC 1400 (AC 140) Air Conditioning & (2-4)

Refrigeration Theory & Application

(2-4) Credit: 4

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

AIRC 1401 (AC 141) Basic Electrical Circuits (2-4) Credit: 4
Instruction in basic electricity and its application. Introduces the student to the various electrical devices, their importance in electrical circuits, including those used in residential wiring. Methods of wire connections for new and repair service, making and testing electrical circuits, and the use of electrical measuring and testing equipment.

AIRC 1402 (AC 142) Household Refrigeration Systems (2-4) Credit: 4 Application of the refrigeration cycle to household refrigeration, including refrigerators, home freezers, and window air conditioning units. Instruction in service procedures for locating and correcting problems in the mechanical and electrical systems of units: trouble shooting, repairing and charging refrigeration equipment. Development of shop skills in the use of special refrigeration tools and equipment. Prerequisites: AIRC 1400, AIRC 1401.

AIRC 1403 (AC 143) Heating Systems (2-4) Credit: 4
The study of types of heating equipment and their application. Service procedures for locating and correcting problems in heating systems. Study of manufacturers information on various heating units and equipment, to enable the student to determine proper installation. Prerequisites: AIRC 1400, AIRC 1401.

AIRC 1404 (AC 144) Residential Air Gonditioning (2-4) Credit: 4 Instruction in heat transfer through material, heat loss and heat gain calculations for residential heating and air conditioning systems, equipment selection and location, duct sizing and layout, controls and control circuits installation and service procedures. Prerequisites: AIRC 1400, AIRC 1401.

AIRC 2401 (AC 241) Control Theory and Application (2-4) Credit: 4 Instruction in the operation of control devices, how they can be applied and varied to achieve the designed conditions. Includes interpretation and drawings of schematic and pictorial control circuit diagrams. Prerequisites: AIRC 1400, AIRC 1401.

AIRC 2402 (AC 242) Commercial Refrigeration Systems (2-4) Credit: 4 Types of commercial refrigeration units and systems. Instruction in controls and control circuits in commercial refrigeration. Heat loss and heat gain calculations for commercial applications, equipment selections, locating and piping procedures. Instruction in installation and service procedures for different systems. Prerequisites: AIRC 1400, AIRC 1401.

AIRC 2403 (AC 243) Commercial Air Conditioning Systems (2-4) Credit: 4

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

Art (ART.)

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

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

ART. 1309 (ART 130) Printing for Advertising Art (2-4) Credit: 3 This course covers the fundamentals of various graphic techniques. Instruction is given in the classification of printing methods, composition, copy and art preparation, paper selection, type and letter styles and usage, trademarks, and handlettering.

Automotive Body Repair (ATBR)

ATBR 1401 (AB 141) Shop Practices

(3-3) Credit: 4

This course is an introduction to shop safety methods (OSHA) and practices in the modern body shop, proper use of hand and power tools and precision measuring devices.

ATBR 1402 (AB 142) Body and Frame Construction (2-4) Credit: 4 A course designed to provide an understanding of body frame construction of both conventional and unit bodies. Special emphasis will be placed on repair equipment and procedures to diagnose, repair and align collision-damaged parts. Corequisite: ATBR 1401.

ATBR 1403 (AB 143) Roughing and Alignment (2-4) Credit: 4
A course designed to provide an understanding of roughing and shaping procedures on automotive sheet metal necessary to make satisfactory body repairs with special emphasis on alignment of component parts such as hoods, doors, fenders, McPherson Strut, etc. Prerequisites or corequisites: ATBR 1401, ATBR 1402.

ATBR 1404 (AB 144) Frame Repair & Alignment (2-4) Credit: 4 A course designed to provide the student with a working knowledge of the types of body frames, misalignment, alignment straightening, repair and the use of special equipment and measuring devices. Prerequisites: ATBR 1401, ATBR 1402.

ATBR 1405 Auto Body Welding

(2-4) Credit: 4

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

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

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

ATBR 2400 Major Vehicle Damage Repair

(2-4) Credit: 4

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

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

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

ATBR 2402 (AB 242) Glass, Electrical & Power Accessory Service

(2-4) Credit: 4

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

ATBR 2403 Painting & Refinishing

(2-4) Credit: 4

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

ATBR 2405 (AB 243) Management & Estimating (3-3) Credit: 4
A course designed to provide the student with the experience of body shop management as it pertains to facilities, personnel, cost accounting, purchasing and stocking of supplies. The student will also receive instructions in collision repair estimating and the use of flat-rate and material manuals. This is to be taken the final semester before graduation. Prerequisite: Approval of the appropriate College official.

Automotive Service and Repair (AUTO)

AUTO 1400 (AT 140) Shop Practices & Safety (2-4) Credit: 4 A course designed to provide the student with basic automotive skills involving shop safety, automotive lifting devices, use of shop and flat-rate manuals, measuring devices, fasteners, hand and power tool use, thread repair, soldering, automotive terminology, cleaning methods, and the basic nine systems of the automobile.

AUTO 1401 (AT 141A) Internal Combustion (2-4) Credit: 4
Engine Fundamentals

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

AUTO 1402 (AT 142) Automotive Electrical (2-4) Credit: 4
Systems

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

AUTO 1403 (AT 141B) Internal Combustion (2-4) Credit: 4
Engine Service

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

AUTO 1404 (AT 144) Fuel Systems (2-4) Credit: 4
A course designed to provide an understanding of the theory, fundamentals of operation, and construction of the various types of carburetors, fuel pumps, and components of the fuel system, using established procedures, measuring tools, hand tools, and special testing

equipment for testing and adjusting overhauled carburetors.

AUTO 1405 (AT 145) Automotive Air Conditioning (2-4) Credit: 4

A course designed to provide an understanding of the principles, design, construction.

A course designed to provide an understanding of the principles, design, construction, installation, and service procedures involved in automotive air conditioning, with special emphasis on system recharging and compressor service.

AUTO 1406 Engine Tune Up

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

AUTO 1407 (AT 147) Brake Systems (2-4) Credit: 4
A course designed to provide an understanding of the nomenclature, theory of operation and service procedures involved in the brake system. The use of the brake drum lathe, shoe grinder, bleeder, and other equipment necessary to effect brake repairs will be taught, with emphasis on power brake and dual braking systems.

AUTO 2401 (AT 241A) Standard Transmissions (2-4) Credit: 4 and Differentials

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

AUTO 2402 (AT 242) Shop Organization (3-3) Credit: 4
and Management

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 preparation for employment.

AUTO 2403 (AT 241B) Automatic Transmissions (2-4) Credit: 4
A study of the theory of operation, construction, and maintenance of fluid couplings and various automatic transmissions used in the modern automobile. This course emphasizes diagnostic repair and overhaul techniques applied on live units. Prerequisite: AUTO 2401.

AUTO 2404 (AT 149) Ignition, Starting, (2-4) Credit: 4 and Charging Systems

This course covers a review of automotive electrical systems, starting motor operations and service, charging system theory and service, ignition system theory and service including conventional and transistor systems and engine operating principles. Prerequisite or corequisite: AUTO 1400.

AUTO 2405 (AT 148) Steering & Suspension Systems (2-4) Credit: 4 A course designed to provide the student with an understanding of the function, theory of operation, maintenance, diagnosis, and service procedures involved in the automotive steering and suspension systems, wheels, tires, steering gears, and linkages, wheel alignment factors, diagnosis repair and alignment procedures on live automobiles.

AUTO 2406 (AT 146) Engine Diagnosis (2-4) Credit: 4 and Emission Control

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, and AUTO 1404.

Aviation Maintenance Technology (AVMT)

AVMT 1301 (AVMT 131) Maintenance Publications - G (2-2) Credit: 3 The basis of all maintenance is the proper use and interpretation of technical publications. This course deals with Federal Aviation Administration and manufacturer's publications. The student will be given instruction on the privileges and limitations of a mechanic according to FAR, Part 65, and also be given practical work with descriptions of aircraft work performed and the completion of required maintenance forms and records.

AVMT 1302 (AVMT 132) Weight & Balance - G (2-2) Credit: 3 Since weight and balance of an aircraft are critical areas in maintenance, the student will be instructed on the weighing and computation of weight and balance of an aircraft. This course will also include basic physics principles and basic ground operations and servicing of aircraft to include starting, moving, securing aircraft and other service procedures.

AVMT 1303 (AVMT 133) Aircraft Drafting - G (2-2) Credit: 3 Since the beginning of any aircraft originates on the drafting board, the technician must be able to use drawings, blueprints, diagrams, charts, and graphs. This course prepares the student to draw sketches and finished drawings of repairs and alterations. In addition, instruction will be given on fabrication and installation of rigid and flexible lines and fittings.

AVMT 1304 (AVMT 134) Airframe Materials & (2-2) Credit: 3 Corrosion Control - G

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

AVMT 1401 (AVMT 141) Basic Aircraft Electricity - G(2-4) Credit: 4
This course is designed to introduce the student to the theory and practical applications of electricity. Topics of instruction include measuring voltage, current, resistance, continuity, leakage, capacitance, inductance and special applications of aircraft electrical circuits problems.

AVMT 2401 (AVMT 241) Aircraft Finishes - A (2-4) Credit: 4
This course covers the principles involved in service and repair of wood structures, selecting, testing, inspection, repairing and applying materials from fabric to fiberglass. In addition, painting, doping, applying trim and letters to the airframe of an aircraft are included.

AVMT 2403 (AVMT 243) Airframe Inspection - A (2-4) Credit: 4
The objective of this course is to prepare the student to perform uniform conformity and airworthiness inspections of both rotary and fixed wing aircraft. This course also covers the alignment check of structures, assembling aircraft, balancing and rigging moveable surfaces, and the jacking of aircraft. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 2404 (AVMT 244) Aircraft Fuel Systems - A (2-4) Credit: 4
This course covers the theory and practical experiences in inspection, repair, and service of aircraft fuel systems that include fuel dump systems, fluid quantity indicators, and fluid pressure and temperature indicators. Heating, cooling, pressurization systems, and oxygen equipment are also covered. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 2405 (AVMT 245) Aircraft Instruments (2-4) Credit: 4 Systems - A

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

AVMT 2406 (AVMT 246) Engine Electrical Systems - P(2-4) Credit: 4
This course is designed to give instruction in the trouble shooting, repair, installation, and inspection of engine fluid rate of flow meters, temperature, pressure, and RPM indicators, fire detection and extinguishing systems, and the engine electrical systems that include wiring, controls, switches, indicators and protective devices. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 2407 (AVMT 247, 248) Engine Lubrication (2-4) Credit: 4 and Cooling Systems - P

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

AVMT 2501 (AVMT 251) Sheet Metal Structures - A (2-6) Credit: 5 This course covers the theory and practical applications of aircraft sheet metal structures. Instructional topics include sheet metal layout, hand forming, machine forming and bending, and the use of conventional and special rivets and fasteners. Inspection techniques and procedures of bonded structures, plastics, honeycomb structures, laminated sections, doors, and aircraft interior furnishings are covered in the course. Soldering, brazing, gas welding, and arc welding of all materials used in aircraft structures including magnesium, titanium, stainless steel and aluminum are included in this course. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 2502 (AVMT 252) Hydraulics & Pneumatics - A

(2-6) Credit: 5

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

AVMT 2503 (AVMT 253) Aircraft Electrical (2-6) Credit: 5
Systems - A

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

AVMT 2504 (AVMT 254) Powerplant Maintenance (2-6) Credit: 5
Reciprocating Engines - P

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

AVMT 2505 (AVMT 255) Engine Fuel Systems - P (2-8) Credit: 5
This course covers the inspection, repair, servicing, and trouble shooting of fuel metering systems, fuel systems components, engine ice and rain control systems, heat exchangers, superchargers, and overhauling carburetors. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

AVMT 2506 (AVMT 256) Aircraft Propellers - P (2-8) Credit: 5 Propellers are an integral part of the majority of aircraft, therefore, a great deal of study is devoted to this area. This course covers the repair, inspection, service, and trouble-shooting of propeller synchronizing and ice controls, propeller control systems, fixed pitch, constant speed and propeller feathering and governing systems, removal and installation of propellers, balancing propellers and identifying and selecting proper propeller lubricants. Prerequisite: Successful completion of the general Aviation Maintenance Technology courses.

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

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

Biology (BIOL)

BIOL 1401 (BIOL 141) General Biology I (3-3) Credit: 4 Fundamental principles of living organisms, including chemical and physical properties of life, tissue organizatin and function, cellular processes, and genetics. Audio tutorial method of instruction.

BIOL 2404 (BIOL 244) Microbiology (3-3) **Credit: 4** Fundamental principles of microbiology; includes study of morphology, physiology, and classification of microbes and their relations to soil, food, water, disease, and immunology. Designed for pre-med students.

Business (BUSS)

BUSS 1301 (BUS 131) Introduction to Business (3-0) Credit: 3 Provides overall picture of business operations; includes analysis of specialized fields within business organizations; identifies role of business in modern society.

BUSS 1302 (BUS 132) Consumer Economics (3-0) Credit: 3
A study of consumer goods and services as related to the home and family, problems and pitfalls associated therewith. This includes a study of family purchasing, advertising, commodity information, sales approaches from a consumer viewpoint and includes sources of advice and counseling. A course to permit the supervisor to better advise subordinates on economic problems.

BUSS 2301 (BUS 231) Principles of Economics I (3-0) Credit: 3 Introduction to economic analysis; price-level changes; the creation of money; the Federal Reserve System and monetary policy; the national accounts; the consumption function; taxation; fiscal policy, public debts; the theory of economic growth and population problems. (Macroeconomics)

BUSS 2302 (BUS 232) Principles of Economics II (3-0) Credit: 3
Determination of relative prices; consumer demand analysis; the competitive firm; agricultural policy; the monopolistic firm; imperfect competition; business organization and government regulation; determinants of demand; the economic view of taxation and public expenditure; regional economics; international trade and finance; foreign economic policy. (Microeconomics).

BUSS 2303 (BUS 237) Principles of Accounting I (3-0) Credit: 3 Analysis and recording of business transactions; use of journal and ledgers; accounting statements; payroll records and payroll taxes; introduction to partnership accounting; special journals and ledgers; voucher system.

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

BUSS 2305 (BUS 235) Introduction to Managerial (3-0) Credit: 3 Accounting

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

BUSS 2306 (BUS 236) Personal Finance

(3-0) Credit: 3

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

Career Pilot (CAPI)

CAPI 1300 (CP 130) Basic Flight

(.8-2.8) Credit: 3

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

CAPI 1301 (CP 131) Aircraft Science

(3-0) Credit: 3

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

CAPI 1302 (CP 132) Propulsion Systems

(3-0) Credit: 3

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

CAPI 1303 (CP 133) Air Navigation

(3-0) Credit: 3

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

CAPI 1304 (CP 134) Intermediate Flight

(.8-3.1) Credit: 3

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

CAPI 1305 (CP 135) Advanced Air Navigation (3-0) Credit: 3

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

CAPI 1306 (CP 232) Meteorology

(3-0) Credit: 3

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

CAPI 2300 (CP 230) Commercial Aviation

(3-0) Credit: 3

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

CAPI 2301 (CP 231) Aerodynamics

(3-0) Credit: 3

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

CAPI 2302 (CP 231A) Turbine Engines

(3-0) Credit: 3

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

CAPI 2303 (CP 233) Air Transportation

(3-0) Credit: 3

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

CAPI 2304 (CP 234) Advanced Flight

(.9-3.4) Credit: 3

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

CAPI 2305 (CP 235) Commercial Flight

(.8-3.1) Credit: 3

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

CAPI 2306 (CP 236) Multi-Engine Flight

(.8-.8) Credit: 3

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

CAPI 2307 (CP 237) Aviation Radio System

(3-0) Credit: 3

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

CAPI 2308 (CP 238) Instructor Rating

(2.5-1.6) Credit: 3

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

CAPI 2309 (CP 239) Airline Transport Pilot (1.7-1.7) Credit: 3
The Airline Transport Pilot Rating is the most comprehensive rating issued by the Federal Aviation Administration. Flight and ground training to qualify for the instruction is provided, which includes 25 hours of dual flight, two flight hours for the FAA Check Flight, and 27 hours of oral instruction and briefings. Prerequisites: First Class FAA Medical Certificate; Age 23; 1,500 hours of approved flight time; and Instrument Rating.

CAPI 2310 (CP 235A) Commercial Transition Flight I(.8-3.1) Credit: 3
This is the first half of two courses to transition Commercial Rotorcraft Helicopter Pilots to
Commercial Airplane Single Engine Land Rated Pilots. The course covers 63 hours of
instruction which includes 20 hours of dual flight with one hour in the simulator, 30 hours of
solo flight, and 13 hours of oral instruction and briefings. Prerequisites: FAA Commercial
Rotorcraft Helicopter Rating, Class II FAA Medical and CAPI 2300 or concurrent enrollment.

CAPI 2311 (CP 235B) Commercial Transition Flight II (.8-3.1) Credit: 3 A continuation of Commercial Transition Flight I to complete the requirements for a Commercial Single Engine Land Aircraft Rating. The course consists of 63 hours of instruction, which includes 30 hours of dual flight, of which 5 will be in the simulator and 5 hours in a complex aircraft; 20 hours of solo flight with 5 hours in a complex aircraft, and 13 hours of oral instruction and briefings. Prerequisite: CAPI 2310.

CAPI 2312 (CP 238A) Instrument Flight Instructor (1.4-1.4) Credit: 3 A program of advanced flight training to prepare the experienced Instrument Pilot to pass the FAA requirements for the Instrument Flight Instructor Certificate for airplane. A minimum of 44 hours of instruction is provided, including 20 hours of dual flight and two hours of FAA check flight and 22 hours of oral instruction and briefings. Prerequisite: Certified Flight Instructor Certificate and Instrument Rating.

CAPI 2313 (CP 238B) Multi-Engine Flight Instructor (1.4-1.4) Credit: 3
This course is designed to prepare an applicant for the FAA Multi-Engine Flight Instructor
Flight Test. A minimum of 40 hours of instruction is provided, including 20 hours of dual
flight instruction, two hours for the FAA check flight and 22 hours of oral instruction and
briefings. Prerequisites: FAA Multi-Engine Rating and FAA Flight Instructor Single—Engine
Land Rating.

CAPI 2314 (CP 238C) Commercial Helicopter Rating (.9-3.2) Credit: 3 Additional Category Commercial Helicopter Rating Course. A minimum of 66 hours of instruction is provided, including 30 hours of dual instruction, 20 hours solo, and 15 hours oral instruction and briefings; and one hour for the FAA check flight. Prerequisite: FAA Commercial Pilot Rating Single-Engine Land.

CAPI 2315 (CP 238D) Helicopter Instructor Rating (2.5-1.6) Credit: 3 This course prepares a pilot that is helicopter rated for the FAA Certified Flight Instructor Certificate for helicopter. This course includes 40 hours of ground training and 25 hours of instructor training, which involves 20 hours of dual flight in a helicopter, and 5 hours of practice ground instruction by the student. Prerequisite: Commercial Pilot Certificate with a helicopter category rating.

Chemistry (CHEM)

CHEM 1401, 1402 (CHEM 141, 142)

(3-4) Credit: 8

General Chemistry I & II

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

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

The course covers the fundamentals of general and descriptive chemistry with applications from modern living, medicine, agriculture, etc. This course is designed for the non-science-major, the agriculture major, the home economics major, the nursing major, and any student needing a laboratory science credit.

Child Development (CHDV)

CHDV 1301 (CHDV 131) Introduction to Child (3-0) Credit: 3

Development

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

CHDV 1302 (CHDV 132) Infant and Toddler Care (2-2) Credit: 3
This course emphasizes the skills required to care for children from birth to three years of age. It shows how the relationship of the primary caregiver to the child influences the physical, emotional, social, and cognitive development of the child. It will also include a study of the infant during the neonatal period and birth, infant stimulation, and the years of the turbulent toddler.

CHDV 1304 (CHDV 134) Developmental Language (2-2) Credit: 3
The objective of this course is to provide the student the knowledge and skills to develop the language ability of young children. Practical experiences are gained in teaching language activities in a child care center. Emphasis is placed on developing special materials and techniques for bilingual and multi-cultural children.

CHDV 1305 (CHDV 135) Instructional Aids (2-2) Credit: 3
This course is designed to instruct child care personnel and teachers' aides in the proper operation of various types of audiovisual equipment and the handling of associated materials. Students will also become familiar with resources for free materials and how to construct simple training aids such as bulletin boards, mobiles, picture mounting and laminating.

CHDV 1401 (CHDV 141) Learning Programs (2-4) Credit: 4
This course covers methods of planning, working with young children for opportunities in the child's active participation, experimentation and problem solving using materials to provide the greatest scope of experience and learning.

CHDV 1403 (CHDV 143) Creative Expression (2-4) Credit: 4 Creative activities, both structured and unstructured, in arts, crafts, music, dance, literature, storytelling, dramatic play and recreational play, are covered in this course. Practical experiences are gained by working with the young in a child care center.

CHDV 2301 (CHDV 231) The Exceptional Child (2-2) Credit: 3
This course is designed to provide a basic knowledge of the child with behavioral problems.
The special problems of mental retardation and conditions such as autism are included.
Practical experiences at a child care center will cover etiology, diagnosis, characteristics and the daily and long-term management of the exceptional child. Prerequisite: CHDV 1301.

CHDV 2302 (CHDV 232) Parent-Child Relationships (2-2) Credit: 3
This course is a study in parent-child experiences and responsibilities and how they affect child behavior and development. Emphasis placed on experiences to stimulate a positive identification for family and self-concept, through thinking and reasoning skills and a positive attitude toward behavior management at each age and stage of development. Included is a study of the abused and neglected child.

CHDV 2401 (CHDV 241) Pre-School Center Management (2-4) Credit: 4
This course covers the theoretical and practical aspects of managing a pre-school center. The main emphasis is placed on developing a management system for a pre-school center that would include budgeting, record keeping, nutrition, health, safety, referral services and personnel practices, including employer/employee relations. Prerequisite: Sophomore standing in the Child Development program.

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

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

CHDV 2602 (CHDV 262) Special Projects (1-15) Credit: 6
This course is designed to allow the advanced Child Development student the opportunity to undertake a project that involves working with pre-school age children. The area of specialization would be selected and performed under the supervision of the instructor. Prerequisite: Sophomore standing in the Child Development program.

Communications Electronics Technology (ELTE)

ELTE 1301 (ET 131) Technical Mathematics I (3-0) Credit: 3 A study of the basic concepts of math and algebra and the use of the electronic calculator in problem solving.

ELTE 1302 (ET 132) Technical Mathematics II (3-0) Credit: 3 A study in the solution of trigonometric problems through the use of tables, and the electronic calculator. Prerequisite: ELTE 1301.

ELTE 1303 (ET 135) Assembly Methods

(1-5) Credit: 3

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

ELTE 1400 (ET 141, ET 142) Basic Electricity

(3-3) Credit: 4

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

ELTE 1401 (ET 141) Direct Current Circuits

(3-3) Credit: 4

A study of the elementary principles of electronics, including DC circuits as related to series and parallel resistive, capacitive, and inductive networks, and the use of Ohm's Law, Kirchoff's Laws, and the power formulas in analyzing these networks.

ELTE 1402 (ET 142) Alternative Current Circuits (3-3) Credit: 4
A study of single and polyphase AC circuits and the use of Kirchoff's Laws, as well as
Thevenin's, Norton's and Superposition Theorems in analyzing these circuits. Prerequisite:
ELTE 1401.

ELTE 1403 Electronics Circuits I

(3-3) Credit: 4

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

ELTE 1404 (ET 245) Communications Circuits I

(3-3) Credit: 4

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

ELTE 1501 Basic Electricity for Electronics

(4-3) Credit: 5

A study of the elementary principles of electricity including voltage, current, resistance, power, magnetism, their relationships and interactions. Mathematic topics covered will include decimals, fractions, scientific notation, roots, powers, exponents, Ohm's Law, power formulas and the use of series and parallel circuits.

ELTE 1502 Intermediate Electricity for Electronics

(4-3) Credit: 5

A study in the principles of basic electricity as related to complex series, parallel, and seriesparallel circuits. The use of Kirchoff's Law and Thevenin's and Norton's theorems in their analysis. The course will include an introduction to inductance, inductive reactance, capacitance, capacitive reactance as applied to simple series and parallel circuits. Those principles of math to be covered include algebra for complex electronic circuits, simultaneous equations, powers of ten, percentages and an introduction to trigonometry. Prerequisite: ELTE 1501.

ELTE 1503 Advanced Electricity for Electronics

(4-3) Credit: 5

A study of AC circuits containing inductive and capacitive reactance combined with resistance for single and polyphase sources and the application of laws and theorems for solving these complex circuits. Math topics covered in this course include trigonometry, efficiencies, impedance matching, inductive and capacitive reactance, Pythagorean theorem, resonant circuits, power factors, logarithmic and mathematical tables. Prerequisite: ELTE 1502.

ELTE 2301 (ET 234) Broadcast Equipment Maintenance (1-6) Credit: 3
The operation, preventive maintenance procedures, and trouble-shooting of modern day radio and television broadcast equipment. The course gives the student that much needed practical experience that can only be gained in a live station atmosphere. Prerequisites: ELTE 1404 and the approval of the appropriate College Official.

ELTE 2402 (ET 242) Advanced Test Equipment (3-3) Credit: 4
The use and calibration of Test Equipment used in servicing complex electronic hardware.
Observation of waveforms of electronic apparatus. Prerequisite: ELTE 2404.

ELTE 2403 (ET 243) Special Intensive Study (1-9) Credit: 4

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

ELTE 2404 Electronic Circuits II

(3-3) Credit: 4

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

ELTE 2406 (ET 246) Integrated Devices

(3-3) Credit: 4

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

ELTE 2407 (ET 247) Communications Circuits II (3-3) Credit: 4
A study of communications circuits necessary for the successful acquisition of the FCC first class license. Prerequisite: ELTE 1404.

ELTE 2408 (ET 248) Industrial Electronic Control Circuits

(3-3) Credit: 4

A study of special purpose electronic control circuits and systems as applied by industry today. This course will include theory and operation, maintenance, diagnostic trouble-shooting, and repair of these special purpose circuits. Prerequisite: ELTE 2404.

ELTE 2409 (ET 249) Electronic Systems Trouble-shooting

(3-3) Credit: 4

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

Computer Electronics Technology (CMET)

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

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

CMET 1401 (CM 141 CM 142) Digital Circuits

(3-3) Credit: 4

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

CMET 1403 (CM 143) Computer Systems & Operational

Programming

(3-3) Credit: 4

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

CMET 2401 (CM 246) Microprocessors and Microcomputers

(3-3) Credit: 4

A study of modern day microcomputer techniques includes eight and sixteen bit machines. Both the S-100 and 6800 bus structure will be studied as well as the use of emulation in the design and repair of a microcomputer system. Prerequisite: CMET 2402.

CMET 2402 (CM 247) Computer Circuit Analysis (3-3) Credit: 4 A comprehensive study of the clock and pulse generation circuit, wave-shaping circuits, trigger and control circuits, and synchronization and counting circuits, as well as other circuits used in modern-day computer. Prerequisites: CMET 1401 and CMET 1403.

CMET 2403 (CM 248) Peripherals & Interfacing (3-3) Credit: 4 The study of selected machine and peripheral interface techniques, to include mag tape and disk, paper tape, CTR, and printer. Prerequisites: CMET 2402 and ELTE 2404.

CMET 2404 (CM 249) Computer System: Diagnosis (3-3) Credit: 4 & Maintenance

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

Computer Science (COSC)

COSC 1300 (CS 130) Computers & Society

(3-0)Credit: 3 A non-technical survey course, intended for non-computer science majors, which studies the role that computers play in our society. The purpose is to give a basic, general, and accurate picture of what computers are, do and can do, and to lay to rest myths and mystiques concerning computers. The effects the computers have had and are having on society are studied and used to project what effect they may have in the future. An introduction to data representation flow-charting and computer program logic is presented to the non-computer science major to write a simple computer program.

COSC 1301 (CS 131) Data Entry/Keypunch (2-3) Introduction to keypunching is designed to train beginning keypunch operators. Keypunching, verifying, and program card design are covered. Drills will develop accuracy and speed. Prerequisite: Typing speed of 30 wpm.

COSC 1302 (CS 132) Data Entry/Terminal $\{2-3\}$ Credit: 3 A course designed to train terminal data entry operators. Actual on-the-job type data entry will be performed by the student using on line video display terminals. Accuracy and speed are stressed. Also covered are different types of data entry systems and the design of source documents and screen formats. Prerequisite: Typing speed of 30 wpm.

COSC 1304 (CS 134) Computer Center Operations (3-0) This course covers operational theories, concepts, and terminology that is necessary for an understanding of how software and hardware interface together to provide a total system. Modern computer center workflow and throughput are emphasized in the course. Prerequisite: COSC 1401. Corequisite: COSC 1406.

COSC 1306 (CS 137) Introduction to BASIC (2-3) Credit: 3 Offers an introduction to the basic concepts and constructs of programming in BASIC for the student interested in using a computer at home or in a small business or as a tool in a subject area such as math or science. Applications will illustrate personal computing techniques.

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

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

Advanced Operations Lab COSC 1402 (CS 141) (1-15) Credit: 4 This course consists of supervised work in a computer center. The students learn to operate the computer and peripheral equipment. Prerequisite: COSC 1401. Corequisite: COSC 1304 and approval of Department Manager.

COSC 1403 (CS 143) Introduction to Computer Science (3-3) Credit: 4 & Computer Programming

This course is intended to be the first course for Computer Science majors and no prior knowledge of computers or programming is assumed. The program language, FORTRAN, and flow-charting are introduced at the beginning of the course so that the student will have a better idea of what a computer does before investigating how it functions. Approximately half of the lectures and nearly all of the laboratories are devoted to programming and flowcharting. Programming assignments will run concurrently with other fundamental topics such as historical development of computers, typical present-day hardware and software and computer applications.

COSC 1404 (CS 138) COBOL Programming (3-3) Credit: 4
This course is designed to provide the student with skills and fundamentals in solving

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

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

Introduction to problems from business and science using logical and mathematical techniques particularly suited to characteristics of the digital computer. Problems involve qualification of descriptive data, manipulation of these data, and expression of analysis in descriptive terms. Includes documentation and flow-charting methods. Prerequisite: COSC 1403 or concurrent enrollment.

COSC 1406 (CS 145) Computer Organization & Architecture

(3-3) Credit: 4

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

COSC 1407 (CS 138A) RPG Programming

(3-3) Credit: 4

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

COSC 1408 (CS 236) Conversational Languages

(3-3) Credit: 4

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

COSC 2301 (CS 231) Introduction to Computer Center Management

(3-0) Credit: 3

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

COSC 2302 (CS 237) Field Projects

(1-5) Credit: 3

Practical application of course work in systems analysis and commercial or scientific programming, depending upon student's degree options. Prerequisite: Consent of Instructor.

COSC 2401 (CS 234) Advanced COBOL

(3-3) Credit: 4

This course is designed to offer the student of COBOL programming an in-depth study of the theory, programming techniques, and needed programming efficiencies that will be required of the prospective COBOL programmer. A thorough coverage is given to file design and the special features of ANS COBOL language. Emphasis is placed on multi-dimensional table handling, searching and sorting techniques, and Indexed Sequential and Random file manipulation. Prerequisite: COSC 1404.

COSC 2402 (CS 238) Systems Analysis

(3-3) Credit: 4

The methodology, techniques, and tools used in performing indepth analysis of information systems destined for computer implementation are described in their relationships within the overall study. The use and requirements associated with decision tables, study plans, testing plans, and documentation are emphasized. Prerequisites: COSC 1404, COSC 1405.

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

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

COSC 2404 (CS 243) Assembler Language Programming (3-3) Credit: 4
Assembler language programming for the current college system. Programming and debugging of business oriented problems, with emphasis on the standard and decimal instruction set and the sequential access method. Prerequisites: COSC 1403 and COSC 1406.

COSC 2405 (CS 232A) FORTRAN Programming (3-3) Credit: 4
This course is designed for the computer science major to augment his algorithmic and programming talents, and to offer the non-computer science major a thorough coverage of the FORTRAN language to employ as a tool to solve business or scientific problems. Emphasis is placed on multi-dimensional arrays, use of functions and subprograms, searching and sorting techniques, and direct access processing. Prerequisite: 6 hours of mathematics.

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

Relevance of data processing in business; impact of computer systems on decision making, heuristic and algorithmic computing techniques using FORTRAN or BASIC to include computation of means and standard deviations, simple regression, contingency tables, and curve plottings. Prerequisites: MATH 1305 and COSC 1403.

COSC 2407 (CS 235) PL/I Programming (3-3) Credit: 4
Business and scientific computer applications are developed using PL/I. Emphasis is placed on advanced programming concepts. Prerequisites: COSC 1403 and COSC 1404.

COSC 2408 (CS 239B) Introduction to 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.

Consumer Electronics Technology (COES)

COES 1409 (TV 149) Television Theory & Servicing (3-3) Credit: 4 A study of electron tube and semiconductor circuits peculiar to television receivers, and practical methods for trouble-shooting and servicing. Prerequisite: ELTE 1403.

COES 2301 (TV 235) TV Shop Practices (1-6) Credit: 3
An in-depth study of basic procedures used in the modern TV shop. Includes record keeping, stocking and ordering procedures, shop management, and advanced techniques of TV repair. Prerequisite: COES 1409 or equivalent.

COES 2402 (TV 242) Radio Systems (3-3) Credit: 4
An in-depth study of the circuitry, both discrete and integrated, used in today's AM and FM
tuner amps, including both two and four channel multiplexing. Prerequisite: ELTE 1403.

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

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

COES 2409 (TV 249) Advanced Television Servicing (2-4) Credit: 4
The operation and service of the more complicated television receiver circuits are covered in
this course. Special attention is given to the use of techniques and equipment for the most
economical solutions to difficult problems. Includes an introduction to transistorized and
color television. Prerequisite: COES 1409.

Developmental Studies (DSCO)

DSCO 0300 (DSCO 030) Developmental Communications

(1-2) Credit: 3

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

DSED 0300 (DSED 030) College Study Skills (1-2) Credit: 3 Designed for improvement of study systems. Emphasis is placed on high level study skills and the improvement of time management, effective listening and notetaking, marking tests, learning through media, concentration, retention of information, and taking examinations.

DSMA 0300 (DSMA 030) Developmental Mathematics I (1-2) Credit: 3 An introductory course including instruction in mathematical operations with rational numbers, the application of measurement systems to geometric problems, and an introduction to basic probability and statistics.

DSMA 0301 (DSMA 031) Developmental Mathematics II (1-2) Credit: 3
A mathematical approach to consumer-oriented and family living problems, including budgeting, balancing a checkbook, calculating wages and payroll deductions, and completing Federal income tax forms.

DSMA 0302 (DSMA 032) Developmental Mathematics III (1-2) Credit: 3 Developmental mathematics for technical fields, including algebra, integers, mathematical sentences, rational numbers, and polynominals.

DSRE 0300 (DSRE 030) Reading & Comprehension I (1-2) Credit: 3 A course offered in a laboratory setting, using varied instruction techniques, designed to help students improve their proficiency in reading comprehension and rate, word recognition and vocabulary development.

DSRE 0301 (DSRE 031) Reading & Comprehension II (1-2) Credit: 3 This course is a continuation of Reading and Comprehension I and places emphasis on further improvement of reading comprehension and rate, word recognition and vocabulary development.

DSSP 0300 (DSSP 030) Developmental Speech (1-2) Credit: 3 An introductory course emphasizing structure and different techniques of presentation, as well as principles and methods of discussion. Designed to identify deficiencies and strengths, and to develop and improve interpersonal skills and the student's ability to communicate through effective speech.

DSWR 0300 (DSWR 030) Developmental Writing I (1-2) Credit: 3 A course offered in a laboratory setting, using varied instructional techniques, designed to identify deficiencies and improve basic writing skills necessary for the student who intends to pursue college-level academic work.

DSWR 0301 (DSWR 031) Developmental Writing II (1-2) Credit: 3 A course in a laboratory setting to develop the ability to locate specific types of material, interpret and summarize information, analyze data and draw conclusions, and to prepare and present the findings in written form.

DSWR 0302 (DSWR 032) Developmental Writing III (1-2) Credit: 3 A course designed to extend reading, research, and writing skills. Emphasis is placed on reference materials relating to consumers, including deceptive trade practices, terms used in written contracts, and a wide variety of consumer oriented literature.

Diesel Mechanics (DIEM)

DIEM 1401 Diesel Engine Fundamentals

(2-4) Credit: 4

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

65

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. Prerequisites or Corequisites: AUTO 1400, DIEM 1401.

DIEM 1403 (DIEM 141) Fuel & Injector Systems (2-4) **Credit: 4** A course designed to provide an understanding of the diesel fuel system. The student will receive instruction and practice in disassembling, cleaning, testing and assembly procedures of various types of injectors and pumps. Prerequistes: AUTO 1400, DIEM 1401.

DIEM 1404 Standard Transmissions & Differentials (2-4) Credit: 4 This course will provide the student with a working knowledge in disassembly and repairing of clutches, sliding gear transmissions, transfer gear cases, drive lines and axle assemblies. The theory of torque and gear ratios will be emphasized as it applies to units of the drive train. Prerequisite: AUTO 1400.

DIEM 2400 Hydraulics & Steering Systems (2-4) Credit: 4
This course will provide lecture and laboratory experience involving hydraulic motors, pumps and various control valves. The student will disassemble, inspect, assemble and test various hydraulic components. Emphasis will be placed upon basic control systems, pneumatic and hydraulic fluids, and power steering service and repair. Prerequisite: AUTO 1400.

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

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. Prerequisites: 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, and 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 (2-4) Credit: 4 & Trouble-shooting

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

Drafting and Design (DRDS)

DRDS 1302 (DD 130) Blueprint Reading (2-2) Credit: 3
The fundamentals of blueprint and sketching as they apply to machine drawing.

DRDS 1303 (DD 134) Architectural Blueprint Reading (2-2) Credit: 3 The fundamentals of blueprint reading for the construction trades. This course includes familiarization with standard terms, sizes, estimations and commercial practices.

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

An overview of drafting to include shape and size description, lettering, dimensioning, pictorial drawings, copy reproduction, and the use of equipment essential to the field of drafting.

DRDS 1401 (DD 141) Pictorial Drafting (3-3) Credit: 4

A course mainly concerned with pictorials. Includes the theory of oblique and isometric drawings. Also covered are one and two point perspectives of shade and shadow application. Prerequisite: ENGR 1301 or concurrent enrollment.

DRDS 1402 (DD 142) Technical Illustration

(3-3) Credit: 4

Introduction to pictorial drawings as used in industrial catalogues, assembly sheets, newspaper publications, and promotional literature. Work to be done in various media to include pencil, ink, transfer tapes, and air brush. Prerequisites: ENGR 1301, DRDS 1401, or concurrent enrollment.

DRDS 1403 (DD 143) Machine Drawing

(2-4) Credit: 4

Drawings and manufacturing processes; Training in producing various kinds of advanced drawings; commercial practices and economics; the use of standard parts, sizes, symbols, and abbreviations. Prerequisites: ENGR 1301, DRDS 1401 or concurrent enrollment.

DRDS 1404 (DD 144) Structural Drafting

(2-4) Credit: 4

A study of the A.I.S.C. specifications and standards; structural theory and data; designing and detailing structural members and connections. Design and development of details and specifications for light industrial structures to include structural steel, pipe, and reinforced concrete rods. Prerequisite: ENGR 1301

DRDS 2401 (DD 241) Pipe Drafting

(2-4) Credit: 4

Design and detailing of pipe systems making use of standard practices and symbols; includes single line, double line, plan profile and isometric drawings of pipe systems. Prerequisite: ENGR 1301.

DRDS 2402 (DD 242) Architectural Drafting

(2-4) Credit: 4

A study of the preparation of architectural plans; elevations, sections, site plans, various building details, room finish, door and window schedules, and structural drawings. Prerequisite: ENGR 1301.

DRDS 2403 (DD 243) Electronic Drafting

(2-4) Credit: 4

A study of layout and preparation of finished electronic and electrical drawings, stressing modern representation used for pictorial drawing, wiring and connection diagrams, printed circuits, control circuits, and schematic diagrams. Some review of lettering and mechanical drawing principles. Prerequisite: ENGR 1301.

DRDS 2404 (DD 248) Principles of Design

(3-3) Credit: 4

Theory and practice of design as related to engineering and technology. Analysis in the areas of architecture, machine design, structural design, and product development. Prerequisites: ENGR 1301, DRDS 1401, DRDS 1402.

DRDS 2405 (DD 245) Topographic Drafting

(3-3) Credit: 4

This is an introductory course in map drafting, utilizing surveyors field notes as a basis for calculating bearings and closures and drawing plats, contours and profiles. This course also includes a unit on surveying which consists of actual field problems of transient tape-stadia surveying. Prerequisites: ENGR 1301, ENGR 1302, TMTH 1300, TMTH 1301, or permission of the appropriate College official.

DRDS 2406 (DD 246) Industrial Practice

(2-4) Credit: 4

This course is designed to give specialized practice to the student in his major field of interest. The student will complete actual jobs for area industries to gain realistic experience in his chosen career. Note: Must be taken during the last semester of the sophomore year.

Emergency Medical Technician (EMET)

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 and to be eligible to take the examination and become a Registered Emergency Medical Technician-Ambulance Technician.

Engineering (ENGR)

ENGR 1301 (ENGR 131) Engineering Graphics (2-4) Credit: 3 Freehand and instrument drawing, dimensioning, fastening, pictorial methods, charts and graphs, projections drawings, geometry of graphical construction. Required for beginning engineering students.

ENGR 1302 (ENGR 132) Descriptive Geometry (2-4) Credit: 3 Involves point, line and plane relationships, auxiliary views, intersections, and flat pattern development. Emphasis is placed on practical solutions to realistic engineering problems relating to aerospace, mining, and geology. Prerequisite: ENGR 1301.

English (ENGL)

ENGL 1301 (ENGL 131) Composition & Rhetoric I (3-0) Credit: 3 Composition of short papers, with emphasis on sentence structure, paragraph development, and paper organization. Analysis of expository prose.

ENGL 1302 (ENGL 132) Composition & Rhetoric II (3-0) Credit: 3 An introduction to literature; the short story, poetry, drama, and the novel. Composition of short papers with emphasis on interpretation and analysis of literary selections, optional research paper. Prerequisite: ENGL 1301 or advanced standing.

ENGL 1307 (ENGL 137) Business English (3-0) Credit: 3 Fundamentals of grammar, punctuation, and sentence structure as employed in written business communications. A review of word study, sentence analysis, punctuation, paragraphing. Required for all students majoring in Office Administration.

ENGL 1309 (ENGL 139) Communications Skills (3-0) Credit: 3 This course includes topics of instruction in grammatical construction, spelling; punctuation; writing effective business letters; preparation of technical reports, business forms and blanks; speaking to groups; business meetings; personal interviews; telephone conversations; and social speech situations.

ENGL 2309 (ENGL 239) Technical Writing (3-0) Credit: 3
This course is designed to provide an opportunity to apply the principles of exposition to the preparation of formal written and oral technical reports. Various types of reports that utilize modern style and format are covered in this course.

Environmental Control (ENCT)

ENCT 1301 (EC 131) Water and Waste Water (3-0) Credit: 3
Technology

A study of method of disease transmission, hygienic excreta disposal, municipal and industrial waste water collection and treatment, characteristics of water, water treatment, protection of ground water insect and rodent control, solid waste collection and disposal, milk and food sanitation, swimming pool sanitation, and industrial hygiene.

ENCT 1302 (EC 132) Aquatic Biology (2-3) Credit: 3 A study of fresh water as an environment, its physical and chemical characteristics; and characteristics of plant and animal communities which inhabit it. The morphology, life history, and taxonomy of fresh water aquatic organisms. (Field trips required.)

ENCT 1303 (EC 133) Solid Waste Management (3-0) Credit: 3 Types of solid waste, physical and chemical method of handling solid waste, possibilities of re-cycling (re-using) solid waste material, possibilities for by-products from solid waste.

ENCT 2201 (EC 221) Pollution Abatement Seminar I (2-0) Credit: 2 Particular problems involving pollution and control in our environment are to be presented and discussed by students in oral reviews. The "how, why, and what-to-do" aspects of pollution are to be stressed.

ENCT 2202 (EC 222) Pollution Abatement Seminar II (2-0) Credit: 2 A continuation of ENCT 2201.

ENCT 2301 (EC 231) Air Pollution

(2-3) Credit: 3

Sources of air pollution - industrial, municipal, automotive; physical and chemical nature of air pollutants. Laboratory techniques for detecting air pollutants. Control and treatment of air pollution.

ENCT 2302 (EC 232) Industrial Waste Control (2-3) Credit: 3
Company policies, organizational problems, legal responsibilities in waste control, investigations into possible regional pollution, and preventive tactics that could be employed.

ENCT 2303 (EC 232) Instrumentation (2-3) Credi

An elementary study of hydraulic, pneumatic, mechanical, electronic control systems and components. It includes a basic description, analysis, and explanation of instrumental controls for a waste water plant. Typical performance characteristics, accuracy, and application of instruments are studied.

ENCT 2304 (EC 234) Water Quality Control (2-3) Credit: 3
A study of basic principles of water purification, including aeration, sedimentation, rapid

sand filtration, chlorination, treatment chemicals, taste and odor control, bacteriological control, mineral control, design criteria, maintenance programs, and operational problems. New processes and recent developments are studied. Criteria rules, regulations, forms, and records associated with the field are considered.

ENCT 2401 (EC 243) Water and Waste Water (3-3) Credit: 4
Chemistry

Theory and laboratory techniques for all control tests of water purification and analysis, including color, turbidity, pH, hardness, coagulation, chlorides, flourides, iron, manganese, bactericides, nitrates, and organic compounds which may be present in water. Qualitative and quantitative analysis are to be stressed in this area.

Fire Protection (FPRT)

FPRT 1301 (FPRT 131) Fundamentals of Fire (3-0) Credit: 3 Protection

History and philosophy of fire protection: review of statistics of loss of life and property by fire; introduction to agencies involved in fire protection; current legislative developments and career orientation; recruitment and training for fire departments; position classification and pay plans; employee organizations; a discussion of current related problems and review of expanding future fire protection problems.

FPRT 1302 (FPRT 132) Fire Prevention (3-0) Credit: 3
The objectives and views of inspection, fundamental principles, methods, techniques, and procedures of fire prevention administration. Fire Prevention organization; public cooperation and image; recognition of fire hazards; insurance problems and legal aspects; development and implementation of systematic and deliberate inspection program. Survey of local, state, and national codes pertaining to fire prevention and related technology; relationship between building inspection agencies and fire prevention organizations. Engineering as a solution to fire hazards.

FPRT 1303 (FPRT 133) Fire Protection Systems (3-0) Credit: 3 Study of the required standard for water supply; special hazards protection systems; automatic sprinklers and special extinguishing systems; automatic signaling and detection systems; rating organizations and underwriting agencies.

FPRT 1304 (FPRT 134) Fire Administration I

 $\{3-0\}$ Credit: 3

An in-depth study of the organization and management as related to a fire department including budgeting, maintenance of records and reports, and management of fire department officers. Personnel administration and distribution of equipment and personnel and other related topics, including relation of various government agencies to fire protection areas, Fire Service Leadership as viewed from the Company Officer's position.

FPRT 1305 (FPRT 135) Fire Administration II (3-0) Credit: 3 Study to include insurance rates and rating, preparation of budgets, administration and organization of training in the fire department; city water requirements, fire alarm and communications systems; importance of public relations, report writing and record keeping; measurements of results, use of records to improve procedures, and other related topics; legal aspects relating to fire prevention and fire protection with stress on municipal and state agencies; design and construction of fire department buildings.

FPRT 1307 (FPRT 137) Fire Service Chemistry I (3-0)Credit: 3 An introductory study to inorganic and organic chemistry, with emphasis on the metric systems, the periodic chart, water, oxygen, hydrogen, carbon, hydrocarbons, carbohydrates, and polymers.

FPRT 1308 (FPRT 138) Fire Service Chemistry II (3-0)Credit: 3 A continuation of FPRT 1307. Prerequisite: FPRT 1307.

FPRT 2301 (FPRT 231) Industrial Fire (3-0) Credit: 3 Protection I

Specific concerns and safeguards related to business and industrial organization. A study of industrial fire brigade organization and development, plant layout, fire prevention programs, extinguishing factors and techniques, hazardous situations and prevention methods. Gaining cooperation between the public and private fire department organization. Study of elementary industrial fire hazards in manufacturing plants.

FPRT 2302 (FPRT 232) Industrial Fire (3-0) Credit: 3 Protection II

Development of fire and safety organizations in industry; relation between private and public fire protection organizations; current trends, deficiencies and possible solutions for industrial fire problems; role of insurance and other special organizations, an in-depth study of specific industrial processes, equipment, facilities and work practices to understand the potential hazards and techniques to detect and control such hazards. Field trips to selected plants and demonstrations of new techniques equipment and innovations. Prerequisite: **FPRT 2301**

FPRT 2303 (FPRT 233) Hazardous Material I (3-0) Credit: 3 Study of chemical characteristics and behavior of various materials that burn or react violently related to storage, transportation, handling hazardous materials, i.e., flammable liquids, combustible solids, and gases. Emphasis on emergency situations and most favorable methods of handling fire fighting and control. Prerequisite: FPRT 1307.

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

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.

(3-0) Credit: 3 FPRT 2305 (FPRT 235) Building Codes and Construction

Fundamental consideration and exploration of building construction and design with emphasis on fire resistance of building materials and assemblies, exposures, and related data focused on fire protection concerns; reviews of related statutory and suggested guidelines. both local and national in scope. Review of Model Building Codes and Life Safety Codes.

FPRT 2306 (FPRT 236) Fire and Arson Investigation

(3-0) Credit: 3

A study of the detection of arson, investigation techniques, case histories, gathering and preserving of evidence; preparing for a court case; selected discussions of laws, decisions and opinions; kinds of arsonists, interrogation procedures, cooperation and coordination between firefighters and arson investigators and other related topics.

FPRT 2308 (FPRT 238) Hazardous Material II (3-0) Credit: 3 Hazardous materials covering storage, handling, laws, standards, and fire fighting techniques associated with chemicals, gases, flammable liquids, corrosives, poisons, explosives, rocket propellants and exotic fuel, and radio-active materials. The formation of 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, 1307.

FPRT 2309 (FPRT 239) Fire Safety Education

(3-0) Credit: 3

A survey of physical, chemical, and electrical hazards and their relationship to loss of property and/or life. Study of codes, laws, problems, and cases. Detailed examination and study of the physical and psychological variables related to the occurrence of casualties. Safe storage, transportation and handling techniques are stressed to eliminate or control potential risks.

FPRT 2310 Fire Service Communications

(3-0) Credit: 3

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

FPRT 2311 Advanced Fire Loss Statistical Systems (3

(3-0) Credit: 3

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

FPRT 2312 Fire Insurance Fundamentals (3-0) Credit: 3

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

FPRT 2313 Urban Fire Problem Analysis (3-0) Credit: 3 Intensive study of the urban fire problem. Problems covered by lack of zoning and other land use laws. Operation research techniques, and systems engineering are utilized as analytic procedures for the technological assessment of public fire protection, including water supply, fire alarm, and fire department traditional assessment methods and urban analysis. Socioeconomic and management factors as related to city planning. Environment problems incurred should be studied in depth.

FPRT 2404 (FPRT 244) Fire Fighting Tactics (3-0) Credit: 3 and Strategy

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 1302 (RMGT 132) Nutrition

(3-0)Credit: 3

A study of dietary needs; the role of proteins, fats, carbohydrates, minerals, and vitamins; factors to be considered in proper selection and preparation of foods for maximum nutritional value.

FSMG 1303 (RMGT 133) Sanitation & Safety (3-0) Credit: 3 This course includes a study of personal cleanliness; sanitary practices in food preparation; cause, investigation and control of illness caused by food contamination; food storage and refrigeration; sanitation of dishes, equipment, and kitchens; cleansing materials, garbage and

refuse disposal; safety precautions and accident prevention. Upon completion of this course, the student will have sufficient knowledge to pass the National Institute for the Food Service Industry (N.I.F.I.) sanitation examination.

Credit: 3 (2-2)

FSMG 1304 (RMGT 134) Work Organization This course is designed to provide a general introduction and orientation to principles of job analysis, performance evaluation, job evaluation and salary administration, and how these affect the work situation. Work measurement and work standard techniques are studied, as well as flow processes and work distribution methods, quantity and quality control planning, and the current impact of governmental guidelines upon such procedures.

FSMG 1305 (RMGT 135) Food Purchasing

(3-0)

Applied theory of food and beverage purchasing; factors affecting selections, standards, quality, and prices; techniques of receiving, storing, and issuing supplies, foods, and materials; applied theory of cost control, pricing and portions.

FSMG 1306 (RMGT 136) Menu Planning

(3-0) Credit: 3

Basic factors of planning menus; variety and nutrition in menu planning; techniques of preparing attractive menus and maintaining budgetary controls; types of menus for various public and private institutions.

FSMG 1307 (RMGT 137) Meat Science

(3-0) Credit: 3

An introductory course in raising, slaughtering, and packing meats, fish, and poultry, accompanied by an intensive study of wholesale and retail cuts of beef, veal, pork, and lamb. Emphasis is placed on the knowledge of grades, bone structure, muscle configuration, and appropriate cooking methods of hotel and restaurant meat cuts.

FSMG 1308 (RMGT 232) Restaurant Merchandising (2-3)Sales promotion; interior decor; types and uniformity of service; food and beverage display; menu and room styling.

FSMG 1401 (RMGT 141) Food Preparation & Serving (3-3) Credit: 4 An introduction to techniques of food preparation. Includes preparation of vegetables, pastries, oven dishes, soups, salads, meats, fish, and poultry. Techniques include experimental cookery, food marketing and preservation, serving and table service.

FSMG 2201 (RMGT 221) Food Service Terminology (2-0)This course is an introduction to the terminology utilized in the food service industry.

FSMG 2303 (RMGT 233) Cafeteria Management (3-0)This course points out the specific differences between an industrial cafeteria and a conventional restaurant and explains how to cope with the unusual problems of industrial and institutional feeding.

FSMG 2304 (RMGT 234) Marketing & Sales Promotion (3-0) Credit: 3 A course designed to develop an understanding of what must be done in order to bring the wheels of production and consumption in the United States into mesh. The business activities that direct the flow of goods and services from the producer to the ultimate consumer are analyzed. Coordination of personal selling, advertising, produce design, market research, and customer relations/services are the individual ingredients of sales promotion, and each is examined in detail. Advertising is studied as the force that creates prospects of countless products, converts these prospects into customers, and keeps customers returning and buying.

FSMG 2305 (RMGT 235) Financial Management (3-0) Credit: 3 Methods and application of financial management within the combined food service facility. Primary emphasis upon sales accountability and internal controls utilized within bar, food, dining room, and hotel operation area. Secondary emphasis on budgeting and forecasting with application of effective labor/sales ratios. Prerequisite or Corequisite: MATH 1307.

FSMG 2306 (RMGT 236) Layout and Design (3-0) Credit: 3 Fundamentals of equipment layout for optimum production and operational efficiency. This course will include procedures to design and decorate remodeling projects.

FSMG 2307 (RMGT 237) Hospitality Industry Law (3-0) Credit: 3 A study of the nature and scope of business law with emphasis on the hospitality industry. Licensing, civil rights, owner responsibility for safety and property loss of guests, rights of the owner, and history of contemporary hospitality law will be discussed.

FSMG 2401 (RMGT 241) Classical Food Preparation (3-3) Credit: 4 This course emphasizes the fine points of culinary skills and theory. Concentration on the preparation of menus. Responsibility of the Chef and Sous-Chef.

FSMG 2402 (RMGT 242) Exhibition Work (3-3) Credit: 4
Taught in conjunction with Classical Food Preparation. This course is designed to assist the student in professional employment. The essence of exhibitions, buffets, centerpieces, and the role of the Executive Chef will be emphasized. This course will include an exhibition planned and prepared by the student.

Government (GOVT)

GOVT 2301, 2302 (GOVT 231, 232) State & Federal (3-0) Credit: 6 Government I & II

Fulfills the legislative requirements for six hours of American Government. A functional study of the American constitutional and governmental system, federal, state, and local. Special attention to Texas. The origins and development of the American governmental system; federal-state and interstate relations; lesser units of government; the individual as a citizen, person, and voter; political parties. Legislative, executive, and judicial functions in federal and state governments; financing governmental activities; foreign relations and national defense; governmental services and functions.

GOVT 2303 (GOVT 239) Introduction to Political (3-0) Credit: 3 Science

This course is designed to introduce the student to the general area of political science and to provide knowledge and understanding of political fundamentals, public law, political dynamics, public policy, theory and organization of the modern state, and international relations.

History (HIST)

HIST 1301 (HIST 131) History of the United (3-0) Credit: 3 States to 1877

English colonization; the Revolution; adoption of the Constitution; growth of nationalism; cotton and the slavery problem; war for southern independence; Reconstruction.

HIST 1302 (HIST 132) History of the United States (3-0) Credit: 3 from 1877

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 (HIST 231) International Relations (3-0) Credit: 3 and U.S. Foreign Policy

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.

Hotel-Motel Management (HMMG)

HMMG 1300 (HM 130) Food & Beverage Management (3-0) Credit: 3 This is an introductory course in food and beverage operation, with an introduction to purchasing, receiving, storage, preparation and service.

HMMG 1302 (HM 132) Hotel/Motel Organization (3-0) Credit: 3 and Administration

This course includes management and organization of hotel industry, communications, accounting, personnel relations and administration, management of guests. Planning for today and tomorrow.

HMMG 1303 (HM 133) Front Office Procedures (3-0) Credit: 3
This course includes hotel organization and services, front office salesmanship, cashiering, front office posting, accounting for guest charges, procedures and form for accounting controls.

HMMG 1304 (HM 134) Hotel/Motel Sales Promotion (3-0) Credit: 3 This course includes sales planning, media advertising to include outdoor, radio, and TV; mail advertising, personal sales; telephone selling; individual and group room business; food and beverage sales and sales incentive.

HMMG 2301 (HM 231) Hotel/Motel Law

(3-0) Credit: 3

Credit: 3

This course includes a study of the consequences resulting from a lack of foresight on the part of management, understanding of the attitudes of courts toward innkeepers involved in litigations, and an awareness of the responsibilities law imposes upon the innkeeper.

HMMG 2302 (HM 232) Supervisory Housekeeping (3-6) Credit: 3 This course includes organization of a housekeeping department of a hotel, job schedules, job breakdown, floor care, stain removal, fire inspection, purchasing records, equipment records, linen inventory and care, carpeting and care, and basic interior design.

HMMG 2304 (HM 234) Hotel/Motel Financial (3-0) Management

This course includes accounting of business for creditors, owners, and government; control of payroll and other operational expenses; and profit making management. Prerequisite or Corequisite: MATH 1307.

HMMG 2305 (HM 235) Hotel/Motel Maintenance (3-0) Credit: 3 This course includes a study of the organization, terms and concepts common to building maintenance. Maintenance functions to be studied include heating, plumbing, electrical, refrigeration and air conditioning, communications and signal system, kitchen equipment, fire prevention and protection, and elevator systems.

HMMG 2306 (HM 236) Recreational Services (3-0) Credit: 3 This course includes the study of the needs of guest recreation and entertainment, space available for these activities, cost of operation and maintenance, layout and design and direct and indirect benefits.

Journalism (JOUR)

JOUR 1401 (JOUR 141) Communications Media (3-3) Credit: 4
This course is designed to give the student an understanding and respect for the mass media of
the modern world. It includes a survey of all the mass communicative media, their purposes,
and methods of operation.

JOUR 1402 (JOUR 142) News Gathering & Reporting (3-3) Credit: 4 Designed to acquaint the student with fundamental news gathering and writing techniques for the print medium. It includes instruction and practice in interviewing, writing, and discussion of news sources and values.

Law Enforcement (LAWE)

LAWE 1201 (LE 121) Defensive Tactics

(1-2) Credit: 2

This course is designed to provide the student with defensive and protective philosophies to better protect the public and criminal justice personnel against illegal force. Techniques of self-defense, safe arrest procedures, citizen contact, and proper prisoner transportation techniques, along with humane methods of handling disturbed persons, will be presented. The legal and humane use of limited force will be stressed at all times. These techniques are learned skills and are indispensible to the professional officer and the potential police student.

LAWE 1301 (LE 131) Introduction to Criminal Justice (3-0) Credit: 3 History, development, and philosophy of law enforcement and criminal justice in a democratic society. Introduction and career orientation to the multifaceted agencies involved in the administration of criminal justice.

LAWE 1302 (LE 132) Criminal Investigation (3-0) Credit: 3 Introduction to the fundamentals of criminal investigation, including theory and history, conduct at crime scenes, collection and preservation of evidence.

LAWE 1303 (LE 133) Legal Aspects of Law Enforcement (3-0) Credit: 3 History and philosophy of modern criminal law, including the structure, definition and application of statutes and leading case law, the elements of crimes and penalties; general provisions of the Penal Code.

LAWE 1304 (LE 134) Criminal Procedures & Evidence (3-0) Credit: 3 Introduction to the rules governing the admissibility of evidence and types of evidence; criminal procedures in various courts, review of the Model Code of Criminal Procedure, including laws of arrest, search and seizure, and leading case law on each topic.

LAWE 1305 (LE 135) Traffic Law

(3-0) Credit: 3

This course is designed to cover all laws pertaining to the control and enforcement of traffic. The officer is taught the use of spot maps and charts, the techniques of enforcement, and the maintenance of good public relations. An analysis of the Model Motor Vehicle Code is given.

LAWE 1306 (LE 136) Survey of Corrections (3-0) Credit: 3
A general course describing the history and evaluation of the corrections process. Covers all aspects of institutional and community based corrections.

LAWE 1307 (LE 137) Police-Community Relations (3-0) Credit: 3
The role of the individual officer in achieving and maintaining positive public response; intergroup relations and public information.

LAWE 1308 (LE 138) Police Role in Crime & Delinquency

(3-0) Credit: 3

Study of deviate behavior and current criminological theories, with emphasis on police applications; crime prevention and the phenomena of crime as it relates to juveniles.

LAWE 1309 (LE 139) Police Organization and Administration

(3-0) Credit: 3

Principles of organization and management as applied to law enforcement agencies; introduction to concepts of organizational behavior.

LAWE 2201 (LE 221) Firearms (1-2) Credit: 2

This course is designed to introduce the student to the skills and techniques of firearms used in the protection of the public and criminal justice personnel. Students will fire various weapons under precision and police combat conditions. The importance of safe weapons handling and the danger of not adopting a mature attitude towards firearms will be stressed at all times. The intelligent, legal, and moral use of the police firearms will be emphasized at all stages of teaching and firing. General state laws affecting the use of firearms as a means of fatal force will be discussed.

LAWE 2301 (LE 231) Probation & Parole (3-0) Credit: 3
Course will provide the student with some understanding of the evolution of criminal corrections and explore with the student the many avenues into which the corrections field branches. Develop in each student a basic understanding of the various methods of corrections so that they can function efficiently in the field.

LAWE 2303 (LE 233) Criminal Justice 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 (LE 234) Juvenile Procedures

(3-0) Credit: 3

The organization, functions and jurisdiction of juvenile agencies; the processing and detention of juveniles, case disposition; juvenile statutes and court procedures.

LAWE 2306 (LE 236) Traffic Planning and Administration

(3-0) Credit: 3

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

LAWE 2307 (LE 237) Penology (Jail Operation & (3-0) Credit: 3 Management)

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 (LE 238) Patrol Administration (3-0) Credit: 3 Discussion of the administration of surveys, special problems arising while the officer is on patrol, improvement in patrol methods, observation of persons and things, preventive techniques, methods of handling complaints, and the development of contacts.

LAWE 2309 (LE 239) Provost Marshal Operations (3-0) Credit: 3 The principles of organization and administration as applied to the operational system of a military Provost Marshal's office as well as that of the Inspector General's. Practical training in conduct of briefings, management, and attendant qualities of leadership, and some cases of dissident conditions which might impair role and mission of the dissident command.

LAWE 2310 (LE 239A) Correctional Control & (3-0) Credit: 3 Administration

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.

Maintenance Technology (MTNT)

MTNT 1400 (MTNT 140) Shop Practice & Safety (3-3) Credit: 4
This course is an introduction to shop safety methods and practices, proper use of hand and power tools, and basic skills involved in the maintenance technology field.

MTNT 1401 (MTNT 141) Carpentry I (2-4) Credit: 4
This course is designed to provide the student with an understanding of Carpentry as a trade.
Included are the use of special tools, measuring devices, wood types, building and concrete forms, framing, floor, wall and roof construction. Prerequisite or corequisite: MTNT 1400 or permission of the appropriate College official.

MTNT 1402 (MTNT 143, 144) Electricity (2-4) Credit: 4
This course is designed to provide the student with a working knowledge of the electrical installation, service and repair procedures for residential and light commercial buildings. Prerequisite or corequisite: MTNT 1400.

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

MTNT 2402 (MTNT 142) Carpentry II (2-4) Credit: 4
This course is a continuation of MTNT 1401, with additional emphasis placed on cabinetry, exterior and interior trim and finish work, including door and hardware installation.
Prerequisites: MTNT 1400, MTNT 1401.

MTNT 2403 (MTNT 243, 244) Plumbing

(2-4) Credit: 4

This course covers the theory and practical application on plumbing maintenance, service and repair procedures for residential and light commercial buildings. Topics of study include plastic, copper, cast iron, galvanized pipe, cutting and joining. Prerequisite or corequisite: MTNT 1400 or permission of the appropriate College official.

MTNT 2404 (MTNT 245) Painting & Refinishing (2-4) Credit: 4
This course covers the theory and practical application of painting and refinishing residential and light commercial buildings. Topics of study include various types of paint, preparation of surfaces, refinishing damaged and proper maintenance of finished surfaces. Prerequisite or corequisite: MTNT 1400.

Management, Business (MGMT)

MGMT 1201 Management of Performance Oriented Training

(2-0) Credit: 2

A course designed to provide a performance oriented approach to managing training in which the manager learns to establish performance oriented objectives, tests, and follow-up evaluations.

MGMT 1202 Briefing Techniques, Aids, and Devices

(2-1) Credit: 2

A course designed to provide the manager with the capability of employing proper briefing methods and to develop the skills required to produce briefing aids to include charts, graphs, posters, slides, filmstrips, transparencies, opaques, and other media.

MGMT 1203 Evaluation of Instruction and Training

(2-1) Credit: 2

A course designed to provide the manager with the rationale, methods, and procedures for evaluating the effectiveness and efficiency of instruction 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 Setting Objectives and Goals

(2-1) Credit: 2

A course designed to provide managers with the processes involved in defining objectives, determining desired goals, and analyzing performance training to enhance achievement of those goals and objectives.

MGMT 1205 Analysis of Training Requirements (2-1) Credit: 2

A course designed to provide managers with techniques for determining organizational and personnel training requirements. Definition of needs and insuring they are compatible with available resources will be stressed in this course.

MGMT 1206 Professional Resource Management (2-0) Credit: 2 A course designed to provide managers with the capability to assist subordinates in the screening, selection, evaluation, and application of employee training programs.

MGMT 1207 Professional Development of the Manager (2-0) Credit: 2 A course designed to equip leaders with skills necessary to provide assistance to subordinates in problem solving. Emphasis will be placed on effective, active and passive performance by leaders which will correct mistakes or reinforce good performance that will cause individuals to be motivated.

MGMT 1208 The Training System Management (2-1) Credit: 2 A course designed to provide managers with methods required to plan, organize, staff, influence, and control training. The main purpose will be to develop a plan and employ limited resources to accomplish system objectives.

MGMT 1209 Managerial Theories

(2-0) Credit: 2

A course designed to provide examination of managerial theories to include management functions, decision-making skills, problem solving techniques, and performance standard oriented approaches to management.

MGMT 1301 (MGMT 130A) Organization and Management

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.

(3-0) Credit: 3

MGMT 1302 (MGMT 137A) Safety (OSHA) (3-0) Credit: 3 A study of safety as it relates to the military, industrial, and business communities. Special emphasis will be given the requirements of the Occupational Safety and Health Act as it affects management and employees.

MGMT 1303 (MGMT 134A) Fundamentals of Industrial (3-0) Credit: 3 Management

Application of the systems approach to the unification of all areas from human factors to environmental factors are covered, along with the manner and methods through which work can be simplified, yet made more meaningful and satisfying.

MGMT 1304 (MGMT 134) Work Organization (2-2) Credit: 3 This course is designed to provide a general introduction and orientation to principles of job analysis, performance evaluation, job evaluation and salary administration, and how these affect the work situation. Work measurement and work standard techniques are studied, as well as flow processes and work distribution methods, quantity and quality control planning and the current impact of governmental guidelines upon such procedures.

MGMT 1305 (MGMT 135) Introduction to Management (3-0) Credit: 3 This course is designed to give the student a knowledge and understanding of management theories and functions which are essential to the person planning a career in business or industry.

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

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

MGMT 1309 (MGMT 139) Income Tax (3-0) Credit: 3 Income tax legislation; present income tax law and regulations; treasury decisions, court decisions, and departmental rulings; income tax problems and returns.

MGMT 2201 Job Performance and Motivation (2-0) Credit: 2
A course designed to provide managers with the capability of applying approaches that influence employee job performance through the adoption of appropriate leadership and motivation techniques, and assessment of group and individual behavior patterns. Communication problem solving techniques in a changing society, as they affect the day to day efforts of subordinates, will also be explored.

MGMT 2202 Individual Orientation Techniques (2-0) Credit: 2 A course designed to provide managers with the skills required to orient personnel in individual job tasks and to facilitate the continuity of the organization's functions.

MGMT 2203 Group Orientation Techniques (2-1) Credit: 2 A course designed to develop managerial skills required in group training efforts. Emphasis is placed on integrating individual experiences into the group orientation efforts. Prerequisite: MGMT 2202.

MGMT 2204 Assessing of Training Standards, (2-1) Credit: 2 Goals, and Objectives

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 2300 (MGMT 230) Credit & Collections (3-1) Credit: 3

The elements of mercantile and consumer credit; organization of a credit department; sources of credit information; collection tolls and procedures.

MGMT 2301 (MGMT 231) Marketing Principles (3-0) Credit: 3

The study of Marketing as an exchange relationship in public and private organizational concerns. Includes an orientation of the different prevailing thoughts in marketing today, including the historical, economic, consumer, and systems approaches. Market research and market segmentation strategies are examined, as well as current government agency regulation concerning marketing practices.

MGMT 2302 (MGMT 232) Personnel Management (3-0) Credit: 3

The dynamic role of management as it relates to personnel, with emphasis on the management aspects important to the line executive or supervisor. Personnel functions and procedures are viewed in the light of management objectives while personnel management is treated as an active and dynamic process which is motivated by basic human drives.

MGMT 2303 (MGMT 232A) Law & Legal Assistance (3-0) Credit: 3

Nature and scope of the law, court systems, law of contracts, principal and agent as relates to the military. Explanation of bailments, carriers, mortgages, securities, negotiable instruments, banks and banking, wills and estates. The procedures of obtaining and acquiring legal assistance for both military and civilian cases in or out of the continental limits of the United States of America are addressed. Emphasis is given on the knowledge required by the supervisor to counsel subordinates in the areas of law and legal assistance.

MGMT 2304 (MGMT 234) Labor-Management (3-0) Credit: 3 Relations

Labor relations aspects of personnel management are emphasized; selection and placement, discipline and morale, promotions, lay offs, job evaluation, incentive systems, profit sharing, and the influence of collective bargaining and legislation on personnel policies. Methods used by organized labor and employers in industrial conflicts.

MGMT 2305 (MGMT 235) Business Law I

(3-0) Credit: 3

Nature and scope of law; court system; law of contracts; principal and agent; business organizations, including partnerships and corporations; Texas community property laws.

MGMT 2306 (MGMT 236) Business Law II

(3-0) Credit: 3

Additional studies in law of business, dealing with bailments, carriers, mortgages, suretyships, negotiable instruments, banks and banking, wills and estates, sales, bankruptcy.

MGMT 2307 (MGMT 237) Life Insurance

(3-0) Credit: 3

Principles of life insurance, business and personal use in insurance; classification and analysis of policies; reserve and policy values; organization and administration of life insurance companies.

MGMT 2309 (MGMT 239) Supervision

(3-0) Credit: 3

A course designed to provide an understanding of: planning work leadership, decision making, work problem solving, human behavior and personnel relations.

MGMT 2310 (MGMT 239A) Personnel Counseling (3-0) Credit: 3

Systematic study of major theories of personnel counseling with supervised experience in role-playing utilizing these approaches.

MGMT 2312 (MGMT 232B) Fundamentals of Systems (3-0) Credit: 3 Management

Introduction to the "systems" concept of management and integration of this concept with the more traditional "principles" approach. This course combines theory and application of systems management and focuses on systems as they exist in many fields such as education, law enforcement, military, industry, and a variety of nonprofit organizations.

Management, Food Service

(See Food Service)

Mathematics (MATH)

MATH 1300 (MATH 130) Introductory Algebra (3-0) Credit: 3

Designed for students desiring a review of fundamental algebraic operations. This course may not be used as a part of the requirements for a major in mathematics. Topics considered include operations with signed numbers, exponents, operations with polynomials, factoring, operations on rational expressions, solving linear equations.

MATH 1301 (MATH 131) Intermediate Algebra (3-0

(3-0) Credit: 3

Includes a brief review of fundamental algebraic operations, linear equations, systems of linear equations, determinants, quadratic functions, inequalities, exponential functions, logarithmic functions. Prerequisite: MATH 1300 or equivalent.

MATH 1302 (MATH 132) College Algebra

(3-0) Credit: 3

Includes consideration of quadratic functions, systems of quadratic equations, quadratic inequalities, matrices, binominal theorem, exponential functions, sequences, progressions, series, and applications. Prerequisite: MATH 1301 or equivalent.

MATH 1303 (MATH 133) Trigonometry

(3-0) Credit: 3

Wrapping function, circular functions, trigonometric functions, use of tables, identities, applications to right triangles and oblique triangles, inverse functions, trigonometric equations, logarithms. Prerequisite: MATH 1301 or equivalent.

MATH 1305 (MATH 135) Finite Mathematics I

(3-0) Credit: 3

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

MATH 1306 (MATH 136) Finite Mathematics II

(3-0) Credit: 3

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

MATH 1307 (MATH 137) Business Math

(3-0) Credit: 3

Introduction to the arithmetic processes in business, including interest, mortgages, taxes, insurance, payroll, inventory deductions, discounts, depreciation, annuities.

MATH 1309 (MATH 139) Modern Math

(3-0) Credit: 3

An introduction to topics taught in the modern elementary curriculum - modern algebra, geometry, sets, number systems, relations, functions, equivalence, congruence.

Mathematics, Technical

TMTH 1300 (TMTH 130) Technical Mathematics I (3-0) Credit: 3 A course designed to fill the needs of students in industrial and technical programs. Emphasis is placed on the use and application of the arithmetic fundamentals basic to everyday mathematics. The course includes addition, subtraction, multiplication, and division of whole numbers and fractions leading to the use of percentages, denominate numbers and basic plane and solid geometry.

TMTH 1301 (TMTH 131) Technical Mathematics II (3-0) Credit: 3 This course is a continuation of Technical Mathematics I, and includes a study of algebra, trigonometric functions, graphs of trigonometric functions, solution of triangles, and plane and solid geometry. Prerequisites: MATH 1300, or TMTH 1300, or permission of the appropriate College official.

Office Administration (OADM)

OADM 1301 (OA 131) Beginning Shorthand

environment will be instructed.

(3-3) Credit: 3

An introduction to shorthand. Students will receive initial training in shorthand emphasizing reading, writing, theory principles, brief forms and related activities.

OADM 1302 (OA 132) Intermediate Shorthand (3-3) Credit: 3 Students will continue shorthand training and reinforcement of theory. Prerequisite: OADM 1301 or equivalent.

OADM 1303 (OA 133) Beginning Typewriting (3-3) Credit: 3 A beginning course in touch typewriting for the mastery of machine parts and the keyboard. Special emphasis of speed development, including an introduction to letter writing, tabulating, and preparing manuscripts.

OADM 1304 (OA 134) Intermediate Typewriting (3-3) Credit: 3 A continuation of OADM 1303. Additional skills in terms of accuracy and speed will be evidenced by students. Composition and typing of business letters, tabulations and manuscripts of more demanding content will be instructed.

OADM 1305 (OA 135) Clerical Practice (2-1) Credit: 3
Procedures of filing and finding operations employed in business offices, standard filing systems. Training in the operation of spirit duplicators, mimeograph, and dry copy machines. Training in proficiency in handling the mail, telephone techniques, and handling receptionist duties. Considerable emphasis and training in integrating these activities into an office

OADM 1306 (OA 136) Secretarial Practice (3-1) Credit: 3
This course is designed for the student who wishes to prepare for a career as an executive secretary. More advanced mailable letters, typing from transcribing machines, organization of meetings and conferences, travel arrangements, information sources, and human relations skills are studied. Students are trained in word processing procedures. Students are introduced to various "needs" theories such as Abraham Maslow's hierarchy of needs. Students are guided into the solution of office problems due to personality problems. Group work, group dynamics, and student evaluations are utilized extensively in this course.

OADM 1308 (OA 138) Business Correspondence (3-0) Credit: 3 A course designed to teach effective business writing and to give practice in composing all types of business letters and reports. Typing ability and sound background in English are strongly recommended.

OADM 1309 (OA 139) Business Mathematics (3-3) Credit: 3 and Calculating Machines

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 (OA 231) Advanced Shorthand (3-3) Credit: 3 Students will improve their ability to take dictation and transcribe mailable copy. Theory principles; brief form derivatives; vocabulary development; speed building; mailable transcription; and office style dictation will be emphasized. Prerequiste: OADM 1302 or equivalent.

OADM 2302 (OA 232) Advanced Typewriting (3-3) Credit: 3
This course includes advanced work in such specialized production as tabulation, inter-office correspondence, manuscripts, telegrams, stencil cutting and mimeograph operation, legal forms, medical forms, special inter-office forms, and additional work on the arrangement of business letters with special features.

OADM 2303 (OA 233) Advanced Transcription (3-3) Credit: 3
Students will continue skill building in shorthand with concentration on transcribing into mailable copy from office-style dictation. Special emphasis will be given to the interrelatedness of specialized office activities and terminologies as they relate to an administrative secretarial position. Prerequisite: OADM 2301.

OADM 2304 (OA 234) Bookkeeping I

(3-3) Credit: 3

Elementary principles of bookkeeping, journalization; posting, statements, special journals; subsidiary ledgers. Special emphasis is placed on personal, family and small business accounting systems.

OADM 2305 (OA 235) Bookkeeping II

(3-3) Credit: 3

Analysis and recording of business transactions; use of the journal and ledgers; trial balance and work sheets; adjusting and closing entries; accounting statements; payroll records and payroll taxes; introduction to partnership accounting; special journals and ledgers; business papers and business procedures relating to accounting voucher system. Prerequisite: OADM 2304 or equivalent.

OADM 2307 (OA 237) Office Administration (3-0) Credit: 3 and Procedures

This course includes topics of instruction in office procedures, work simplification, selection and training of office workers, supervision, office etiquette and ethics, and an analysis of the responsibilities of the manager, secretary, clerk, and other office workers. The student is given an opportunity to relate knowledge, information and skills acquired in previous academic courses. Special emphasis is placed on the relationship of the various systems that affect the modern office. Prerequisite: Sophomore standing or consent of the instructor.

OADM 2308 (OA 238) Office Occupations Internship (1-5) Credit: 3 The student will be provided a combination of occupationally related classroom instruction and on-the-job training in cooperation with offices within the Office Administration Department and other campus offices. Actual work training will be available in the following areas: typewriting, filing, duplication, use of telephone, preparation of correspondence, voice transcription machine, record keeping, proofreading, etc.

OADM 2309 (OA 239) Office Administration Internship

(1-5) Credit: 3

Students will be provided a combination of occupational related 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.

Offset Printing (OPRT)

OPRT 1301 (OP 131) Introduction to Offset Printing (2-4) Credit: 3 This course offers the student an introduction to offset printing with a general survey of various printing processes and their uses in industry. The history of printing, the techniques involved in the production and distribution of printing materials, the kinds of printing industries, and printing terminology are included. It provides an introduction to all equipment and how each piece of equipment relates to the total plant operation.

OPRT 1302 (OP 132) Camera & Darkroom Procedures (2-4) Credit: 3
Stripping & Platemaking I

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.

Petroleum Technology (PETT)

PETT 1301 (PETT 131) Introduction to Petroleum Technology (3-0) Credit: 3

General study of the industry, including history of the industry, chemistry of petroleum, its occurrence in nature and its importance in the world economy, leasing and royalty exploration, drilling and production methods, conservation, transportation and refining, economics of the oil industry.

PETT 1302 (PETT 132) Petroleum Geology (3-0) Credit: 3

A rapid survey course covering the principles of petroleum geology. Topics covered are geographic and stratigraphic distribution, types of structures, properties of petroleum, origin of petroleum, methods of migration, and petroleum discovery methods. Different fields are studied to determine the characteristics of fields as based on different types of traps.

PETT 1303 (PETT 133) Rotary Drilling Fluids (3-0) Credit: 3
Testing methods, determining drilling fluid characteristics, drilling fluid problems, use of special drilling fluids, laboratory exercises consisting of practice in altering the properties of fresh water and special drilling fluids for drilling through troublesome zones with the rotary system.

PETT 1304 (PETT 134) Oil Field Records

(3-0) Credit: 3

A study of records kept by oil companies and reports made within companies and to the regulatory agencies.

PETT 1401 (PETT 141) Rig & Drilling Equipment (3-3) Credit: 4
Technical information covering the care and use of drilling equipment, hoists, power units, derricks, pumps, and derrick equipment. Trips to examine different types of drilling equipment in actual operation in the field. Also trips to service companies to study their drilling tools.

PETT 1402 (PETT 142) Petroleum Logging & Mapping (3-3) Credit: 4 A study of theories of electrical, micro-electrical radiation, optical chemical, and mechanical well logging methods and application of these theories, field examples and problems.

PETT 2301 (PETT 231) Pumping Equipment (3-0) Credit: 3 A theoretical study of the motors, engines, compressors, and pumps used in the movement of petroleum products; including a survey of the different types of equipment available for specific conditions and loads.

PETT 2302 (PETT 232) Well Completion Methods (3-0) Credit: 3 Included in this course are basic types of completion methods, such as open hole, liner and screen, perforated casing. Permanent type completions and multiple completions are studied. Remedial measures including recompletion, shutting off bottom hole water, reducing high gas oil ratios, sand control, fracturing, and redrilling are studied.

PETT 2303 (PETT 233) Natural Gas Production (3-0) Credit: 3
A survey course in the handling of natural gas from discovery to use; with emphasis on efficient transportation and the use of proper equipment for distribution. Gas regulations, control and measuring devices will be studied.

PETT 2304 (PETT 234) Petroleum Transportation (3-0) Credit: 3 A study of the methods and practices of transporting crude and refined petroleum products by pipeline, tanker and by land.

PETT 2305 (PETT 235) Petroleum Pollution Control (3-0) Credit: 3 A study of the various contaminants of air, water, and soil and their effect on ecology. The types of contaminants released by the petroleum industry and petroleum products to the air and water, and methods used to minimize them will be studied. A survey of the various pollutants, their effects on materials, and their control.

PETT 2306 (PETT 236) Hydraulics (3-0) Credit: 3 A study of hydraulics related to drilling, oil pipelines, and artificial lift.

PETT 2307 (PETT 237) Refinery Operations (3-0) Credit: 3 A study of theoretical and practical approaches to the operation of refinery.

PETT 2401 (PETT 241) Petroleum Production Methods (3-3) Credit: 4 Various elements of crude oil production are studied, including subsurface pumps, gaslifting, emulsion treating, separation of oil and water, separation of oil and gas. Instrumentation of leases is discussed, including flow-meters, automatic lease operation, and automatic custody transfer; also a study of oil field corrosion problems, and secondary recovery methods.

PETT 2402 (PETT 242) Petroleum Refining Methods (3-3) Credit: 4 and Operations

The chemical structure of the hydrocarbon is studied in this course. A survey of modern refining methods of gasoline, petrochemicals and other related chemicals is included.

Photography (PHOT)

PHOT 1401 (PHOT 141) Introduction to Photography

(3-2) Credit: 4

This course emphasizes the handling of small cameras, film exposure, processing, contact printing and basic enlarging. Flash and existing light photography is studied with new features, action photography, and story-telling photographs. Printing and composing photographs for publications included.

PHOT 1402 (PHOT 142) Portrait Photography (3-2) Credit: 4
A study is made of fundamental lighting, camera techniques, posing, composition, processing, and printing as applied to portraiture. Experience in retouching negatives and prints, mounting and making story-telling pictures for fashion and advertising is provided. Prerequisite: PHOT 1401 or consent of instructor.

PHOT 1403 (PHOT 143) Advanced Photography (3-2) Credit: 4
This course includes elements of composition and film exposure development for specific gamma studied sensitometry, advanced photographic printing characteristics of printing papers, processing for contrast, print balance, and toning. Principles of filters and lenses and advanced focusing techniques are studied. Prerequisite: PHOT 1401 or consent of instructor.

PHOT 1404 (PHOT 144) Commercial Photography (3-2) Credit: 4 A study is made of the fundamental differences between commercial and advertising photography. Although both are studied, emphasis will be on the commercial level such as products, houses, factories, weddings and party photography. Emphasis on what a commercial photographer does, how business is set up, what equipment is needed, how clients are found, what prices are charged, and new trends in the field are reviewed. Prerequisites: PHOT 1401 and PHOT 1402, or consent of instructor.

PHOT 1405 (PHOT 145) Advanced Printmaking (3-2) Credit: 4
This course includes special instruction and laboratory work in advanced printmaking, mounting, display, toning and tinting and special procedures in graphic techniques in printmaking with higher contrast materials. Preparation of a black and white portfolio is included. Prerequisites: PHOT 1401, PHOT 1402, PHOT 1403, PHOT 1404 or consent of instructor.

PHOT 1406 (PHOT 146) Color Photography I (3-2) Credit: 4
Study of primary and secondary colors of light, color temperature, color compensations in film exposure, the making of color slides for visual education, theory of color negative systems and demonstrations of Type-C printing.

PHOT 1407 (PHOT 147) Color Photography II (3-2) Credit: 4
Positive and negative color film processing, sensitometry, and color printing. Prerequisite: PHOT 1406.

PHOT 2301 (PHOT 231) Photography Internship I (1-5) Credit: 3 Supervised off-campus laboratory and work experience in photography or closely allied fields. Students usually work as laboratory technicians, cameramen, and salespersons. Prerequisites: PHOT 1401, PHOT 1402, PHOT 1404 or consent of instructor.

PHOT 2302 (PHOT 232) Photography Internship II (1-5) Credit: 3 Supervised off-campus laboratory and work experience in photography or closely allied fields. Students usually work as laboratory technicians, cameramen, and salespersons. Prerequisite: PHOT 2301 or consent of instructor.

PHOT 2403 (PHOT 243) Portrait Retouching (3-2) Credit: 4
Portrait negatives retouched by the use of leads, dye and etching with special attention to the study of facial structure and demonstrations in printing and retouching negatives. Some color techniques included. Prerequisite: PHOT 1402.

PHOT 2404 (PHOT 244) Photographic Production (3-2) Credit: 4
The student prepares a portfolio of photographs for the mass media, business, education, government, industry and science for presentation to staff members and to prospective employers. Individualized projects. Prerequisites: PHOT 1401, PHOT 1402, PHOT 1404, PHOT 1406, and PHOT 1407.

Physical Education (PYED)

PYED 2108 (PE 218) Physical Conditioning

(1-2) Credit: 1

PYED 2302 (PE 235) Safety & First Aid

(3-0) Credit: 3

Health knowledge and practice with regard to individual and group welfare; personal hygiene; community health problems; communicable disease control and health organizations. Instruction in American National Red Cross first aid methods for emergency treatments of injuries and sudden illness.

Physics (PHYS)

PHYS 1403 (PHY 140) Survey of Physics

(3-3) Credit: 4

A survey of the fundamental principles of physics designed to acquaint the students with the basic concepts of physics, contemporary physics, and modern thinking.

Psychology (PSYC)

PSYC 1101 (PSYC 111) College Orientation

(1-0) Credit: 1

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

PSYC 2301 (PSYC 231) Introduction to Psychology (3-0) Credit: 3
Basic principles of human experience and behavior involving biological, environmental, and sociological studies. An overview course including an introduction to the major studies of psychology. Recommended for students of sophomore standing.

PSYC 2303 (PSYC 233) Child Growth & Development (3-0) Credit: 3 The purpose of this course is to develop an understanding of children and to engender a real interest in them. Consideration is given to the human organism as it develops physically, mentally, emotionally, and socially; problems of adjustment.

Real Estate (REAE)

REAE 1301 (MGMT 138R) Real Estate Fundamentals (3-0) Credit: 3 This course is designed for both real estate and non-real estate majors. Subjects include license law and ethics, nature and description of real property, rights and interests in land, contract law, owner-broker relationships, mortgages, trust deeds, sources of funds, taxes and assessments, and title transfer.

REAE 1302 (MGMT 139R) Real Estate Principles (3-0) Credit: 3 and Practices

This course includes a study on sources of funds, influences of the Federal Reserve System, secondary mortgage market, agency operation and functions, title search, and closing procedures. The practice of real estate is an essential objective of this course and the students will learn the basic skills needed to practice real estate in the local communities, utilizing Texas Real Estate Commission promulgated contract forms, various financial qualification forms, market data surveys, and tax tables.

REAE 2301 (MGMT 230R) Real Estate Brokerage (3-0) Credit: 3 Techniques and skills required to effectively operate a broker's office in today's economy, including organization of brokerage operations; personnel selecting, training and retention; sales, marketing and advertising policy formulation, and general functions of the modern brokerage office. Prerequisite: REAE 1301 or consent of the appropriate College official.

REAE 2302 (MGMT 231R) Residential Real Estate Appraisal

This course includes an analysis and valuation of real estate as needed by buyers, sellers, lendors, and investors. Emphasis is placed on the various approaches to appraising residential real estate, and the student is asked to participate in selected case applications that illustrate current appraisal principles and practices. Prerequisites: MATH 1307, REAE 1301, or REAE 1302.

(3-0)

Credit: 3

REAE 2303 (MGMT 232R) Real Property Management (3-0) Credit: 3 Introduction to the property management field, including professional organizations, management responsibilities, lease negotiations, insurance and tax aspects, advertising and public relations. Prerequisite: REAE 1301 or consent of the official College official.

REAE 2304 (MGMT 233R) Real Estate Finance (3-0) Credit: 3
This course includes the study of federal and state practices in mortgages and real estate finance, also includes a survey of savings and loan associations, commercial banks, life insurance companies and mortgage bankers. Prerequisite: REAE 1301 or consent of the appropriate College official.

REAE 2305 (MGMT 238R) Real Estate Law (3-0) Credit: 3 Contains a study of sources of real estate law, legal estates and ownership, deeds, contracts, law of agency and brokerage, escrow agreements, closing of sales, title assurance methods, mortgages, liens, leases, homestead, wills, administration of estates, zoning and building ordinances, property taxation and other matters of law which pertain to real estate transactions.

REAE 2306 (MGMT 237R) Real Estate Seminar (3-0) Credit: 3
This course is designed to provide additional studies in the real estate profession that include current trends and developments, new legal requirements, special problems, and other subjects that will be selected from the wide range of occupations related to the real estate industry. This course may be repeated for credit. Prerequisite: Six semester hours of Real Estate courses or consent of the instructor.

REAE 2307 Commercial Real Estate Appraisal (3-0) Credit: 3
This course is designed for the professional real estate and financial professional. It includes an in-depth investigation of the various factors affecting value in commercial real estate. Subjects include: Market dynamics and market analysis, physical and locational characteristics of commercial real estate, legal factors affecting value of ownership interests and lease interests, limitations of use, land investment and development, and the effect of financing on value. This is a casework-oriented course that enables students to develop commercial appraisal skills. Prerequisites: MATH 1307, REAE 1301, REAE 1302, or approval of the appropriate College official.

Small Gas Engine Repair (SGER)

SGER 1401 (SGER 141) Gas Engine Fundamentals (2-4) Credit: 4
This course covers the theory and repair practices on two cycle, four cycle, and wankel engines, both air cooled and water cooled.

SGER 1402 (SGER 142) Ignition Systems (2-4) Credit: 4
This course covers the theory and repair practices on the various component parts of the ignition system. Proper testing and service procedures are performed on battery ignition systems, solid state ignitions, capacitor discharge systems, and on magneto systems.

SGER 1403 (SGER 143) Shop Practices (2-4) Credit: 4
The course covers an introduction to shop safety, use of hand and power tools, use of precision measuring instruments, and other special tools used in small engine repairs.

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

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

SGER 1405 (SGER 145) Motorcycle Engine Service (2-4) Credit: 4
This course is designed to provide the student the necessary skills to disassemble and assemble motorcycle power plants, repair and replace drive train components, use special tools particular to motorcycle repairs, and to use applicable parts and service manuals.

SGER 1406 (SGER 146) Lawn Care Equipment Service (2-4) Credit: 4
This course covers the theory and repair practices on all types of power lawn care units including lawn mowers, riding mowers, garden tractors, rotary tillers, and other similar items of equipment.

SGER 2401 (SGER 241) Advanced Motorcycle Repair (2-4) Credit: 4 This course is a continuation of SGER 1405 with special emphasis placed on chassis and system repair including front and rear suspension systems, hub and wheel repair, transmissions, and brakes. Prerequisite: SGER 1405.

SGER 2402 (SGER 242) Chain Saw Service (2-4) Credit: 4
This course covers the theory and repair practices on all types of modern chain saws and related equipment.

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

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

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

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

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

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

SGER 2406 (SGER 246) Special Projects (1-8) Credit: 4
The purpose of this course is to allow the student to develop one or more special projects related to small gas engine repair under the supervision of the program instructor. Prerequisites: Sophomore standing and 24 semester hours of Small Gas Engine Repair courses.

Sociology (SOCI)

SOCI 2301 (SOC 231) Introduction to Sociology (3-0) Credit: 3
The study of human society; human behavior and personality as a product of group life; community organization; social change and current social problems.

SOCI 2302 (SOC 232) Contemporary Social Problems (3-0) Credit: 3 Identification and analysis of contemporary social problems, development of criteria for evaluating problems for social betterment.

SOCI 2303 (SOC 233) Criminology (3-0) Credit: 3
Causes and manifestations of delinquency; case studies of criminals and their social milieu; the offender and agencies of his adjustment; analysis and evaluation of penal methods.

SOCI 2306 (SOC 236) Marriage and the Family (3-0) Credit: 3 A study of problems in courtship, marriage, and family living as they relate to the social structure of American society.

Speech (SPCH)

SPCH 1301 (SPCH 131) Fundamentals of Speech (3-0) Credit: 3 Instruction is given in speech preparation and delivery with emphasis on communication through audience analysis, gesturing, and vocal variety. Students will have opportunity for practice in the researching, outlining, and presentation of speeches.

SPCH 2303 (SPCH 233) Business Speech (3-0) Credit: 3
Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he might encounter in his career. It is planned for agriculture, business, and home economics majors. Emphasis is on structure and techniques of presentation.

Telecommunications (TELE)

TELE 1301 (TELE 131) Introduction to Broadcasting (3-3) Credit: 3
This is a survey course tracing the history of broadcasting from 1884 to the present. Besides history, the course will present information on comparative systems of broadcasting and on the basic operational procedures of radio and television stations. Preparation for the FCC Radio-Telephone Operator's Third Class Permit is included in this course of study.

TELE 1302 (TELE 132) Beginning Radio Production (3-3) Credit: 3 In this course the fundamental techniques and practices of production and programming are emphasized with a great deal of practical experience in 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 1303 (TELE 133) Beginning Television (3-3) Credit: 3 Production

This course is designed to give the student the fundamental skills of camera operation, microphone techniques, basic set design, basic graphics, and lighting. In addition, each student will produce and direct his own commercials. A basic study of the operations of a television station will be covered.

TELE 1304 (TELE 134) Broadcast Sales (3-0) Credit: 3
This course is designed to give the student a working knowledge of the broadcast time sales.
Areas of study include sales call preparation, sales presentations, spot scheduling, client interviews, collections, rate cards and contracts, and sales promotion. Station ratings and their use in broadcast sales will also be studied.

TELE 1305 (TELE 135) Radio-Television Announcing (3-3) Credit: 3 This course covers the duties and responsibilities of the announcer, such as operation of the audio console, announcing commercial copy, announcing station breaks, newscasting, interviewing, etc. Special emphasis is given in the areas of voice and diction and pronunciation. Practical experience will be offered through the use of actual radio and television stations.

TELE 1306 (TELE 136) Television Film I (3-3) Credit: 3
This course is designed to introduce the student to the fundamentals of cinematography and its applications in the television industry. Basic filming techniques will be covered, and each student will learn to shoot 16 mm motion picture cameras, edit, story board, and process film. Laboratory exercises will provide for the shooting of at least 200 feet of film per student.

TELE 1307 (TELE 137) Broadcast Station Management (3-0) Credit: 3
This course is an in-depth study of management responsibilities within the broadcast industry. Areas of study include personnel management, station budgets, profit and loss statements, network negotiations, and equipment purchases. Also included is a study of the Federal Communications Commission's rules and regulations pertaining to the overall operation of the broadcast station.

TELE 2301 (TELE 239A) Technical Aspects of (3-0) Credit: 3 Broadcasting

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 2302 (TELE 232) Advanced Television Production (3-3) Credit: 3
This course offers advanced training in television production. Included will be experience as cameraman, floor director, talent, lighting, director, technical director, producer, graphics, film director, video tape operator, and audio engineer. Practical experience in weekly television program production will be available through the use of an actual television station. In addition, a critical look will be given to television programming techniques, types of station structure, and innovative technological breakthroughs.

TELE 2303 (TELE 233) Advanced Radio Production (3-3) Credit: 3
The major emphasis in this course is advanced training in the production of radio commercials, promotion announcements, documentaries, newscasting, and interviewing. An in-depth study of the programming formulas and different types of radio broadcasting is presented. Each student will be responsible for weekly programming to be aired over an actual radio station.

TELE 2304 (TELE 234) Broadcast Operations (3-3) Credit: 3
This course is designed to provide the student of broadcasting with specific areas of study in promotion, graphics, traffic, continuity, and programming for both radio and television. The laboratory for this course will be the study of and implementation of an assessment of audience needs survey.

TELE 2305 (TELE 235) Broadcast Writing (3-3) Credit: 3
This course covers the stylistic writing techniques as needed for commercial copy, promotional copy, news editing, radio-television show formats, and individualistic creative writing for drama or documentaries. Practical experience will be available through actual radio and television stations.

TELE 2306 (TELE 239C) Telecommunications Seminar (3-0) Credit: 3
This seminar is designed to allow the student of broadcasting to take an in-depth look at the industry he will soon serve. Individual investigation will be conducted on the current trends in broadcasting, major issues facing the broadcaster, and the importance of broadcasting in today's society. Considerable discussion on such issues as freedom of the press and the future of broadcasting will take place. This course will give the student an up-to-date and realistic perspective of his chosen industry.

TELE 2307 (TELE 237) Television Film II/Electronic (3-3) Credit: 3 News Gathering

Advanced film production, color processing, and editing are covered during the first half of the semester. Electronic news gathering techniques with mini-cameras are covered the second half of the semester. Much emphasis is given to news photography and on-the-job training. Students are given weekly assignments for television newscasts.

TELE 2308 (TELE 238) Telecommunications (1-6) Credit: 3 Practicum

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.

TELE 2309 (TELE 239B) Telecommunications Field (1-5) Credit: 3 Projects I

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. Prerequisites: TELE 1302 and TELE 1303.

TELE 2310 (TELE 239D) Telecommunications Field (1-5) Credit: 3 Projects II

A continuation of Telecommunications 2309, this course consists of on-the-job training as a production member of and actual television or radio station for on-air operations. Prerequisite: TELE 2309.

Welding (WELD)

WELD 1301 (WELD 131) 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 (WELD 132) 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 (WELD 141) Beginning Gas Welding (2-4) Credit: 4
Instruction will be conducted in oxy-acetylene welding theory and practical application.
Course of study will include use and operation of oxy-acetylene cutting equipment. Safety and proper care of oxy-acetylene equipment will be stressed.

WELD 1402 (WELD 142) Beginning Arc Welding (2-4) Credit: 4
Instruction will be conducted in the theory and practical application of Shielded Metal Arc
Welding with various types of electrodes in flat and horizontal positions. Course of study to
include AWS electrode classification.

WELD 1403 Intermediate Arc Welding (2-4) Credit: 4
Instruction will be given in the practice of making Shielded Metal Arc Welds in all positions.
Emphasis will be placed on preparing the student for certification in flat and horizontal positions with various types of electrodes. Prerequisite: WELD 1402.

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

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 (2-4) Credit: 4 Cutting Processes

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

WELD 2401 (WELD 151) Advanced Arc Welding (2-4) Credit: 4
Instruction will be given in the practice of taking guided bend test, with and without the use of back-up strips, in all positions. Emphasis will be placed on preparing students for certification in all positions with various types of electrodes. Prerequisite: WELD 1403.

WELD 2402 Beginning Pipe Welding (2-4) Credit: 4
Intensive classroom and practical applications will be given in techniques used in the welding of rolled and fixed position pipe. Prerequisite: WELD 1403.

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

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

WELD 2404 Advanced Pipe Welding (2-4) Credit: 4 Classroom instruction to be given on development of layout templates. Practical instruction will place emphasis on preparing the student for certification test on pipe. Prerequisite: WELD 2402.

WELD 2405 (WELD 153) Weld Testing and Inspection

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.

(4-2) Credit: 4

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

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

CONTINUING EDUCATION 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.

CURRICULUM AND COURSE INDEX

	Curriculum Page	Course Prefix	Course Descriptions Page
Administrative Secretarial	27	(OADM)	81
Air Conditioning and Refrigeration	27	(AIRC)	50
Applied Management	28	(MGMT)	77
Applied Management with Technical Option	29	(MONT)	11
Automotive Tune-up	29	(AUTO)	52
Computer Science	31	(COSC)	62
Electronics Servicing	29	(ELTE)	59
Food Service Operations	30	(FSMG)	72
Home Entertainment Servicing	31	(COES)	64
Residential Air Conditioning Servicing	32	(AIRC)	50
Small Engine Servicing	33	(SGER)	86
Automotive Body Repair	33	(ATBR)	51
Automotive Service and Repair	34	(AUTO)	52
Aviation Maintenance	34	(AVMT)	53
Business Management	35	(MGMT)	77
Career Pilot	36	(CAPI)	56
Child Development	36	(CHDV)	58
Communications Electronics Technology	•	(ELTE)	59
Computer Electronics Technology	38	(CMET)	61
Computer Science	38	(COSC)	62
Consumer Electronics Technology	39	(COES)	64
Diesel Mechanics	40	(DIEM)	65
Drafting and Design	40	(DRDS)	66
Electronics Technology	39	(ELTE)	59
Environmental Control	41	(ENCT)	68
Fire Protection Technology	42	(FPRT)	69
Food Service Management	42	(FSMG)	72
Hotel/Motel Management	43	(HMMG)	74
Law Enforcement Technology	44	(LAWE)	75
Maintenance Technology	44	(MTNT)	76
Office Management	45	(OADM)	81
Petroleum Technology	46	(PETT)	82
Photography	46	(PHOT)	84
Real Estate	47	(REAE)	85
Small Gas Engine Repair	48	(SGER)	86
Telecommunications	48	(TELE)	88
Welding Technology	49	(WELD)	90
Emergency Medical Technician		(EMET)	67

RELATED COURSES

	Course Prefix	Course Descriptions Page
Art	(ART.)	50
Biology	(BIOL)	55
Business Administration	(BUSS)	55
Chemistry	(CHEM)	58
Developmental Studies	(DSCO)	65
Engineering	(ENGR)	68
English	(ENGL)	68
Government	(GOVT)	73
History	(HIST)	73
Journalism	(JOUR)	74
Mathematics	(MATH)	80
Offset Printing	(OPRT)	82
Physics	(PHYS)	85
Physical Education	(PYED)	85
Psychology	(PSYC)	85
Sociology	(SOCI)	87
Speech	(SPCH)	88

GENERAL INDEX

I	PAGE		PAGE
A		D	
Absences	10	Degree Completion Agreement, SOC	24
Academic Load	10	Degree, How to Apply for	22
Academic Probation	14	Degree Programs	20
Academic Standards	14	Degree Requirements	20
Academic Suspension	14	Developmental Studies	21
Accreditation	ii	Disciplinary Action	17
Adding Classes	7	Discipline, Philosophy	17
Addresses	i	Dropping Classes	7
Address Change	15	Due Process	17
Administrative Offices	iii	240 1100000	• ,
Admission, Early	5	K	
Admission Requirements	4	Early Admission	5
Associate in Applied Science Degree	21	Educational Objectives	2
Associate in Arts Degree	20	Educational Philosophy	1
Associate in General Studies Degree	21	Electives, Approved	25
Associate in Science Degree	20	Electives, Technical	25
Attendance Policy	10	Equal Opportunity Policy	3
Auditing Classes	15		23,24
B	1)	Examination, Credit by	23,24
Behavior, Class	16	F	43
Board of Trustees	iii	Falsification of Records	16
Book Fees	16	Fees	3
C	10	Field Evaluation	24
Career Pilot, Admission Requirements	5	Field Registrar	6
Certificate, How to Apply for	22	Financial Aid	-
Certificates Conferred	22	Freshman, Classification of	8 11
Challenge Exam, Institutional	23	resuman, Classification of	11
Change of Address	15	G	
Change of Grade	14	GED Equivalency	4
Changing Registration	7	General Information	1
Cheating	16	GI Bill	7
Class Behavior	16	Grade, Change of	14
Class Membership	11	Grade, Change of Grade, Reporting	14
Classification	11	Grade Requirements	12
Collusion	16	Grade and Point Average	14
Commencement	22	Grades for Repeated Courses	14
Continuing Education Program	91	Graduation	22
Correspondence Courses	23	Graduation	
Cost of Classes	7		
Counseling	4		
Course Admissions	4	н	
Course Descriptions	50	Harrassment	16
Course Numbers	12	High School Requirements	4
Course Offerings	50	Historical Background of the College	
Courses Out of Sequence	12	Honors	22
Credit by Examination	23	How Many Hours Should You Take	10
Credit, Non-Traditional and	23	How to Apply for Certificate/Degree	
Traditional	-,	How to Begin	4
Credit, Resident	11	11044 to neRm	**
Credit Transfer	11		

	PAGE	S	PAGE
How to Choose Courses	12	Satisfactory Progress, Grade	14
How to Earn a Certificate	22	Requirements	
How to Obtain CTC Transcripts	18	Scholastic Honesty	16
How to Obtain Financial Aid	8	Semester Credit Hours	12
How to Sign Up for Classes	6	Servicemen's Opportunity College	24
How You May Return After Suspension		SOC Agreement, Degree Completion	24
How You Receive Credit by Evaluation		Student Activities, Regulations	15
How You Receive Grades	12	Student Discipline	17
		Student Financial Aid	8
I		Student Records	8
If You Don't Make the Grade	14	Suspension, Academic	14
Incomplete, Grade of	13	•	
Incomplete, Removal of	13		
Institutional Challenge Exam	23	Т	
_		Table of Contents	v
L		Tardiness	10
Late Registration	6	Textbooks	3,16
g		Transcripts, How to Obtain CTC	18
M		Transcripts Required for Admission	5
Military Credit	24	Transfer Credit (to CTC)	23
Military Tuition Assistance	8	Transfer Credit (to other Colleges)	11
		Tuition Charges	7
N		Tuition Refund	7
Non-Credit Courses	91	Tuition and Fee Schedules	7
Non-Traditional Credit	23	· · · · · · · · · · · · · · · · · · ·	,
		v	
0		Veterans Benefits	8
Official Enrollment/Registration	11	Visitors in Class	15
Other Costs	3,7,16		
		W	
P		What Degrees Are Offered	20
Payment	7	What Requirements Must be Met	20
Plagiarism	16	for a Degree	
Prerequisite Courses	25	When are Certificates and Degrees	22
Privacy Act	8	Awarded	
Probation, Academic	14	When is Commencement Held	22
Probation, Disciplinary	17	When to Register	6
	.,	Who to See for Classes	6
R		Withdrawal, Official	18
Records Access	8		10
Refunds	7		
Registration Periods	6		
Registration Requirements	6		
Repeating a Course	14		
Return to Class After Suspension	15		

NOTES

